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Breadwinner Backlash: The Gendered Effects of Industrial Decline

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Industries with skewed gender makeups are vulnerable to globalization, decarbonization, and other drivers of economic disruption. We study how decline in disproportionately male industries, such as coal and steel, affects electoral outcomes. We theorize that an uneven loss of male jobs, and a shift in income from husbands to wives, can give rise to "nostalgic" coalitions of men and women that seek a return to patriarchal divisions of labor within households. Such attitudes fuel right-wing movements that pledge to protect traditional gender roles. This theory is supported with data on local labor markets and electoral outcomes in the United States over the last two decades, as well as a longitudinal study tracking individual Americans over four decades. This paper offers a new gender-based account of the globalization backlash and shows how within-household status concerns moderate responses to economic dislocation.

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Coal mining dominated Boone County, West Virginia, at the turn of the twenty-first century. One in two workers were employed in coal, with mine workforces exceeding those of the next largest industry by a factor of three. By 2020, coal in Boone County had cratered. Just a few hundred workers remained, down from the more than three thousand on payrolls twenty years earlier. Such precipitous drops in employment have occurred across the Appalachian coal belt in recent years. Similar patterns are evident in steel and metal manufacturing across the Midwestern United States. Steelmakers in Youngstown, Ohio, employed nearly 50,000 workers in the 1970s, accounting for over one-third of the city's population.[2] Fewer than 900 remained employed in the industry in 2023. While these declines are notable for their magnitude, they are also significant because of the ascriptive character of those losing jobs: virtually all coal miners and steelworkers in the United States, both then and now, are men.[3]

This paper examines the political ramifications of decline in gender-imbalanced industries. In doing so, it speaks to a growing literature on the politics of labor market segmentation. Scholars have notably explored the tendency of ethnoracial groups to unevenly sort into different industries (Hechter 1978; Baccini and Weymouth 2021). This ethnoracial division of labor can cause industrial shocks to reverberate within some groups more than others, prompting group-specific shifts in political attitudes and mobilization (Gaikwad and Suryanarayan 2022; Zucker 2022). We expect the gender segmentation of labor markets — an enduring feature of working-class occupations (Cotter, Hermsen, and Vanneman 2005; Blau, Brummund, and Liu 2012) — to have distinct political implications. By virtue of men and women often being directly reliant upon each other within households, decline in male-majority industries alters the political preferences of both men and women.

Deindustrializing blue-collar communities have experienced marked shifts in labor mar-

[2] *CNBC*, 2014, [cnb.cx/3KJ9Wfc].

[3] Ninety-nine percent of coal mine employees in Boone County and 92% of steelworkers near Youngstown were men in early 2020 (Quarterly Workforce Indicators, U.S. Census Bureau).

ket power from men to women in recent years (Winant 2021). The decline of overwhelmingly male mines, for example, has ignited a surge in female labor force participation in U.S. coal towns.[4] This labor market transformation rebalances economic power within households, altering the status, decision-making authority, and political engagement of husbands and wives (Iversen and Rosenbluth 2006, 2010). Greater female economic autonomy sometimes induces more gender-equitable political outcomes (Ross 2008; Folke and Rickne 2020; Brulé and Gaikwad 2021; Gaikwad, Lin, and Zucker 2023). But in the context of industrial decline, we argue that the shift in breadwinning responsibilities to women instead fuels right-wing political movements looking to restore traditional, patriarchal divisions of labor within families.

We theorize that this move to the right occurs due to dissatisfaction with the new division of labor among both men and women.[5] Men who lose work or take pay cuts experience a decline in subjective social status within the family and community.[6] This may occur due to loss of income or deprivation of the status benefits conferred by employment in a once-dominant and distinctively "masculine" industry.[7] Working-class men often derive significant psychosocial value from employment in patriarchal settings (Lamont 2000; Edin et al. 2019; Hussam et al. 2022), making job loss especially damaging to their subjective social status. This is grimly exemplified by the prevalence of "deaths of despair" among men in much of the U.S. (Autor, Dorn, and Hanson 2019; Case and Deaton 2020; Pierce and Schott 2020).[8]

[4] *New York Times*, 2019, [nyti.ms/3ec0cfG].

[5] We use binary gender language throughout this manuscript, following much of the literature on the political economy of gender. We likewise focus on heterosexual couples, which constitute 99% of all couples in the U.S., of which 90% are married (American Community Survey 2022, U.S. Census Bureau).

[6] Gidron and Hall 2017 define subjective social status as "the level of social respect or esteem people believe is accorded them within the social order" (S61).

[7] Heavily male, manual labor-intensive industries are often central to community and personal identities (Bell and York 2010; Kojola 2019; Gaikwad, Genovese, and Tingley 2022).

[8] Deaths of despair have also increased among women (Case and Deaton 2020). Labor market outcomes for working-class women have declined in recent years, but less rapidly than for men (Binder and Bound 2019); the gender wage gap has closed more rapidly in the working class than in higher income strata (Blau

Women may increasingly support right-wing movements as well. Scholars have previously linked growth in women's share of household resources to more equitable political outcomes (Folke and Rickne 2020; Brulé and Gaikwad 2021; Gaikwad, Lin, and Zucker 2023). We argue that this link is unlikely to hold amid the economic malaise and depression that follows decline in major local industries. While women's relative earnings increase in these cases, absolute levels of household wealth are often in decline; women provide a larger slice of a shrinking pie. This scarcity, we argue, counteracts the equitable political effects of women becoming more active outside the home. Women who enter healthcare, education, and other service industries as their husbands lose work typically earn less than what men in mining or manufacturing once did (Latimer and Oberhauser 2004; Dill and Hodges 2019).[9] Such work is often taken on in addition to preexisting domestic responsibilities, compounding the time demands that disproportionately fall on women and limit their earning potential and political activity (Bernhard, Shames, and Teele 2021; Goldin 2021). Women may thus see resurrecting male-dominated industries and traditional divisions of labor as a safer, if suboptimal, route to economic recovery than mobilization in support of the new, less prosperous industrial structure.

We test this theory with longitudinal data on household divisions of labor, local economic conditions, gender attitudes, and political behavior spanning the last several decades of U.S. history. First, to test our posited mechanism, we draw on a multidecade panel survey of Americans born between 1957–64, a cohort that witnessed mounting pressure on the U.S. working class during their prime working years and has turned out for recent elections at high rates.[10] We document that decline in prototypically masculine mining and manufacturing industries has corresponded to a pronounced shift in within-household

and Kahn 2017).

[9] See Winant 2021 on women's entry into service industries in deindustrializing areas.

[10] See Binder and Bound 2019 on labor market changes during this period. On turnout by age, see U.S. Census Bureau, 2021, [bit.ly/3lp3Oi1].

economic activity towards women within this cohort, which activates more patriarchal attitudes among married men and women. Such attitudes are strongly correlated with support for the Republican Party, which has advocated for traditional gender roles over the last several decades (Wolbrecht 2000; Strolovitch, Wong, and Proctor 2017; Gillion, Ladd, and Meredith 2020). These dynamics are most prominent among non-college educated men, a group whose labor market standing has dramatically deteriorated in recent decades (Binder and Bound 2019).

Second, pairing data on local layoffs with county-level electoral outcomes, we find that shifts in workforce composition towards women and the loss of *male* jobs have bolstered Republican candidates in much of the country, particularly in more economically distressed areas. We find evidence of this using observational labor market data, as well as when employing a shift-share instrumental variables strategy to account for the non-random distribution of layoffs. Analyses of individual vote choice indicate that this rightward shift has occurred due to both men *and* women voting Republican. Evidence suggests that declining household income is an important driver of women's move to the right.

This study revises and extends recent work on gendered aspects of economic change. Abou-Chadi and Kurer (2021) show that household political preferences in Western Europe are sensitive to unemployment risk, with both husbands and wives being more likely to vote for the radical right when either is in danger of losing their job. In contrast, we analyze actual layoffs in gender-skewed industries and find that while women are more likely to shift right when men lose work in such industries, men do not similarly move right following women's job loss.[11] We attribute these asymmetric responses to status loss and within-household spillovers related to economic scarcity when predominantly male industries decline. In the context of decarbonization, Bush and Clayton (2023) show that men are often more opposed to phaseouts of fossil fuels than women, in part due to their

[11] Abou-Chadi and Kurer do not find similar results when analyzing actual unemployment or layoffs.

connection to fossil fuel workforces. We demonstrate that men *and* women jointly move rightward when such industries decline.

This paper illustrates the centrality of cultural upheaval to the backlash against globalization (Margalit 2019; Mansfield, Milner, and Rudra 2021; Ballard-Rosa, Jensen, and Scheve 2022) and potential for gender divisions to aggravate reactions to decarbonization. We highlight gender as an important determinant of how economic volatility is experienced, complementing work focused on ethnoracial dimensions of industrial decline (Jardina 2019; Baccini and Weymouth 2021; Zucker 2022, 2023). In doing so, we clarify when relative gains in women's economic station fail to yield progressive political change.

GENDER DIVIDES AMID INDUSTRIAL DECLINE

Scholars are increasingly interested in how cultural factors shape the political effects of economic decline. A nascent literature probes how ethnic and racial divides mold experiences of industry decline, finding that status concerns, particularly in native-born white communities, amplify support for right-wing populist candidates (Jardina 2019; Baccini and Weymouth 2021; Ballard-Rosa, Jensen, and Scheve 2022). This research reflects the persistent segmentation of labor markets along ethnoracial lines (Hechter 1978; Zucker 2022).

Industries are also polarized by gender, sometimes to greater extremes than by ethnicity or race (Appendix A). Industries in advanced economies such as coal mining and metal manufacturing are staffed almost exclusively by men, while others, like textiles, skew heavily towards women. These divisions reflect an enduring polarization of working-class occupations along gender lines (Evans 2021), suggesting a key role for gender in moderating experiences of industrial decline.

Shocks that initially afflict either men or women in heterosexual marriages tend to swiftly spread to the opposite sex due to within-household dependencies (Abou-Chadi and Kurer 2021). Negative shocks to large, male-dominated industries connote widespread layoffs of men. Associated income losses are passed on within the household, diminishing the resources available to spouses and children. The consequences of these spillovers are most severe in households marked by traditional divisions of labor, where men are primary income earners and women principally do unpaid work within the home.

Women may look to recoup lost household income in the face of such shocks. Scholars have notably explored the large-scale entry of women into the labor force during wartime, when men are disproportionately conscripted or killed (Acemoglu, Autor, and Lyle 2004; Tripp 2015). In peacetime, we expect women to similarly become more economically active as husbands lose work. Though men may be able to compensate for their income loss themselves, industry-specific skills and a hesitancy to seek work in subjectively less masculine or lower status industries may limit their tendency to actually do so. Conversely, women may be more willing to seek work in the care-oriented service industries, such as healthcare, that have rapidly grown amid shocks to male-dominated industries (England 2010; Winant 2021).

The entry of women into the labor force has powerful political effects. Several studies find that women's economic empowerment narrows the traditional gender gap in rates of political participation, as women acquire the resources needed for political mobilization and dislodge patriarchal norms (Iversen and Rosenbluth 2008; though see Bernhard, Shames, and Teele 2021 on time constraints). Much of this work identifies these gains as products or correlates of economic stability and development (Inglehart and Norris 2003; Duflo 2012). Goldin (2006), for example, attributes growth in women's economic autonomy to broader access to "nicer, cleaner, shorter-hour, and thus more 'respectable' jobs," as well as technological advances and greater educational attainment (5). Scholars have argued that it is specifically women's entry into professional, managerial occupations —

those that require more education and skills useful for political engagement — that augments female political representation (Kenworthy and Malami 1999; Thomsen and King 2020). Women taking low-paying jobs to smooth over economic shocks may not produce similarly egalitarian outcomes, particularly where conservative cultural mores remain entrenched (Shorrocks 2018).

Other studies focus on severe shocks — such as civil war or genocide — that displace men and uproot cultural institutions, creating space for more gender-equitable norms to take hold (Tripp 2015; Gaikwad, Lin, and Zucker 2023). Absent such societal ruptures, in settings where external cultural conditions are relatively stable (Giuliano and Nunn 2021), traditional beliefs about the proper division of labor between men and women may persist.[12] Indeed, women's gains during wartime, facilitated by an acute loss of men from local communities, often dissipate when male populations rebound (Summerfield 1989; Berry 2017).[13] Even if male job loss shifts actual divisions of labor, stable institutions and norms may keep preferred gender roles moored in convention.

Disproportionate and sustained male exit is unlikely following industrial decline in advanced economies, which feature low labor mobility (Ganong and Shoag 2017; Kaplan and Schulhofer-Wohl 2017). Accordingly, shifts in breadwinning induced by industrial decline are likely to occur while men remain present in both the household and local community.[14] Likewise, industrial decline is often abrupt, brought about by rapid technological change or ascendant foreign competition (e.g., Autor, Dorn, and Hanson 2013). Observation of women quickly replacing men in the workforce may add to already widespread fears of cultural disruption (Margalit 2019). To the extent that income corresponds to subjective

[12] Conservative religious congregations, for instance, may "freeze" patriarchal understandings of gender rights (Htun and Weldon 2015, 457).

[13] Non-conflict theories of gender norm shift often consider how slow-to-change economic endowments (e.g., oil reserves), not abrupt shocks, limit or enable women's labor force participation (Ross 2008). Brulé 2023 finds that sudden climate shocks can empower women if they also "initiate male outmigration" (5).

[14] We test the validity of this assumption below (see fn. 25).

social status, the loss of a job — particularly one integral to personal and communal identities (Lamont 2000; Bell and York 2010; Kojola 2019) — may fuel interest in reviving traditional social hierarchies and divisions of labor. Resultant changes in the marriage market — namely, increased divorce rates and dimished marriage prospects for less educated men (Iversen and Rosenbluth 2010; Shenhav 2021) — likely only compound this discontent (Dal Bó et al. 2023).

Men may seek new work to mitigate for the loss of income and status or look to welfare services to compensate. But there are plausible limits to this. Skills appropriate for their prior industry may not be easily transferable to growing local industries, such as healthcare (Winant 2021), and access to job transition support is often limited in the U.S. (Kim and Pelc 2021). Men may moreover hesitate to acquire the skills necessary to work in such industries. For status-concerned men, growing industries lack appeal to the extent they are seen as feminine, emblematic of men's persistent "devaluation of traditionally female [jobs]" (England 2010, 150). The presence of women in a profession diminishes its prestige in the eyes of some men (Goldin 2014). While shifts in economic activity from men to women may increase divorce rates, limiting men's ability to lean on wives for economic support (Iversen and Rosenbluth 2010), we expect that men's distaste for employment in subjectively "feminine" industries — and dissatisfaction with the transformed labor market — will persist.

Welfare stigmas likewise limit the capacity of government assistance to compensate for decline in male-dominated industries (Gilens 1999; Shayo 2009). Men in working-class communities often take pride in and derive psychosocial value from hard, manual work and are drawn to the notion of self-sufficiency (Terkel 1974; Lamont 2000; Goldstein, Ballard-Rosa, and Rudra 2021; Hussam et al. 2022). While public assistance softens families' loss of income, it is unlikely to remedy men's perceived status loss and may even exacerbate it to the extent that men are averse to taking welfare.

We argue that this labor market shift will affect men's political preferences and voting behavior. As economic means of reclaiming subjective social status are often unavailable or unappealing, men may seek to restore the status quo ante via political mobilization. In the wake of losing breadwinning responsibilities, men may be drawn to "nostalgic" political candidates — historically situated on the right (McClosky and Chong 1985; van Kersbergen 1995; Wolbrecht 2000) — who pledge to protect traditional domestic structures, where men support their families via work outside the home, and revive male-dominated industries. Defense of this "male-breadwinner family model" characterized right-wing politics in Europe and North America throughout much of the twentieth century (Giuliani 2022, 678) and remains central to right-wing populist discourse today (Inglehart and Norris 2016).

This argument implies, importantly, that men will move to the right principally amid decline in male-dominated industries, not gender-balanced or predominantly female industries. While men can still lose work following shocks to the latter, those industries lack the masculine connotations that fuel fears of upturned gender hierarchies. Moreover, decline in those industries drives more women into unemployment, thus attenuating the broad shift in economic activity from men to women that occurs amid decline in male-dominated industries and may compound men's status anxieties.[15] In constrast, when male-dominated industries falter, even men not employed in those industries may move right insofar as decline stokes anxieties about transformed gender hierarchies in the broader community.[16]

This argument reflects the power of subjective status loss to fuel restorationist political

[15]Recent work does not emphasize this distinction. Abou-Chadi and Kurer 2021, for example, argue that threats to women's employment also "[increase] the probability of [men] voting for the radical right" (501). Baccini and Weymouth 2021 focus on industries' racial makeup, not their gender characteristics. Autor et al. 2020 and Broz, Frieden, and Weymouth 2021 link deindustrialization to populist success independent of the gender composition of afflicted workforces.

