Beyond the Clock: Labor Market Effects of Lifting Gender-Specific Hours Restrictions *

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Abstract

During the 1960s and 1970s, states across the US repealed laws that imposed limits on how many hours women could work in certain industries. We find that the repeal of these laws led to similarly labor market effects for *both* men and women. In particular, the average workweek increase in length and fewer people left the previously affected the affected industries. In addition, both hourly and annual earnings fell. The effects for women are consistent with a model in which male and female labor are complements in production and removing a workweek limit expands the supply of female labor. However, to explain the effects for men, it must be that repealing the female specific workweek limit also expanded the supply of *male* labor.

Keywords: Maximum Hours Restrictions, Female Employment, Hours Worked, Wages.

JEL Classification: J16, J20, N32

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1 Introduction

The 20th century saw the rise and (partial) fall of a legal regime aimed at protecting women but having the consequence of limiting women's labor market opportunities. One type of such legislation explicitly limited the number of hours a woman could work over a certain amount, which we refer to as a gender-specific hours restriction, or GHR. A labor market regulation of this kind is particular costly for the most ambitious women working in industries and occupations in which the returns to working long hours are convex (Goldin, 2014). By 1950, nearly every state in the union had such a policy and by 1975, all of these laws were gone either repealed through legislative, legal, or executive action. In this paper, we study the consequences of ending these laws for both women and *men* exploiting the staggered repeal of these laws to estimate their effects on weekly hours, employment, and earnings.

To organize our empirical results we develop an extension of the model of the labor market in a paper by Landes (1980). The original model assumed that workers make a choice of whether to work at all and conditional on that choice, how many hours to work. Workers only differ in terms of a fixed cost of working at all. We introduce a second dimension of heterogeneity in the form of differences in the marginal disutility of hours worked. This dimension of heterogeneity generates a distribution of hours worked across individuals. On the labor demand side, the original model assumed that an additional hour from hiring an additional worker is equivalent in terms of additional production from an additional hour from an already hired worked. In addition, the firm views male and female labor as perfect substitutes. Besides studying this case, we also examine the case of perfect complements.[1]

We conceptualize the repeal of a GHR as acting like a positive shock to female labor supply. Under this interpretation, the effects on men's labor force outcomes will depend essentially on whether male and female labor are complements or substitutes. In the first case, then an increase in the supply of female labor will raise the wage, hours per worker, and employment of men. If the two types of labor are substitutes, then the effects are just the opposite. In either case for women, the wage will fall and hours worked will rise. Whether that increase in hours worked comes from an increase in employment or hours per worker (or both) depends on parameter values like the elasticity of labor demand. The key takeaway is that it is in fact the response of men to the repeal that identifies the

[1] In the appendix, we consider intermediate levels of substitutability.

substitutability between the types of labor and whether the repeal was in the interest of men in the first place.

To empirically estimate the impact of these laws, we exploit their staggered state-level repeals in a difference-in-differences framework. As a first step, we find that hours per worker for women rose after the repeal of these laws by around 0.6 hours per week. This rise in the average length of workweek is driven by changes along two margins: an increase in the probability of working longer than the GHR limit as well as longer workers for those who initially had a workweek far below the GHR. This is not a particularly surprising result (though it is not a necessary consequence of the model), but what is more surprising is that the average workweek for men also rises by a similar amount as for women. On the extensive margin, we find that fewer men and women leave industries previously subjected to the workweek restriction. These results for quantities are consistent with male and female labor being complements. Interestingly, these results are quite similar to those of Goldin (1988), who studied the effects of the introduction of women's hours limits before 1922. She found that introducing these maximum hours laws *reduced* hours worked by both women and men.[2] Haddad and Kattan (2024) examine other types of protective laws for women that were passed by the end of the nineteenth century. These regulations, which tended to come along side restrictions on hours work, include seating, health and safety, and night-work regulations. They find that the laws regulating health and safety conditions and restricting women's night work actually increased the likelihood of female employment by about 4% to 8% by making the jobs more attractive.

What is puzzling are the results for wages. We find again similar effects across men and women with both hourly, weekly, and annual earnings falling following the repeal of these laws. The negative effects for women can be rationalized with our simple model. However, we cannot rationalize the effects for male earnings if the only effect of repealing the GHR is to expand the female labor supply. Instead it must be that repealing the limit on women's workweek not only increased the demand for male labor but also the supply. The direct increase in the supply of male labor is consistent with Goux, Maurin and Petrongolo (2014). They find that when the wife in the household cuts her hours worked, then so does the husband. They argue that these changes reflect complementarities in leisure choices between spouses (though the effect does not work in reverse if there is an exogenous decrease in the workweek of the husband).

[2]Goldin interpreted these results as reflecting a general push for shorter workweeks for all workers. She does not consider the possibility that the effect for men could be due to complementarities between male and female labor.

We argue that the mixed effects for women help to rationalize the debate around repealing these laws. In fact, women were divided over whether these restrictions should be removed. In our model, this group is that of women who were working less than the workweek restriction before it was repealed. They are hurt when the restriction is repealed because of increased competition from *other women*. Doepke et al. (2024) study the political economy of the introduction of these laws and argue that the laws were all about limiting economic competition with men. In the case of repeal, it was not about the economic interests of men since our results suggest that all men benefited from repeal because of complementarities in production. Instead the political economy of repeal was all about some women wanting to limit competition from other women who stood to take advantage of these greater market opportunities. In a review of Lehrer (1987), which is a book-length study of the origin of these laws, Siegel (1987-1988) calls the debate a "struggle of women against women, in which women serve as the primary agents of their own victimization."[3]

Our paper first fits into a literature that empirically explores the effects of gender-specific hours regulations on labor market outcomes. As mentioned earlier, Goldin (1988) and Landes (1980) examined the effects of the introduction of women's hours laws in the early 1900s on labor market outcomes. Kato and Kodama (2018) investigated the effects of relaxing overtime restrictions on female employment in Japan. Like these earlier papers, we also find roughly symmetric effects on the genders of these gender-specific regulations. We go beyond earlier work by also examining the effects on wages for men and women, which are particularly important for understanding who benefited from these laws in the first place. Joseph E. Zveglich and van der Meulen Rodgers (2003) study a similar policy in Taiwan and find that employment and hours for women falls when an hours restriction is imposed, but there is no effect on wages. They argue that the null effect for wages reflects the fact that women made up a small share of the labor force in this setting.

More broadly, our paper is related to the extensive literature on the gender gap in labor market outcomes and what role legal barriers played (and continue to play) in creating (and sustaining) that gap.[4] One hypothesis is that women are constrained by the lack of affordable and flexible substitutes to household production (Cortés and Tessada, 2011; Cortés and Pan, 2013). Another hypothesis is that social norms may dictate that

[3]This was contra Lehrer (1987) who argues that it was the business class that pushed for these laws at the expense of women.

[4]For a comprehensive review of the literature, see Blau and Kahn (2017).

married women should stay at home and put their husband's career ahead of their own (Fortin, 2005, 2015; Bertrand, Kamenica and Pan, 2015). Still another hypothesis is that women face discrimination in their workplaces and employers refuse to promote women to highly-paid positions that require long hours. Historically, women faced legal discrimination in the labor market. For example, Marchingiglio and Poyker (2023) studied the economic consequences of gender-specific minimum wage laws. They find that, on average, female employment decreased due to the female specific minimum wage, but the net earnings effect was positive suggesting that while this kind of law might have exacerbated the gender gap in employment, it would have reduced the gender gap in earnings. The paper highlights a way in which laws might have positive or negative effects on different dimensions of the gender gap.

A similar concern rises when it comes to the push for more flexible working schedules and more control over the workweek by workers themselves. At the federal level, the 2019 *Schedules That Work Act* and the 2021 *Part-Time Worker Bill of Rights* bills aimed to address the issue of unpredictable and inadequate work hours. At the local level, as an example, Berkeley's Fair Workweek Ordinance, passed in December 2022, gives covered employees the right to request a modified work schedule including additional shifts or hours, changes in days of work or start and end times of a shift, as well as other modifications. Many have speculated that eliminating rigid work days and providing more flexibility would reduce the employment gender gap since the vagaries of childcare and other home obligations tend to fall on women.

To date, the literature (see, for example, Mas and Pallais (2017), Cook et al. (2020), and Angelici and Profeta (2024)) has been divided over what the rise of workplace flexibility has meant for the women's experience in the labor market. Part of the issue is that formally gender neutral polices can have disparate impacts on gender. In the case of flexible work laws, this is the hope. In other cases though these gender neutral policies appear to have backfired. For example, Antecol, Bedard and Stearns (2018) document the fact that the adoption of gender-neutral tenure clock-stopping policies substantially reduced female tenure rates while substantially increasing male tenure rates. We establish something like the "converse" result in which a gender specific policy reform has (approximately) gender-neutral effects.

2 Institutional Background

2.1 The Rise and Fall of GHRs

During the decade preceding World War I, several states enacted protective labor laws applying only to women, regulating their hours of work and conditions of employment. The laws specified things like maximum daily or weekly hours, days of rest, meal and rest periods, and limitations on night work. At their peak in 1967, these gender-specific laws existed in 46 states. Some standards were established by statute; others by the orders of minimum wage of industrial commission boards. In the vast majority of cases, the laws applied to women working in manufacturing and mercantile industries. The difficulty we face is the CPS data we work prior to 1968 does not provide the detailed and consistent 1950 Census Bureau industrial classification system is not available. Instead, we rely on the relatively coarse information based on a 2-digit code system. Therefore, there is some "measurement error" in our identification of who is subject to a GHRs.[5] To mitigate the concern due to this technical issue, we pool workers from other industries together in the appendix and show our estimates are quite similar to the baseline ones. There were some states with much broader coverage of women such as in Arizona where nearly all female workers[6] were subject to a limit of 8 hours per day and 48 hours per week. Similar legal language could be found in Nevada[7], New Hampshire[8], North Carolina[9], Ohio[10], Pennsylvania,[11], South Dakota,[12], and Utah[13]. In principle then, we could exploit cross-industry variation to identify the effects. As we discuss later, we choose to only exploit variation across states and over time associated with the repeal of GHRs.

After the passage of Title VII in the Civil Rights Act of 1964, a pressing question for states became how to reconcile these gender-specific laws with the federal mandate to not

[5]For example, we cannot directly identify workers in the laundry, hotel, restaurant, telephone/telegraph offices/exchanges, and public housekeeping industries.

[6]The few exceptions included domestic work, telephone or exchanges, or railroad yard offices when only 3 women are employed, nurses, children's camps when on written contract basis for longer than 1-week term, except camps regulated by existing ordinance or any city or town.

