

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 political mobilization. We theorize that an uneven loss of male jobs, and a shift in income from husbands to wives, can foment “nostalgic” political coalitions that seek a return of patriarchal divisions of labor between women and men. Such attitudes fuel right-wing populist movements that claim to protect traditional domestic structures. This theory is supported using fine-grained data on local labor markets, domestic relationships, political attitudes, and electoral outcomes in the United States over the last two 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. 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 in Boone County and the United States, both then and now, are men.²

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 select industries (Hechter 1978; Jha 2013; Zucker 2022*b*). This ethnoracial division of labor can cause industrial shocks to reverberate within some groups more than others, prompting group-level shifts in political attitudes and mobilization (Gaikwad and Suryanarayan 2019; Baccini and Weymouth 2021; Zucker 2022*a*). We expect the gender segmentation of labor markets — an enduring feature of working-class occupations (Cotter, Hermsen, and Vanneman 2005) — 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 affects change across gender lines (Abou-Chadi and Kurer 2021).

Deindustrializing communities have experienced marked shifts in labor market power from men to women (Winant 2021). The decline of overwhelmingly male mines, for example, has ignited a surge in female labor force participation in much of the United States.³ This labor market transformation rebalances economic power within households, prompting shifts in the status, decision-making authority, and political engagement of husbands

²Ninety-nine percent of coal mine employees in Boone County were men in early 2020 (Quarterly Workforce Indicators of the U.S. Census Bureau).

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

and wives (Iversen and Rosenbluth 2006; Bernhard, Shames, and Teele 2021). Female economic autonomy promotes political gender equality in some settings (Ross 2008; Folke and Rickne 2020; Brulé and Gaikwad 2021; Gaikwad, Lin, and Zucker 2022). But in the context of deindustrialization, we argue that the shift in breadwinning responsibilities from men to women instead often fuels socially conservative movements looking to restore traditional, patriarchal divisions of labor within families.⁴

We theorize that this move to the right occurs due to dissatisfaction with the new division of labor among both men and women. Men who lose work or take pay cuts should experience a decline in subjective social status within the family.⁵ This may occur due to a loss of income or deprivation of status benefits conferred by employment in a once-dominant and distinctively “masculine” industry.⁶ Women, while commanding a greater share of household resources, may shift rightward when asymmetric or gendered norms neutralize or invert the benefits such resources provide. This may occur due to perceived economic threats to their husbands (Abou-Chadi and Kurer 2021) or new strains on their time. Rather than unemployed husbands taking on additional responsibilities, we anticipate that women will often be left to serve as a primary breadwinner while retaining most domestic responsibilities. This exacerbates the distinct demands on women’s time that constrain female political participation (Bernhard, Shames, and Teele 2021), potentially leading to greater deference to politically active husbands (Green, Palmquist, and Schickler 2002). We expect such changes to manifest where traditional cultural institutions endure through bouts of economic turmoil. The persistence of such institutions, apparent in deindustrializing communities, breaks the link between female economic autonomy and eroded patriarchal norms that other scholars have identified.

⁴Patriarchal backlashes can follow wartime improvements in female economic autonomy (Berry 2017).

⁵Gidron 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).

⁶Heavily male extractive industries are often central to community identities (Bell and York 2010; Kojola 2019; Gaikwad, Genovese, and Tingley 2022). Also see Terkel 1974; Lamont 2000.

We test this theory with panel data on household divisions of labor, local economic conditions, and political behavior spanning the last two decades of U.S. history. Pairing layoff data separated by gender with county-level electoral outcomes, we find that the loss of *male* jobs — and a general shift in workforce composition from men to women — has driven Republican gains in much of the country. We find evidence of this using observational data on labor market conditions, as well as when employing shift-share instruments to account for non-random spatial distribution of layoffs. Analyses of individual vote choice yield supportive evidence.

This paper illustrates the centrality of cultural upheaval to the “anti-globalization backlash” (Margalit 2019; Mansfield, Milner, and Rudra 2021; Ballard-Rosa, Jensen, and Scheve 2022) and potential for gender divisions to aggravate reactions to decarbonization, which threatens male-dominated fossil fuel industries (Bush and Clayton 2022). We highlight gender as an important determinant of how volatility is experienced, complementing work focused on ethnoracial dimensions of industrial decline (Jardina 2019; Baccini and Weymouth 2021; Zucker 2022a,b). In doing so, we clarify when women’s economic empowerment may fail to yield enduring political gender equity, reconciling conflicting findings in the literature (Goldin 1991; Alesina, Giuliano, and Nunn 2013; Brulé 2022; Gaikwad, Lin, and Zucker 2022).

Gender Divides amid Deindustrialization

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 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 prominence of

ethnoracial labor market segmentation.

Industries are also polarized by gender, sometimes to greater extremes than by ethnicity or race. Industries such as coal mining and metal manufacturing are staffed almost exclusively by men, while others, like textiles, skew heavily towards women (see Appendix A). Nearly a quarter of male workers in the U.S. work in industries where men outnumber women at least three-to-one.⁷ This variation suggests a key role for gender in moderating experiences of industrial decline.

Scholars often treat state support for different social groups as rivalrous, where support for one group implies a lack of support for another (Alesina, Baqir, and Easterly 1999; Jha 2013; Huber 2017). These accounts correctly capture how ethnocultural groups often vote similarly and segregate socially from one another, limiting intergroup spillovers of economic resources and causing shocks to largely reverberate within groups (Htun 2004; Wilkinson 2004; Zucker 2022a). While this analytical treatment is sensible for many groups, it is less applicable to gender. Shocks that initially afflict either men or women are likely to swiftly spread to the opposite sex due to within-household ties (Abou-Chadi and Kurer 2021).

Negative shocks to a male-majority industry drive men into unemployment or underemployment. The 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 with traditional divisions of labor, where men are primary income earners and women principally work within the home (Antecol 2000).

Women may look to recoup lost household income in the face of such shocks. The large-scale entry of women into the labor force has notably been observed during wartime, particularly when men are conscripted or disproportionately killed (Acemoglu, Autor, and Lyle 2004; Tripp 2015; Gaikwad, Lin, and Zucker 2022). In peacetime, we expect women

⁷Analysis of Quarterly Workforce Indicators for 2018Q4. Industries defined at NAICS four-digit level.