[16]These spillovers may be more common in areas with dense social network connections across industries (i.e., many people know workers in the declining industry), or where people otherwise observe changes in male-dominated industries (e.g., due to media focus on male job loss; see, for instance, *The Daily Beast*, 2021, [bit.ly/3G8KCvU]). This is often the case for large, male-dominated industries such as coal and steel (Broz, Frieden, and Weymouth 2021; Zucker 2022).

movements (Du Bois 1935; Mansbridge and Shames 2008; Suryanarayan and White 2021). It moreover captures sensitivity of men to and male distaste for improvements in the relative labor market standing of their wives and other women (Folke and Rickne 2020); men often prefer to outearn their partners (Fisman et al. 2006; Bertrand, Kamenica, and Pan 2015). Ethnographic profiles of working-class men subject to "tenuous" employment highlight a desire and nostalgia for jobs that once offered a "family wage that allowed men to be the sole or primary breadwinners" and, in turn, granted them "considerable authority within the household" (Edin et al. 2019, 214). We expect these attitudes to manifest in votes for right-wing political parties that voice support for traditional gender roles and, part and parcel of this, pledge to protect declining male-majority industries.

Hypothesis 1. *Decline in male-majority industries should cause men to seek restoration of traditional gender roles and become more supportive of right-wing political parties.*

We theorize that women will also move to the right following decline in large male-dominated industries. Women do so not because patriarchal household structures are seen as optimal. Rather, we argue that women will support right-wing, traditionalist parties out of discontent with the new situation of economic decay — a rotten deal where women work more and face compounded demands on their time while their families earn less — and a lack of attainable alternatives.

Scholars have found that women in developed democracies have broadly moved to the left in recent decades, tying this in part to growth in female labor force participation (Manza and Brooks 1998; Iversen and Rosenbluth 2010). In some cases, women are able to translate economic autonomy into enduring improvements in household bargaining power and political representation (Gaikwad, Lin, and Zucker 2023). Yet these gains may be difficult to come by amid deindustrialization, which corresponds to broad reductions in community wealth and welfare (Broz, Frieden, and Weymouth 2021; Blonz, Roth Tran, and Troland

2023). While women may enter the workforce to substitute for newly unemployed or underemployed husbands, these women will often struggle to fully replace their husbands' prior earnings.[17] Men were historically well compensated in industries such as coal and steel, while women entering service work following decline in those industries often earn less (Latimer and Oberhauser 2004; Dill and Hodges 2019). Extensive work demonstrates that where men's potential earnings exceed women's, couples prioritize husbands' careers and seek to maximize husbands', not wives', income (Strøm 2014; Goldin 2021; Hutchinson, Khan, and Matfess 2022).

Women who increase their paid work as male-majority industries decline will often encounter unique time constraints that hinder their ability to fully participate in the labor market (Goldin 2021) or local politics (Burns, Schlozman, and Verba 1997; Silbermann 2015; Teele, Kalla, and Rosenbluth 2018; Dahlgaard and Hansen 2021). Bernhard, Shames, and Teele (2021) illustrate that women's political ambition is depressed by breadwinning obligations assumed *in addition to* traditional household roles. Economically dependent husbands often fail to substitute for wives in the household (Evans 2016) — in some contexts, increasing their alcohol and drug consumption (Dean and Kimmel 2019; Case and Deaton 2020)[18] — aggravating demands on female breadwinners' time and impeding their conversion of economic autonomy into political gains.

For women able to only partially compensate for decline in male-majority industries while facing increased time constraints, restoration of the status quo ante may become a relatively attractive means of recovering economic welfare. This stems from a lack of appealing alternatives in economically distressed areas. Exit from afflicted communities is complicated by high costs of migration to healthier labor markets, particularly for less

[17] We expect that women would be less likely to move to the right if they more fully compensated for their husbands' lost earnings. Men would likely still shift rightward, as their status concerns would persist.

[18] A resident of one Appalachian coal community recounts, "When the mines left, [men] all ended up on drugs. And their women went to work" (*New York Times*, 2019, [nyti.ms/3ec0cfG]).

skilled workers (Ganong and Shoag 2017). Exit from marriage, while more available to women with better labor market prospects, may be unappealing insofar as the general environment of economic depression erodes confidence in individuals' ability to "[insure] against poverty" after divorce (Iversen and Rosenbluth 2010, 89).[19]

Women may alternatively mobilize in support of the new labor market structure, rallying for welfare reforms that would relieve the unpaid caregiving burdens that typically fall on women and enable them to increase their paid economic activity (Iversen and Rosenbluth 2006, 12–13), potentially narrowing the gap with men's prior earnings. However, welfare states designed to "maximize women's economic independence" are uncommon, and movement in this direction would require "radically recast welfare state[s]" in many countries (Esping-Andersen 1999, 45–46). Women may thus see achievement of these reforms as unlikely, especially upon entering the labor force.

Rightward shifts in the local community and household may likewise feed skepticism of the viability of the new economic arrangement. Working class communities often voice limited support for redistribution (Shayo 2009). While economic shocks may boost the appeal of welfare transfers (Margalit 2013), many men — fearing their new subordinate economic position — will resist broad reconceptualizations of the welfare state intended to cement women's newly prominent place in local labor markets. Such communal moves to the right may erode the perceived viability of the new, more gender-equitable economic structure and dissuade women from mobilizing in its favor. Women may also themselves adopt more traditionalist attitudes due to socialization by increasingly conservative husbands, whose own preferences are unlikely to be swayed by improvements in their wives'

[19] Iversen and Rosenbluth 2010 hold that "economically self-sufficient women" — those with good outside employment options beyond housework — "can abandon marriage without the economic hit that dependent women would have to endure" (89). Improved outside options brought about by growth in service industries may be counteracted by broader economic decline. Blonz, Roth Tran, and Troland 2023 find, for example, that decline in the U.S. coal industry "cause[d] significant deterioration in financial health" across local communities regardless of people's industry of employment (3).

economic standing (Kan and Heath 2006, 70).[20]

All such complications deter mobilization in support of the transformed local economy. For women, a return to the status quo ante advocated for by right-wing parties — where male-dominated industries prospered and traditional domestic structures prevailed — may be considered a more realistic, if suboptimal, means of recovering economic welfare.

Hypothesis 2. *Decline in male-majority industries should cause women to become more supportive of right-wing political parties.*

EMPIRICS

We test this theory at three levels in the context of the United States.[21] First, we draw on a unique longitudinal study of American families spanning four decades to trace shifts in within-household divisions of labor and individual gender attitudes. Using these household- and individual-level data, we link shifts in breadwinning responsibilities from husbands to wives to greater support for traditional gender roles among both men and women.

Second, we examine whether decline in male-majority industries — and, specifically, concentrated layoffs of men — has improved the election fortunes of the modern Republican Party, whose candidates have emphasized "support for traditional family [values]" (Rozell 2011, 118), "traditional women's roles" (Wolbrecht 2000, 3), and "[rejection of] feminist positions" (Strolovitch, Wong, and Proctor 2017, 359) in recent decades, while pledging to revive male-dominated industries such as coal and steel.[22] In the third empiri-

[20] Under mounting time constraints, women may receive greater shares of political information from their husbands and consequently develop more congruent preferences (Stoker and Jennings 2005; Dassonneville and McAllister 2018; Bellettini et al. 2023).

[21] Coupled households constitute 53% of all households in the U.S.; 98% of these are either married (85%) or cohabiting (13%) opposite-sex couples (American Community Survey 2022, U.S. Census Bureau).

[22] Donald Trump promised in 2016, for example, to "put our coal miners and steel workers back to work" (White House, 2017, [bit.ly/3YYJemt]). Republican emphasis on reviving these industries pre-dates Trump. In 2008, Republicans portrayed Barack Obama "as openly hostile to the [coal] industry and its workers" (Sutton 2009, 194). George W. Bush similarly pursued distinctly pro-coal policies as president (*NBC News*,

cal section, we use individual-level survey data to evaluate whether both men and women move rightward. We find that labor market shifts towards women have improved Republican electoral performance and increased Republican support among men and women, particularly in contexts of economic decay.

In evaluating electoral outcomes and vote choice, we focus on the first two decades of the twenty-first century, a period during which economic dislocations mounted in many industrial centers and a populist "backlash" emerged (Mansfield, Milner, and Rudra 2021). In our primary tests we measure employment conditions at the county level, reflecting the localized nature of industrial disruptions (Broz, Frieden, and Weymouth 2021).[23] Aggregation to the county level moreover permits use of a novel shift-share instrument for gendered workforce shifts, aiding identification of the causal effect of decline in male-dominated industries.

We gather these employment data from the Quarterly Workforce Indicators (QWI) of the U.S. Census Bureau, which records high-frequency male and female employment data for each county and industry in the U.S.[24] These data, illustrated in Figure 1, reveal pronounced rebalances of workforce composition across much of the country. Women's share of local workforces grew in 49% of counties between 2006–17, with a notable cluster of gains in the coal mining belt of Appalachia (also see Appendix C; we consider 2006–17 for these descriptive purposes in order to maximize geographic coverage of the U.S.). In 320 counties, absolute levels of female employment increased during this period while male employment fell.[25]

2004, [nbcnews.to/40N4hLp]).

The Republican Party has consistently emphasized traditional morality, including traditional family values and anti-abortion policies, to a greater extent than the Democratic Party (Appendix B). Pressure groups such as the Family Research Council, which oppose bills linked to equal pay and women's empowerment, focus their support on Republicans. See *Open Secrets*, 2023, [bit.ly/46dTWcG].

[23] The results are robust to re-estimation at the commuting zone level.

[24] In calculations involving employment levels, we use data from the fourth quarter of a given year. In calculating job loss and creation, we sum such incidents across all quarters of a given year.

[25] We find no correlation between male layoffs and changes in the male share of the local working-age

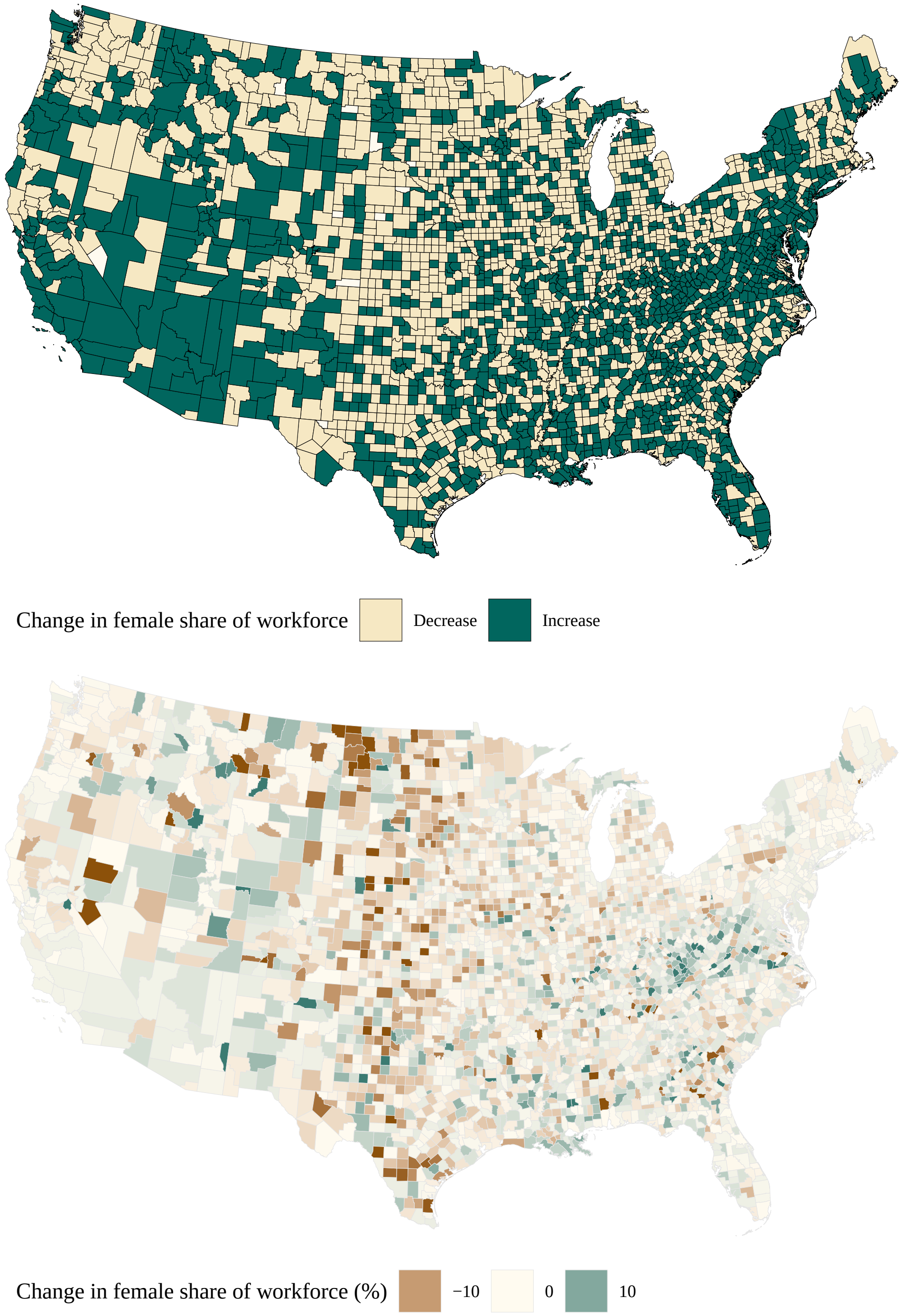

Figure 1: Growth in female workforce share, 2006–17. Data from QWI. To ease interpretation of the bottom map, values below the 1st percentile (-18.5%) or above the 99th (15.7%) are censored.

population, indicating that male job loss is not associated with disproportionate outmigration of men. County-year regression of male share of working age population on proportion of layoffs affecting men in the prior year, estimated by ordinary least squares with county and year fixed effects and standard errors clustered by county ($\hat{\beta} = 0.0003$, $p = 0.84$).

Breadwinning and Gender Attitudes

We theorize that such workforce transformations, and concomitant shifts in breadwinning responsibilities from husbands to wives, dissatisfy both men and women. We operationalize dissatisfaction as support for traditional gender roles, where men serve as breadwinners and women focus on unpaid household labor. To test this, we draw on the National Longitudinal Survey of Youth 1979 (NLSY79), a program of the U.S. Bureau of Labor Statistics. The NLSY79 is an telephone-based longitudinal survey that has followed a representative sample of U.S. residents born between 1957–64, beginning in 1979 and continuing through the present day.[26] With a broad battery of questions and high recontact rates maintained over several decades, the NLSY79 has been widely used by scholars of labor economics and public health (Rothstein, Carr, and Cooksey 2019). The NLSY79 contains detailed information on individual work experiences, family dynamics, and gender attitudes, making it uniquely well-suited to address the questions under study.

NLSY79 data confirm rapid deterioration in the economic position of men who once worked in male-dominated mining or manufacturing industries.[27] Among married, non-college educated men with experience in such industries,[28] we identify pronounced declines in their shares of household income and in the proportion of such men who outearn

[26]The survey was conducted annually from 1979–1994; it has been fielded biennially since 1996. The initial sample included 12,686 individuals (6,403 men and 6,283 women). Details on sampling available at bit.ly/3LzDQ64.

[27]We define these industries according to a 1% weighted sample of the 1970 U.S. decennial census (Ruggles et al. 2023). We identify all industries in mining and durable goods manufacturing that were at least 90% male, after excluding managers, professional staff, and workers outside the ages of 20–64. We focus on these sectors due to their cultural salience and masculine connotations (Terkel 1974; Lamont 2000). These criteria yield the following industries: coal mining (97% male); logging (96%); metal mining (96%); non-specific mining (94%); non-metallic mining excluding fuel (94%); blast furnaces, steel works, rolling and finishing mills (93%); other primary iron and steel (92%); cement, concrete, gypsum, and plaster (92%); rail locomotives (92%); shipbuilding (91%); sawmills (90%). Similar trends are found using an alternative sample of men in similar industries (Appendix D).

[28]Non-college educated men have been uniquely afflicted by unemployment and declining real wages (Binder and Bound 2019). Note that marriages are exclusively heterosexual for the majority of the NLSY79. The sample post-2004, when same-sex marriage was first legalized in the U.S., may include same-sex marriages.

their spouse. In 1985 (subjects aged 21–28), these men accounted on average for 78% of the income of themselves and their spouses; by 2018 (ages 54–61), this share had fallen to 63%. Likewise, 82% of these men outearned their spouses in 1985, in notable excess of the 62% who did so in 2018. Income shares for men who had not held such jobs, as well as for college-educated men (Appendix D), exhibit less precipitous declines. These trends suggest that decline in male-dominated industries tilts breadwinning responsibilities from men to their spouses; the trends illustrated in Figure 2 coincide with an acceleration of industrial decay in much of the U.S. (Broz, Frieden, and Weymouth 2021).[29]

We argue that this new division of labor within households is broadly unsatisfactory. Men seek a return of patriarchal domestic structures, where women principally engage in unpaid household labor. Women, while perhaps not seeing traditional roles as optimal, consider a return to the status quo to be a more attainable means of economic recovery. To test this, we consider answers to two questions included the 1982, 1987, and 2004 waves of the NLSY79. The first asked subjects for their level of agreement with the statement that "a women's place is in the home, not in the office or shop," which we take as a measure of men's views of traditional gender roles as optimal. The second asked subjects whether they agreed that "women are much happier if they stay at home and take care of their children," which we interpret as a measure of women's relative preference for traditional gender roles. Across the sample, 16% of men agreed with the former statement and 28% of women with the latter.