[7]*Rev. Stat (1959), vol 5., sec. 609.020, 609.110, 609.120*

[8]*Ibid., secs. 275:15, 175:17, 175:18, 175:20, 275:21*

[9]*General Stat. with 1959 supp., vol. 2C, sec. 95-17.*

[10]*Rev. Code Annotated, with 1959 supp., title 41, secs. 4107.43, 4107.45, 4107.46.*

[11]*Stat. Annotated with 1958 supp., title 43, secs. 103, 104, 107*

[12]*Code 1939, with 1956 supp., vol.1, see 17.0601*

[13]*Code Annotated, 1953, with 1959 supp., vol. 4, sec. 34-4-3*; and Industrial Commission Welfare Regulations for any occupation, trade of industry, effective Sept. 14, 1937, as amended April 20, 1948; and Administrative Regulations for the issuance of emergency work permits, approved May 12, 1939.

discriminate on the basis of sex. In response, the federal government set up *A Task Force on Labor Standards* to study these issues. One approach was to extend the same protections to men as well as women and to incorporate statutes pertaining to lunch periods, weight-lifting limits, and occupational hazards into a comprehensive safety and health program applicable to men and women alike. The other approach urged by the Task Force was the removal of these restrictions altogether, including the prohibition on night work. It also recommended the hours limits be replaced with overtime provisions when agreed to by employees and employers.

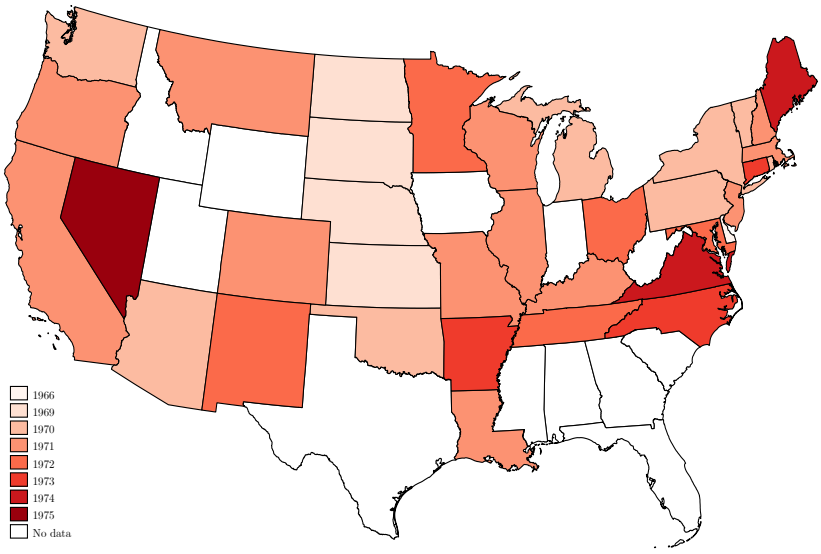
After Congress and some states began mandating premium pay for overtime, several states relaxed maximum daily and weekly hours provisions for employers to comply with overtime pay requirements by repealing these protective laws for women. Starting in 1970, more decisive action began to take place by state legislators to resolve the conflict between federal anti-discrimination laws and these state laws. For instance, in 1970, Arizona repealed its maximum hours and weekly rest day law for females; New York released women from over 21 from restrictions on daily and weekly work hours and on night work; and Vermont released women age 18 and over from its maximum hours law and repealed other provisions governing conditions of female employment. Other states including California, Connecticut, Maryland, Massachusetts, New Mexico, North Carolina, Tennessee, and Virginia adopted major amendments to these laws that reduced the scope or loosened the restrictive nature of restrictions. For example, several of them made the restrictions inapplicable to employment that met or were covered by requirements of the Federal Fair Labor Standards Act (Weissbrodt, 1971). Figure 1 shows a map of when states repealed these laws. [14]

In other states, federal and state supreme court decisions voided state maximum hours laws for women.[15] For example, in *Rosenfeld v. Southern Pacific Company*, the Ninth Circuit Court of Appeals "tackled head-on the conflict between Title VII and protective labor laws for women" (Hill, 1979). The plaintiff, Leah Rosenfeld, wanted to be an agent-telegrapher. Southern Pacific denied her the job on two grounds: first, that women were not physically or "biologically" suited for such work; second, giving the plaintiff the job would violate California's maximum hours and weight restriction laws for women (Hill, 1979).

[14]The information on these policies is drawn from the Women's Bureau, the U.S. Department of Labor Statistics. The Women's Bureau regularly published state labor laws for women (Department of Labor, 1924, 1927, 1928, 1937, 1939, 1944, 1961, 1967) and the Handbook on Women Workers (1969, 1975, 1983). In the appendix, we present more historical information on such state-level maximum hours standards from *State Hour Laws for Women : Women's Bureau Bulletin, No. 277*.

[15]See https://www.nytimes.com/1971/07/13/archives/womens-job-rights-gain-in-federal-court-rulings-womens-job-rights.html, last accessed March 20, 2025.

Figure 1: Year of Repeals



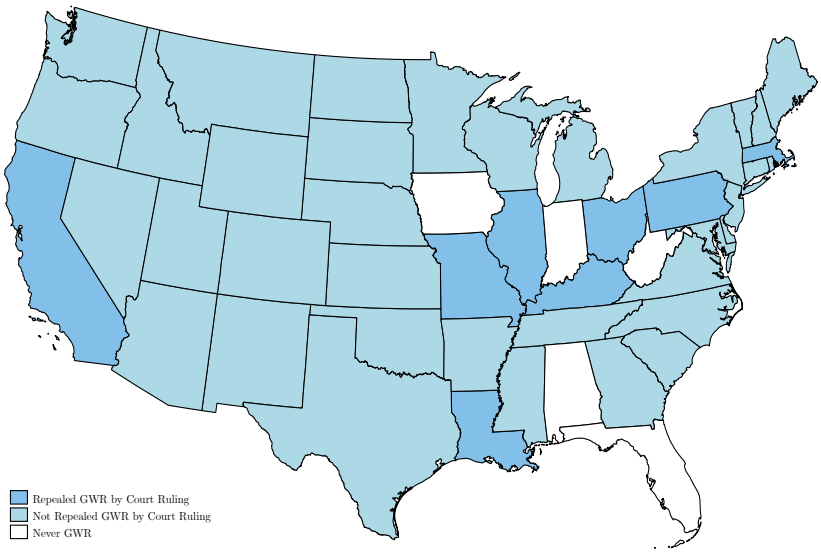
Notes: A state could have multiple actions repealing a GHR. We take the year of first action.

The *Rosenfeld* court stated that "[Voiding the law] alone accords with the Congressional purpose to eliminate subjective assumptions and traditional stereotyped conceptions regarding the physical ability of women to do particular work" and clearly enunciated Title VII's mandate that women workers be treated and judged as individuals, not lumped into a class by themselves.[16] As a consequence of this court decision, California announced it would no longer enforce its restrictions on hours and weightlifting for women (Hill, 1979). Another important case in 1970 was the decision in *Caterpillar Tractor Co. v. Grabiec*, 317 F. Supp. 1304 (S.D. Ill. 1970), which voided the Illinois Female Employment Act. The court wrote that "Most, if not all, female employees of each plaintiff who are within the coverage of the Illinois Female Employment Act are fully capable of working in the operations of their respective employers for more than the maximum hours permitted by the Illinois Female Employment Act." Subsequently, state female hours laws in Kentucky (1971), Louisiana (1971), Massachusetts (1971), Missouri (1971), Ohio (1972), and Pennsylvania (1971) were struck down by federal courts or state supreme courts (State Hours Laws for Women Changes in Status Since the Civil Rights Act of 1964, 1974).[17] Figure 2

[16] Admittedly, the court also tersely stated that, "an employer can hardly be faulted for following the explicit provisions of applicable state law." Therefore, it left room for employers to exclude women from jobs as long as they relied on one of these laws. If caught, they would be told to stop, but the good faith reliance doctrine, as set forth in *Rosenfeld*, has consistently been used to deny women any damages for the employer's past discrimination (Hill, 1979).

[17] See https://www.google.com/books/edition/State_Hours_Laws_for_Women/5newvDepRuwC?hl=en&gbpv=0, last accessed March 20, 2025.

Figure 2: Court Cases Voiding Gender-Specific Hours Restrictions



Notes: A state could have multiple actions repealing a GHR.

shows a map of state laws invalidated by court actions.

Finally, in some states, the laws were simply invalidated on the basis of opinions by states' attorneys general or administrative rulings. In general, these opinions stated that the hours laws were not applicable to employers covered under Title VII or the opinions modified the status of the laws directly. For example, in an opinion dated July 17, 1970, Wisconsin's Attorney General Robert W. Warren advised the Department of Industry, Labor and Human Relations' chairman that Sec. 103.02 of the statutes and administrative rules limiting the maximum hours women may work "[was] superseded by provisions of the Civil Rights Act of 1964 as to employers covered by that Act, but other employers remain subject to the State law." He added that "The problems and inequities flowing from disparate treatment under the State and Federal laws deserve careful legislative and administrative attention." Notably, the Attorney General pointed out that while the August 19, 1969, guidelines of the Federal Equal Employment Opportunity Commission stated that state laws restricting the employment and hours of females were in conflict with the 1964 Act, "the final authorities on issues of statutory construction" were the courts. We note that these different kinds of repeal were not necessarily mutually exclusive. For example, in a number of states, an administrative ruling came a few years before the law was repealed or modified by the legislature.

One question is to whether these laws had any bite. Fig. 3 maps the state-specific

workweek limits as of 1961 highlighting that the limits were in every case longer than the normal 40 hour workweek. It is not surprising then that the *Report of the Task Force on Labor Standards to the Citizens' Advisory Council on the Status of Women* argued that the direct effect of weekly caps was minor. By their calculations, only 17 percent of married women workers worked more than 41 hours a week in 1966, and the state limits were always at least 48 hours. However, they did not conclude that limits were meaningless. They instead suggested that *daily* limits were a larger problem, though there did not exist data to test this:

> One-third of the States, however, set a limit of 8 hours on daily hours of work and some additional States a limit of 9 hours a day on work in certain industries or occupations. While no data are available on daily hours of work, these limits are more likely to be restrictive than the weekly limits [...] the fact that all women workers covered by laws with an absolute daily maximum limit of 8 or 9 hours are prohibited from working longer on any day in the week even though their total weekly hours may be within the permissible limit, may well restrict women's access to jobs, promotions and overtime pay.

Hedges (1971), in discussing potential moves to a 4 day workweek with 10 hour days that have "intrigued management and is winning guarded support from labor organizations", noted that GHR laws held back their adoption: "State restrictions on maximum daily hours for women mean that a 4-day week would necessitate a reduction in weekly hours".