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 less subjectively masculine or lower status industries may limit their tendency to actually do so. Conversely, women may be more willing to seek work in “feminine” service industries, such as education and healthcare, that survive and even thrive amidst shocks to male-majority industries (Winant 2021).

The entry of women into the labor force is recognized to have 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 (Tripp 2015; Hadzic and Tavits 2021; Gaikwad, Lin, and Zucker 2022). Yet these studies often focus on cases where there is an acute loss of men from local communities, as is common in wartime, and find that women’s gains can dissipate as male populations recover (Goldin 1991; Brulé 2022). Or they consider cases where slow-to-change economic endowments, such as oil reserves, limit or enable women’s labor force participation (Ross 2008; though see Groh and Rothschild 2012).

Disproportionate male exit is unlikely in cases of deindustrialization. While economic shocks may drive outmigration, rates of exit are likely to be relatively consistent across men and women. Accordingly, shifts in breadwinning induced by industrial decline are likely to occur while men remain present in both the household and local community. Likewise, industrial decline is often abrupt, brought about by rapid technological change or foreign competition (e.g., Autor, Dorn, and Hanson 2013). Observation of women quickly replacing men in the workforce may add to fears of cultural disruption already widespread across advanced economies (Margalit 2019). To the extent that income corresponds to subjective social status, the loss of a job — particularly one integral to personal and communal identities (Lamont 2000; Bell and York 2010; Kojola 2019) — may further foment male discontent and feed an interest in restoring traditional social hierarchies.

Men may seek new lines of work to mitigate for the loss of income and perceived 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 industries, such as education or healthcare (Winant 2021), and access to job transition support is often limited (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 the persistent “devaluation of traditionally female [jobs]” (England 2010, 150).

Welfare stigmas likewise limit the capacity of government assistance to compensate for decline in male-majority industries (Gilens 1999; Luttmer 2001; Shayo 2009). Men in deindustrializing regions often take pride in hard work and are attracted by the notion of “picking themselves up by their bootstraps” (Terkel 1974; Lamont 2000; Goldstein, Ballard-Rosa, and Rudra 2021). While government assistance softens families’ loss of income, it is unlikely to remedy the perceived loss of social status.

We expect that this labor market shift will affect the political preferences of both men and women and, in turn, electoral outcomes. 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, we expect men to increasingly support “nostalgic” political candidates who pledge to resurrect male-majority industries and revive traditional family structures. This argument reflects the power of subjective status loss to fuel restorationist political movements (Du Bois 1935; Mansbridge and Shames 2008; Suryanarayan and White 2021).

Women may similarly support traditionalist candidates following labor market shifts, in part out of an aversion to economic risk (Guisinger and Kleinberg 2021; Oshri et al. 2022). In patriarchal societies, household political attitudes tend to develop according to the economic station of the senior men present. In families with traditional divisions

of labor, women's vote choice often reflects the economic well-being of their husbands, whereas husbands rarely vote according to their wives' situation (Kan and Heath 2006; Strøm 2014).⁸ The reentry of men into the workforce, via the revival of male-majority industries, may be an appealing means of mitigating risks to the household.⁹ In gender-stratified settings, women similarly often hesitate to voice political preferences or participate in political life independent of their husbands (Khan 2021; Cheema et al. 2022).

Exacerbating this gender gap are the unique time constraints that women contend with, which we expect to become more restrictive amid decline in male-majority industries. Women's domestic responsibilities are widely recognized to limit their ability to participate in politics (Burns, Schlozman, and Verba 1997; Iversen and Rosenbluth 2006; Silbermann 2015). Bernhard, Shames, and Teele (2021) argue that political ambition is particularly low among female breadwinners, who assume income-earning roles *in addition to* their household obligations. Economically dependent husbands often fail to substitute for wives in the household (Evans 2016), aggravating demands on female breadwinners' time and further containing their capacity to convert economic autonomy into political gains. This should limit large-scale mobilization in opposition to traditionalist candidates,¹⁰ as well as intensify discontent with local economic transformations. Though voting itself is not time consuming, accumulating information about candidates is, and so women may defer to their husbands' preferences under these conditions. This is especially likely when men are unemployed or underemployed and themselves invest significant time in political mobilization.

⁸This pattern does not reverse in households with women breadwinners. "Economically dependent men [...] place virtually no emphasis on their partners' political values" (Kan and Heath 2006, 70). Though see Abou-Chadi and Kurer 2021.

⁹This may be especially appealing when women struggle to fully replace the earnings of their husbands. Men in industries such as steel manufacturing and coal mining were typically well compensated; women in surrounding communities earned far less (Latimer and Oberhauser 2004).

¹⁰Men and women's attitudes may not entirely converge; gender gaps in policy preferences are widespread (Clayton et al. 2019; Bush and Clayton 2022). But women face more barriers in acting on their preferences.

These changes should be pronounced where patriarchal cultural institutions remain entrenched throughout a period of economic upheaval (Brulé 2022). In some cases, women’s economic empowerment engenders lasting improvements in gender norms and female political participation. Yet short-term advances may occur only following severe shocks — such as civil war or genocide — that destroy established institutions and create space for new norms to take root (Gaikwad, Lin, and Zucker 2022). Absent such societal ruptures, and in settings where external conditions are relatively stable (Giuliano and Nunn 2021), traditional expectations about the proper division of labor between men and women may persist. Conservative religious congregations, for example, may “freeze” patriarchal understandings of gender rights (Htun and Weldon 2015, 457). Even if male job loss shifts actual divisions of labor, these institutions and entrenched norms may keep preferred gender roles moored in convention.¹¹

In sum, decline in male-majority industries and a labor market shift towards women should prompt many men to seek relief via restorationist political movements. Women who have newly entered the workforce may lack the resources to countermobilize or adopt more conservative attitudes themselves. Articulated as a testable hypothesis,

Hypothesis 1. *Men and women should become more supportive of socially conservative political parties following decline in male-majority industries.*