For married, non-college educated men in the NLSY79, we regress a binary indicator of agreement that "a women's place is in the home" on their wives' shares of household income and their own work experience in male-dominated mining and manufacturing.[30]

[29]Corroborating this, we associate shifts in men's relative earnings with changes in sectoral employment and pay in supplementary regression analyses (Appendix E). Media reports point to this phenomenon as well (*New York Times*, 2019, [nyti.ms/3ec0cfG]); also see Autor, Dorn, and Hanson 2019; Shenhav 2021. We find no significant association between sectoral decline and divorce for men in these industries (Appendix F).

[30]We adopt the same definition of male-dominated industries here as in footnote 27.

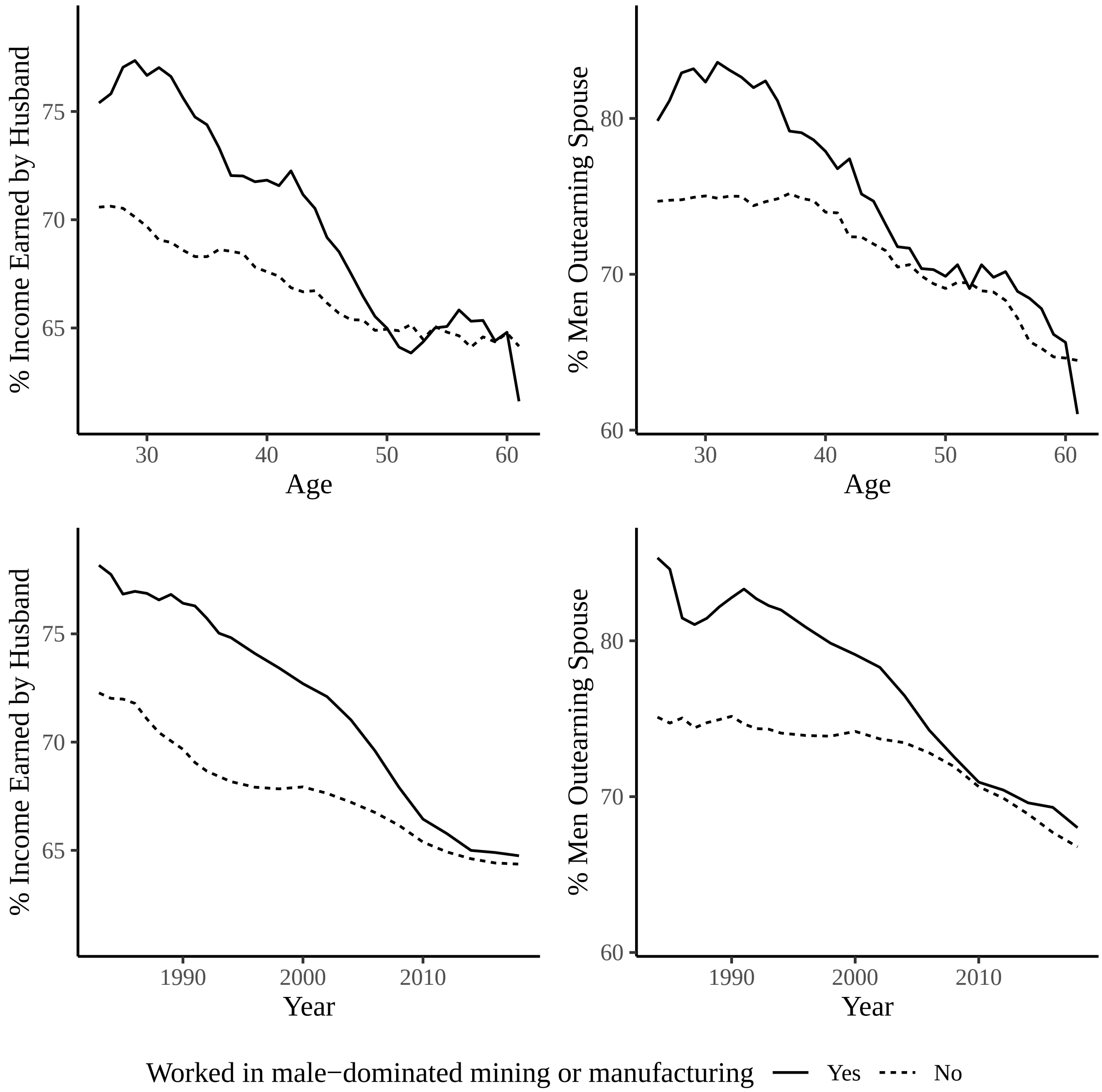

Figure 2: Changes over time in employment income (wages and salary) earned by married, non-college educated men born between 1957–64. Left-hand plots depict income as a share of household income (individual plus spouse). Right-hand plots depict proportions of men outearning their spouses. Men who had worked in mining or manufacturing industries prior to a given survey wave distinguished from other men. Plots depict five-year rolling means calculated with sample weights.

For married women, we regress a binary indicator of agreement that "women are much happier if they stay at home" on their own income share and their husbands' experience in such industries.[31] We include individual and year fixed effects in these regression mod-

[31] NLSY79 lacks data on spouses' industries of employment. In lieu of this, we estimate spouses' employ-

els, as well as subjects' level of household income, educational attainment, the number of children present in their household, and their region of residence. This approach, though observational, nonetheless sheds light on how within-household shifts in economic activity may affect gender attitudes over time.[32]

Table 1 shows that the probability of agreement these statements varies with women's breadwinning status, but in ways dependent on husbands' employment history. For men with no extensive history of work in male-dominated mining or manufacturing, growth in wives' relative income is associated with less patriarchal beliefs. Model 2 indicates, for example, that men in this category whose wives increase their income share by 30 percentage points (one standard deviation) are six percentage points less likely to believe that women belong in the home, not the workplace.[33] Men with at least two years work experience in these industries, by contrast, are nine points *more* likely to see traditional gender roles as ideal when their wives become breadwinners.[34] These results illuminate how shifts in economic activity from husbands to wives are distinctly unsettling for men in male-dominated, prototypically masculine industries.[35]

Table 1 likewise points to dissatisfaction among women with the new household arrangement. Seventy-two percent of married women in the NLSY79 disagree that "women are much happier if they stay at home and take care of their children." This return to

ment in these industries according to their reported occupations (see Appendix G).

[32]Reverse causation is possible: gender attitudes may affect the distribution of earnings between husbands and wives. However, we expect increases in women's earnings to correspond to more traditional gender attitudes. It is unclear why such attitudes would cause women to earn *more* rather than less. Reverse causality thus implies the opposite of what we argue.

[33]As a placebo test, we measure men's experience in industries that are at least 70% *female*. We find no evidence that the association between spousal earnings and gender attitudes varies with work in these industries (Appendix G).

[34]Men have a high baseline preference for being the breadwinner. In an original survey of American adults conducted in late 2022, we find that 62% of men expressed a desire to earn more than their spouse, in significant excess of the 45% of women who indicated that they would ideally earn more (t-test $p = 0.000$). See Appendix H for survey details. These findings support long-running findings that men have a general preference to act as the breadwinner (Fisman et al. 2006; Bertrand, Kamenica, and Pan 2015).

[35]We principally obtain these results for non-Black and non-Hispanic men. We find less evidence of these trends among Black and Hispanic men (Appendix I).

	NLSY79: Gender Attitudes (1982–2004)			
	Pr(Agree: Woman's Place Is in the Home = 1)		Pr(Agree: Women Happier at Home = 1)	
	Sample: Married Men (No College)		*Sample:* Married Women	
	(1)	(2)	(3)	(4)
Wife income share (%)	-0.002^{**}	-0.002^{*}	-0.002^{***}	-0.001^{**}
	(0.0007)	(0.0007)	(0.0004)	(0.0005)
Husband worked in mining/manuf.	-0.193^{*}	-0.182^{*}	-0.108	-0.109
	(0.091)	(0.085)	(0.077)	(0.078)
Wife inc. share × husband in mining/manuf.	0.005^{*}	0.005^{*}	0.006^{**}	0.006^{**}
	(0.002)	(0.002)	(0.002)	(0.002)
N	2,428	2,351	5,220	5,051
Adjusted R^2	0.206	0.244	0.224	0.235
Individual controls		✓		✓
Individual fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

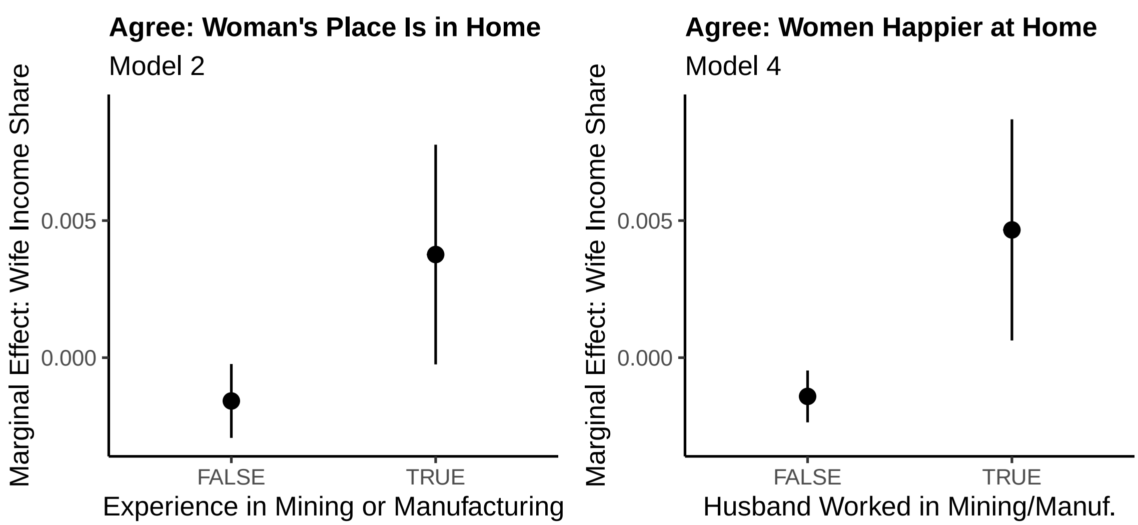

Table 1: Least squares regressions of gender attitudes on womens' household income share, interacted with husbands' work in male-dominated mining or manufacturing (at least two years work experience: 0/1). Graphical inserts display marginal effects with 95% confidence intervals. Models 1–2 evaluate agreement with the statement, "a woman's place is in the home, not in the office or shop." Models 3–4 evaluate agreement with the statement, "it is much better for everyone concerned if the man is the achiever outside the home and the woman takes care of the home and family." Individual controls, lagged by one year, include family income, number of children present in household, region of residence, and educational attainment. Standard errors clustered by individual. Individual-level sample weights included. Full covariate results in Appendix G.

traditional divisions of labor is more attractive, however, for women with husbands who had worked in male-dominated mining or manufacturing (2,043 women in the sample are estimated to be married to such men). Model 4 suggests that these women become 15 percentage points *more* likely to agree that women would be happier staying at home when upon their income share by 30 points. No such attitudinal change is apparent among women married to men without experience in these industries.

We anticipate that these expressions of traditional gender attitudes correlate with support for the Republican Party. To test this, we rely on the 2008 wave of the NLSY79, which asks subjects for their party affiliation and strength of partisan identification. We regress binary indicators of affiliation with the Republican Party and of "strong" Republican affiliation in 2008[36] on each subject's gender attitudes in 2004. We find that preferences for traditional gender roles are associated with increased probabilities of Republican identification among both men and women (Appendix J). Among men, agreement that "women's place is in the home" is associated with a seven-point increase in the likelihood of strong Republican affiliation. Among women, agreement that women are happier at home is associated with an 11-point increase in the probability of strong Republican affiliation.

Electoral Outcomes

These findings indicate that decline in male-dominated industries and shifts in economic activity from husbands to wives increase the appeal of traditional gender roles. We expect these trends to improve electoral outcomes for the Republican Party. Here we assess the effect of layoffs of men and women's entry into the workforce on Republican electoral performance. We do so via observational panel analyses and a shift-share instrumental variables strategy.

[36]The NLSY79 only asked questions of this sort in the 2008 wave. Data on vote choice or other political attitudes are not available. Subjects were asked whether they were a "strong" or or "not very strong" Democrat/Republican.

We first evaluate whether gendered workforce shifts bolster Republican performance in elections for the U.S. House of Representatives. The biennial nature of House elections allows for high-frequency analyses of how labor market changes shape subsequent electoral outcomes. We estimate the following model by ordinary least squares:

$$\text{Republican Vote Share}_{ct} = \beta \left[\text{layoffs}_{c(t-1)}\right] + \gamma \mathbf{X}_{c(t-1)} + \alpha_c + \delta_t + \varepsilon_{ct}$$

where Republican Vote Share$_{ct}$ is the Republican Party's two-party vote share in county c and year t. We define, in separate models, *layoffs* as (a) the net change in the gender makeup of a county's workforce[37] and (b) the counts of men and women, in thousands, laid off in the year preceding an election. We include layoffs of women to ensure that male layoffs are not conflated with instances of decline that equally afflict men and women. $\mathbf{X}_{c(t-1)}$ is a vector of county-year control variables measured the year prior to the election, including counts of men and women employed, unemployment rate, population, male proportion of working-age population, white population share, and an indicator of whether a Republican candidate outperformed the Democratic candidate in the preceding election.[38] α_c and δ_t are county and year fixed effects. ε_{ct} is an error term clustered by county.

Table 2 displays the estimates of this model. A standard deviation shift towards women — narrowing the gender gap in workforce participation by 860 workers — prompts a 0.3-to-0.4-point swing towards Republicans. These estimates are substantially larger in more economically distressed counties (Appendix Q). Male layoffs — not female layoffs — are likewise associated with sizable increases in Republican vote share across specifica-

[37]We calculate net change in gender makeup as the net change in women's employment (job creation minus loss), minus the net change in men's employment. Using net change and layoffs, rather than unemployment, ensures that the specification estimates the effect of the decline in male-majority industries rather than the endogenous decisions to stay unemployed.

[38]We gather election outcome data from David Leip's Atlas of U.S. Congressional and Presidential Elections; workforce data from QWI; unemployment data from the Bureau of Labor Statistics; and population data from the National Cancer Institute.

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Net shift towards women (st. dev.)	0.394^{***}		0.324^{***}	
	(0.086)		(0.078)	
Men laid off (ln)		12.023^{***}		7.949^{***}
		(1.517)		(1.583)
Women laid off (ln)		-10.516^{***}		-2.612
		(2.349)		(2.389)
N	21,633	21,633	18,513	18,513
Adjusted R^2	0.695	0.695	0.718	0.718
County controls			✓	✓
County fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table 2: Regressions of county-level Republican two-party vote share in House elections (2006–18) on gendered workforce shifts (defined in thousands of workers). Standard errors clustered by county. Right-hand side variables lagged by one year. Full covariate results in Appendix K.

tions. Within counties, a 25% increase in the number of male layoffs is correlated with a three-point rightward swing, enough to flip 3.5% of county-level results between 2006–18 towards the Republican candidate.[39] By contrast, female layoffs correspond to no such rightward swing and are in fact associated with diminished Republican support, a finding we return to in the conclusion.

These results are robust to the inclusion of state-by-year fixed effects to account for states' distinct political trajectories over time (Appendix L); inclusion of county-specific linear time trends to account for unobserved heterogeneity across counties that varies over time (Appendix M); re-estimation at the commuting zone level (Appendix N); and to the exclusion of any single county from the sample (Appendix O). The results are also robust to calculating layoffs as proportions of baseline employment levels (Appendix P).

It is possible that these analyses conflate male layoffs with decline in male-majority

[39]As previously mentioned, we focus on this period due to the broad geographic coverage of workforce data for these years.

industries that drive rightward shifts for reasons independent of gender. For example, coal decline might augment Republican support due to the industry's unique cultural value (Bell and York 2010), not due to its predominantly male workforce. Similarly, layoffs in male-dominated industries may receive more media attention than those in other industries, prompting stronger political responses.[40] To account for this, we re-estimate these models focusing on employment changes *within* male-dominated mining and manufacturing industries.[41] If gender does not play a role, we would expect both male and female layoffs in these industries to increase Republican vote share.

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Net shift towards women	0.360^{**}		0.223^{+}	
	(0.133)		(0.129)	
Men laid off (ln)		8.549^{*}		6.659^{+}
		(3.659)		(3.448)
Women laid off (ln)		−8.709		−13.994
		(11.311)		(11.206)
N	10,131	10,131	8,663	8,663
Adjusted R^2	0.697	0.697	0.736	0.736
County controls			✓	✓
County fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table 3: Replication of Table 2, examining workforce shifts only in male-dominated mining and manufacturing. Sample limited to counties with non-zero employment in these sectors in prior year. Standard errors clustered by county. Full covariate results in Appendix R.

Table 3 suggests that within these industries, male layoffs have effects distinct from those of female layoffs. Men losing work is again associated with increases in Republican vote share, while women's job loss is not. This implies that independent of general industrial decline, even in culturally prominent industries such as mining and manufacturing, it

[40]Greater media attention would be consonant with our theoretical claim that men's jobs are prioritized over women's.

[41]As defined in footnote 27.

is the specific loss of *men's* jobs that boosts right-wing parties.