Another way in which these hours restrictions might have mattered was in providing a "basis" for employment discrimination against women, a view echoed in lawsuits challenging these workweek restrictions. In *Potlatch Forests, Inc. v. Hays*, an employer brought suit against Arkansas arguing that Title VII preempted a state law requiring overtime pay. The court recognized that the effect "of the [state] statute was to discourage [female] employment by commanding premium pay for it" and ruled that the protections should be extended to *men*, a decision affirmed by the Eighth U.S. Circuit Court of Appeals. In other cases, employers while defending themselves in court *explicitly* cited these workweek restrictions as a basis for their discriminatory employment decisions. In *Kober v. Westinghouse Electric Corporation* (summarized in Gregory (1971)), Westinghouse defended the denial of the promotion of a woman on the grounds that promoting her would have conflicted with Pennsylvania law regarding work hours. Ratner (1980) quotes a statement of a United Auto Workers representative to the Equal Employment Opportunity Commission to the same effect:

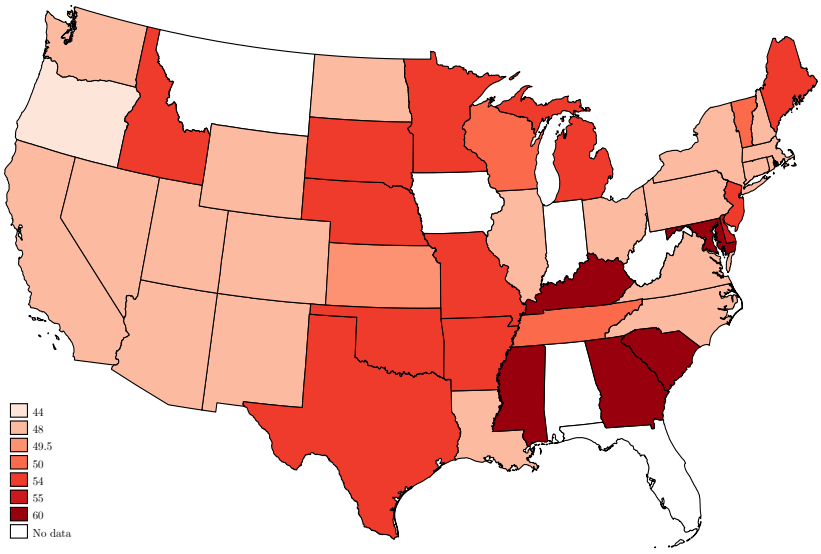
> The contracts we negotiate with employers provide equal pay, equal job opportunity, equal seniority, training, etc., but I couldn't begin to estimate the number of grievances we have taken all the way to arbitration in an effort to enforce a contract only to be stymied by one or another of the so-called state "protective" laws [...] During war periods [laws] were honoured only in the breach. Yet when men were again available the employers resorted to the technique of combining two jobs into one so that it was beyond the state maximum weight law, or scheduling hours of work beyond the statutory limit for women in order to avoid hiring women employees

In *Jones Metal Products Co. v. Walker*, the employer in admitting to discriminatory practices went so far as to contend that it was *required* to discriminate against women under Ohio law. On appeal, the firm argued that Title VII preempted state-level legislation and that a failure of the appellate court to invalidate the state law would put the firm in an impossible position:

> According to appellants, continued compliance with these state statutes will subject them to a multiplicity of damage suits by their employees, in the federal courts, for violations of Title VII. Conversely, if they comply with the requirements of Title VII, they will subject themselves to suits by one or more of the appellees and will subject themselves to fines, imprisonment and the costs of defending such litigation

The Supreme Court of Ohio agreed, and the state restrictions were invalidated.

Figure 3: Weekly Hours Worked Limits as of 1961



Notes: While not having a weekly hours worked limited, Montana had a daily hours limit of 8 hours.

3 Theoretical Framework

To organize our empirical results, we build on the model of Landes (1980), which distinguished on the labor supply side between hours per worker and number of workers (to a certain degree) as well as between labor supplied by males versus females. On the labor demand side, firms viewed hours worked by men and women as perfect substitutes. We generalize the model in two directions. First, we also consider the perfect complements case.[18] Given the different types of work men and women did at the time, we think perfect complements is potentially a more reasonable assumption. The second generalization is that we allow for two dimensions of preference heterogeneity: (1) along the extensive margin of whether a person works at all like in the original model and (2) along the intensive margin of how many hours a person works. This second dimension of heterogeneity allows us to capture the distribution of hours worked among those that work.[19] Importantly, this second dimension of heterogeneity is what generates disagreement between women about repealing the law. We study the comparative statics of a marginal increase in the legally imposed hours limit on women $\bar{h}$.[20]

[18] In the appendix, we discuss intermediate levels of substitutability.
[19] In the appendix, we discuss the special case with only one dimension of preference heterogeneity.
[20] This is slightly different comparative static than the one Landes calculates.

3.1 Labor Supply

For now, we focus on a single gender. An individual i makes a decision whether to work or not and how much to consume c. Conditional on the choice of whether to work, the individual chooses how many hours to work h. Preferences are given by

$$c_i - \frac{\alpha}{\alpha+1}\beta_i^{-1/\alpha} h_i^{\frac{\alpha+1}{\alpha}}.$$

The individual maximizes utility subject to the budget constraint $c_i = wh_i$ where w is the (common across individuals) wage per hour. Here β_i represents an idiosyncratic marginal disutility from working an additional hour. It can also be interpreted as one in which workers have different levels of productivity proportional to β_i and get paid based on their individual-specific marginal product. Then the optimal number hours worked given the workweek limit $\bar{h}$ is

$$h_i = \min\{\beta_i w^\alpha, \bar{h}\},$$

Now the individual chooses to work at all if and only if

$$U_i > \delta_i.$$

Here δ_i is a fixed cost of working, which is drawn along with β_i from joint distribution F. We assume that the preferences for work are private information to the worker and firms do not try to screen workers based on these differences. Firms can only condition the wage on gender.[21] Fig. 4 shows the optimal choice for hours worked as a function of β_i and δ_i.

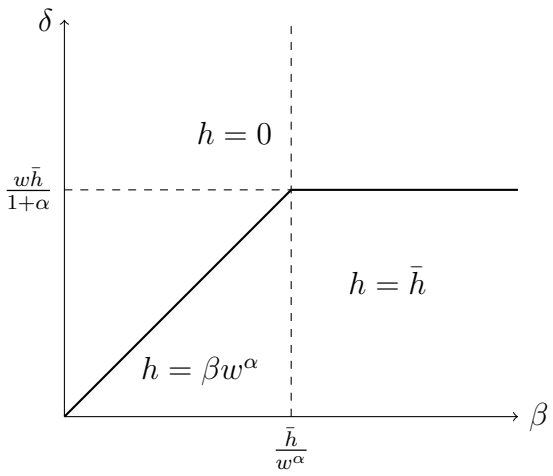
Because preferences are quasi-linear, utility at the optimal choice for those that work is proportional to total earnings:

$$U_i = \frac{wh_i}{\alpha+1}.$$

As a consequence, for people who work before and after the repeal, whether or not the repeal was good depends solely on whether their total earnings went up or down. Those that enter the workforce are strictly better off and those that leave are strictly worse off

[21] As. a consequence of this assumption, individuals with a low disutility of working will earn “rents" in this world. This is similar to the model of the workweek in Bernanke (1986), which has the property that the equilibrium without a workweek limit is not efficient. The reason is that firms are not able to differentiate between workers with a high or low disutility from working at all. Firms instead offer one single wage and allow workers to choose to work as much as they want at that rate. As Fishback, Vickers and Ziebarth (2024) show, the equilibrium with the workweek restriction is not necessarily Pareto dominated by the no workweek case.

Figure 4: Hours Choices



because the value of the outside option of not working δ_i is fixed. The empirical difficulty is that we do not observe changes in individual earnings over time but rather average earnings, which also reflect changes in the composition of the employed.

Let ϵ_i^j denote the percentage change in variable j (e.g., employment L or working hours h) for gender $i = m, f$ while α_i^j denotes the elasticity of variable i with respect to a variable j (e.g., the hours limit $\bar{h}$ or the wage w). Then the general structure of the labor supply block of equations that determine the equilibrium effect of a percentage change in the workweek limit $\varepsilon^{\bar{h}}$ is

$$\begin{aligned}
\varepsilon_f^L &= \alpha_{\bar{h}}^L \varepsilon^{\bar{h}} + \bar{\alpha}_f^L \varepsilon_f^w, \\
\varepsilon_f^h &= \alpha_{\bar{h}}^h \varepsilon^{\bar{h}} + \bar{\alpha}_f^h \varepsilon_f^w, \\
\varepsilon_m^L &= \bar{\alpha}_m^L \varepsilon_m^w, \\
\varepsilon_m^h &= \bar{\alpha}_m^h \varepsilon_m^w,
\end{aligned}$$

where the elasticities $\bar{\alpha}_m^h, \bar{\alpha}_m^L, \alpha_{\bar{h}}^h, \bar{\alpha}_f^h, \alpha_{\bar{h}}^L$, and $\bar{\alpha}_f^L$ we will derive later. Note that the equations for men's labor supply response do not depend on the change in $\bar{h}$ since they are not subject to the workweek restriction. For generality, we allow for the wage to be different between men and women. After setting $\varepsilon^{\bar{h}} = 1$, we can write these equations in matrix

form as

$$\begin{bmatrix} 1 & 0 & 0 & 0 & -\bar{\alpha}_m^L & 0 \\ 0 & 1 & 0 & 0 & 0 & -\bar{\alpha}_f^L \\ 0 & 0 & 1 & 0 & -\bar{\alpha}_m^h & 0 \\ 0 & 0 & 0 & 1 & 0 & -\bar{\alpha}_f^h \end{bmatrix} \begin{bmatrix} \varepsilon_m^L \\ \varepsilon_f^L \\ \varepsilon_m^h \\ \varepsilon_f^h \\ \varepsilon_m^w \\ \varepsilon_f^w \end{bmatrix} = \begin{bmatrix} 0 \\ \alpha_{\bar{h}}^L \\ 0 \\ \alpha_{\bar{h}}^h \end{bmatrix}.$$

The labor demand part of model will provide the two missing two equations that will allow us to determine the equilibrium changes in these 6 variables.

As for the elasticities, we leave the details regarding their derivation to the appendix and simply state their values here. Let $\gamma_1 = w\bar{h}/(1+\alpha)$, $\gamma_2 = (1+\alpha)\delta/w^{\alpha+1}$, $\gamma_3 = \bar{h}/w^{\alpha}$, and $\tilde{f}(\delta) = (1+\alpha)\delta f(\gamma_2(\delta), \delta)$. First, the elasticity of L with respect to $\bar{h}$ and w is

$$\alpha_{\bar{h}}^L = \frac{\gamma_1}{L} \frac{\bar{F}_\beta(\gamma_3|\delta = \gamma_1)}{f_\delta(\gamma_1)} > 0.$$

Here $\bar{F}_\beta$ is the complement of the CDF of β conditional on δ while f_δ is the marginal density of δ. This elasticity captures to what extent adjustments to the increase in $\bar{h}$ come from simply more people being employed. These new employees are people who need to work a lot of hours for it to be worthwhile to work at all. These long workweeks were not possible before the workweek restriction was repealed. The elasticity is positive because no one wants to leave the workforce after the limit is repealed (though they might not be happy about the change) so $\alpha_{\bar{h}}^L$ measures the size of the new employees, which depends on the conditional tail distribution of β.