Empirical Strategy

We test this theory at two levels, focusing on the United States. First, we see if decline in male-majority industries and shifts in the workforce from men to women improve election outcomes for the Republican Party. Second, we use individual-level survey data to evaluate

¹¹We expect this disjunction between actual and preferred divisions of labor to emerge in the short term. Over generations, reformed divisions of labor — if sustained — may gradually displace traditional gender norms (Alesina, Giuliano, and Nunn 2013; Gaikwad, Lin, and Zucker 2022).

whether these rightward shifts are apparent across both men and women. We concentrate on the first two decades of the 21st century, a period during which economic dislocations mounted in many industrial centers and a populist, “globalization backlash” accelerated (Walter 2021). Our primary level of analysis is the county, reflecting the localized nature of industrial disruptions (Broz, Frieden, and Weymouth 2021).¹² We conduct these analyses using panel data on local labor market changes over time, buttressed with a modified shift-share instrumental variables design that allows us to more confidently identify the effects of gendered transformations in local workforces.

Our analysis begins with county- and industry-level employment data collected from the Quarterly Workforce Indicators (QWI) of the U.S. Census Bureau, which records quarterly male and female employment data for each county and industry in the U.S.¹³ These QWI data reveal gendered workforce shifts across a broad swath of the U.S., illustrated in Figure 1. Women increased their share of local workforces in 49% of counties between 2006–17, with a notable cluster of gains in the coal mining belt of Appalachia (also see Appendix A, Figure A1). In 320 counties, men’s employment fell during this period while women’s employment grew.

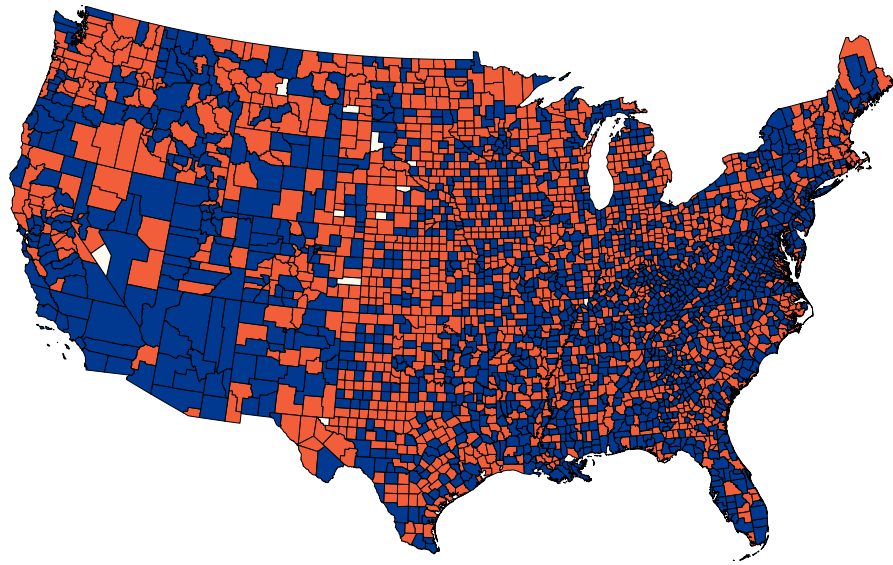
County-Level Analyses

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

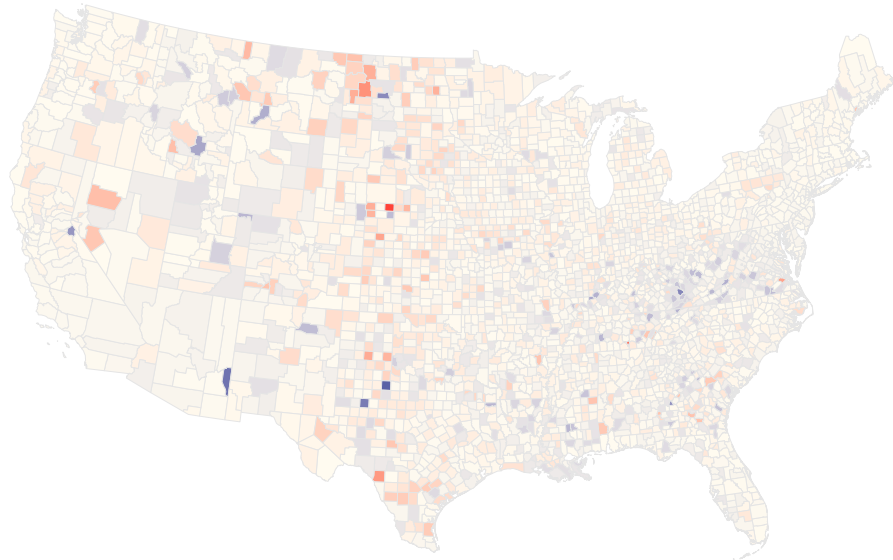
$$\text{Republican Vote Share}_{ct} = \beta \left[\text{layoffs}_{c(t-1)} \right] + \gamma \mathbf{X}_{c(t-1)} + \alpha_c + \delta_t + \varepsilon_{ct}$$

¹²The results are robust to re-estimation at the commuting zone level.

¹³In 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.



Change in female share of workforce ■ Decrease ■ Increase



Change in female share of workforce (%) ■ -60 ■ -40 ■ -20 ■ 0 ■ 20 ■ 40

Figure 1: Growth in female workforce share from 2006 to 2017. Data from QWI.

where $\text{Republican Vote Share}_{ct}$ is the Republican Party's two-party vote share in county c and year t . We define, in separate models, *layoffs* as (a) the counts of men and women laid off in the year preceding an election and (b) the net change in the gendered makeup

of a county’s workforce.¹⁴ $\mathbf{X}_{c(t-1)}$ is a vector of county-year control variables, including counts of men and women employed, unemployment rate, population, male proportion of working-age population, and an indicator of whether a Republican candidate outperformed the Democratic candidate in the preceding election.¹⁵ α_c and δ_t are county and year fixed effects. ε_{ct} is an error term clustered by county.