To gain causal leverage, we compute a shift-share instrument to estimate how workforce shifts towards women have affected Republican vote share.[42] This identification strategy addresses the potential non-random distribution of economic shocks (see Baccini and Weymouth 2021). We define this county-level instrument Z_c as:

$$Z_c = \sum_j \left(\frac{\text{Employment}^w_{jc}}{L^w_c} - \frac{\text{Employment}^m_{jc}}{L^m_c} \right) \times \frac{\text{Net change}_{j-c}}{L_{j-c}}$$

where $\text{Employment}^{w,m}_{jc}$ is the number of employees in industry j and county c at the end of 2003, recorded separately for women w and men m, and $L^{w,m}_c$ is the total number of women and men employed in each county at that time.[43] The first term of this equation accordingly captures how women and men were distributed across local industries and differentially exposed to industry-level shocks. Net change_{j-c} records the change in the nationwide workforce size for industry j between 2004 and 2015 (hires minus layoffs, excluding county c), divided by the initial workforce size L_{j-c}. This second term represents the "shift" in each industry. The instrumental variable thus estimates changes in the gender makeup of county workforces between 2004–15 as a function of counties' industrial structures in 2003.

Required for this identification strategy is the assumption that nationwide shifts in hires and layoffs are (conditionally) exogenous to economic and political conditions in individual counties (Borusyak, Hull, and Jaravel 2022).[44] In Appendix S, we validate this instrument

[42] We operationalize the endogenous variable – net shifts towards women – as the difference in net employment changes for women and men (defined for each as job gains minus job losses), divided by starting workforce size.

[43] We define industries at the NAICS four-digit level.

[44] Borusyak, Hull, and Jaravel 2022 show that this assumption is equivalent to the exclusion restriction for the shift-share design. In other words, the baseline distribution of women and men across industries must only affect the outcome via its effect on the shift in local workforce from men to women (conditioning on controls capturing economic conditions potentially collinear to local shocks, other county-year variables as described above, and state fixed effects). While the shift component of the instrument follows the literature, our novel share component ensures that the instrument captures county-level exposure to gendered shifts in workforce makeup as predicted by national shifts in workforce size and the distribution of women and men

by analyzing the distribution of the shocks, performing balance tests that support the assumption of conditional exogeneity in shock assignment, and illustrating the strength of the first-stage relationship.

	Δ Republican Vote Share (2004–16, %)			
	House		Presidency	
	(1)	(2)	(3)	(4)
Net shift towards women (st. dev.)	8.525**	11.925*	5.564***	9.833**
	(3.172)	(5.262)	(1.428)	(3.166)
N	3,063	3,033	3,113	3,036
First-stage coefficient	2.76***	1.88***	2.74***	1.87***
	(0.505)	(0.560)	(0.500)	(0.559)
F-statistic	51.1	21.8	51.8	21.7
County controls		✓		✓
State fixed effects	✓	✓	✓	✓
$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$				

Table 4: Two-stage least squares regressions of change in Republican vote share between 2004 and 2016 on shifts in workforce composition towards women between 2004 and 2015. Robust standard errors parenthesized. Full covariate results in Appendix T.

Table 4 reports the results of two-stage least squares regressions for House and presidential elections, comparing county-level results in 2016 to those in 2004. Across both sets of elections, we find that growth in women's share of local workforces caused substantial Republican gains. A standard deviation shift towards women (equivalent to 14% of initial workforce size) between 2004–15 fueled a nine-to-eleven percentage point swing towards Republican candidates for the House. This shift likewise caused a six-to-ten point move towards Donald Trump in 2016 compared to George W. Bush in 2004. These results are robust to controlling for counts of men and women employed, county-level population, unemployment, male proportion of the working age population, white proportion of the population, and an indicator of whether the Republican House candidate outperformed the

across industries.

Democratic candidate in 2004.

Vote Choice by Gender

We next examine whether, as theorized, both men and women become more supportive of Republican candidates following male job loss. To do so, we draw nationally representative survey data on individual vote choice in House elections between 2006–20 from the Cooperative Election Study (Ansolabehere and Schaffner 2017; Kuriwaki 2022). We first conduct these tests with observational data on layoffs by county, including state and year fixed effects to account for unobserved differences between states and election years.[45] We then utilize the shift-share instrument described above.

	Pr(Vote for Republican = 1)					
	All Respondents		Men		Women	
	(1)	(2)	(3)	(4)	(5)	(6)
Men laid off (ln)	0.287***	0.089***	0.265***	0.064+	0.305***	0.112***
	(0.052)	(0.024)	(0.055)	(0.033)	(0.055)	(0.028)
Women laid off (ln)	−0.354***	−0.119***	−0.329***	−0.096**	−0.375***	−0.140***
	(0.052)	(0.024)	(0.056)	(0.032)	(0.056)	(0.027)
N	227,324	195,250	112,138	97,238	115,186	98,012
Adjusted R^2	0.058	0.410	0.056	0.370	0.063	0.447
County controls		✓		✓		✓
Individual controls		✓		✓		✓
State fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table 5: Least squares regressions of reported votes for Republican House candidates, 2006–2020, on county-level layoffs in preceding year. Standard errors clustered by county. CCES observation weights included. Full covariate results in Appendix V.

The results of these individual-level tests, reported in Table 5, support the prior county-level findings. Local male layoffs prompt sizable increases in the likelihood of voting

[45] Results are robust to including county instead of state fixed effects (Appendix U).

Republican among both men *and* women, whereas layoffs of women are associated with no such rightward shift. These patterns remain when controlling for a battery of county- and individual-level covariates, including party identification.[46] In the fully specified models, a 25% increase in the rate of male layoffs renders men and women 1.4-to-2.5 points more likely to vote Republican. Female layoffs conversely reduce individuals' likelihood of voting Republican; a commensurate increase in female layoffs erodes Republican support by 2.1-to-3.1 points. We do not find that male layoffs correlate with general election turnout among men or women (Appendix V). We find similar results when focusing specifically on layoffs in mining and metal manufacturing: male layoffs boost Republican support, while layoffs of women — even in the same industries — do not (Appendix W).

Supportive results are likewise found when examining vote choice in 2016 with the instrument described above. Table 6 shows that shifts in workforce makeup towards women between 2004–2015 boosted Republican popularity among men and women, both in local congressional races and for Trump. Across voters in a single state, a standard deviation swing towards women in a county workforce made voters ten points more likely to back the Republican House candidate and five points more likely to support Trump, independent of their party identification and other individual- and county-level factors. We do not find that workforce shifts towards women meaningfully affected male or female election turnout (Appendix X).[47] These results indicate that Republican electoral gains are driven by increased support among men and women, as theorized.

As a final analysis, we consider how women's vote choice varies with changes in house-

[46]County controls (lagged by one year) include the number of men and women employed, unemployment rate, male proportion of the working-age population, population, and party of the incumbent House member. Individual controls include race (white or nonwhite), age, gender, marital status, possession of a four-year college education, party identification, and family income.

[47]County controls (lagged by one year) include the unemployment rate, male proportion of the working-age population, and population. Individual controls include race (white or nonwhite), age, gender, marital status, possession of a four-year college education, party identification, and family income. We measure turnout as having a validated record of having voted in either the general election or a primary election.

	Pr(Vote for GOP House Cand. = 1)			Pr(Vote for Trump = 1)		
	All	Men	Women	All	Men	Women
	(1)	(2)	(3)	(4)	(5)	(6)
Net shift towards women (st. dev.)	0.095***	0.109***	0.081**	0.053**	0.052+	0.055*
	(0.024)	(0.031)	(0.028)	(0.019)	(0.027)	(0.022)
N	51,326	23,917	27,409	56,219	26,142	30,077
First-stage coefficient	7.52***	7.99***	7.19***	7.63***	8.23***	7.20***
	(1.10)	(1.34)	(1.18)	(1.13)	(1.43)	(1.14)
F-statistic	1408.0	730.2	693.8	1559.8	809.9	766.2
County controls	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table 6: Two-stage least squares regressions of votes in the 2016 general election on shifts in workforce composition towards women between 2004 and 2015. Samples limited to validated voters in 2016 general election. Standard errors clustered by county. CCES observation weights included. Full covariate results in Appendix X.

hold income. Following decline in male-dominated industries, women provide larger slices of shrinking pies, struggling to fully compensate for men's loss of work. We theorize that frustration with this situation of economic scarcity pushes women to the right. To test this, we estimate the effect of workforce shifts separately for women in households where the income during the past year increased, decreased or stayed the same. We find that shifts in workforce makeup towards women increased the probability of Republican voting most significantly for women experiencing overall declines in household income (Appendix Y). There is no similar pattern among men. These heterogeneous effects support the contention that economic scarcity following male job loss is a key source of women's move to the right.

CONCLUSION

This paper explores the gendered dimensions of industrial decline. We argue that contractions of male-dominated industries and concentrated layoffs of men drive households towards the political right. Men affected by such decline suffer status loss and embrace parties that promise to restore men's place of prominence within the household and community. To compensate for husbands' loss of income, women become increasingly active in local labor markets but struggle to fully replace their husbands' prior earnings. These women left underpaid and overburdened likewise move to the right, seeing a return of the status quo ante as the most plausible means of recovering economic welfare. In support of these claims, we bring to bear extensive evidence on household divisions of labor, gender attitudes, election outcomes, and individual vote choice. We find consistent evidence that shifts in economic power from men to women — measured as male layoffs, changes in the gender makeup of local workforces, and the balance of income within married couples — lead both men and women to move right, improving Republican electoral fortunes.

Our findings are notable amid an ongoing move by the U.S. right to reaffirm traditional domestic structures, exemplified by a "neopatriarchal" pursuit of abortion restrictions (Leach 2020, 320; Reingold et al. 2021). This paper helps make sense of the support right-wing parties find among women and men, speaking to scholarly debates over the anti-globalization backlash that has afflicted advanced economies in recent years. Rather than this backlash having a purely economic origin, we find that it is intimately interwoven with cultural attitudes and fears (Margalit 2019). Complementing recent work on the ethnoracial aspects of this backlash (Baccini and Weymouth 2021), this paper highlights gender as an important source of discontent amid economic disruption.

This paper also clarifies when economic tumult bolsters the political right versus left. The argument we lay out is consistent with the extensive literature showing that industrial decline buttresses rightist movements (Baccini and Weymouth 2021; Ballard-Rosa et al. 2021; Milner 2021). Yet other studies link decline to greater support for leftist policies and parties (Margalit 2013; Autor et al. 2020; Alt et al. 2021). In this paper, we find some evidence that while male layoffs aid the right, female layoffs have the opposite effect, reducing support for Republicans among men and women in favor of the Democratic Party. These divergent findings suggest that status concerns play a central role in dictating the direction of these effects. The loss of male jobs and subsequent upheaval of subjective status hierarchies may strengthen right-wing parties due to their promise of restoring the social status quo ante (cf. Margalit 2019). Loss of women's income may not similarly upset normative expectations. Female layoffs may accordingly be viewed less as a sign of cultural turmoil and more as a source of material scarcity. These experiences of material loss may render left-wing redistributive policies more attractive.

Our argument should generalize to cases where gender-imbalanced industrial decline occurs in the presence of a right-wing party that emphasizes a return to traditional household and labor market structures. It may be particularly generalizable to monoeconomies, where single industries are dominant in the local community; in more diversified economies, decline in select industries may not prompt similar aggregate changes in election outcomes. Political institutions may also accentuate or attenuate the results we identify. We suspect that women will move to the right most under "familialistic" welfare states, present in much of the West, that expect family members to be primary caregivers. These obligations impede women's ability to politically mobilize and earn equal wages with men (Dahlgaard and Hansen 2021; Goldin 2021). "De-familialized" welfare systems, prominent in Scandinavia, relieve these burdens on women and may allow them to mobilize in support of the new labor market structure (Esping-Andersen 1999, 45). We encourage scholars to explore how the effects of decline in male-dominated industries vary with welfare states.

These findings may also extend to developing countries that feature entrenched patriarchal norms and low levels of female labor force participation.[48] However, labor mobility in developing countries is often relatively high, aiding outmigration after economic shocks. Recent work suggests that this mobility, to the extent that it facilitates the outmigration

[48] *Brookings*, 2022, [brook.gs/3MI3LqF].

of men, may create space for women to secure meaningful political and economic gains (Brulé 2023). How labor mobility breaks the link between large-scale male job loss and right-wing backlash is an important question for future work.

There may be temporal conditions to our theory. We focus largely on short-to-medium-term responses to industrial decline. The disjunction between actual and preferred divisions of labor that we theorize may be most apparent in this time frame. Over generations, reformed divisions of labor — if sustained — may gradually displace traditional gender norms (Alesina, Giuliano, and Nunn 2013; Gaikwad, Lin, and Zucker 2023).[49] Younger Americans in areas afflicted by the initial wave of deindustrialization in the 1970s, for example, may hold more equitable gender attitudes today than older generations did after the initial economic shock. Research on how the effects of decline change over time — and, importantly, the conditions under which women maintain their new economic position for the long term — would be a valuable contribution.

This paper shows that the gender segmentation of industries has powerful implications for how people make sense of their economic security. Such gender imbalances may accordingly shape specific policy debates. Decarbonization, for example, necessitates the phasing out of male-dominated fossil fuel industries (Bush and Clayton 2023). Our results indicate that gender-based concerns about cultural upheaval may fuel broad backlash to climate change mitigation efforts. Scholars should investigate the conditions under which such a pro-carbon backlash is more or less likely to emerge. One possibility is that backlash is more likely where fossil fuel industries once paid well; in contexts such as India where many fossil fuel workers are paid very little,[50] the carbon-intensive status quo may do less to bolster men's economic standing and thus be seen as less attractive. Another possibility is that "just transition" policies that move workers to new industries attenuate

[49] Iversen and Rosenbluth 2010 note that "in the short and medium run, values are very powerful." Over the long term, "material forces shape both institutions and values" (14).

[50] *Brookings*, 2021, [bit.ly/3QNdzlF].

such backlash; however, efforts to move men to industries that lack the masculine connotations of fossil fuel industries may fail to have this effect. The gender makeup of industries is a fundamental aspect of how communities experience, cope with, and respond to their decline.

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Appendices

A. Workforce Polarization by Gender vs. Ethnicity/Race

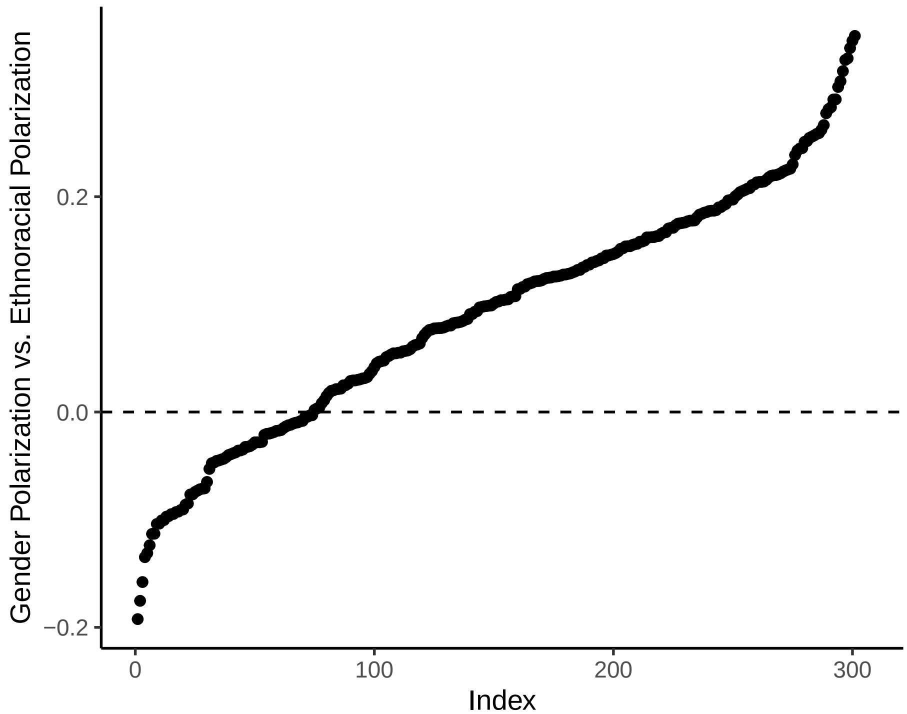


Figure A1: Differences in the gender vs. ethnoracial polarization of NAICS four-digit industries (2020Q4, data from QWI). Polarization calculated as the absolute difference between the proportion of an industry's workers who are male or white/non-Hispanic and the nationwide average for that group (52% male; 63% white/non-Hispanic). Values above zero indicate that the industry is more polarized by gender than ethnicity/race; industries indexed in ascending order.