Next the elasticity of employment with respect to the wage is

$$\alpha_w^L = \alpha_{\bar{h}}^L + \frac{\gamma_3}{L\gamma_1} \int_{\delta=0}^{\gamma_1} \tilde{f}(\delta)\, d\delta > 0.$$

This shows that the effect of changing the wage is like the effect of changing the workweek plus an additional term. For women, we evaluate this at the legally imposed workweek limit to calculate $\bar{\alpha}_f^L$. For men, we evaluate this in the limit as $\bar{h} \to \infty$ since men do not face such a limit. It is easy to check that in the limit $\alpha_{\bar{h}}^L = 0$ so

$$\bar{\alpha}_m^L = \frac{1+\alpha}{Lw^{\alpha}} \int_{\delta=0}^{\infty} \tilde{f}(\delta)\, d\delta\,.$$

Rather than calculate elasticity of average hours per worker directly, we calculate the elasticity of total hours worked H with respect to $\bar{h}$:

$$\alpha_{\bar{h}}^{H} = \frac{\bar{h}}{h}(1 + \alpha_{\bar{h}}^{L}) > 0.$$

Finally for the elasticity of H with respect to w, we have

$$\alpha_{w}^{H} = \frac{\bar{h}}{h}\left[\alpha_{\bar{h}}^{L} + wL(\alpha_{w}^{L} - \alpha_{\bar{h}}^{L})\right] - \frac{\bar{h} - h}{h}\alpha.$$

To calculate the elasticity of average hours per worker, we use the fact that

$$\varepsilon^{H} = \varepsilon^{h} + \varepsilon^{L}.$$

Hence,

$$\varepsilon^{h} = \underbrace{\left(\frac{\bar{h}}{h} + \alpha_{\bar{h}}^{L}\frac{\bar{h} - h}{h}\right)}_{\alpha_{\bar{h}}^{h}}\varepsilon^{\bar{h}} + (\alpha_{w}^{H} - \alpha_{w}^{L})\varepsilon^{w}.$$

We define $\bar{\alpha}_{f}^{h}$ as $\alpha_{w}^{H} - \alpha_{w}^{L}$ when evaluated at the legally imposed workweek limit and $\bar{\alpha}_{m}^{h}$ the value when evaluated in the limit as $\bar{h} \to \infty$.

3.2 Labor Demand

On the labor demand side, we assume that the production function is $Y = \frac{\sigma}{\sigma-1}H^{\frac{\sigma-1}{\sigma}}$ where $\sigma > 0$ and H is an aggregate of female and male labor input. We assume that labor input for gender i (abusing notation) is equal to total hours worked $H_i = h_i L_i$. The fact that h_i and L_i enter symmetrically is a critical assumption. If the firm cared about employment and hours per worker in different ways, then we would need an additional price to clear both the employment and hours per worker markets. In this setup, firms are indifferent between more employees or more hours per worker so it is enough to have just one price for total hours.[22] We also assume that firms are perfectly competitive in the output and labor markets. We now consider different cases for the substitutability of male and female labor.

[22] Again compare this to the model Bernanke (1986) and its extension in Fishback, Vickers and Ziebarth (2024), which meaningfully distinguished between hours worked and working at all by having firms offer contracts that specified both a level of utility and workweek.

Strict Substitutes Between Male and Female Labor The first case we consider assumes that labor inputs for men and women are perfect substitutes meaning $H = H_f + H_m$. This was the case studied by Landes. As a consequence, the wage for men and women will be the same w. This implies that demand for total hours worked is $H = w^{-\sigma}$. This expression for labor demand along with the equality of the wage rates for men and women are the two equations that close the model. The complete system of equations that determine the equilibrium response are

$$\begin{bmatrix} 1 & 0 & 0 & 0 & -\bar{\alpha}_m^L & 0 \\ 0 & 1 & 0 & 0 & 0 & -\bar{\alpha}_f^L \\ 0 & 0 & 1 & 0 & -\bar{\alpha}_m^h & 0 \\ 0 & 0 & 0 & 1 & 0 & -\bar{\alpha}_f^h \\ 0 & 0 & 0 & 0 & 1 & -1 \\ 1-s & s & 1-s & s & \sigma & 0 \end{bmatrix} \begin{bmatrix} \varepsilon_m^L \\ \varepsilon_f^L \\ \varepsilon_m^h \\ \gamma\varepsilon_f^h \\ \varepsilon_m^w \\ \varepsilon_f^w \end{bmatrix} = \begin{bmatrix} 0 \\ \alpha_{\bar{h}}^L \\ 0 \\ \alpha_{\bar{h}}^h \\ 0 \\ 0 \end{bmatrix}.$$

where $s = \frac{h_f L_f}{h_f L_f + h_m L_m}$ is the share of total hours worked by women. Note that s is an equilibrium object, but for the purposes of the comparative statics, we assume any changes in s are second-order.

As we show in the appendix, it is straightforward to solve this system of linear equations by using the formula for the inverse of a partitioned matrix. We find that the equilibrium outcomes are

$$\begin{bmatrix} \varepsilon_m^L \\ \varepsilon_f^L \\ \varepsilon_m^h \\ \varepsilon_f^h \\ \varepsilon_m^w \\ \varepsilon_f^w \end{bmatrix} = -\frac{s\alpha_{\bar{h}}^H}{\gamma} \begin{bmatrix} \bar{\alpha}_m^L \\ \bar{\alpha}_f^L - \frac{\gamma}{s}\frac{\alpha_{\bar{h}}^L}{\alpha_{\bar{h}}^L + \alpha_{\bar{h}}^h} \\ \bar{\alpha}_m^h \\ \bar{\alpha}_f^h - \frac{\gamma}{s}\frac{\alpha_{\bar{h}}^h}{\alpha_{\bar{h}}^L + \alpha_{\bar{h}}^h} \\ 1 \\ 1 \end{bmatrix},$$

where $\gamma = \sigma + (1-s)\bar{\alpha}_m^H + s\bar{\alpha}_f^H$ and $\bar{\alpha}^H = \bar{\alpha}^L + \alpha^h$ for men and women respectively. We conclude that the wage rate for men and women fall (by the same amount). As a consequence, hours per worker and employment fall for men, but by less than the increase in $\bar{h}$ so earnings for those working at the limit $w\bar{h}$ increases. Obviously, earnings per male worker wh will also fall. Clearly in this case, men will not be in favor of repealing the workweek restriction since they compete with women in the labor market.

The situation is more complicated for women. What is straightforward to check is that

the effect on total hours worked is positive since

$$\bar{\alpha}_f^H = \bar{\alpha}_f^L + \bar{\alpha}_f^h = (\alpha_{\bar{h}}^L + \alpha_{\bar{h}}^h)\left(1 - \frac{s\bar{\alpha}_f^H}{\sigma + (1-s)\bar{\alpha}_m^H + s\bar{\alpha}_f^H}\right) > 0.$$

In this way, we think of removing the workweek restriction as acting like a positive shock to the supply of female labor. On the other hand, the average workweek increases if and only if

$$\frac{\alpha_{\bar{h}}^h}{\alpha_{\bar{h}}^L + \alpha_{\bar{h}}^h} - \frac{s\bar{\alpha}_f^h}{\gamma} > 0.$$

The first term is the direct effect of removing on the restriction on the workweek while the second term is the indirect effect on the workweek from the decline in the wage. This condition will hold if, for example, $s \approx 0$. That is, the share of female hours in total hours worked is (relatively) small, which seems plausible at this point of time. In this case, we would also expect female employment to rise. It is possible for hours per worker and employment of women to move in opposite directions. Finally, earnings per female worker will rise if and only if

$$\frac{\alpha_{\bar{h}}^h}{\alpha_{\bar{h}}^L + \alpha_{\bar{h}}^h} - \frac{s(1+\bar{\alpha}_f^h)}{\gamma} > 0.$$

Again this condition will be satisfied if $s \approx 0$. It is possible for the average workweek for women rises while earnings per worker falls. However, if the average workweek declines, then so will average earnings. Conversely, if average earnings increases, then so will the average workweek.

Strict Complements Between Male and Female Labor We now assume that the labor input of men and women are strict complements so that the production function is $Y = \frac{\sigma}{\sigma-1}\left[\min\{H_m, H_f\}\right]^{\frac{\sigma-1}{\sigma}}$. Then profit-maximization implies that $H_m = H_f = H$ so there will be a positive correlation between the total hours worked for the genders. In this setting, it is possible that wages for men and women will differ. Labor demand in this case is determined by $H^{-1/\sigma} = w_m + w_f$. These two additional equilibrium conditions can be

written in elasticity form as

$$\begin{bmatrix} 1 & -1 & 1 & -1 & 0 & 0 \\ \sigma & 0 & \sigma & 0 & \omega & 1-\omega \end{bmatrix} \begin{bmatrix} \varepsilon_m^L \\ \varepsilon_f^L \\ \varepsilon_m^h \\ \varepsilon_f^h \\ \varepsilon_m^w \\ \varepsilon_f^w \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \end{bmatrix},$$

where ω is the share of female wages in total wages.

Using similar steps to the substitutes case, we show in the appendix that the equilibrium outcomes are

$$\begin{bmatrix} \varepsilon_m^L \\ \varepsilon_f^L \\ \varepsilon_m^h \\ \varepsilon_f^h \\ \varepsilon_m^w \\ \varepsilon_f^w \end{bmatrix} = \frac{\omega \alpha_{\bar{h}}^H}{\gamma} \begin{bmatrix} \bar{\alpha}_m^L \\ \omega^{-1}\left(\gamma \frac{\alpha_{\bar{h}}^L}{\alpha_{\bar{h}}^L + \bar{\alpha}_{\bar{h}}^h} - \bar{\alpha}_f^L(1-\omega+\sigma\bar{\alpha}_m^H)\right) \\ \bar{\alpha}_m^h \\ \omega^{-1}\left(\gamma \frac{\alpha_{\bar{h}}^h}{\alpha_{\bar{h}}^L + \alpha_{\bar{h}}^h} - \bar{\alpha}_f^h(1-\omega+\sigma\bar{\alpha}_m^H)\right) \\ 1 \\ -\omega^{-1}(1-\omega+\sigma\bar{\alpha}_m^H) \end{bmatrix},$$

where $\gamma = \bar{\alpha}_m^H \bar{\alpha}_f^H + (1-\omega)\bar{\alpha}_m^H + \omega\bar{\alpha}_f^H$. As opposed to the perfect substitutes case, here total earnings employment, and hours per worker all increase for men. For women, clearly the hourly wage falls. We also know that total female hours worked must increase since total male hours worked increases and the two types of labor are complements though like in the perfect substitutes case, whether the increase is due to an increase in hours per worker or employment (or both) depends on parameters.[23]

Table 1 collects the comparative statics for these different versions of the model. The takeaway is that in fact, the labor market response of men to the lifting of the ban on women working long hours is what identifies whether male and female labor are substitutes are complements or substitutes. Moreover, the one qualitative prediction that does not depend on parameter value is that for men, the effects on all labor market related variables should be the same sign though whether that sign is positive or negative depends on whether male and female labor is substitutable.

