Beyond the Clock: Labor Market Effects of Gender-Specific Workweek 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During the 1960s and 1970s, states across the US repealed laws that imposed limits on how many hours women could work in certain industries.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 similar labor market effects for *both* men and women. In particular, the average workweek increases in length and fewer people left the previously 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 (ostensibly) aimed at protecting women that had the effect of limiting women's labor market opportunities. One type of such legislation explicitly limited the number of hours a woman could work over a day or week, which we refer to as a gender-specific hours restriction, or GHR. By 1950, nearly every state in the union had a GHR, and by 1975, all of these laws were gone, either repealed through legislative, legal, or executive action. We study the consequences of ending these laws for both women and *men* by exploiting the staggered repeal of these laws to estimate their effects on weekly hours, employment, and earnings.

These "protective" laws were not dead letters. To the contrary, despite the passage of Title VII of the Civil Rights Act of 1964 forbidding discrimination on the basis of sex, campaigners for the Equal Rights Amendment still faced pushback because of fears that state protective laws would be disallowed following its passing (Kanowitz, 1979). Organized labor, in particular, was initially opposed to the ERA on this basis. While the limits on weekly hours were set higher than customary workweeks, they were still binding both on individuals working long hours and long shifts. For example, in *Ridinger v. General Motors Corporation*, the plaintiff contended that she had been "denied employment opportunities which are extended to males such as Saturday and Sunday overtime work and better paying jobs." The defendants, General Motors and the International Union of Electrical, Radio and Machine Workers, did not dispute the charge, instead claiming that they were *required* to discriminate in this way.[1] Birch Bayh, the chairman of the Senate Subcommittee on Constitutional Amendments, in arguing for the merits of the ERA, noted that the protective laws made it "more difficult for women to obtain work they desire and for which they are qualified, or to become supervisors" and that even in 1968, several years after the passage of Title VII, "federal district courts in California and Louisiana refused to negate work hours limitations which restricted women only" (Bayh, 1972).

To organize our empirical results we develop an extension of the model in Landes (1980). The original model assumed that workers make a choice of whether to work at all, and then conditional on that choice, how many hours to work. Workers only differed 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 an extra hour of work. This second dimension of heterogeneity generates a (non-degenerate) distribution of hours worked across individuals. It also generates disagreement among women over the wisdom of repealing a GHR. On the labor demand side, the original model assumed that male and female labor were perfect substitutes in production. Besides studying this case, we also examine the case of perfect complements.[2]

[1] Ridinger v. General Motors Corporation, 325 F. Supp. 1089 - Dist. Court, SD Ohio 1971

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

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. When they are complements, an increase in the supply of female labor will raise the wage, hours per worker, and employment of men. If they are substitutes, then the effects are just the opposite. Whether men and women are complements or substitutes also determines whether men themselves would be in favor of repealing such a restriction. In either case for women, the wage will fall and total 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 the effects on male labor market outcomes identify the substitutability between the types of labor.

To empirically estimate the impact of these laws, we exploit their staggered state-level repeals of GHRs 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 was driven by changes along two margins: an increase in the probability of working longer than the GHR limit as well as longer hours for those who initially had a workweek far below the GHR. Meanwhile, the results for men are consistent with male and female workers being complements in production, as the repeal of the GHRs were associated with a rise in the average workweek for men by a similar amount as for women. On the employment margin, we find that fewer men and women left industries previously subjected to the workweek restriction. These results are consistent with male and female labor being complements rather than substitutes as Landes had assumed. Interestingly, these findings are consistent with Goldin (1988)'s analysis of the *introduction* of these laws. She found that introducing these maximum hours laws *reduced* hours worked by both women and men.[3]

In addition, the results show that hourly, weekly, and annual earnings for both women and men fell following the repeal of these laws. The negative effects for women can be rationalized with increases in labor supply in our simple model. However, the drops in male earnings are difficult to rationalize if the only effects of repealing the GHR are to expand the female labor supply and the demand for male labor. To have a drop in male wages also requires an increase in male labor supply that more than offsets the rise in the demand for male labor. The rise in male labor supply might occur if an increase in male labor supply reflects complementarities in leisure choices between spouses within the family. Goux, Maurin and Petrongolo (2014) found such complementarities when they found that husbands responded to their wives cutting work hours by cutting their own work hours. We find evidence for this complementarity by showing that hours worked went up more for married men than for single men following repeal of the

[3]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.