B. Traditional Values in Party Manifestos

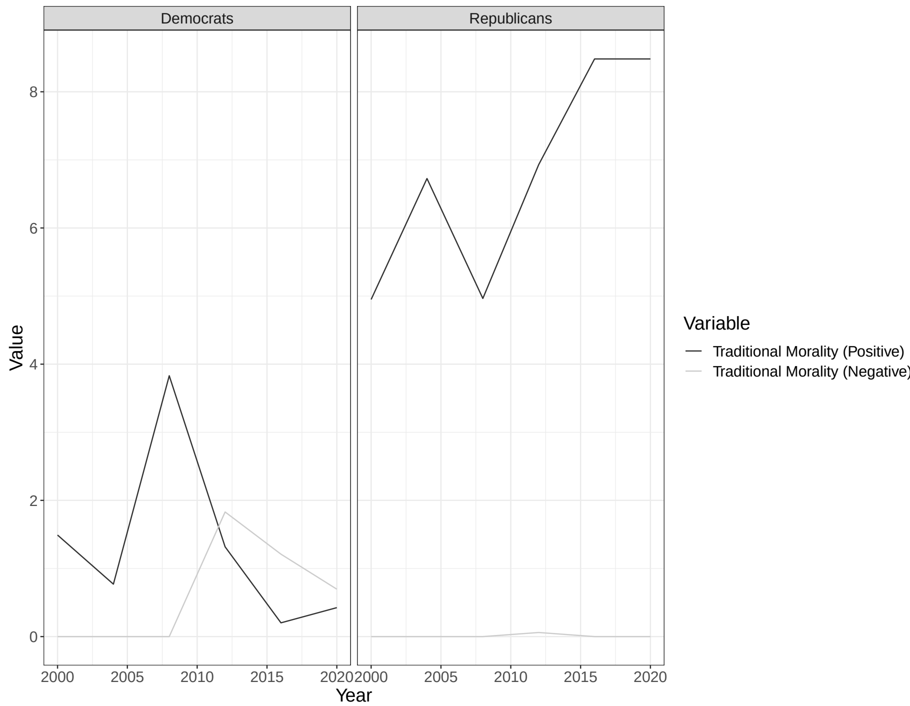


Figure B1: Differences in party emphasis on traditional morality in party manifestos (data comes from Comparative Manifesto Project). Traditional Morality denotes mentions of traditional and/or religious moral values, which include suppression of "unseemly behavior," maintenance and stability of the traditional family as a value (with the woman as the homemaker), and support for the role of religious institutions in state and society. Republicans have persistently made positive references to these attributes while Democrats do so less often, instead making negative references to them. Democratic manifestos are more favorable to abortion, divorce, and a modern family composition.

C. Job Losses by Gender

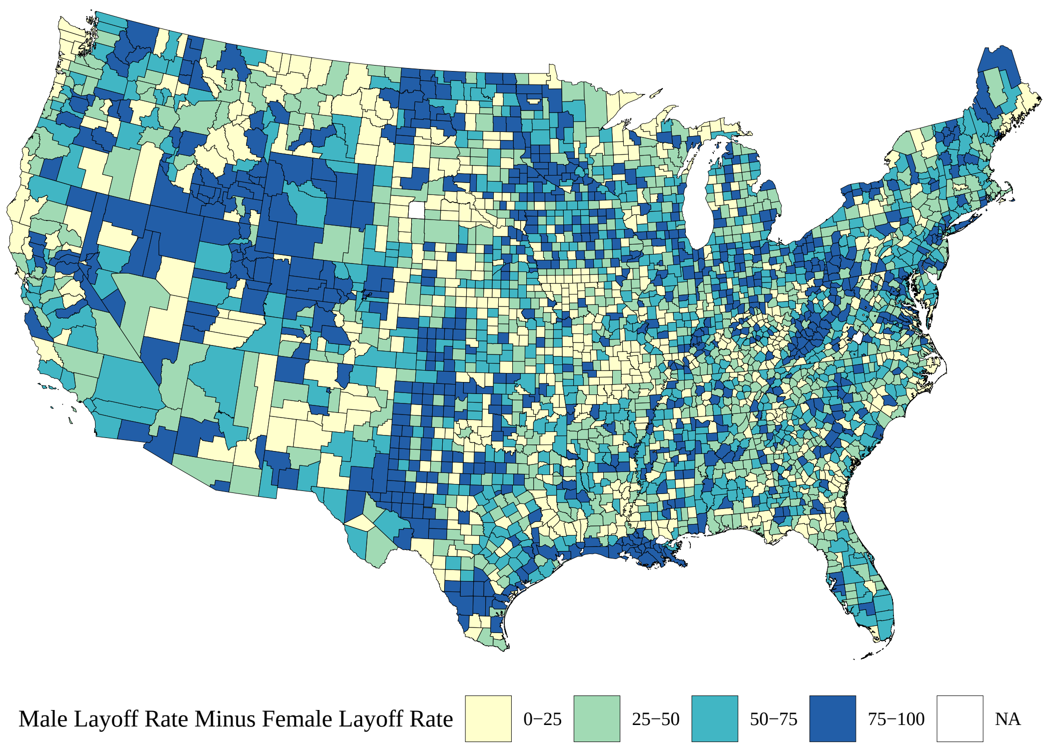


Figure C1: Quantiles of the difference in male vs. female layoffs between 2004–2020 (darker shades: more men than women laid off as percentage of working age population).

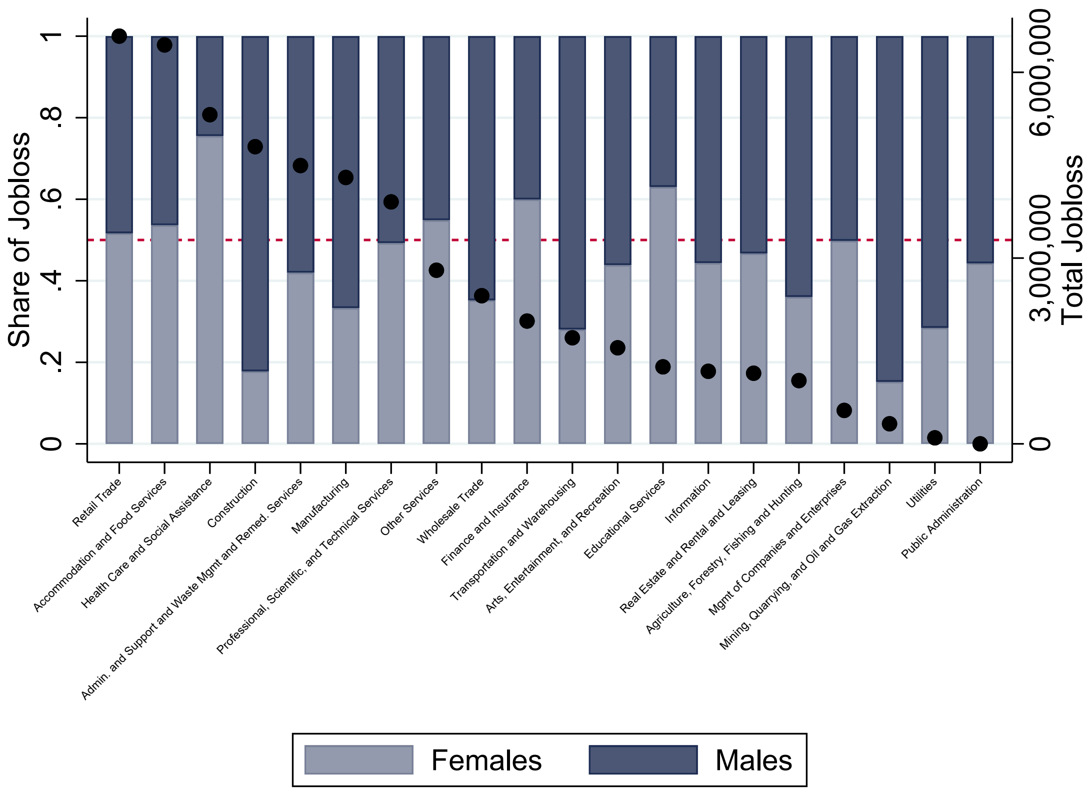


Figure C2: Shares of job losses by gender for each NAICS 2-digit industry (2004–16). The industries are ordered by the total number of job losses (indicated by the black dots).

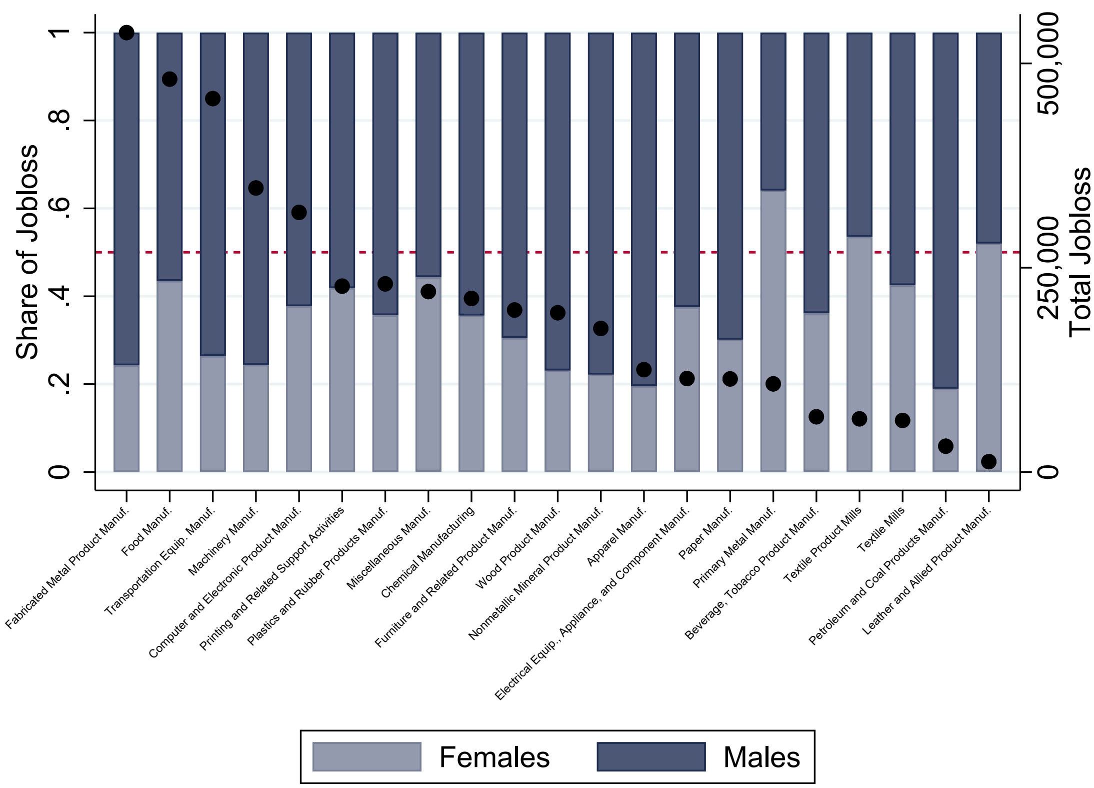


Figure C3: Shares of job losses by gender for each NAICS 3-digit industry in the U.S. manufacturing sector (2004–16). The industries are ordered by the total number of job losses (indicated by the black dots).

D. Income Trends

D.1. Alternative Definition of Workers in Male-Dominated Industries

In this alternative analysis, we identify married men who held blue-collar positions across mining or manufacturing industries. We focus on these workers due to the persistent gender-segmentation of these occupations and their documented centrality to individual and communal identities (Lamont 2000; Cotter, Hermsen, and Vanneman 2005). We define "blue-collar" occupations as either (*a*) those held by someone with no more than a high school education, or (*b*) those involving large amounts of manual labor.

This definition follows, among others, the U.S. Department of Labor, 2019, [bit.ly/40khHx0]. We consider non-college educated workers due to our assumption that such individuals are likely to work manual labor-intensive jobs when employed in mining or manufacturing. We consider manual labor-intensive jobs to be occupations classified by IPUMS USA [bit.ly/41r2IBH] as craftsmen and kindred workers (e.g., foremen, electricians); mechanics or repairmen; operatives (e.g., blasters, furnacemen); precision machine operatives (e.g., sawyers, solderers); or non-farm laborers (e.g., freight handlers, teamsters). For post-2000 observations, we consider occupations classified under construction, extraction, and maintenance or production, transportation, and material moving to be blue collar [bit.ly/3KXZjVL]. In the NLSY79, 90% of subjects reporting one of these occupations had not received any college education.

Figure D1 reveals a marked decline in the relative earnings of married men who once held blue-collar jobs in mining or manufacturing. In 1985 (subjects aged 21–28), these men accounted on average for 75% of the income of themselves and their spouses; by 2018 (ages 54–61), this share had fallen to 64%. Likewise, 84% of these men outearned their spouses in 1985, in notable excess of the 67% who did so in 2018. Income shares for men who had not held such jobs, by contrast, were steadier between these years.

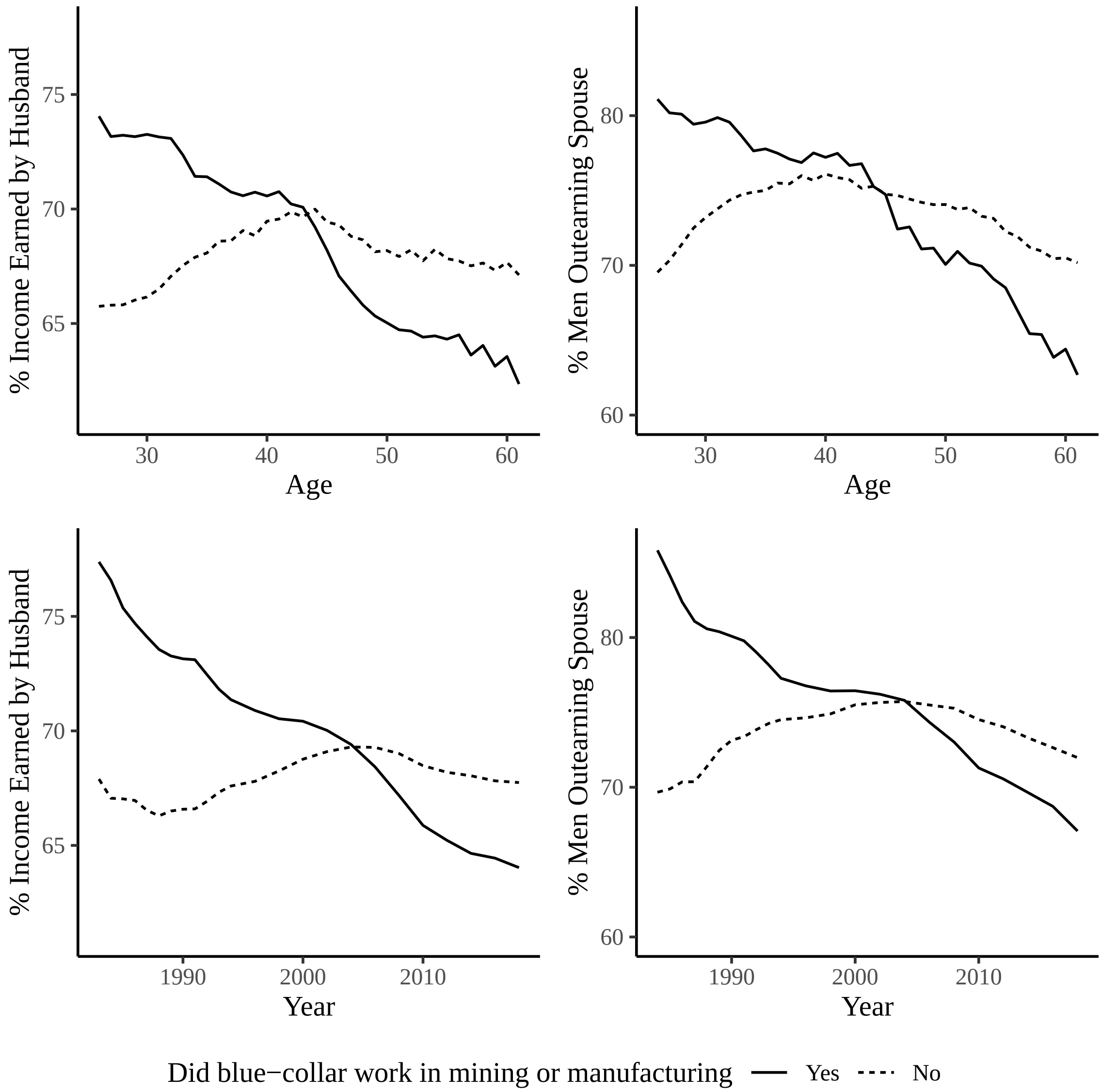


Figure D1: Changes over time in share of household employment income (wages and salary) earned by married men born between 1957–64. Men who had worked blue-collar jobs in mining or manufacturing industries prior to a given survey wave distinguished from other men. Plots depict five-year rolling means calculated with sample weights.