The effects for men turn completely on the substitutability between male and female labor. At a high level, removing the workweek restriction acts as an expansion in the

[23]The conditions for an increase are easy to derive but not particularly intuitive.

Table 1: Theoretical Effects of Lifting GHRs

	Comparative Statics	
	Male	Female
Substitutes		
Employment L	-	?
Hours per worker h	-	?
Hourly wage w	-	-
Total hours hL	-	+
Earnings per worker W	-	?
Complements		
Employment L	+	?
Hours per worker h	+	?
Hourly wage w	+	-
Total hours hL	+	+
Earnings per worker W	+	?

Notes: A ? denotes that the sign of the effect depends on parameters. In the substitutes case, the effects on the male and female wage are exactly equal while in the complements case, the effects on male and female total hours are exactly equal. If the effect on h is negative for females, then the effect on W is negative.

supply of female labor. The demand curve for female labor is fixed as is the supply curve for male labor. The only question is whether the demand curve for male labor increases or decreases which is a question of substitutability between the genders. The point though is that because supply curve for men is fixed, the male wage rate and total hours worked must be positively correlated. Moreover, because hours per worker and the number of workers are increasing in the wage, both of these must comove together as a function of what happens to the male wage.

3.3 Who Wins? Loses?

Even within the group of women as a whole, removing the hours restriction is not Pareto improving. Removing the restriction will be a Pareto improvement for men if and only if the types of labor are complements. (Men who don't work before and after the repeal are indifferent. All other men are strictly better off if the male wage rises.) We consider the most natural case in which $w_f \bar{h}$ increases, that is, $\varepsilon_f^w > -1$. Our results only speak to average welfare as reflected in average earnings, but not how many women are better off with the repeal. We can decompose the population of women into

6 groups depending on how their labor supply decisions change following repeal. We denote working the efficient level as h^*. Then

1. $0 \to 0$: This group, which wasn't working before repeal and still isn't after, is indifferent.
2. $\bar{h} \to \bar{h}$: This group supports the repeal since their earnings increases because $w\bar{h}$ increases.
3. $0 \to h^*$: This group supports the repeal since they could have continued to not work.
4. $0 \to \bar{h}$: This group supports the repeal since they could have continued to not work.
5. $\bar{h} \to h^*$: This group does not support the repeal since their earnings fall.
6. $h^* \to h^*$: This group does not support the repeal since they were happy before the repeal.

Unfortunately, we cannot identify which group an individual falls into because we cannot follow individuals over time meaning we cannot exactly measure the size of these groups and the number of women who are better offer with repeal. However, we can bound the number of winners and losers. First, the fraction of women still constrained after the limit is a lower bound on the fraction of winners since everyone constrained after is happy, but it misses out on the people who benefit but are working strictly less than $\bar{h}$. This group latter group would have been working 0 before. Second, an upper bound on the number of losers is equal to the fraction of women working strictly less than the limit after it is removed. This is an upper bound because it includes a subgroup of women, those who were not working before, that are better off after the repeal.

4 Data

4.1 Current Population Survey

We use the March Current Population Survey (CPS) from 1962 to 1980. We stop in 1980 since, by then, all repeals of GWRs had been in place for over 5 years. We harmonize industry classifications across years to something finer than the 2-digit NAICS code but a bit coarser than the 3-digits NAICS code. For instance, we are able to separate restaurants

from the rest of the retail sector, but we cannot separate hotels and lodging places from laundries and other professional services due to data limitations in the 1963-1967 CPS. What is critical is to be able to identify whether a person is working in a manufacturing or mercantile industry, the two groups singled out in the original laws. Throughout the primary analysis, we restrict our attention to people employed in either manufacturing or mercantile industries.[24]

It is important to keep in mind the timing of the employment and earnings variables. First, annual wage and salary incomes are reported in the March CPS for the previous calendar year. Thus we track annual earnings from 1962 onwards. Weeks worked in the prior year are reported only in broad categories,[25] so there is significant measurement error in any weekly earnings measure. Weekly hours are only reported in the week before the survey was taken. Following Derenoncourt and Montialoux (2020), our preferred approach to this problem is to treat the annual wage income as the main outcome of interest and control for the number of weeks worked or the number of hours worked per week. This way, we estimate the *net* effect of lifting GWRs on the annual wage income resulting from other channels through hours of work. In our second approach following Bailey, DiNardo and Stuart (2021), we divide the annual wage earnings for year $t-1$ by the product of a measure of weeks worked[26] in year $t-1$ and hours worked in the reference week of year t. As noted in Bailey, Helgerman and Stuart (2023), the hourly wage imputed in this way matches quantiles of actual hourly wages from the CPS Outgoing Rotation Group data above the minimum wage reasonably well.[27]

An additional problem with the March CPS data is that the publicly available data report information by state *groups* instead of state in 1962 and from 1968 to 1976, an important period for the repeals of GHRs. The grouped states (which we show in the appendix) were relatively small, geographically close to each other, and the borders of these state groups do not cross region or division lines (Derenoncourt and Montialoux, 2020). Nevertheless, this creates a challenge in our empirical analysis by making it difficult to identify whether a person living in a particular state group is actually treated since several state

[24]Mercantile industries are defined as both retail and wholesale ones; in a set of robustness checks, we consider only treating retail industries as "mercantile." Results are almost identical and are available upon request. In the Appendix, we also extend our sample of interest to those who were employed in unaffected industries.

[25]The CPS contains information on the number of weeks worked last year, by categories: 1-13 weeks, 14-26 weeks, 27-39 weeks, 40-47 weeks, 48-49 weeks, and 50-52 weeks.

[26]In addition, adjustments have to be made for the fact that this variable is intervalled. We took the midpoint of each category.

[27]A final concern with the CPS is that the sample size of the CPS data is relatively small prior to 1968 (Derenoncourt and Montialoux, 2020).

groups include states with and without a GHR at any given point in time. For example, Kentucky and Tennessee were grouped together from 1973 to 1976. The former repealed its GHR in 1974, while the latter never lifted its GHR during the sample period. As a result, between 1975 and 1976, we would not know whether a person living in a particular state group was actually subject to a GHR. In our preferred specification, we simply drop observations from state groups. In the appendix, we show that the results are robust to including these observations and using the share of the population within a state group with a repealed GHR as the treatment variable.

4.2 Other Policy Variables

Besides repealing GHRs, the decade and a half period we study also saw many other reforms that could have affected women's labor market outcomes. We collect data on a few of the most important of these reforms and control for them in our regressions.

Fair Employment Practices (FEP) By 1983, 42 states, the District of Columbia, and Puerto Rico had adopted FEP laws covering private employment. Many of these laws prohibited discrimination on the basis of age while others went further prohibiting discrimination as well on the basis of handicap, marital status, and sexual orientation. All of these laws prohibited discrimination based on sex with some providing stronger protection than what was available under Title VII of the Civil Rights Act of 1964. If the adoption of these laws was correlated at the state-level with the repeal of GHRs, then it is possible our effects are actually due to the effects of the FEP rather than the GHR. We collect information on state laws addressing sex discrimination from Neumark and Stock (2006).

Overtime Compensation Finally, we examine the interaction between the repeal of GHRs and changes in state-level policies on overtime compensation. Even though these overtime rules would apply uniformly to men and women, they might have gendered effects given the differences between men and women in the average workweek. By 1967, there were fifteen states and D.C. having laws or regulations (typically as a part of the minimum wage program) that provide for overtime compensation. These laws generally required the payment of premium rates for hours worked in excess of a daily or weekly standard. Such premia act as a deterrent to long hours and a nudge to more equal workweeks across workers. Table 2 summarizes the state-level variation in these laws.

Table 2: State-level Fair Employment Practices and Overtime Laws

State	FEP Law	Overtime Law in 1961	Overtime Law in 1975	Overtime Law in 1983
Alabama				
Alaska	1949	✓	✓	✓
Arkansas	1955	✓	✓	✓
Arizona	1962			
California	1949	✓	✓	✓
Colorado	1955	✓	✓	✓
Connecticut	1949	✓	✓	✓
Delaware				
District of Columbia	1965	✓	✓	✓
Florida	1969			
Georgia	1966			
Hawaii	1959	✓	✓	✓
Idaho	1967			
Illinois	1944			✓
Indiana	1967			
Kansas				✓
Kentucky	1966	✓	✓	✓
Louisiana	1968			
Massachusetts	1945	✓	✓	✓
Maryland	1965		✓	✓
Maine	1949	✓	✓	✓
Michigan	1962	✓	✓	✓
Minnesota	1969	✓	✓	✓
Mississippi				
Missouri	1963			
Montana	1919	✓	✓	✓
Nebraska	1957	✓	✓	✓
North Carolina		✓	✓	✓
North Dakota	1965		✓	✓
New Hampshire	1947	✓	✓	✓
New Jersey	1952		✓	✓
New Mexico	1969	✓	✓	✓
Nevada	1967			
New York	1944			
Ohio	1959	✓	✓	✓
Oklahoma	1965			
Oregon	1947	✓	✓	✓
Pennsylvania	1947	✓	✓	✓
Rhode Island	1946	✓	✓	✓
South Carolina				
South Dakota	1966			
Tennessee				
Texas				
Utah	1965			
Vermont	1963	✓	✓	✓
Virginia				
Washington	1943	✓	✓	✓
Wisconsin	1961	✓	✓	✓
West Virginia	1965	✓	✓	✓
Wyoming	1959	✓	✓	✓

Note: Information is derived from Neumark and Stock (2006),

5 Empirical Strategy

5.1 Difference-in-Differences Specification

Our primary empirical specification estimates the effect of any state-level actions that invalidated the GHR using a differences-in-differences framework:

$$y_{it+1} = \beta Repeal_{st} + \text{Controls}_{it} + \tau_{oks} + \mu_{okt} + \varepsilon_{it+1}, \tag{1}$$

where i indexes individual, o occupation groups, k industry groups, s states (or state groups), and t year. We include individual-level demographic controls in the vector $Control_{it}$ including the linear and quadratic forms of age, educational attainment, marital status, and race. For the vast majority of people older than 25, our population of interest, decisions regarding education and marriage have already been made, thereby alleviating concerns that these are bad controls. To maintain a consistent sample across the different outcome variables, we also drop anyone who does not report working a positive number of hours.

We restrict attention to people working in the private sector who are not self-employed, not working on a farm, and not working without pay for the family between 25 and 55 years old. In the main analysis, we solely focus on people working in the manufacturing and mercantile industries and drop everyone outside of these two affected ones. As a consequence, our preferred specification only exploits two sources of variation associated with the repeal: (1) the geographic variation across states/state groups, and (2) the longitudinal variation over years. The primary reason we focus on workers in these two industries is because we are concerned about general equilibrium spillovers to workers in other industries not directly affected by the workweek limits. In other words, it is not clear if the group of people working outside of these affected industries should be part of the treatment or control groups. We instead consider each state as separate 'local' labor market, while considering industries within a state as a *part* of one single labor market.