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Men laid off (ln)	12.023*** (1.517)		8.528*** (1.625)	
Women laid off (ln)	-10.516*** (2.349)		-2.774 (2.408)	
Net shift towards women (st. dev.)		0.394*** (0.086)		0.341*** (0.082)
N	21,633	21,633	18,513	18,513
Adjusted R ²	0.695	0.695	0.717	0.717
County controls			✓	✓
County fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 1: 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.

Table 1 displays the estimates of this model. Male layoffs — not female layoffs — are associated with sizable increases in Republican vote share across specifications. Within counties, a 25% increase in the number of male layoffs prompts a two-point rightward swing, enough to flip 3% of county-level results between 2006–18 towards the Republican candidate.¹⁶ By contrast, a surge in female layoffs corresponds to no such rightward

¹⁴We calculate this at the net change in women’s employment (job creation minus loss), minus the net change in men’s employment.

¹⁵We 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.

¹⁶We focus on this period due to the broad geographic coverage of workforce data for these years.

lurch, and is in fact associated with *eroded* Republican support. Significant results are similarly found when analyzing net changes in workforce composition. A standard deviation shift towards women — narrowing the gender gap in workforce participation by 860 workers — prompts a 0.34-point swing towards Republicans. These results are robust to the inclusion of state-by-year fixed effects, to account for states’ distinct political trajectories (Appendix B); re-estimation at the commuting zone level (Appendix C); and to the exclusion of any given county from the sample (Appendix D).

It is possible that these analyses conflate male layoffs with decline in male-majority industries that might drive rightward shifts for reasons independent of gender. To account for this, we re-estimate these models focusing on employment changes in mining and metal manufacturing, focusing on these industries due to their disproportionate employment of men and pronounced political salience. 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)
Men laid off (ln)	8.780*		8.269*	
	(3.802)		(3.768)	
Women laid off (ln)	-11.558		-13.457	
	(11.405)		(10.956)	
Net shift towards women (st. dev.)		0.267*		0.214 ⁺
		(0.107)		(0.116)
N	8,235	8,235	7,119	7,119
Adjusted R ²	0.737	0.737	0.770	0.770
County controls			✓	✓
County fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2: Replication of Table 1, examining workforce shifts only in mining and primary metal manufacturing (NAICS 21, 331). Sample limited to counties with non-zero employment in these sectors in prior year.

Table 2 indicates that within single industries, male layoffs have effects distinct from

those of female layoffs. Men losing work is again associated with substantively significant increases in Republican vote share, while no such correlation is uncovered for women’s loss of work. This suggests that independent of general industrial decline, even in culturally significant industries such as mining and manufacturing, the specific loss of *male* jobs is a powerful source of communal moves to the right.

To gain causal leverage, we calculate a shift-share instrument for rebalances of local workforces between women and men.¹⁷ This identification strategy follows recent approaches in the literature and accounts for the potential non-random distribution of economic shocks (see Baccini and Weymouth 2021). We use this instrument to evaluate changes in Republican vote share between 2004–16 due to the emergence of right-wing populism and acceleration of deindustrialization during this period (Broz, Frieden, and Weymouth 2021). We estimate this county-level instrument Z_c as:

$$Z_c = \sum_j \left(\frac{\text{Employment}_{jc}^w}{L_c^w} - \frac{\text{Employment}_{jc}^m}{L_c^m} \right) \times \frac{\text{Net change}_j}{L_j}$$

where $\text{Employment}_{jc}^{w,m}$ 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 $L_c^{w,m}$ is the total number of women and men employed in each county at that time.¹⁸ The first term of this equation accordingly captures how women and men are distributed across local industries, and differentially exposed to industry-level shocks (“shares”). Net change_j records the shift in the nationwide workforce for industry j between 2004 and 2015 (hires minus layoffs), divided by the initial workforce size L_j . This second term represents the “shift” in each industry and local workforces’ exposure to layoffs. This equation thus estimates changes in the gender makeup of county workforces between 2004–15 as a function of counties’ industrial

¹⁷We operationalize this endogenous variable as the difference in net employment changes for women and men (defined for each as job gains minus job losses), divided by the starting workforce size.

¹⁸We define industries at the NAICS 4-digit level.

structures in 2003. Required for this identification strategy is the assumption that this initial distribution of male and female workers affects electoral outcomes only via its effect on subsequent hires and layoffs. We assume, as well, that nationwide shifts in hires and layoffs are (conditionally) exogenous to economic and political conditions in individual counties.

	Δ Republican Vote Share (2004–16, %)			
	House		Presidency	
	(1)	(2)	(3)	(4)
Net shift towards women (st. dev.)	9.097** (3.016)	6.958+ (3.986)	6.141*** (1.364)	6.707*** (1.639)
N	3,034	3,032	3,083	3,081
Adjusted R ²	0.175	0.283	−0.135	0.162
First-stage coefficient	2.79*** (0.391)	2.05*** (0.403)	2.78*** (0.386)	2.07*** (0.399)
F-statistic	50.92	25.89	51.74	27.01
County controls		✓		✓
State fixed effects	✓	✓	✓	✓

+ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3: 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.

Table 3 reports the results of two-stage least squares regressions for both House and presidential elections. Across both sets of elections, we again find that growth in women’s share — or decline in men’s share — of local workforces corresponds to significant and sizable increases in Republican vote share. These models indicate that a standard deviation shift towards women (equivalent to 14% of initial workforce size) between 2004–15 caused a seven percentage point swing towards Republican candidate for the House. This shift likewise caused approximately a seven-point move towards the Republican presidential candidate between George W. Bush in 2004 and Donald Trump in 2016. These results are robust to controlling for county-level population, unemployment, male proportion of the

working age population, white proportion of the population, and the percentage of adults with at least a Bachelor’s degree. Comparisons of the 2012 and 2016 elections yield similar results (Appendix E).

Individual-Level Analyses

We complement these tests of electoral outcomes with nationally representative survey data on individual vote choice and political attitudes, drawn from the Cooperative Election Study (Ansolabehere and Schaffner 2017; Kuriwaki 2022). These tests serve to verify the county-level results, examine whether rightward shifts appear among both men and women, and probe the shifts in political beliefs that may underly Republican election gains.