D.2. All Married Men

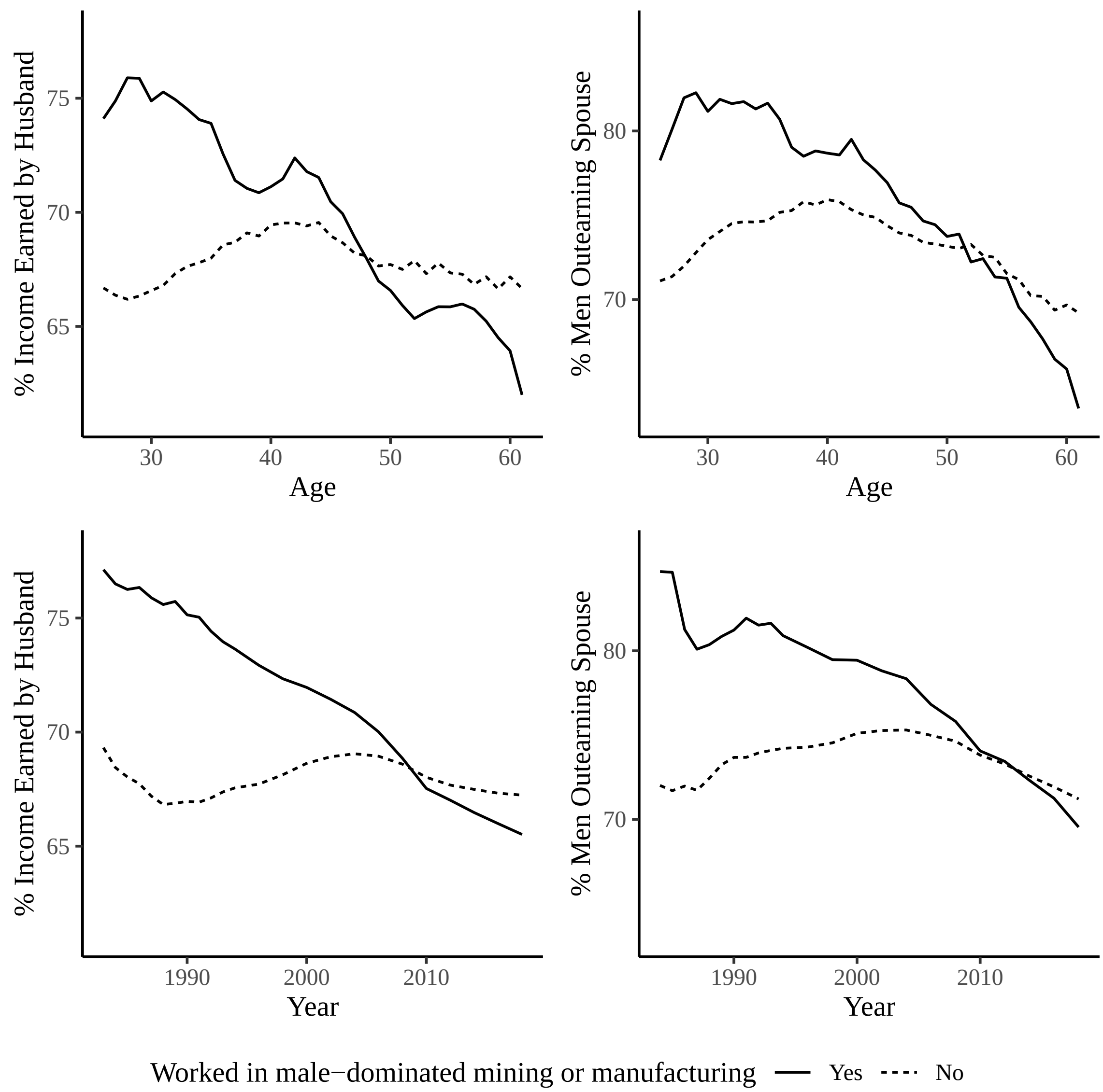


Figure D2: Replication of Figure 2, sample limited to all married men (regardless of educational attainment).

D.3. College-Educated Men

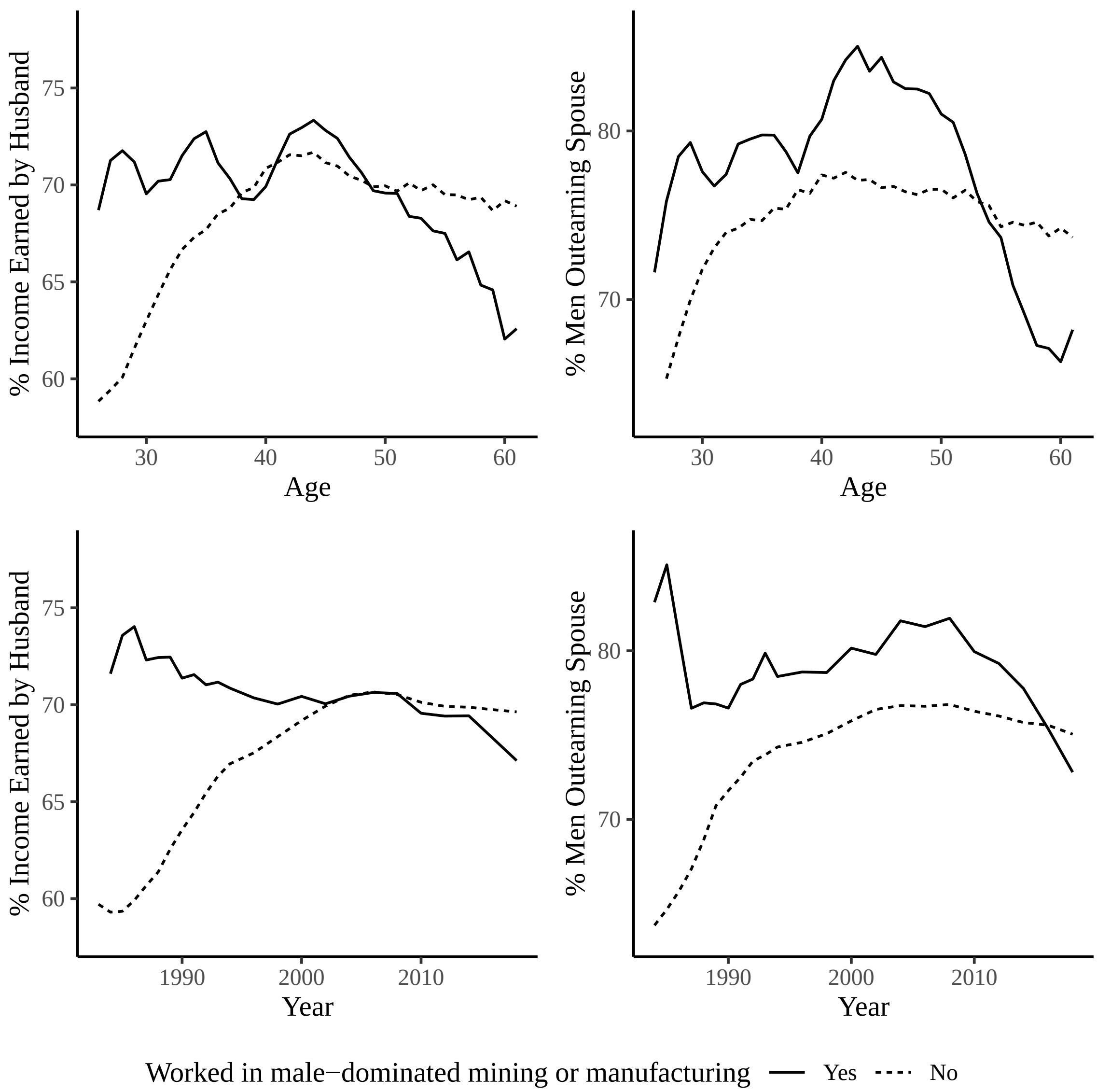


Figure D3: Replication of Figure 2, sample limited to married men with at least some college education.

E. Change in Men's Relative Earnings

Here we report results from regressing changes in men's relative earnings on changes in sectoral employment levels. We gather sector-region employment figures for the years 1990–2019 from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW) and match these to mining and manufacturing workers in the NLSY79. Following NLSY79, we define regions as the northeastern, north-central, southern, and western U.S. (for state classifications, see bit.ly/42mJf6w). We opt for the sector-region level of aggregation due to fine-grained NAICS industry classifications and geographic details being unavailable in the public NLSY79. We match individuals in the NLSY79 to QCEW data based on two-digit NAICS sector codes.

We estimate the following model by least squares:

$$\begin{aligned}\text{\% Income Earned by Spouse}_{irst} = &\beta \left[\text{employment}_{rs(t-1)} \times \text{blue-collar work}_{i(t-1)}\right] \\ &+ \gamma \mathbf{X}_{i(t-1)} + \alpha_i + \delta_t + \varepsilon_{irst}\end{aligned}$$

where % Income Earned by Spouse_{irst} is the share of income earned by the spouse of man i living in region r and working in sector s in year t. The term "employment" indicates the level of employment in sector s and region r the preceding year, calculated as: (a) the average number of workers employed in a quarter during year $t-1$, (b) the share of employed workers in region r employed in that sector, and (c) the share of wages in region r that the sector is responsible for. "Blue-collar work" is a binary indicator of whether individual i did at least two years blue-collar work in mining or manufacturing. $\mathbf{X}_{i(t-1)}$ is a vector of individual-level controls from NLSY79, including annual family income (log transformed), number of children present in the household, region of residence, and educational attainment. α_i and δ_t are individual and year fixed effects terms; ε_{irst} is an error term clustered by individual. Individual-level sample weights included.

Estimates in Table E1 indicate that for men with longer histories of blue-collar work in mining or manufacturing, contractions in those sectors are associated with increases in the relative income of their spouses. Model 2 suggests, for example, that a 20-percentage point decline in mining or manufacturing's workforce share for a man with at least two years of blue-collar experience in that sector would be associated with an 11-point *increase* in the share of income earned by his spouse. These findings support our claim that declines in male-majority industries have meaningfully tilted breadwinning responsibilities towards women.

	% Income Earned by Spouse		
	(1)	(2)	(3)
Sector workforce size (10,000s)	0.006		
	(0.006)		
Sector workforce share (% region)		16.645	
		(21.276)	
Sector wage share (% region)			10.264
			(18.833)
Mining/manuf. labor	2.722	5.596	4.733
	(8.126)	(8.210)	(8.485)
Sector measure × min./manuf. labor	-0.019^{+}	−73.206	−54.229
	(0.008)	(33.002)	(26.158)
Family income (ln)	1.367	1.419	1.402
	(1.621)	(1.610)	(1.619)
Number children present	−2.337	−2.255	−2.273
	(1.803)	(1.844)	(1.837)
Highest grade completed	0.388	0.401	0.404
	(0.359)	(0.356)	(0.362)
Resides in north−central U.S.	−9.541	−9.509	−9.564
	(4.868)	(5.022)	(5.400)
Resides in southern U.S.	−8.177	−7.307	−7.340
	(4.284)	(3.803)	(3.877)
Resides in western U.S.	−7.909	−8.028	−8.336
	(5.542)	(5.592)	(5.778)
N	5,341	5,341	5,341
Adjusted R^2	0.655	0.656	0.656
Individual controls	✓	✓	✓
Individual fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table E1: Least squares regressions of men's relative earnings on employment history and sector-region-level employment trends. Standard errors clustered by individual and region. Graphical inserts display marginal effects with 95% confidence intervals.

F. Divorce

	Pr(Divorced = 1)		
	(1)	(2)	(3)
Sector workforce size (10,000s)	0.000		
	(0.000)		
Sector workforce share (% region)		−0.259	
		(0.347)	
Sector wage share (% region)			−0.204
			(0.295)
Mining/manuf. labor	−0.039	−0.062	−0.041
	(0.035)	(0.079)	(0.087)
Sector measure × min./manuf. labor	0.000	0.282	0.109
	(0.000)	(0.665)	(0.551)
Family income (ln)	−0.018^{+}	−0.018^{+}	−0.018^{+}
	(0.006)	(0.006)	(0.006)
Number children present	−0.063**	−0.063**	−0.063**
	(0.006)	(0.007)	(0.007)
Highest grade completed	−0.003	−0.003	−0.003
	(0.005)	(0.005)	(0.005)
Resides in north−central U.S.	0.016	0.018	0.023
	(0.037)	(0.040)	(0.046)
Resides in southern U.S.	0.028	0.017	0.019
	(0.026)	(0.022)	(0.022)
Resides in western U.S.	0.054	0.051	0.056
	(0.026)	(0.025)	(0.027)
N	7,228	7,228	7,228
Adjusted R^2	0.622	0.623	0.623
Individual controls	✓	✓	✓
Individual fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table F1: Least squares regressions of probability of divorce on regional sector employment (number of workers employed in an individual's sector and region, share of regional workers employed in sector, and share of regional wages provided by sector) and individual experiences of blue-collar work in mining or manufacturing (at least two years: yes or no). Standard errors clustered by individual and region. Individual-level sample weights included.

G. Full Covariate Results: Table 1

NLSY79 does not include data on spouses' industries of employment. Given this, we estimate husbands' experience in male-dominated mining and manufacturing industries on the basis of their reported *occupation* (which is reported in the NLSY79). Across all NLSY79 waves, we compute the proportion of married men in each occupation doing blue-collar work in mining or manufacturing (as defined in Appendix D). We assume a woman's spouse to have worked in mining or manufacturing when holding an occupation in which at least 50% of married men worked in such an industry.

	NLSY79: Gender Attitudes (1982–2004)			
	Pr(Agree: Woman's Place Is in the Home = 1)		Pr(Agree: Women Happier at Home = 1)	
	Sample: Married Men (No College)		*Sample:* Married Women	
	(1)	(2)	(3)	(4)
Wife income share (%)	-0.002^{**}	-0.002^{*}	-0.002^{***}	-0.001^{**}
	(0.0007)	(0.0007)	(0.0004)	(0.0005)
Husband worked in mining/manuf.	-0.193^{*}	-0.182^{*}	−0.108	−0.109
	(0.091)	(0.085)	(0.077)	(0.078)
Wife inc. share × husband in mining/manuf.	0.005^{*}	0.005^{*}	0.006^{**}	0.006^{**}
	(0.002)	(0.002)	(0.002)	(0.002)
Family income (ln)		−0.045		0.022
		(0.033)		(0.015)
Number children present		0.035^{*}		0.023^{+}
		(0.016)		(0.012)
Highest grade completed		0.026		0.003
		(0.043)		(0.005)
Resides in north−central U.S.		−0.111		−0.067
		(0.135)		(0.073)
Resides in southern U.S.		0.136		−0.097
		(0.116)		(0.072)
Resides in western U.S.		−0.025		−0.131
		(0.141)		(0.092)
N	2,428	2,351	5,220	5,051
Adjusted R^2	0.206	0.244	0.224	0.235
Individual controls		✓		✓
Individual fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table G1: Table 1 with all covariate results reported. Standard errors clustered by individual.

G.1. Placebo Test: Men in Predominantly Female Industries

	NLSY79: Gender Attitudes (1982–2004)	
	Pr(Agree: Woman's Place Is in the Home = 1)	
	Sample: Married Men (No College)	
	(1)	(2)
Wife income share (%)	-0.001	-0.0007
	(0.0008)	(0.0008)
Husband worked in maj.-female ind.	-0.045	-0.025
	(0.093)	(0.095)
Wife inc. share $\times$ husband in maj.-female ind.	2.62×10^{-5}	-0.0005
	(0.002)	(0.002)
Family income (ln)		-0.057
		(0.035)
Number children present		0.037^{*}
		(0.016)
Highest grade completed		0.018
		(0.042)
Resides in north-central U.S.		-0.074
		(0.133)
Resides in southern U.S.		0.158
		(0.117)
Resides in western U.S.		9.04×10^{-5}
		(0.143)
N	2,428	2,351
Adjusted R^2	0.195	0.233
Individual controls		✓
Individual fixed effects	✓	✓
Year fixed effects	✓	✓
$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$		

Table G2: Placebo test. Replications of models 1–2 in Table 1, instead measuring men's experience in female-dominated industries (workforces at least 70% female; at least two years experience). Standard errors clustered by individual.

H. Survey Details

We conducted an original survey on a representative sample of American adults in late 2022. We fielded the sample with Qualtrics, which offers high-quality representative samples appropriate for social science research (Boas, Christenson, and Glick 2020). Our sample is representative of the U.S. population along the dimensions of age, gender, and region of residence. Appendix Z discusses research ethics. Survey results indicate that men are sensitive to the distribution of income between husbands and wives within the household. We asked 922 married individuals (including 503 men and 416 women) the following question: Thinking about the salaries and wages earned by you and your spouse, roughly what percentage would you earn *in an ideal world*?

Boas, Taylor C., Dino P. Christenson, and David M. Glick. 2020. "Recruiting Large Online Samples in the United States and India: Facebook, Mechanical Turk, and Qualtrics." *Political Science Research and Methods* 8 (2): 232–250.

I. Alternative Sample: NLSY79 Results by Race

	Gender Attitudes (1982–2004)			
	Pr(Agree: Woman's Place Is in the Home = 1)		Pr(Agree: Traditional Husband/Wife Roles Best = 1)	
	Sample: Non-College Educated Married Men		*Sample:* Married Women	
	Non-Black / Non-Hispanic	Black or Hispanic	Non-Black / Non-Hispanic	Black or Hispanic
	(1)	(2)	(3)	(4)
Wife income share (%)	−0.002*	−0.001	−0.001**	−0.0010
	(0.0009)	(0.001)	(0.0006)	(0.0006)
Husband worked in mining/manuf.	−0.029**	0.002	−0.117	−0.010
	(0.009)	(0.012)	(0.084)	(0.127)
Wife inc. share × husband in mining/manuf.	0.0007***	1.07×10^{-5}	0.006**	0.007
	(0.0002)	(0.0003)	(0.002)	(0.004)
Family income (ln)	−0.048	−0.008	0.028	0.013
	(0.040)	(0.050)	(0.021)	(0.016)
Number children present	0.037*	0.050*	0.024+	0.011
	(0.018)	(0.023)	(0.013)	(0.020)
Highest grade completed	−0.020	0.115**	0.001	0.004
	(0.052)	(0.042)	(0.009)	(0.004)
Resides in north-central U.S.	−0.039	−0.429*	−0.078	−0.053
	(0.142)	(0.181)	(0.080)	(0.086)
Resides in southern U.S.	0.163	0.077	−0.126	0.034
	(0.127)	(0.060)	(0.082)	(0.086)
Resides in western U.S.	−0.023	0.041	−0.122	−0.180
	(0.164)	(0.145)	(0.101)	(0.151)
N	1,477	874	3,387	1,664
Adjusted R^2	0.258	0.380	0.233	0.316
Individual controls	✓	✓	✓	✓
Individual fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table I1: Replication of Table 1, disaggregating sample by subjects' reported race. Standard errors clustered by individual.