The variable $Repeal_{st}$ is an indicator for whether a state had repealed its GHR through any type of action by time t. For example, in Kentucky where a court decision, an administrative ruling, and a legislative repeal all took place, respectively, in 1971, 1972, and 1974, $Repeal_{st}$ is coded as one starting in 1971.[28] In Colorado and South Carolina, the repeal only applied to certain industries. However, the number of people in these states

[28] In the Appendix, we consider the effects of these different types of repeal actions.

who were not in those industries was so small that we treated the repeal as applying to all industries in the states. Because the date of repeal action was not the actual date of repeal, the outcomes are one year in the future when the laws would have been no longer in effect.

In our most preferred specification, we include state-by-occupation-by-industry fixed effects (τ_{oks}) and year-by-occupation-by-industry (μ_{okt}), respectively. Two key assumptions are imposed in this specification: First, we are assuming state labor markets are independent of one another;[29] second, non-mercantile and non-manufacturing industries within the same state will be affected by repeal. We also present two additional specifications: (1) a simpler one that replace the two fixed effects vectors above with state fixed effect (τ_s), year fixed effect (μ_t), and occupation-by-industry fixed effect (γ_{ok}), and (2) a more complicated one that adds race-by-time trend, education-by-time trend, and marital status-by-time trend. Finally, in some specifications, we include controls for other state-level policies mentioned earlier including fair employment and overtime laws.

5.2 Event-Study Specification

We also estimate event-study specifications:

$$y_{icdst+1} = \sum_{\tau=-4}^{7} \beta_{t+\tau} Repeal_{st+\tau} + \text{Controls}_{iodst} + \tau_{ods} + \mu_{odt} + \varepsilon_{iodst}, \tag{2}$$

where $Repeal_{st+\tau}$ is an indicator for whether a state had repealed its GHR through any type of action by time $t + \tau$. The coefficients $\beta_{t+\tau}$ thus identify the dynamic effects associated with the removal of the GHR. Regressions are weighted using the CPS survey weights following Lemieux (2006). The span of τ covers the 12 calendar years we focus on.

All the usual concerns about staggered DID designs apply here. On the question of parallel pre-trends, we use the event studies to test this assumption. There is also the issue of always and never treated observations. These are states that either never had a GHR to begin with or had not repealed theirs by the end of our sample.[30] Because there is no compelling reason for dropping or including them, we experiment with both ways of handling these states. In the appendix, we present the robustness of our main results

[29] Ideally, one can test the validity of this assumption using the status of interstate migration/commuting. Unfortunately, we don't have such information in the historical March CPS.

[30] In our case, we find Georgia, Idaho, Texas, Utah, and Wyoming had GHRs in the first place, but none have repealed the GHR throughout the sample period (1962-1980).

when dropping such states. We also show in the appendix that states that repealed their laws early in our sample had similar characteristics to those that repealed late.

6 Effects of Lifting GHRs on the Workweek

To start, we investigate the impact of removing GHRs on men's and women's workweek. Table 3 presents the estimates of the effects of repealing a GHR by gender on working over the limit. In principle, women working above the limit before the law was repealed were in violation so in theory, the fraction working above the limit should only increase, although, there are potential measurement issues that could explain violations while the law was in effect. We emphasize that such an increase means different things in different states that had different limits rather than representing, for example, an increase from 44 to 45 hours per week. Such a change in, for example, Washington would represent a workweek longer than the limit, but in other states such as Mississippi with a limit of 60 hours, this change would not. In these tables, the baseline specification in columns 1 and 4 includes the state effects, year effects, and occupation-industry fixed effects. In columns 2 and 5, we add state-occupation-industry fixed effects and year-occupation-industry fixed effects to better control for the time-invariant factors as well we as a number of interactions between demographic information and time trends. Finally, in columns 3 and 6, we add controls for state-level policy changes. In Panel A, we include everyone in the mercantile and manufacturing industries and in Panel B, we restrict our attention to full-time workers (i.e., people working at least 35 hours last week). In all tables reported in the main part of this paper, the results are reported for an unbalanced panel of states that were not part of a grouping in the CPS in that year.[31]

We find that the probability of working over the initial GHR significantly increased among women. The magnitude and statistical significance are stable across all specifications. Given the rarity of working over the GHR before it was repealed, the increase of around 1 percentage points for women working past the GHR hours level is economically meaningful, as the rise doubles the mean rate in place before the GHR. The fact that the increase was only slightly more than a percentage point highlights the fact that the workweek limits tended to be set rather high and so were not binding for most working women. In some specifications such as columns 4 and 5, the effect of the repeals of the

[31] In the appendix, we also show that the results are quantitatively similar when we use a balanced panel in which only states are included that were reported separately for every year and also another balanced one in which all states are included in the same grouping throughout and repeal is measured as the share of workers in the grouping for which the GHR had been repealed.

Table 3: Effects on the Probability of Working over the GHR Limits

	Working over GHR?					
	Females			Males		
Repeal	0.015***	0.013***	0.011***	0.010*	0.005	0.001
	(0.003)	(0.002)	(0.002)	(0.005)	(0.005)	(0.005)
State	Yes	No	No	Yes	No	No
Occ-Ind	Yes	No	No	Yes	No	No
Year	Yes	No	No	Yes	No	No
State-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Year-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Education	Yes	No	No	Yes	No	No
Married	Yes	No	No	Yes	No	No
Race	Yes	No	No	Yes	No	No
Race-Year	No	Yes	Yes	No	Yes	Yes
Education-Year	No	Yes	Yes	No	Yes	Yes
Marital Status-Year	No	Yes	Yes	No	Yes	Yes
Overtime Law	No	No	Yes	No	No	Yes
Equal Protection Law	No	No	Yes	No	No	Yes
Observations	53782	53583	53583	104004	103951	103951

Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. The dependent variable in all specifications is the propensity to work beyond the state GWR in the past week relative to the survey. In Panel A, our sample is composed of all wage/salary earners, and in Panel B, we restrict our attention to those who worked at least 35 hours in the past week and worked at least 26 weeks in the preceding calendar year.

GHR were of a similar magnitude for men though there is less statistical significance in general. However, when we include state-level policy controls in column 6, the effect on men is mitigated. Moreover, prior to repeal, over 14% of men worked longer than the GHR so the change in this share following repeal does not represent on a percentage based as large a change as for women. When the sample is limited to wage earners working more than 35 hours per week in Panel B, the coefficient estimates in each specification are slightly larger than those for all workers in Panel A, and all of the coefficients are statistically significant.

Table 4 shows that the repeal of these laws was associated with an increase of 0.6 to 0.8 hours per week for all female workers and a similar amount for those working full-time. These effects are both statistically and, in our view, economically significant. In what will be a recurring theme, the effects for men are similar qualitatively and quantitatively to those for men. In this case, the average workweek for male workers increases between 0.25 and 0.45 hours per work. Again the smallest effect in magnitude and statistical significance for men is when we include the other state-level policy controls in column 6. Nevertheless, the fact that, in general, average workweek for men rises is consistent with male and female labor being complements rather than substitutes in production.

To build move evidence for our causal interpretation of these results, we now turn to an event study. Figure 5 shows that immediately after repeal, the probability of working over the limit for women jumped and remained high through the end of our sample. The effect for men is not immediate if there is any at all. Similarly, Figure 6 shows that the workweek jumped for women following repeal and remained high through the end of our sample(though the results are noisier here).[32] For men, the effect appears to build more slowly over time thought we cannot reject the null that the effects for men and women are the same. Both of these figures do not show much much evidence of a pre-trend.

The question is where in the workweek distribution does the increase in the average workweek come from. Does it come from people initially working well below the limit working more? Or does it come mainly from those initially constrained working more after repeal? To answer this question, we calculate a person's actual workweek as a percentage of the state-specific workweek limit. We then split individuals into bins based on this percentage and estimate separate regressions using the DD specification mentioned in Section 5 for the effect of repeal on the probability of working in a given bin. We plot

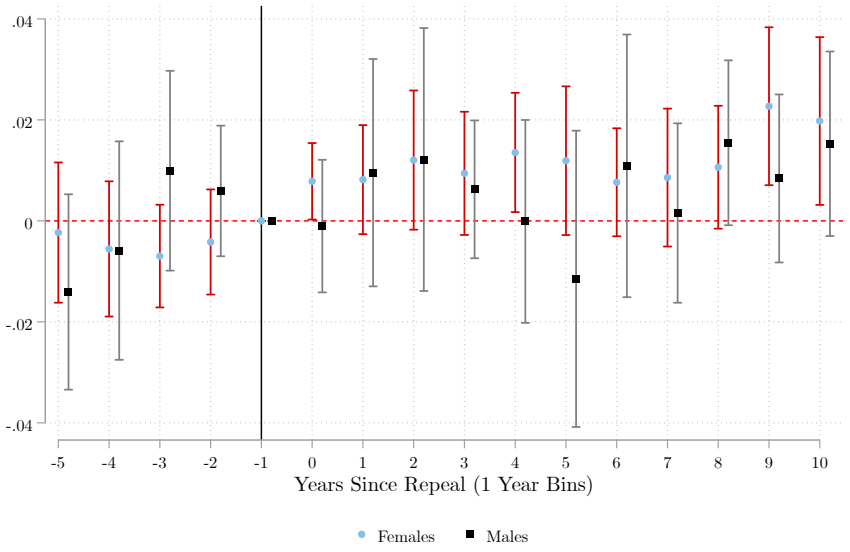
[32]The imprecision of our event-study specifications might be attributed to the data structure issues and measurement errors mentioned in Section 4, or naturally due to other confounding factors during the 1960s and 1970s. We directly address these confounding factor issues in the appendix.

Table 4: Effects on Workweek Length

	Workweek					
	Females			Males		
Panel A. all wage earners						
Repeal	0.742***	0.580***	0.472***	0.421**	0.333**	0.249
	(0.176)	(0.176)	(0.162)	(0.173)	(0.165)	(0.151)
State	Yes	No	No	Yes	No	No
Occ-Ind	Yes	No	No	Yes	No	No
Year	Yes	No	No	Yes	No	No
State-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Year-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Education	Yes	No	No	Yes	No	No
Married	Yes	No	No	Yes	No	No
Race	Yes	No	No	Yes	No	No
Race-Year	No	Yes	Yes	No	Yes	Yes
Education-Year	No	Yes	Yes	No	Yes	Yes
Marital Status-Year	No	Yes	Yes	No	Yes	Yes
Overtime Law	No	No	Yes	No	No	Yes
Equal Protection Law	No	No	Yes	No	No	Yes
Observations	52505	52309	52309	103007	102954	102954

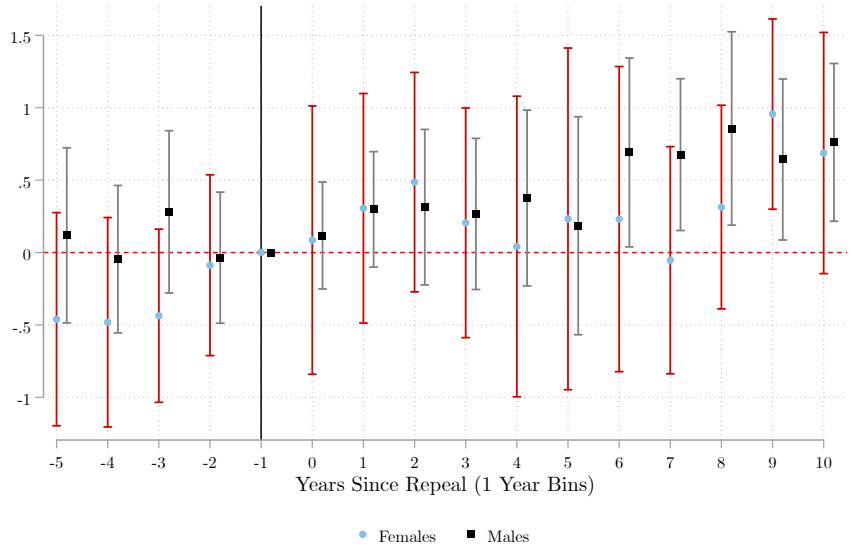
Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. The dependent variable in all specifications is the number of hours one worked in the past week relative to the survey. In Panel A, our sample is composed of all wage/salary earners, and in Panel B, we restrict our attention to those who worked at least 35 hours in the past week and worked at least 26 weeks in the preceding calendar year.