	Pr(Vote for Republican = 1)					
	All Respondents		Men		Women	
	(1)	(2)	(3)	(4)	(5)	(6)
Men laid off (ln)	0.287*** (0.052)	0.111*** (0.029)	0.265*** (0.055)	0.090* (0.035)	0.305*** (0.055)	0.130*** (0.033)
Women laid off (ln)	-0.354*** (0.052)	-0.154*** (0.030)	-0.329*** (0.056)	-0.131*** (0.036)	-0.375*** (0.056)	-0.174*** (0.033)
N	227,457	221,541	112,220	109,459	115,237	112,082
Adjusted R ²	0.058	0.391	0.056	0.350	0.063	0.429
County controls		✓		✓		✓
Individual controls		✓		✓		✓
State fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4: 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.

Table 4 reports the results of these individual-level tests, which support the prior county-level findings. Local male layoffs prompt sizable increases in the likelihood of voting Republican among both men *and* women, whereas local layoffs of women are associated

with no such rightward shift. These patterns persist even upon controlling for a battery of county- and individual-level covariates, including party identification.¹⁹ In the fully specified models, a 25% increase in the rate of male layoffs renders men and women two-to-three points more likely to vote Republican. Female layoffs rather prompt substantial declines in individuals' likelihood of voting Republican; a commensurate increase in female layoffs reduces support by three-to-four points. We find similar results when focusing specifically on layoffs in the stereotypically masculine industries of mining and metal manufacturing: male layoffs boost Republican support, while layoffs of women — even in the same industry — do not (Appendix F). We likewise identify these trends when replacing state fixed effects with county fixed effects to account for finer spatial heterogeneity (Appendix G).

	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.)	0.099*** (0.025)	0.115*** (0.032)	0.082** (0.028)	0.062** (0.020)	0.061* (0.028)	0.063** (0.023)
N	48,919	22,740	26,179	53,487	24,805	28,682
Adjusted R ²	0.410	0.346	0.465	0.432	0.372	0.486
First-stage coefficient	7.79*** (1.13)	8.48*** (1.46)	7.29*** (1.13)	7.79*** (1.13)	8.48*** (1.46)	7.29*** (1.13)
F-statistic	1415.9	737.7	695.7	1573.2	824.4	766.3
County controls	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 5: Two-stage least squares regressions of votes in the 2016 general election on shifts in workforce composition towards women between 2004 and 2015. Sample limited to validated voters in 2016 general election. Standard errors clustered by county. CCES observation weights included.

Commensurate results are found when examining votes in the elections of 2016. Table 5

¹⁹County controls (lagged by one year) include the number of men and women employed, 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, and party identification.

shows that shifts in workforce makeup towards women between 2004–2015, instrumented for with nationwide industry trends as above, 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 local labor workers made voters six points more likely to support Trump, independent of their party identification and other individual- and county-level factors, and eight-to-twelve points more likely to back the Republican candidate for Congress.²⁰

In a final set of tests, we examine whether, as expected, women face increased time constraints upon entering the labor force. We utilize panel data from the American Household Time Use Survey to do so. Results in Appendix H show that when women replace their husbands as primary breadwinners, they devote *more* time to childcare than they did prior to working full-time. Men, meanwhile, spend *less* time on childcare when they lose their jobs, instead devoting additional time to leisure activity. These findings affirm those in existing literature (Evans 2016), and indicate that workforce shifts from men to women may exacerbate temporal constraints on women’s political participation. In accordance with this, we find that while labor market shifts towards women induce greater political engagement among men, then do not increase the participation of women (Appendix I).

Conclusion

This paper explores the gendered political consequences of industrial decline in the United States. We argue that decline in male-dominated industries generates within-household spillovers that drive households towards right-wing parties, especially in the presence of conservative cultural institutions. Men embrace conservative parties that promise to revitalize historically male industries and restore men’s prior economic prominence. Women,

²⁰In these models, 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.

meanwhile, often take the place of their husbands in the labor market while simultaneously retaining responsibility for the majority of housework and childcare. This leaves them overburdened, often underpaid, and with limited time to invest in political mobilization. To support these theoretical claims, we bring to bear an array of evidence on county-level electoral outcomes and individual-level vote choice. Across models, we find that workforce shifts from men to women — measured both as male layoffs and changes in workforce composition — prompted significant moves to the right among both men and women in the 2000s and 2010s.

Our findings are notable amid a broad move by the American right in recent decades to reaffirm traditional domestic structures, exemplified by a “neopatriarchal” pursuit of abortion restrictions (Leach 2020; Reingold et al. 2021). This paper helps make sense of the support among both women and men for socially conservative parties, 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 suggest that it is intimately interwoven with cultural attitudes and fears (Margalit 2019). Complementing recent work on the ethnoracial aspects of this backlash (e.g., Baccini and Weymouth 2021), this paper highlights gender as an important source of discontent amid economic disruption.

This paper also clarifies when economic tumult boosts right-wing versus left-wing parties. The argument we lay out is consistent with the extensive literature showing that industrial decline bolsters right-wing political movements (Colantone and Stanig 2018; Ahlquist, Copelovitch, and Walter 2020; Autor et al. 2020; Baccini and Weymouth 2021; Ballard-Rosa et al. 2021; Milner 2021). Yet other studies have linked decline to greater support for left-wing policies and parties (Margalit 2013; Emmenegger, Marx, and Schraff 2015; Alt et al. 2021). In this paper, we find that while male layoffs aid right-wing parties, female layoffs have the opposite effect, reducing support for Republicans among men and women in favor of the Democratic Party. These divergent findings indicate that status concerns

may play a central role in dictating the direction of these effects. The loss of male jobs, and subsequent upheaval of subjective status hierarchies, may support right-wing parties due to their promise of restoring the status quo ante. The loss of female jobs may not similarly upset status perceptions in patriarchal settings, implying that its effect will primarily be funneled through economic scarcity. Such experiences of material loss may render left-wing social policies more attractive.