J. Mechanism: Gender Attitudes and Republican Affiliation

	Pr(Republican Affiliation = 1)		Pr(Strong Republican Affiliation = 1)		Pr(Republican Affiliation = 1)		Pr(Strong Republican Affiliation = 1)	
	Sample: Men				*Sample:* Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Agree: women's place in home	0.055	0.063^{+}	0.065^{*}	0.068^{*}				
	(0.034)	(0.034)	(0.030)	(0.029)				
Agree: women happier at home					0.098^{***}	0.102^{***}	0.107^{***}	0.109^{***}
					(0.023)	(0.022)	(0.020)	(0.019)
Non-Black, non-Hispanic		0.279^{***}		0.150^{***}		0.249^{***}		0.135^{***}
		(0.017)		(0.014)		(0.016)		(0.013)
Family income (ln)		0.018^{**}		0.012^{*}		0.025^{***}		0.013^{**}
		(0.006)		(0.005)		(0.006)		(0.004)
Resides in north−central U.S.		0.024		−0.012		−0.004		0.042^{+}
		(0.031)		(0.025)		(0.030)		(0.021)
Resides in southern U.S.		0.057^{+}		0.050^{*}		0.102^{***}		0.109^{***}
		(0.030)		(0.024)		(0.028)		(0.021)
Resides in western U.S.		0.047		0.013		0.004		0.030
		(0.034)		(0.028)		(0.033)		(0.023)
Constant	0.334^{***}	-0.116^{+}	0.167^{***}	-0.096^{+}	0.267^{***}	-0.235^{***}	0.120^{***}	-0.186^{***}
	(0.011)	(0.062)	(0.009)	(0.051)	(0.011)	(0.062)	(0.008)	(0.045)
Observations	3,255	3,255	3,255	3,255	3,217	3,217	3,217	3,217
Adjusted R^2	0.001	0.066	0.002	0.034	0.009	0.080	0.018	0.058

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table J1: Least squares regressions of Republican affiliation (overall and "strong" identification) in 2008 on gender attitudes in 2004. Observation weights included. Robust standard errors parenthesized.

K. Full Covariate Results: Table 2

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Net shift towards women	0.394***		0.324***	
	(0.086)		(0.078)	
Men laid off (ln)		12.023***		7.949***
		(1.517)		(1.583)
Women laid off (ln)		−10.516***		−2.612
		(2.349)		(2.389)
GOP won last election			7.220***	7.209***
			(0.427)	(0.427)
Men employed			0.000***	0.000***
			(0.000)	(0.000)
Women employed			0.000***	0.000***
			(0.000)	(0.000)
Unemployment rate			0.181*	0.158*
			(0.074)	(0.075)
Male % working age population			77.980***	75.333***
			(18.743)	(18.743)
Population (ln)			−24.135***	−26.193***
			(3.582)	(3.520)
White % population			115.920***	112.764***
			(21.294)	(20.902)
N	21,633	21,633	18,513	18,513
Adjusted R^2	0.695	0.695	0.718	0.718
County controls			✓	✓
County fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table K1: Table 2 with all coefficient estimates reported. Standard errors clustered by county.

L. Respecification: State-by-Year Fixed Effects

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Net shift towards women	0.233***		0.169**	
	(0.060)		(0.059)	
Men laid off (ln)		6.643***		3.862**
		(1.387)		(1.457)
Women laid off (ln)		−10.599***		−2.653
		(2.283)		(2.276)
GOP won last election			5.874***	5.878***
			(0.401)	(0.401)
Men employed			0.000**	0.000**
			(0.000)	(0.000)
Women employed			0.000***	0.000***
			(0.000)	(0.000)
Unemployment rate			−0.058	−0.072
			(0.106)	(0.107)
Male % working age population			41.706**	40.797**
			(15.321)	(15.345)
Population (ln)			−29.943***	−30.599***
			(3.279)	(3.341)
White % population			118.273***	116.131***
			(18.467)	(18.424)
N	21,633	21,633	18,513	18,513
Adjusted R^2	0.778	0.778	0.793	0.793
County controls			✓	✓
State-by-year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table L1: Replication of main models (1–4) in Table 2, replacing year fixed effects with state-by-year fixed effects. Standard errors clustered by county.

M. Respecification: County-Specific Time Trends

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Men laid off (ln)	5.507***		4.349**	
	(1.485)		(1.686)	
Women laid off (ln)	−3.329		−0.498	
	(2.312)		(2.725)	
Net shift towards women (st. dev.)		0.198***		0.163**
		(0.057)		(0.063)
GOP won last election			−1.748***	−1.755***
			(0.443)	(0.443)
Men employed			0.0001*	0.0001*
			(0.00006)	(0.00006)
Women employed			−0.00009	-0.00009
			(0.00006)	(0.00007)
Unemployment rate			0.376***	0.382***
			(0.086)	(0.086)
Male % working age population			−16.158	−16.056
			(21.597)	(21.567)
Population (ln)			0.083	3.812
			(6.812)	(6.624)
White % population			−33.661	−29.187
			(44.929)	(45.036)
N	21,633	21,633	18,513	18,513
Adjusted R^2	0.796	0.796	0.795	0.795
County controls			✓	✓
County-specific time trend	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table M1: Replication of main models (1–4) in Table 2, including county-specific linear trends. Standard errors clustered by county.

N. Respecification: Commuting Zones

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Net shift towards women	0.559***		0.521***	
	(0.122)		(0.136)	
Men laid off (ln)		11.522***		6.992**
		(2.483)		(2.360)
Women laid off (ln)		−14.402**		−5.837
		(4.670)		(4.779)
GOP won last election			8.790***	8.836***
			(0.673)	(0.672)
Men employed			0.000*	0.000**
			(0.000)	(0.000)
Women employed			0.000**	0.000***
			(0.000)	(0.000)
Unemployment rate			36.245**	35.436**
			(13.150)	(13.246)
Male % working age population			126.182**	114.262*
			(45.331)	(44.833)
Population (ln)			−23.942**	−28.709***
			(7.710)	(7.605)
White % population			62.113	71.126
			(45.175)	(44.203)
N	4,829	4,829	4,136	4,136
Adjusted R^2	0.743	0.744	0.784	0.783
Commuting zone controls			✓	✓
Commuting zone fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table N1: Replication of main models (1–4) in Table 2, aggregated to commuting zone level. Standard errors clustered by commuting zone.

O. Alternative Sample: Iteratively Dropping Counties

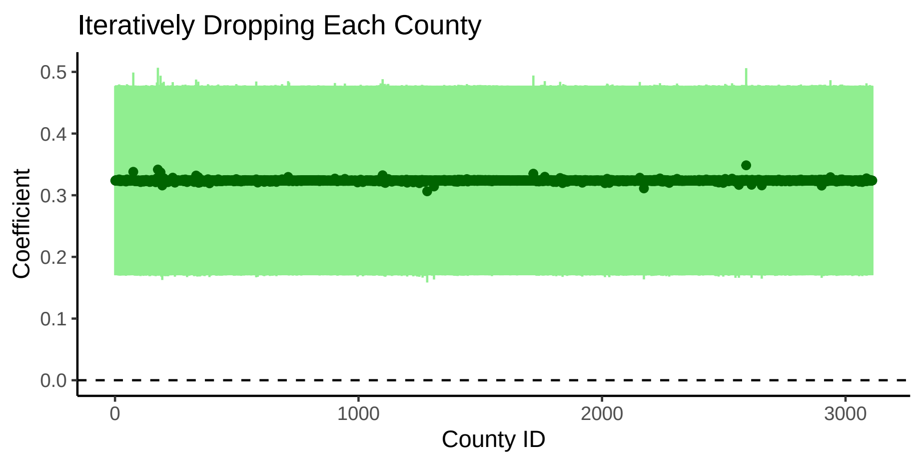


Figure O1: Replications of Table 2, Model 3. Green points indicate coefficients for net workforce shift towards women. Vertical lines indicate 95% confidence intervals. Each iteration of the model excludes an individual county from the analysis.

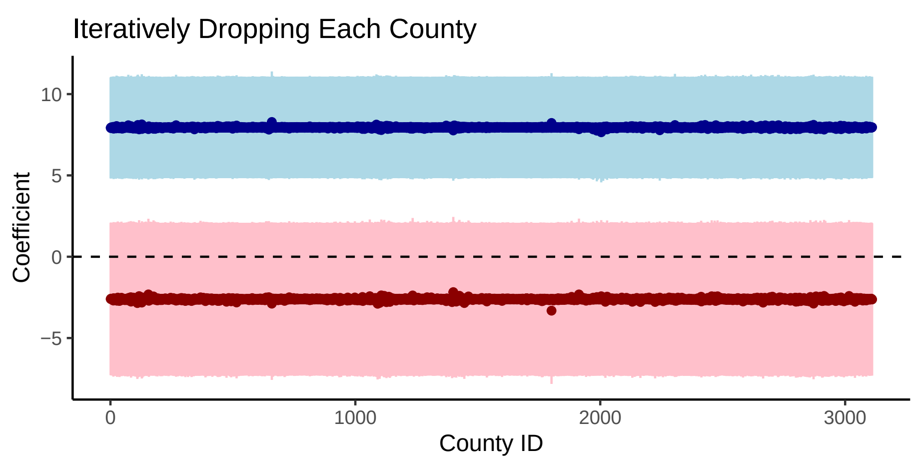


Figure O2: Replications of Table 2, Model 4. Blue and red points indicate coefficients for men laid off (ln) and women laid off (ln), respectively. Vertical lines indicate 95% confidence intervals. Each iteration of the model excludes an individual county from the analysis.

P. Respecification: Layoffs Proportional to Baseline Employment

	Republican Vote Share (%)	
	(1)	(2)
Men laid off (% 2004 male employment)	1.122*	1.096*
	(0.522)	(0.501)
Women laid off (% 2004 female employment)	−0.220	−0.065
	(0.177)	(0.211)
GOP won last election		7.269***
		(0.428)
Men employed		0.0003***
		(0.0001)
Women employed		−0.0004***
		(0.0001)
Unemployment rate		0.181*
		(0.075)
Male % working age population		79.160***
		(19.479)
Population (ln)		−24.941***
		(3.523)
White % population		120.134***
		(21.195)
N	21,486	18,393
Adjusted R^2	0.690	0.714
County controls		✓
County fixed effects	✓	✓
Year fixed effects	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table P1: Replication of main models (1–4) in Table 2, calculating layoffs as proportions of county-level employment in 2004 (year prior to data contained in panel). Standard errors clustered by county.

Q. Heterogeneity: Economic Distress

	Republican Vote Share (%)		
	All Counties	Non-Distressed	Distressed
	(1)	(2)	(3)
Net shift towards women	0.289***	0.204***	1.419***
	(0.073)	(0.059)	(0.398)
Net shift towards women × distressed county	0.694*		
	(0.298)		
GOP won last election	7.223***	6.107***	8.852***
	(0.427)	(0.497)	(0.735)
Men employed	0.000***	0.000***	0.000
	(0.000)	(0.000)	(0.000)
Women employed	−0.000***	−0.000***	−0.001
	(0.000)	(0.000)	(0.000)
Unemployment rate	0.178*	0.366***	−0.160
	(0.074)	(0.087)	(0.121)
Male % working age population	78.143***	60.492*	59.541*
	(18.748)	(25.160)	(28.568)
Population (ln)	−24.244***	−24.759***	1.761
	(3.585)	(4.057)	(8.135)
White % population	116.131***	139.096***	62.988
	(21.284)	(24.751)	(39.005)
N	18,513	11,126	7,387
Adjusted R^2	0.766	0.786	0.748
County controls	✓	✓	✓
Year fixed effects	✓	✓	✓
County fixed effects	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table Q1: Replication of Table 2. Model 1 interacts the net shift variable with a dummy variable equal to 1 if a county is "economically distressed." Models 2 and 3 split the sample by levels of economic distress. Standard errors clustered by county.

We draw the set of economically distressed counties from the Distressed Communities Index (DCI) of the Economic Innovation Group. DCI calculates levels of economic distress according to seven indicators, with data drawn from the Census Bureau's American Community Survey for the years 2016–2020. The indicators are: (1) share of population without a high school diploma; (2) housing vacancy rate; (3) % prime-age adults not employed; (4) poverty rate; (5) median income ratio; (6) recent change in number of jobs; (7) recent change in number of business establishments. For details, see bit.ly/49IkRQj.

Communities are sorted into five quintiles. We define the top 2 quintiles as economically distressed in Table Q1.

R. Full Covariate Results: Table 3

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Net shift towards women	0.360^{**}		0.223^{+}	
	(0.133)		(0.129)	
Men laid off (ln)		8.549^{*}		6.659^{+}
		(3.659)		(3.448)
Women laid off (ln)		-8.709		-13.994
		(11.311)		(11.206)
GOP won last election			8.222^{***}	8.229^{***}
			(0.621)	(0.621)
Men employed			0.000	0.000
			(0.001)	(0.001)
Women employed			0.011^{*}	0.012^{*}
			(0.005)	(0.005)
Unemployment rate			-0.053	-0.049
			(0.116)	(0.116)
Men % working age population			12.553	12.122
			(55.297)	(55.216)
Population (ln)			-31.917^{***}	-31.933^{***}
			(5.283)	(5.283)
White % population			144.534^{***}	144.477^{***}
			(25.955)	(26.021)
N	10,131	10,131	8,663	8,663
Adjusted R^2	0.697	0.697	0.736	0.736

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table R1: Table 3 with all coefficient estimates reported. Standard errors clustered by county.

S. Validity of the Shift-Share Instrument

To examine how changes in the gendered makeup of a county's workforce affect voting outcomes, we adopt a shift-share instrumental variables design. This approach acknowledges that layoffs and changes in the gender makeup of a county's workforce may not occur randomly and may be systematically correlated with county-level election outcomes. Our instrument combines variation in the baseline concentration of men and women across local industries by county (the share component) with growth in the national workforce of each industry (the shift/shock component).

The shift-share framework yields valid causal estimates when assuming exogeneity of baseline industry shares or "exposure weights" (Goldsmith-Pinkham, Sorkin, and Swift 2020), or when assuming that the shock components are exogenous conditional on shock-level residuals and exposure weights (Borusyak, Hull, and Jaravel 2022). In our case, we allow the baseline makeup of county workforces to be endogenous and rely on the conditional exogeneity of aggregated changes in industries' nationwide employment. Thus, our shift-share design hinges on the assumption that unobserved shocks affecting Republican vote share are uncorrelated with nationwide shifts in industry employment.

We follow Borusyak, Hull, and Jaravel (2022) in validating this instrument. We first analyze the distribution of shifts (or shocks) across industries and use balance tests to evaluate the plausibility of conditional quasi-random shift assignment. Table S1 reports summary statistics for the shift component, with an average of 0.091, a standard deviation of 0.304, and an interquartile range of 0.145, reflecting that the shift variable can be both positive and negative but is on average positive. The inverse Herfindahl index (HHI) is 34.65, reflecting a relatively large effective sample size. The largest shift weight is 0.105. These descriptives indicate that shifts are relatively well dispersed across industries.

Calculation	Value
Mean	0.091
SD	0.304
Interquartile range	0.145
Effective sample size	
Across industries	34.65
Largest weight	
Across industries	0.105
Observation count	
Number of industry-county shocks	318,879
Number of industries	99

Table S1: Summary of the distribution of the shift component in the shift-share instrument. We additionally report the effective sample size (the inverse renormalized Herfindahl index of the weights), the largest weight, and the observation counts.

Table S2 presents the results of regressing other industry-level variables that potentially determine Republican vote share on the shift component of the instrument. Specifically, we use the set of industry-level production controls in Acemoglu et al. (2016), reflecting the structure of employment and technology across industries. We find no statistically significant correlations, suggesting that the shifts are not correlated with these predetermined variables.

Control	Coef.	SE
Production workers' share of employment, 1991	-0.037	0.030
Ratio of capital to value-added, 1991	-0.146	0.186
Log real wage (2007 USD), 1991	0.138	0.074
Computer investment as share of total, 1990	-0.806	0.827
High-tech equipment as share of total investment, 1990	0.234	0.571
$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$		

Table S2: This table reports coefficients from regressions of industry-level covariates on the shift component of the shift-share instrument, weighting by average industry exposure shares.

Finally, Figure S1 displays the first-stage relationship of our two-stage least squares specification nonparametrically by plotting residuals of the net shift toward women (the endogenous variable) and the shift-share instrument. To ease intrepretability, observations are sorted into 100 groups of equal size using `binscatter` in Stata. The dots represent the mean value in each group. The figure shows that observations are clustered near the regression line across the whole range of the instrument, indicating that there is compliance with the instrument at all values.

Acemoglu, Daron, David Autor, David Dorn, Gordon H. Hanson, and Brendan Price. 2016. "Import Competition and the Great US Employment Sag of the 2000s." *Journal of Labor Economics* 34 (S1): S141–S198.

Borusyak, Kirill, Peter Hull, and Xavier Jaravel. 2022. "Quasi-Experimental Shift-Share Research Designs." *Review of Economic Studies* 89 (1): 181–213.

Goldsmith-Pinkham, Paul, Isaac Sorkin, and Henry Swift. 2020. "Bartik Instruments: What, When, Why and How." *American Economic Review* 110 (8): 2586–2624.