Figure 5: Event Study on the Probability of Working over GHRs



Notes: Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. We also include state by occupation and industry fixed effects as well as year by occupation and industry fixed effects. The sample is composed of all workers.

Figure 6: Event Study on Workweek Length



Notes: Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. We also include state by occupation and industry fixed effects as well as year by occupation and industry fixed effects. The sample is composed of all workers.

the coefficients from each of these regressions for the workweek bins in Figures 7 and 8. For women, we find a dramatic decline in the probability of working in the bin right below the workweek limit, which supports the causal interpretation of our results. At the same time, the results are the opposite for men.

Figure 7: Effects on the Distribution of the Workweek for Women



Notes: The dependent variable is the probability of working within the $[k, k+25]$ bin where k is the actual workweek as a percentage of the workweek limit. All regressions are weighted by the survey weights in March CPS and standard errors are clustered at the state level.

Figure 8: Effects on the Distribution of the Workweek for Men



Notes: The dependent variable is the probability of working within the $[k, k+25]$ bin where k is the actual workweek as a percentage of the workweek limit. All regressions are weighted by the survey weights in March CPS and standard errors are clustered at the state level.l.

7 Effects of Lifting GHRs on Employment

We next focus on the employment margin. Because we focus only on workers in manufacturing and mercantile industries, the employment variable we examine is the probability of shifting out of the affected industries into other industries. Since we have excluded people initially employed outside of the affected industries, there is no natural specification to examine the effects on flows *into* affected industries or even total employment in the affected industries. Therefore, we are not able to estimate the effect on total employment in these industries of repealing the workweek limits. Nevertheless, the effects on flows out of the industries provide insight into whether there was substitution between the intensive margin of hours worked and (one part of) the extensive margin in the form of flows out.

Table 5 summarizes our estimates using the same specifications as in Tables 3 and 4 of the effect on transitioning out of the treated industries into other industries. Here we rely on the CPS question that asked respondents the industry they worked in last year and currently. A negative coefficient estimate indicates smaller flows out of the manufacturing and mercantile employment following a repeal, and we interpret that as a positive

effect on employment in that industry. Prior to repeal an average of 4.5 percent of women and 3 percent of men transitioned out of the affected industries into other industries or unemployment. Panel A shows that for all wage earners the outflow rate fell by around 1.5 percentage points across all specifications and for both men and women. Panel B, which focuses on all full-time wage earners, finds reports similar effect with the probability of transitioning to other sectors falling by roughly 1 percentage point for both men and women, and all of the coefficients were statistically significant.

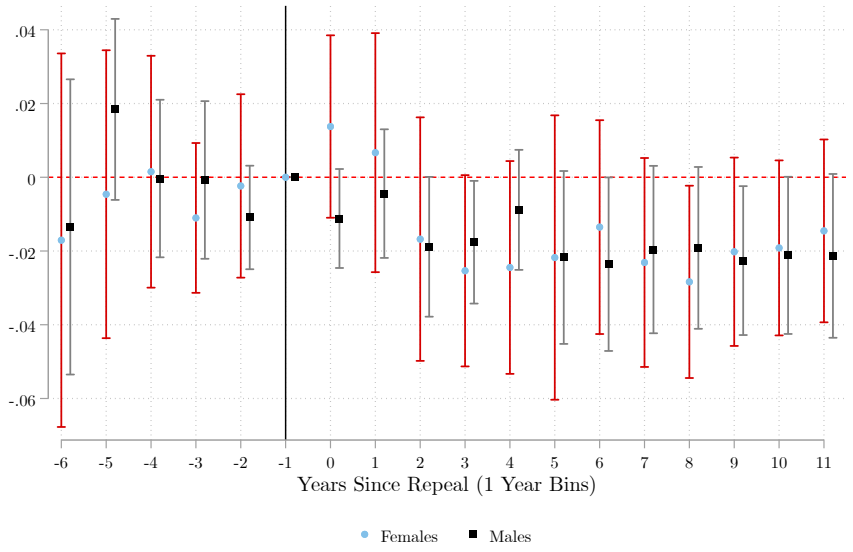
Table 5: Effects on the Probability of Transition to Other Industries

	Females			Males		
Panel A. all wage earners						
Repeal	-0.018***	-0.011***	-0.012***	-0.019***	-0.012***	-0.012**
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
State	Yes	No	No	Yes	No	No
Occ-Ind	Yes	No	No	Yes	No	No
Year	Yes	No	No	Yes	No	No
State-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Year-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Education	Yes	No	No	Yes	No	No
Married	Yes	No	No	Yes	No	No
Race	Yes	No	No	Yes	No	No
Race-Year	No	Yes	Yes	No	Yes	Yes
Education-Year	No	Yes	Yes	No	Yes	Yes
Marital Status-Year	No	Yes	Yes	No	Yes	Yes
Overtime Law	No	No	Yes	No	No	Yes
Equal Protection Law	No	No	Yes	No	No	Yes
Observations	48744	48007	48007	96296	95316	95316

Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1963-1981). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (26-56) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. The dependent variable is an indicator for shifting out of manufacturing or mercantile industries into unemployment (Panel A) or into another industry (Panel B).

The event study results for the transition rate to other sectors in Figures 9 seem consistent with the results in Table 5. For women, it appears that the effect on outflow flows was delayed by a couple years following repeal, which is different than the immediate effect we found on the workweek. The effects for women also seem to fade out over time. On the other hand, the effect on men is more immediate though estimates are noisy and do not show statistically significant effects until nearly a decade on from repeal. The results also do not show evidence any statistically significant pre-trends for men or women.

Figure 9: Event Study on Transition Rate to Other Industries



Notes: Data are drawn from March CPS sample (1963-1981). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (26-56) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. We also include state by occupation and industry fixed effects as well as year by occupation and industry fixed effects. The sample includes all workers

We interpret these reduced outflows for men alongside reduced outflows for women as further evidence for the complementarity between men and women labor. How do we interpret the reduced outflows for women? On the face of this, it seems slightly puzzling that hours per worker and employment would go up since an additional hour worked by a current employee is equivalent to an additional hour worked from a new employee. Instead, increasing the workweek limit draws some women into the workforce who have relatively high fixed costs to working and, hence, are only willing to work if they can work very long hours. This is why for women, employment can increase at the same time as the workweek. For men, the increase in labor represented by the increased supply of female labor is met by all margins of adjustment including both a longer workweek and a greater employment.

8 Effects of Lifting GHRs on Earnings

Finally, we examine the effects of lifting the GHR limits on different measures of labor earnings. As we mentioned earlier, the CPS variables needed to construct the hourly or weekly wage correspond to different points in time. We nevertheless follow Bailey, Helgerman and Stuart (2023) and construct the these wage measures using the variables from different points in time.[33] We note that these earnings measures will reflect both "straight-time" earnings and any overtime received. The other question is how exactly do these wage measures apply to salaried workers. Unfortunately, we do not observe whether someone is categorized as hourly paid or salaried so we cannot separate these two groups of workers.

With these qualifications in mind, the results in Panel A of Table 6 show that weekly and annual (which are measured directly) earnings for women fell after the repeal of the GHR by between 2.5 and 3.7%, which are sizable amounts. The effect on annual earnings at least for full-time wage earners is moderated relative to hourly earnings because of the increase in hours worked per week. Like before, the effects for men are very similar in magnitude to those for women with hourly and annual earnings falling by about 3%. To be clear, this does not mean that wages actually fell outright by 3% after the repeal. Instead, it means that they were 3% lower relative to states that had not repealed their GHRs. Effects in Panel B for full-time wage earnings are of a similar magnitude to those for all wage earners though with slightly less statistical significance.

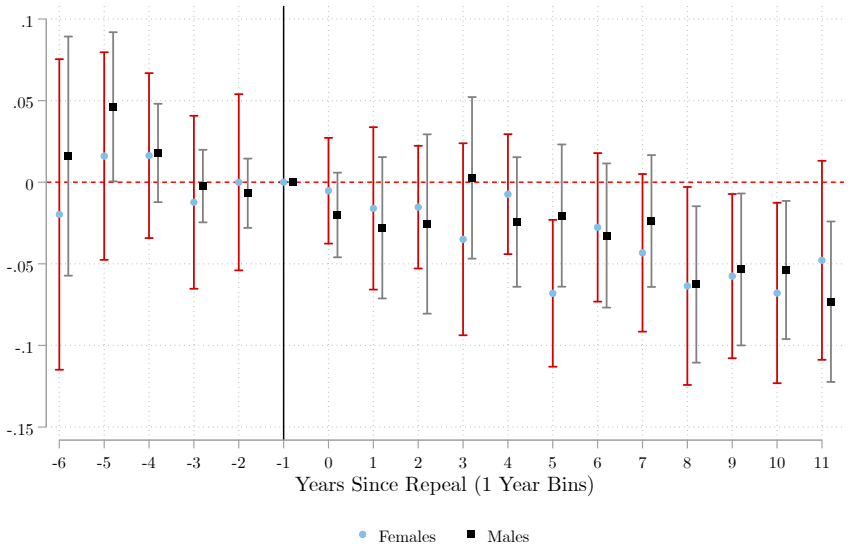
[33] In the appendix, we show that results are similar if we use reported annual earnings as the dependent variable and control for the number of weeks worked in the last year and the length of the workweek.