The argument in this paper should generalize. We expect our contentions to hold when gendered deindustrialization occurs alongside the presence of (a) patriarchal norms, often embedded in conservative cultural institutions, and (b) a right-wing party that emphasizing a return to traditional divisions of labor. These conditions are met in a number of settings across developed and developing countries. For instance, men in India and Bangladesh suffer severe status losses when they lose their jobs.²¹ The Irish far right is gaining traction via its focus on social conservatism.²² Future work should more comprehensively evaluate the effects of decline in gendered-segmented industries outside the U.S.

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 the mass politics of a number of issues, beyond globalization and deindustrialization. Decarbonization, for example, implies decline in a number of male-dominated industries in advanced economies (Bush and Clayton 2022). Our results indicate that gender-based concerns about cultural upheaval may fuel a similar backlash to climate change mitigation policy, especially if not accompanied by “just transition” policies instead to shift workers to new industries. Climatic shocks to agriculture in the Global South, which features greater shares of women (Brulé 2022), may not ignite such traditionalist reactions. Gender is a core component of the politics of industrial decline.

²¹*Brookings*, 2022, [brook.gs/3MI3LqF].

²²*Irish Times*, 2021, [bit.ly/3CCyZuS].

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Appendices

A. Job Losses by Gender and Industry

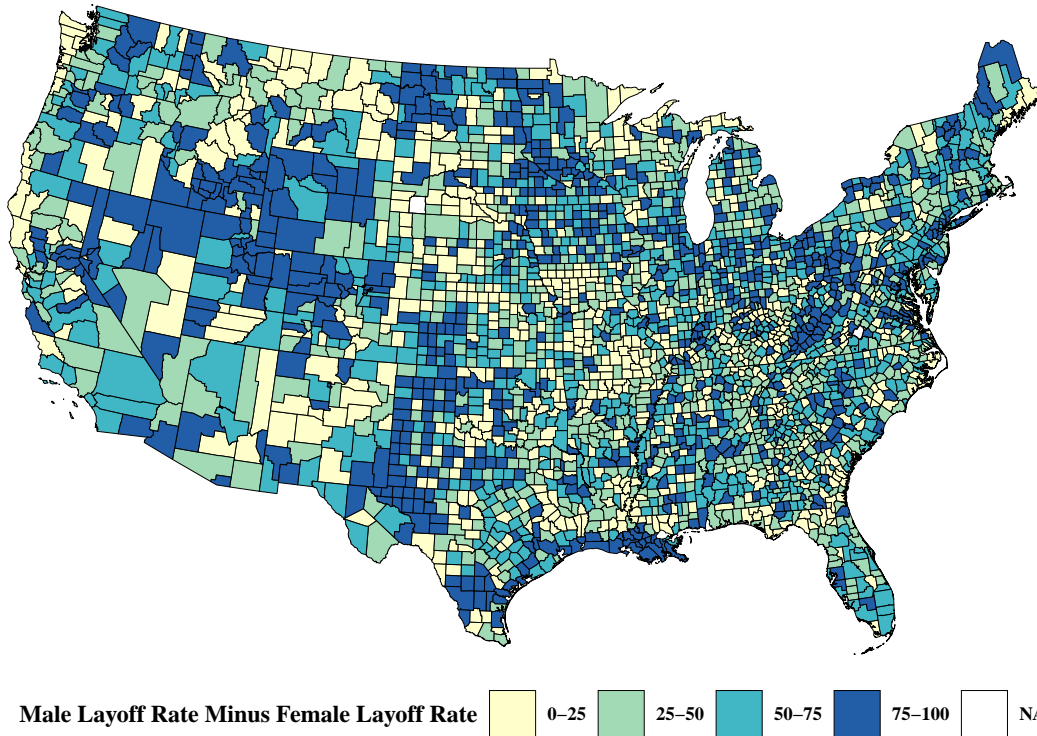


Figure A1: Quantiles of the difference in male vs. female layoffs between 2004–2020 (darker shades: more men than women laid off as percentage of working age population).

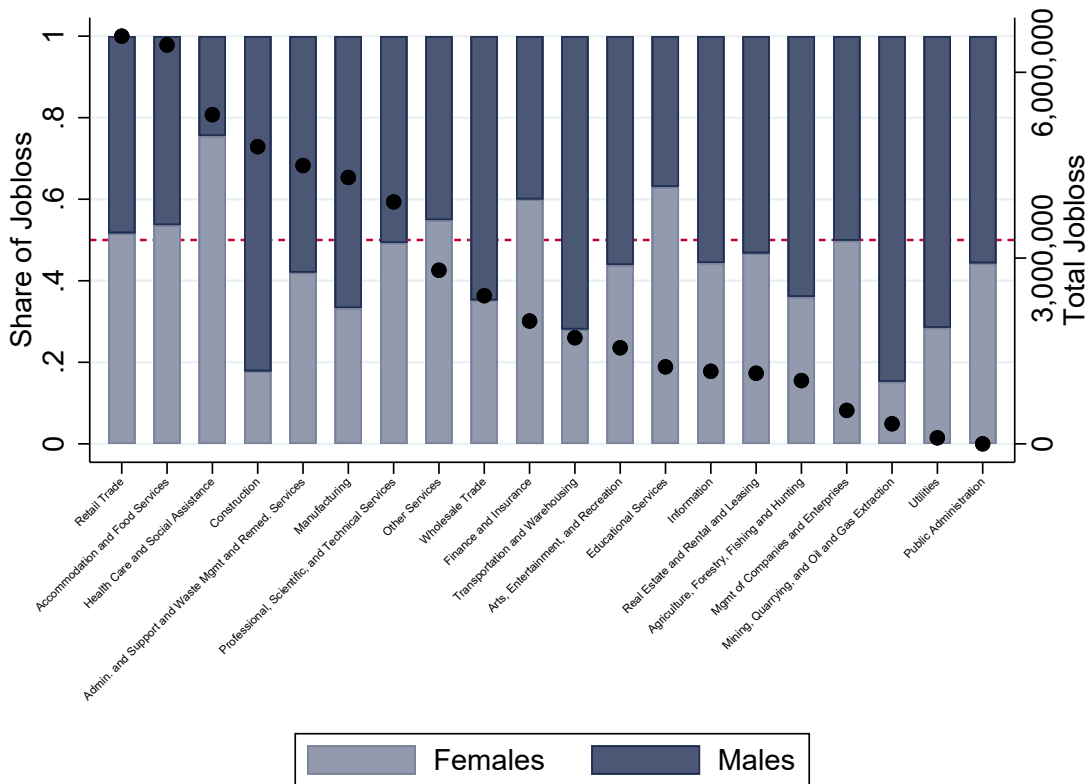


Figure A2: Shares of job losses by gender for each NAICS 2-digit industry (2004–16). The industries are ordered by the total number of job losses (indicated by the black dots).