GHRs.

We argue that the mixed effects for women increasing hours worked but decreasing the wage 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 kind of regulation is costly for the most ambitious women (Goldin, 2014); i.e., those that are constrained by the limit. Women who work but strictly less than the limit are hurt when the restriction is repealed because of increased competition from *other* women. Doepke et al. (2024) also study the political economy of the introduction of these laws and argue that the laws were all about men trying to limit economic competition from women. Our view is that repeal was not about the economic interests of men since our results suggest that all men benefited from repeal because of complementarities in production. Instead, in our view the political economy of repeal was all about some women wanting to limit competition from other women who stood to take advantage of greater labor market opportunities. Our conclusion echoes that of Siegel (1987-1988), who calls the debate over the origin of these laws a "struggle of women against women, in which women serve as the primary agents of their own victimization."[4]

Our paper first fits into a literature that empirically explores the effects of gender-specific labor market regulations. 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 similar effects on work hours for males and females from gender-specific labor 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. Haddad and Kattan (2024) examine other types of protective laws for women from 19th century America. These regulations, which tended to come along with restrictions on hours of 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.

[4]This cite is to a review of Lehrer (1987), which is a book-length study of the origin of these laws. Lehrer argues that it was the business class that pushed for these laws at the expense of all women.

2 The Messy Process of Repeal

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.[5] 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 industrial commission boards. In the majority of cases, the GHRs applied only to women working in manufacturing and mercantile industries. There were some states with much broader coverage of women. In Arizona, for example, nearly all female workers were subject to a limit of 8 hours per day and 48 hours per week. 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. Similar legal language could be found in Nevada,[6] New Hampshire,[7] North Carolina,[8] Ohio,[9] Pennsylvania,[10] South Dakota,[11] and Utah[12].

After the passage of Title VII in the Civil Rights Act of 1964, which called for the elimination of discrimination on the basis of sex, a pressing question for states became how to reconcile these gender-specific laws with the federal mandate to not discriminate on the basis of sex. The President's Commission on Status of Women in 1963 had studied labor legislation applying to only women. Its recommendation 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. In 1967, another commission, A Task Force on Labor Standards, was set up to study developments in these issues in the intervening years. In their final 1968 report, the commission, rather than suggesting the standards be applied to everyone, called for the repeal of these restrictions altogether. On August 19, 1969, the federal Equal Employment Opportunity Commission published guidelines that state laws restricting the employment and hours of females were in conflict with the 1964 Act.

[5]The "protective" nature of the laws with regard to blue collar work is illustrated by the example of the repeal in the law in Michigan, after which Chrysler supposedly demanded such high levels of hours that, according to a female employee before the Occupational Safety Standards Commission, "women dropped over from fatigue and exhaustion daily and had to be removed by stretcher" (Munts and Rice, 1970).

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

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

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

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

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

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

[12]*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.

The passage of the Civil Rights Act of 1964 clearly did not result in the elimination of state protective laws. The reason the laws could continue is the nature of the "Bona Fide Occupational Qualification" (BFOQ) exemption to the ban on discrimination. Pitt (1970) notes that while by 1971 the Equal Employment Opportunity Commission had settled on the view that the protective laws were not BFOQs, "it must be remembered that the EEOC is only a policy and guideline-making, conciliatory and mediating agency and thus its opinions, no matter how correct and persuasive, have no actual binding effect. The question remains as to whether the courts will adhere to this sound reasoning and policy." That is, the process was not concluded by the determination of the federal government.

Over the last half of the 1960s, the EEOC adopted conflicting views regarding the BFOQ defense for state protective laws (Ross, n.d.). In December 1965, the first EEOC guidance allowed restrictive laws to be used by employers as a BFOQ if employers acted in good faith and if the laws were protective and not discriminatory, apparently on the belief that Congress had not intended to override the state protective laws with the Civil Rights Act. Subsequently, in August 1965, the EEOC announced that they would refrain from making a decision when Title VII conflicted with state laws. In February 1968, they rescinded this policy, returning to one in which they would determine whether the laws were discriminatory based on consultation with states. Finally in August 1969, they changed guidance again, saying that no prohibitory law could be a BFOQ.