Table 6: Effects on Hourly and Annual Earnings

	Females			Males		
Panel A. all wage earners						
DV: Hourly Earnings						
Repeal	-0.019	-0.032***	-0.030**	-0.017	-0.033***	-0.031**
	(0.015)	(0.011)	(0.011)	(0.013)	(0.012)	(0.013)
State	Yes	No	No	Yes	No	No
Occ-Ind	Yes	No	No	Yes	No	No
Year	Yes	No	No	Yes	No	No
State-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Year-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Education	Yes	No	No	Yes	No	No
Married	Yes	No	No	Yes	No	No
Race	Yes	No	No	Yes	No	No
Race-Year	No	Yes	Yes	No	Yes	Yes
Education-Year	No	Yes	Yes	No	Yes	Yes
Marital Status-Year	No	Yes	Yes	No	Yes	Yes
Overtime Law	No	No	Yes	No	No	Yes
Equal Protection Law	No	No	Yes	No	No	Yes
Observations	46281	45545	45545	92983	92000	92000
DV: Annual Earnings						
Repeal	-0.020	-0.048***	-0.044***	-0.010	-0.035***	-0.032**
	(0.020)	(0.017)	(0.016)	(0.015)	(0.013)	(0.014)
State	Yes	No	No	Yes	No	No
Occ-Ind	Yes	No	No	Yes	No	No
Year	Yes	No	No	Yes	No	No
State-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Year-Occ-Ind	No	Yes	Yes	No	Yes	Yes
Education	Yes	No	No	Yes	No	No
Married	Yes	No	No	Yes	No	No
Race	Yes	No	No	Yes	No	No
Race-Year	No	Yes	Yes	No	Yes	Yes
Education-Year	No	Yes	Yes	No	Yes	Yes
Marital Status-Year	No	Yes	Yes	No	Yes	Yes
Overtime Law	No	No	Yes	No	No	Yes
Equal Protection Law	No	No	Yes	No	No	Yes
Observations	46281	45545	45545	92983	92000	92000

Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1963-1981). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (26-56) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. Hourly earnings is calculated by dividing annual earnings from the reference year by hours worked in the reference week times the number of weeks worked in the reference year. In Panel A, our sample is composed of all wage earners and Panel B of all full-time wage/salary earners.

Figure 10: Event Study on Hourly Earnings

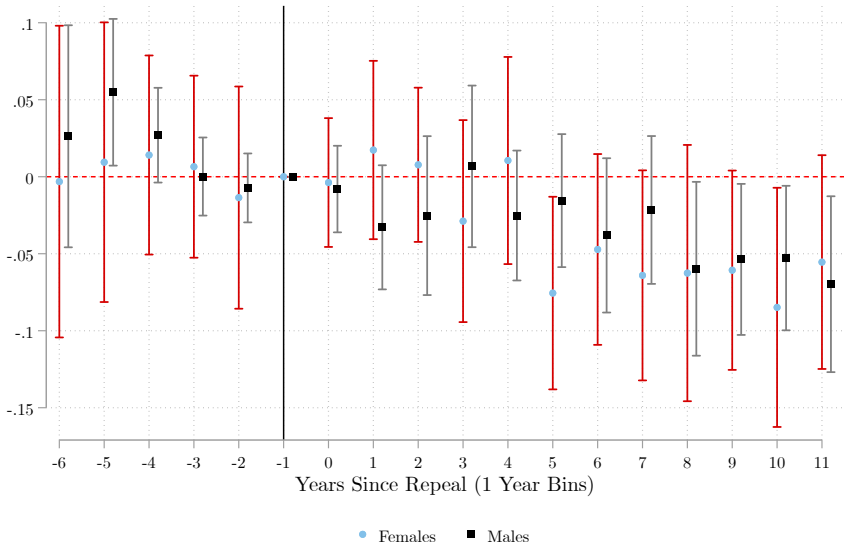


Notes: Data are drawn from March CPS sample (1963-1981). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (26-56) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. We also include state by occupation and industry fixed effects as well as year by occupation and industry fixed effects. The sample includes all workers

Figures 10 and 11 show the effects on hourly and annual earnings, respectively, for both men and women were immediate after repeal like the effect on the length of the workweek. The effects are also remarkably persistent with the point estimates for both men and women barely changing until the end of our sample. We also observe no statistically significant pre-trends, which provides supporting evidence that we are estimating the effect of repealing these laws.

What do we make of these in general negative effects on earnings? The negative effect on hourly earnings for women is easy to make sense of if repealing the law increased the supply of female labor. From the viewpoint of the theoretical model, a worker's welfare is completely summarized by how much that person earns. Because preferences are quasi-linear, there is no need to adjust for changes in leisure. Changes in total income are a sufficient statistic for changes in a person's welfare. Does this mean that (all) women were worse off following repeal since annual and weekly earnings fell? This would be a surprising result since our model features perfect competition meaning the equilibrium without a workweek limit is Pareto efficient, but that does not mean everyone is made strictly better off by lifting the limit. In fact, women who before the repeal worked less

Figure 11: Event Study on Annual Earnings



Notes: Data are drawn from March CPS sample (1963-1981). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (26-56) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. We also include state by occupation and industry fixed effects as well as year by occupation and industry fixed effects. The sample includes all workers

than the limit but were in the workforce will be hurt by the increased competition from other women now able to work longer hours.

We believe the distributional effects of repealing such a workweek limit explains why in some cases, there was disagreement among women about the value of repealing these laws. On one side were those like the female president of the Missouri Federation of Business and Professional Women who argued that the Missouri law limiting women to 9 hours a day "eliminated from executive-type jobs that often require more than 9 hours work a day." On the other side as highlighted by the same article from the *St. Louis Dispatch* on Feb. 2, 1970 as the previous quote were women who "welcomed" the "consistency" brought by the law. Note these disagreements among women are not present in the original Landes' model in which either women are out of the workforce or work up to the workweek limit. In this case, lifting the limit cannot hurt those who were not working before because they can simply continue to not work and the value of not working is unaffected by the repeal while those working at the limit are happy to have the opportunity to work more. It should not be surprising then that the theoretical effect of lifting the workweek limit on average earnings for women can be positive or negative.

The real puzzle is the negative effect on hourly, weekly, and annual earnings for men. The effects for hours and employment suggested that male and female labor were complements in production so an increase in the supply of female labor should raise the demand for male labor. Therefore, we would have expected hourly earnings to rise for men. Alongside the increase in average hours worked, average weekly and annual earnings should have increased. To rationalize the decline, it must be that the repeal of these female specific workweek restrictions also increased male labor supply directly. Note that these changes in quantity and price of male labor rule are not compatible with a decline in the demand for male labor. It is not completely clear how repealing these laws could have increased male labor supply. These negative effects for males make it even more puzzling why the laws were repealed in the first place by male-dominated state houses, courthouses, and governor's mansions.

9 Why Male Labor Supply?

Why did male labor supply go up following the removal of the GHRs? Our argument is that there are (utility) complementarities between hours worked of husbands and wives. To explore this idea, we examine the response of husbands to changes in their wives'

labor supply. The main specification we consider compares married men with a wife who works in a treated industry to everyone else including married men who don't have such a wife as well as single men. We focus on the same sample of men as the previous regressions for comparison and estimate the same basic specification as before.

Table 7 interacts marital status with repeal.

Table 7: Effects on Spousal Workweek (Marital Status)

	Workweek		
Repeal X Married	0.441***	0.471***	0.465***
	(0.095)	(0.109)	(0.109)
Repeal	0.320*	0.217	0.143
	(0.176)	(0.168)	(0.159)
State	Yes	No	No
Occ-Ind	Yes	No	No
Year	Yes	No	No
State-Occ-Ind	No	Yes	Yes
Year-Occ-Ind	No	Yes	Yes
Education	Yes	No	No
Race	Yes	No	No
Race-Year	No	Yes	Yes
Education-Year	No	Yes	Yes
Marital Status-Year	Yes	Yes	Yes
Marital Status-State	Yes	Yes	Yes
Overtime Law	No	No	Yes
Equal Protection Law	No	No	Yes
Observations	103007	102954	102954

Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. In Panel A, our sample is composed of all wage/salary earners, and in Panel B, we restrict our attention to those who worked at least 35 hours in the past week and worked at least 26 weeks in the preceding calendar year.

Table 7 conditions on being married and interacts whether a husband's spouse is in an effected industry.

Table 8: Effects on Spousal Workweek

	Workweek		
Repeal X Affected Spouse	0.329	0.333	0.311
	(0.325)	(0.323)	(0.327)
Repeal	0.270	0.200	0.123
	(0.161)	(0.153)	(0.139)
State	Yes	No	No
Occ-Ind	Yes	No	No
Year	Yes	No	No
State-Occ-Ind	No	Yes	Yes
Year-Occ-Ind	No	Yes	Yes
Education	Yes	No	No
Race	Yes	No	No
Race-Year	No	Yes	Yes
Education-Year	No	Yes	Yes
Affected Spouse-Year	Yes	Yes	Yes
Affected Spouse-State	Yes	Yes	Yes
Overtime Law	No	No	Yes
Equal Protection Law	No	No	Yes
Observations	86998	86927	86927

Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS sample weights. Demographic controls include race, educational attainment, a quadratic function in age, and marital status. In Panel A, our sample is composed of all wage/salary earners, and in Panel B, we restrict our attention to those who worked at least 35 hours in the past week and worked at least 26 weeks in the preceding calendar year.

10 Conclusion

We studied the repeal of legal restrictions on the number of hours a woman could work. Following repeal, average hours worked by both men and women rose by roughly half a day, and the probability of working longer than the limit rose by about 1 or 2 percentage points for both men and women. Moreover, the percentage of women and men who switched out of employment in the previously affected industries fell by roughly one percentage point. Finally, the earnings per hour for both men and women fell by 2-3 percent.

These results are surprising if you take the view that male and female labor are substitutes in production, which was the assumption in the model of Landes (1980). In that case, if women start working more, it must come at the cost of men who will end up working less. However, as we show, if male and female labor are complements, then the fact that hours per worker and employment rose following repeal for both men and women is easy to understand. The problem with the assumption of complementarity is that it predicts the hourly wage will rise for men while for women, it will fall. In reality, both male and female hourly earnings fell. To explain the effect for men, it must be that the supply of male labor must have also increased.

We highlight the competing economic interests of not only men versus women but also among women. As reflected in the actual debates over the repeal of these laws, women were divided between the most ambitious who understood these laws as limiting their chances of moving up and those who valued the stability the limits brought. From the viewpoint of our model, those women in the latter category would be hurt by the increased competition from other women who could work longer after the workweek limit was repealed. The consequence is that building political complications to repeal laws like these can be complicated with, in some cases, seemingly disparate groups sharing common economic interests while those within the directly affected group disagreeing over the right course of action.

Our results have parallels to the complicated economic and political interests involved over the debate on immigration. One question has been whether native and foreign-born workers are complements or substitutes in production. For example, Foged and Peri (2016) argues that in fact natives benefit in the labor market from immigrants. Our work shows that even if this is true, there can still be winners and losers among immigrants themselves contributing to complicated political discussions of immigration reform. In

the end, it is ironic that what gave male policymakers economic incentives to eliminate this one form of discrimination was the broader system of gender discrimination that remained in place. That system is what led both men and women to segregate into certain types of jobs and view themselves as not even competing in the labor market. This makes us wonder how the debate would play out to today when the “Battle of Sexes" is much more of a reality with men and women increasingly fighting over the same job opportunities.

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