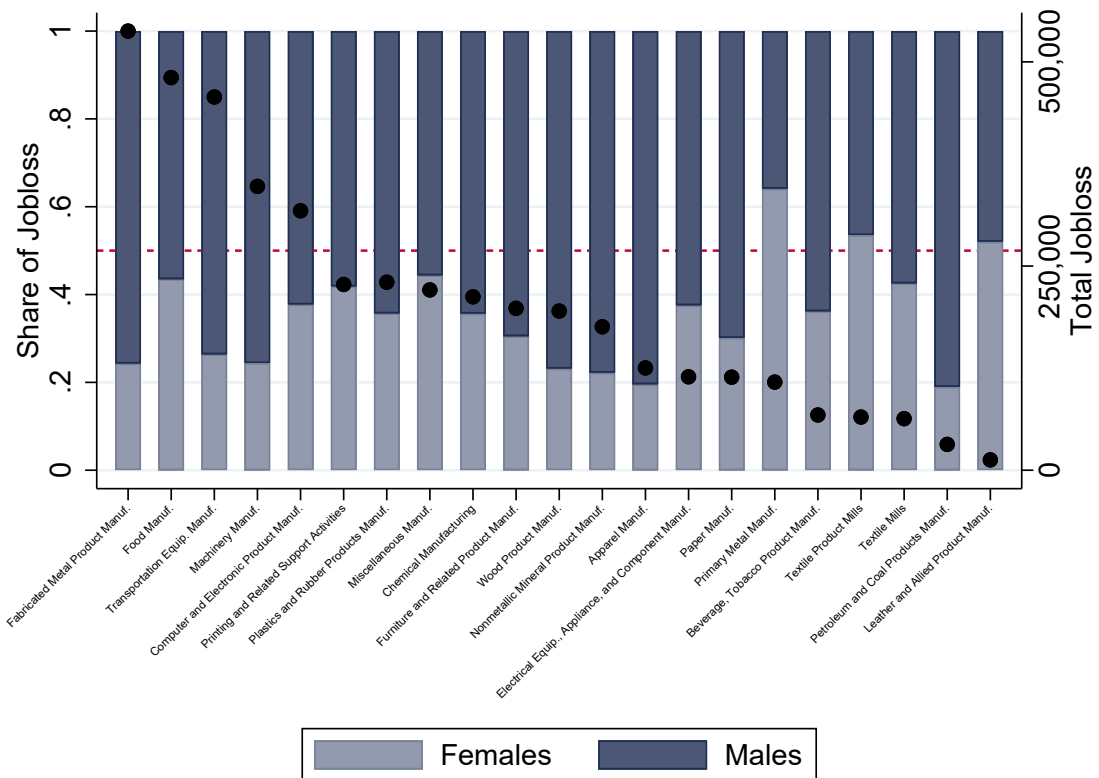


Figure A3: Shares of job losses by gender for each NAICS 3-digit industry in the U.S. manufacturing sector (2004–16). The industries are ordered by the total number of job losses (indicated by the black dots).

B. Respecification: State-by-Year Fixed Effects

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Men laid off (ln)	6.643*** (1.376)		4.680** (1.468)	
Women laid off (ln)	-10.599*** (2.265)		-2.597 (2.276)	
Net shift towards women (st. dev.)		0.233*** (0.059)		0.180** (0.060)
N	21,633	21,633	18,513	18,513
Adjusted R ²	0.779	0.779	0.793	0.793

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table B1: Replication of main models (1–4) in Table 1, replacing year fixed effects with state-by-year fixed effects.

C. Respecification: Commuting Zones

	Republican Vote Share (%)			
	(1)	(2)	(3)	(4)
Men laid off (ln)	10.083*** (2.872)		7.981** (2.699)	
Women laid off (ln)	-11.081* (4.728)		-4.324 (4.810)	
Net shift towards women		0.167*** (0.048)		0.158** (0.052)
N	21,643	21,643	20,950	20,950
Adjusted R ²	0.542	0.542	0.549	0.549

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table C1: Replication of main models (1–4) in Table 1, aggregated to commuting zone level.

D. Alternative Sample: Iteratively Dropping Counties

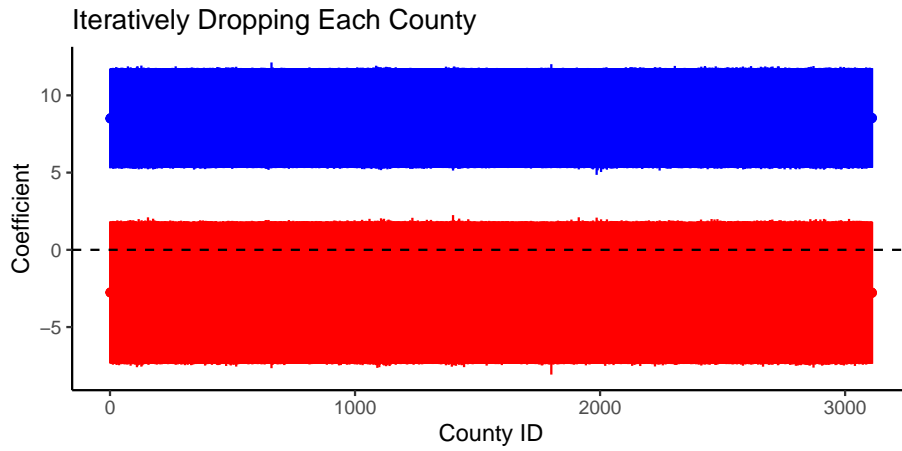


Figure D1: Replications of Table 1, Model 3. Blue and red points indicate coefficients for men laid off (ln) and women laid off (ln), respectively. Vertical lines indicate 95% confidence intervals. Each iteration of the model excludes an individual county from the analysis.