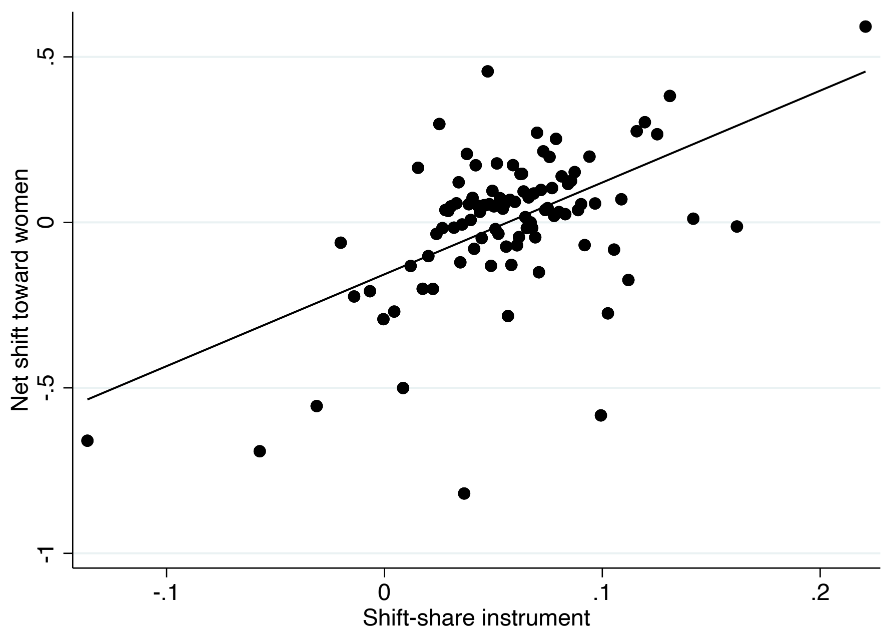


Figure S1: Nonparametric depiction of the first-stage relationship. The figure plots the net shift towards women (st. dev.) against the shift-share instrument. Observations are sorted into 100 groups of equal size. Dots indicate the mean value in each group. A linear regression line based on the underlying (ungrouped) data is also shown. State fixed effects are included.

T. Full Covariate Results: Table 4

	Δ Republican Vote Share (2004–16, %)			
	House		Presidency	
	(1)	(2)	(3)	(4)
Net shift towards women (st. dev.)	8.525^{**}	11.925^{*}	5.564^{***}	9.833^{**}
	(3.172)	(5.262)	(1.428)	(3.166)
GOP won last election		-21.464^{***}		-1.045
		(1.170)		(0.656)
Men employed		0.000^{+}		0.000
		(0.000)		(0.000)
Women employed		0.000^{+}		0.000
		(0.000)		(0.000)
Population (ln)		-2.547^{*}		-3.565^{***}
		(1.002)		(0.657)
Unemployment rate		0.462		0.604^{*}
		(0.430)		(0.261)
Men % working age population		80.462^{**}		41.929^{**}
		(26.902)		(16.202)
White % population		30.079^{***}		18.416^{***}
		(5.489)		(3.358)
N	3,063	3,033	3,113	3,036
First-stage coefficient	2.76^{***}	1.88^{***}	2.74^{***}	1.87^{***}
	(0.505)	(0.560)	(0.500)	(0.559)
F-statistic	51.1	21.8	51.8	21.7
County controls		✓		✓
State fixed effects	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table T1: Table 4 with all coefficient estimates reported. Robust standard errors parenthesized.

U. Respecification: County Fixed Effects

	Pr(Vote for Republican = 1)		
	All Respondents	Men	Women
	(1)	(2)	(3)
Men laid off (ln)	0.105^{**}	0.102^{*}	0.082^{+}
	(0.035)	(0.046)	(0.042)
Women laid off (ln))	-0.129^{**}	-0.084^{+}	-0.136^{**}
	(0.041)	(0.048)	(0.051)
N	269,266	130,702	138,218
Adjusted R^2	0.123	0.135	0.147
County fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table U1: Replication of main model in Table 5, replacing state fixed effects with county fixed effects. Standard errors clustered by county.

V. Full Covariate Results: Table 5

	Pr(Vote for Republican = 1)						Pr(Voted = 1)	
	All Respondents		Men		Women		Men	Women
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Men laid off (ln)	0.287***	0.089***	0.265***	0.064+	0.305***	0.112***	0.044	0.022
	(0.052)	(0.024)	(0.055)	(0.033)	(0.055)	(0.028)	(0.038)	(0.034)
Women laid off (ln)	−0.354***	−0.119***	−0.329***	−0.096**	−0.375***	−0.140***	−0.057	−0.008
	(0.052)	(0.024)	(0.056)	(0.032)	(0.056)	(0.027)	(0.039)	(0.033)
Men employed		0.00000		0.00000		0.00000	−0.00000	−0.00000
		(0.00000)		(0.00000)		(0.00000)	(0.00000)	(0.00000)
Women employed		−0.00000		−0.00000		0.000	0.00000	0.00000
		(0.00000)		(0.00000)		(0.00000)	(0.00000)	(0.00000)
Unemployment rate		0.001		0.0004		0.002	−0.007***	−0.007***
		(0.001)		(0.002)		(0.001)	(0.002)	(0.001)
Male % working age population		0.273		0.389		0.184	−0.283	−0.271
		(0.203)		(0.275)		(0.209)	(0.235)	(0.195)
Population (ln)		0.010		0.014		0.007	0.006	−0.007
		(0.007)		(0.009)		(0.007)	(0.010)	(0.008)
Republican incumbent		0.148***		0.145***		0.151***	0.003	0.005
		(0.005)		(0.006)		(0.006)	(0.006)	(0.004)
White		0.106***		0.109***		0.102***	0.084***	0.040***
		(0.005)		(0.007)		(0.006)	(0.006)	(0.006)
Age		0.001***		0.001***		0.001***	0.007***	0.008***
		(0.0001)		(0.0002)		(0.0001)	(0.0002)	(0.0001)
Male		0.060***						
		(0.003)						
Married		0.060***		0.070***		0.046***	0.009	−0.009*
		(0.003)		(0.005)		(0.004)	(0.005)	(0.004)
College educated		−0.013***		−0.012**		−0.013**	0.061***	0.076***
		(0.003)		(0.004)		(0.004)	(0.005)	(0.004)
Republican		0.567***		0.528***		0.608***	0.044***	0.063***
		(0.004)		(0.005)		(0.005)	(0.005)	(0.004)
Family income		0.00003		0.001		−0.001	0.016***	0.018***
		(0.0005)		(0.001)		(0.001)	(0.001)	(0.001)
N	227,457	195,364	112,220	97,303	115,237	98,061	140,611	158,956
Adjusted R^2	0.058	0.410	0.056	0.370	0.063	0.447	0.128	0.139
County controls		✓		✓		✓	✓	✓
Individual controls		✓		✓		✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table V1: Table 5 with all coefficient estimates reported. In addition, effects on validated general election turnout (models 7–8) are also reported. Standard errors clustered by county.

W. Respecification: Mining and Metal Manufacturing

	Pr(Vote for Republican = 1)						Pr(Voted = 1)	
	All		Men		Women		Men	Women
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Men laid off (ln)	0.290***	0.080**	0.273***	0.068*	0.303***	0.092***	0.035	0.025
	(0.058)	(0.024)	(0.062)	(0.033)	(0.061)	(0.028)	(0.035)	(0.031)
Women laid off (ln)	−0.358***	−0.112***	−0.338***	−0.102**	−0.375***	−0.121***	−0.064^{+}	−0.011
	(0.058)	(0.024)	(0.062)	(0.032)	(0.062)	(0.028)	(0.036)	(0.032)
Men employed		0.000		0.000		0.000	0.000	0.000
		(0.000)		(0.000)		(0.000)	(0.000)	(0.000)
Women employed		0.000		0.000		0.000	0.000	0.000
		(0.000)		(0.000)		(0.000)	(0.000)	(0.000)
Unemployment rate		0.002		0.001		0.002	−0.008***	−0.007***
		(0.001)		(0.002)		(0.002)	(0.002)	(0.002)
Male % working age population		0.562*		0.501		0.596*	-0.539^{+}	−0.502^{+}
		(0.243)		(0.333)		(0.232)	(0.278)	(0.277)
Population (ln)		0.014		0.017		0.008	0.015	−0.014
		(0.008)		(0.011)		(0.009)	(0.014)	(0.011)
Republican incumbent		0.145***		0.145***		0.145***	0.000	0.003
		(0.005)		(0.006)		(0.006)	(0.006)	(0.004)
White		0.104***		0.106***		0.101***	0.087***	0.044***
		(0.005)		(0.007)		(0.006)	(0.006)	(0.006)
Age		0.001***		0.001***		0.001***	0.007***	0.008***
		(0.000)		(0.000)		(0.000)	(0.000)	(0.000)
Male		0.061***						
		(0.003)						
Married		0.060***		0.069***		0.047***	0.008	−0.010*
		(0.003)		(0.005)		(0.004)	(0.006)	(0.005)
College educated		−0.014***		−0.013**		−0.014***	0.060***	0.073***
		(0.003)		(0.004)		(0.004)	(0.005)	(0.004)
Republican		0.574***		0.534***		0.617***	0.041***	0.060***
		(0.004)		(0.005)		(0.005)	(0.005)	(0.004)
Family income		0.000		0.001		−0.001^{+}	0.016***	0.018***
		(0.001)		(0.001)		(0.001)	(0.001)	(0.001)
N	203,373	178,339	100,710	89,173	102,663	89,166	129,011	144,303
Adjusted R^2	0.055	0.412	0.053	0.371	0.060	0.451	0.127	0.138
County controls		✓		✓		✓	✓	✓
Individual controls		✓		✓		✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓	✓	✓

$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table W1: Replication of Table 5, focusing on layoffs only in male-dominated mining and manufacturing (as defined in footnote 27). Sample limited to counties with non-zero employment in these industries in prior year. Regressions of validated general election turnout (models 7–8) are also reported. Standard errors clustered by county.

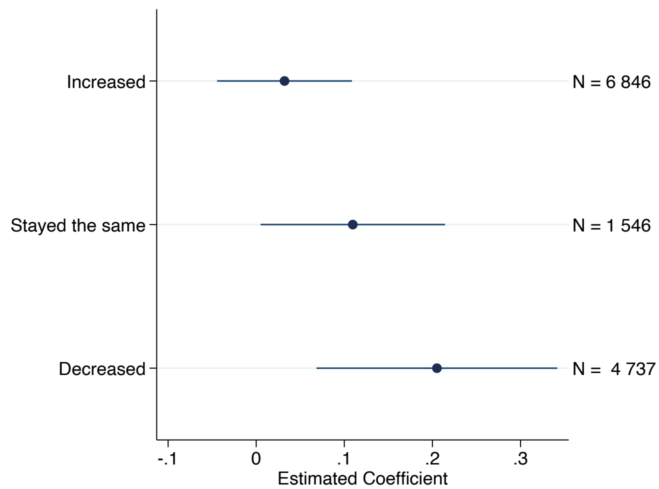
X. Full Covariate Results: Table 6

	Pr(Vote for GOP House Cand. = 1)			Pr(Vote for Trump = 1)			Pr(Voted = 1)	
	All	Men	Women	All	Men	Women	Men	Women
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Net shift towards women (st. dev.)	0.095***	0.109***	0.081**	0.053**	0.052+	0.055*	0.035	−0.020
	(0.024)	(0.031)	(0.028)	(0.019)	(0.027)	(0.022)	(0.034)	(0.026)
Unemployment rate	−0.005	−0.001	−0.008*	0.003	0.003	0.004	−0.012*	−0.006
	(0.004)	(0.005)	(0.004)	(0.003)	(0.004)	(0.003)	(0.005)	(0.004)
Male % working age population	1.723***	2.143***	1.420**	1.266***	0.974+	1.521***	0.382	−0.835+
	(0.473)	(0.649)	(0.550)	(0.382)	(0.539)	(0.445)	(0.656)	(0.459)
Population (ln)	−0.038***	−0.038***	−0.037***	−0.025***	−0.024***	−0.025***	−0.014**	−0.004
	(0.004)	(0.005)	(0.004)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)
White	0.140***	0.155***	0.124***	0.158***	0.173***	0.143***	0.073***	0.071***
	(0.010)	(0.014)	(0.012)	(0.010)	(0.013)	(0.011)	(0.013)	(0.009)
Age	0.001***	0.002***	0.001**	0.003***	0.003***	0.002***	0.008***	0.007***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.069***			0.064***				
	(0.005)			(0.005)				
Married	0.067***	0.069***	0.060***	0.050***	0.044***	0.048***	−0.025*	−0.034***
	(0.006)	(0.009)	(0.007)	(0.006)	(0.009)	(0.007)	(0.012)	(0.008)
College educated	−0.065***	−0.066***	−0.065***	−0.098***	−0.105***	−0.090***	−0.039**	−0.025*
	(0.005)	(0.007)	(0.007)	(0.005)	(0.007)	(0.006)	(0.013)	(0.010)
Republican	0.594***	0.545***	0.643***	0.597***	0.544***	0.648***	0.034**	0.045***
	(0.007)	(0.008)	(0.008)	(0.007)	(0.009)	(0.008)	(0.011)	(0.008)
Family income	0.000	0.001	0.000	0.000	0.001	0.000	0.009***	0.013***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
N	51,326	23,917	27,409	56,219	26,142	30,077	24,472	28,840
First-stage coefficient	7.52***	7.99***	7.19***	7.63***	8.23***	7.20***	8.97***	8.04***
	(1.10)	(1.34)	(1.18)	(1.13)	(1.43)	(1.14)	(1.61)	(1.18)
F-statistic	1408.0	730.2	693.8	1559.8	809.9	766.2	964.8	977.6
County controls	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓	✓	✓

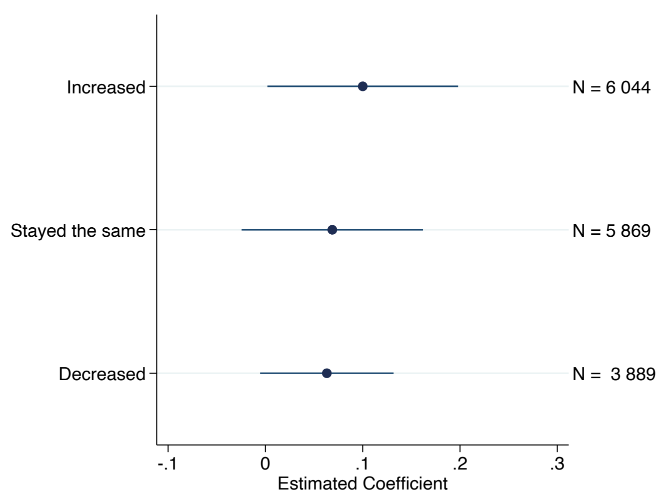
$^{+}p < .1$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table X1: Table 6 with all coefficient estimates reported. Regressions of validated general election turnout in the 2016 general election (models 7–8) are also reported. Standard errors clustered by county.

Y. Vote Choice By Change in Household Income



(a) Women's Vote Choice



(b) Men's Vote Choice

Figure Y1: Two-stage least squares estimates of women's and men's House vote choice in 2016 (Republican vote = 1) on shifts in workforce composition towards women between 2004 and 2015. The figure illustrates estimated coefficients of the net shift toward women (st. dev.), distinguish between women and men reporting that their household income during the past year (i) increased a lot or increased somewhat, (ii) stayed about the same, or (iii) decreased somewhat or decreased a lot. Standard errors clustered by county.

Z. Research Ethics

The human subjects research in this paper complies with the American Political Science Association's "Principles and Guidance for Human Subjects Research." The original survey described in the main text was fielded by Qualtrics after it was deemed exempt by the institutional review board at [redacted institution] ([protocol number redacted]). The risks to subjects were evaluated to be minimal and the researchers took steps to ensure that any potentially identifying information was protected and then redacted prior to making the data available for analysis and replication. There were no conflicts of interest identified for the researchers.

Survey participants initially completed a standard electronic adult consent form that informed them they were being asked to participate in a voluntary study approved by the [redacted institution] IRB. The consent form indicated that subjects would be asked questions about their background, political preferences, and opinions about government policies. It also provided the estimated length of time to complete the survey and contact information for the researchers, and noted that the study was deemed to be one of minimal risk. Respondents had to agree to participate before proceeding with the survey; the survey was immediately terminated for subjects who did not agree.

Subjects were recruited by the survey firm Qualtrics. Individuals voluntarily chose to participate in the Qualtrics panel and were compensated based on the terms of the survey vendor, which can include cash, gift cards, and loyalty reward points. All subjects were U.S. adults and could opt in or out of the panel. Subjects were given the opportunity to contact the researchers if they had any concerns about compensation or the survey, but we did not receive any communications of this kind.

We do not believe this survey had any effect on political processes such as elections or policy development (Principle 10). The survey asked for subjects' political opinions; it did not present new information or incentives that might have altered their behavior, preferences, or political processes.

This study includes analyses of other pre-existing individual-level data (CCES and NLSY79). All such data are fully anonymized and were obtained from public sources; we did not engage with participants in these other surveys ourselves. CCES is made available through Harvard University [cces.gov.harvard.edu]. NLSY79 is made available by the U.S. Bureau of Labor Statistics [bls.gov/nls]. These data do not contain sensitive or personally identifiable information, nor do we see use of these public data sources as likely to affect political processes.

Data for replication will be made available upon publication.