E. Alternative Sample: House Elections, 2012–16

	Δ Republican Vote Share (2012–16, %)	
	(1)	(2)
Net shift towards women (st. dev.)	6.631*** (1.723)	5.058** (1.622)
N	3,104	3,103
Adjusted R ²	0.059	0.188
First-stage coefficient	7.41*** (0.939)	7.38*** (0.946)
F-statistic	62.45	61.52
County controls		✓
State fixed effects	✓	✓

+ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table E1: Two-stage least squares regression of change in Republican vote share (2004–16) on the net shift in workforce makeup towards women (2004–15). Robust standard errors parenthesized.

F. Respecification: Mining and Metal Manufacturing

	Pr(Vote for Republican = 1)					
	All Respondents		Men		Women	
	(1)	(2)	(3)	(4)	(5)	(6)
Men laid off (ln)	0.292*** (0.065)	0.138*** (0.037)	0.328*** (0.070)	0.158*** (0.043)	0.264*** (0.067)	0.123** (0.039)
Women laid off (ln)	-0.362*** (0.066)	-0.181*** (0.038)	-0.398*** (0.070)	-0.199*** (0.043)	-0.333*** (0.068)	-0.166*** (0.039)
N	176,669	175,939	82,041	81,680	94,628	94,259
Adjusted R ²	0.055	0.395	0.057	0.397	0.053	0.394
County controls		✓		✓		✓
Individual controls		✓		✓		✓
State fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table F1: Replication of Table 4, focusing on layoffs only in mining and primary metal manufacturing. Sample limited to counties with non-zero employment in these industries in prior year.

G. Respecification: County Fixed Effects

	Pr(Vote for Republican = 1)					
	All Respondents		Men		Women	
	(1)	(2)	(3)	(4)	(5)	(6)
Men laid off (ln)	0.105** (0.035)	0.102** (0.032)	0.102* (0.046)	0.095* (0.042)	0.082+ (0.042)	0.080* (0.039)
Women laid off (ln)	-0.129** (0.041)	-0.059 (0.037)	-0.084+ (0.048)	-0.020 (0.045)	-0.136** (0.051)	-0.069 (0.048)
N	269,516	221,541	131,015	109,459	138,501	112,082
Adjusted R ²	0.114	0.416	0.118	0.385	0.130	0.459
County controls		✓		✓		✓
Individual controls		✓		✓		✓
County fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓

+ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table G1: Replication of Table 4, replacing state fixed effects with county fixed effects.

	Pr(Vote for Republican = 1)					
	All Respondents		Men		Women	
	(1)	(2)	(3)	(4)	(5)	(6)
Men laid off (ln)	0.099* (0.045)	0.106** (0.038)	0.120* (0.058)	0.107* (0.050)	0.071 (0.059)	0.109* (0.048)
Women laid off (ln)	-0.092+ (0.054)	-0.067 (0.043)	-0.098 (0.075)	-0.042 (0.056)	-0.068 (0.067)	-0.076 (0.053)
N	176,669	175,939	82,041	81,680	94,628	94,259
Adjusted R ²	0.103	0.415	0.110	0.420	0.104	0.416
County controls		✓		✓		✓
Individual controls		✓		✓		✓
County fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓

+ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table G2: Replication of Table F1 (mining and metal manufacturing), replacing state fixed effects with county fixed effects.

H. Mechanism: Changes in Time Use

Here we examine AHTUS time use data to see whether, as expected, the exit of men from the workforce exacerbates demands on women’s time. Table H1 indicates that female breadwinners retain the bulk of domestic responsibilities upon entering the workforce. For women whose husband is not employed full time, their assumption of full-time work produces no reduction in time spent on childcare; in fact, women appear to spend *more* time on childcare in this situation.

	Woman’s time spent on childcare
Woman employed full-time	–50.590*** (1.535)
Man not employed full-time	–69.735*** (1.643)
Woman employed full-time × man not employed full-time	50.807*** (2.392)
N	45379
Adj. R-squared	0.055

***p < .01; **p < .05; *p < .1

Table H1: Changes in women’s time use (minutes per day). Includes individual and survey-wave fixed effects, with robust standard errors clustered by individual. Panel data gathered from the American Heritage Time Use Study, covering the years 1965–2018 (conducted decennially 1965–95, 1998, annually 2003–12, and 2018).

In line with this, we find that men who cease working full time devote *less* time to childcare and more time to leisure activities, in line with other studies in the literature (e.g., Gaikwad, Lin, and Zucker 2022). This indicates that as women replace husbands in the workforce, constraints on women’s time tighten, while those on men’s loosen. This may prevent women from investing in politics to mobilize against patriarchal political movements; may foment their desire for a return to more patriarchal divisions of labor; or may lead them to defer to their partners.

	Male time spent on childcare	Male in-home leisure time
	Model 1	Model 2
Male not employed full-time	–18.527*** (1.016)	33.097*** (1.688)
N	41464	41464
Adj. R-squared	–0.021	0.038

***p < .01; **p < .05; *p < .1

Table H2: Changes in men’s time use (minutes per day). Includes individual and survey-wave fixed effects, with robust standard errors clustered by individual. Panel data gathered from the American Heritage Time Use Study, covering the years 1965–2018 (conducted decennially 1965–95, 1998, annually 2003–12, and 2018).

I. Mechanism: Political Engagement

	Pr(Attend Local Political Meeting = 1)	
	Men	Women
	(1)	(2)
Net shift towards women (st. dev.)	0.021* (0.010)	0.004 (0.008)
N	16,839	20,760
Adjusted R ²	0.039	0.038

⁺ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 11: Regressions of binary indicator of attendance at local political meeting in last year on workforce shifts between 2012–15 (estimated via shift-share instrument). Data from 2016 CSES wave.