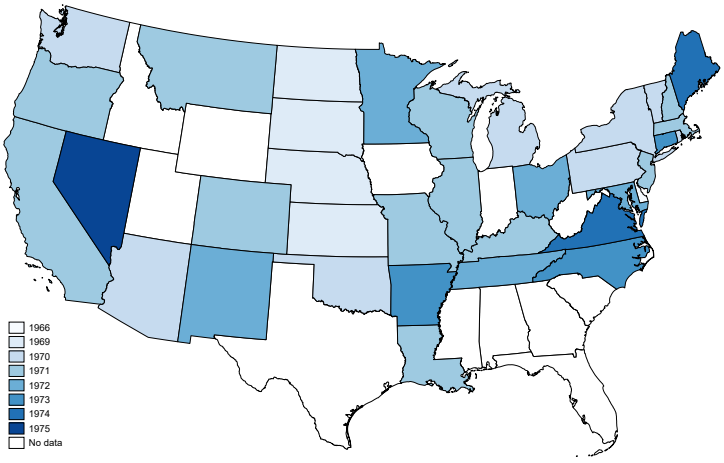
The EEOC's action was the last nudge needed to get the ball rolling. Starting in 1970, state legislators began to resolve the conflict between federal anti-discrimination laws and the state GHR laws. All in this year, Arizona repealed its maximum hours and weekly rest day law for females; New York released women from over 21 restrictions on daily and weekly work hours and on night work; and Vermont released women ages 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. 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. [13]

Courts at both the federal and state level then started getting involved.[14] For example, in *Rosenfeld v. Southern Pacific Company*, the Ninth Circuit Court of Appeals "tackled head-on the conflict

[13]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*.

[14]See https://www.nytimes.com/1971/07/13/archives/womens-job-rights-gain-in-federal-court-rulings-womens-job-rights.html, last accessed July 14, 2025.

Figure 1: Year of Repeals



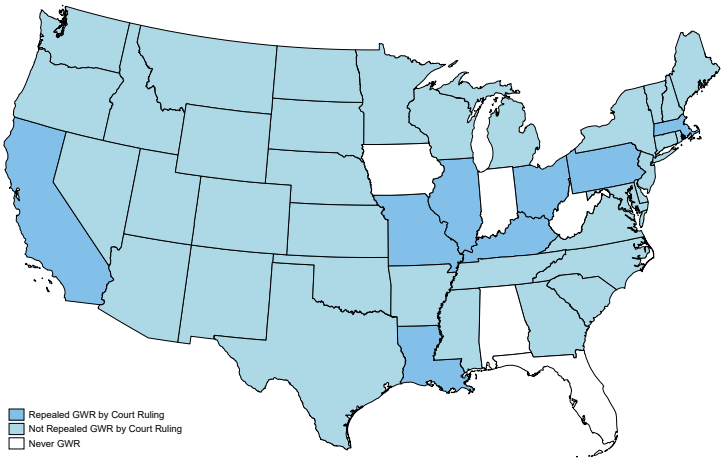
Notes: A state could have multiple actions repealing a GHR. We take the year of first action.

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). The court's opinion in *Rosenfeld* 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 must be treated the same as men. 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 "[m]ost, 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).[15] Figure 2 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

[15]See https://www.google.com/books/edition/State_Hours_Laws_for_Women/5newvDepRuwC?hl=en&gbpv=0, last accessed July 14, 2025.

Figure 2: Court Cases Voiding Gender-Specific Hours Restrictions



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

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." In support of this interpretation, he pointed to 1969 guidelines of the EEOC. 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 whether these laws while in force had any bite. Fig. 3 maps the state-specific workweek limits as of 1961 highlighting that the limits were in every case longer than 40 hours per week. 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* found that 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 ineffectual. The report instead suggested that *daily* limits were the larger problem:

> 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 a potential move to a 4 day workweek with 10 hour days that "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."

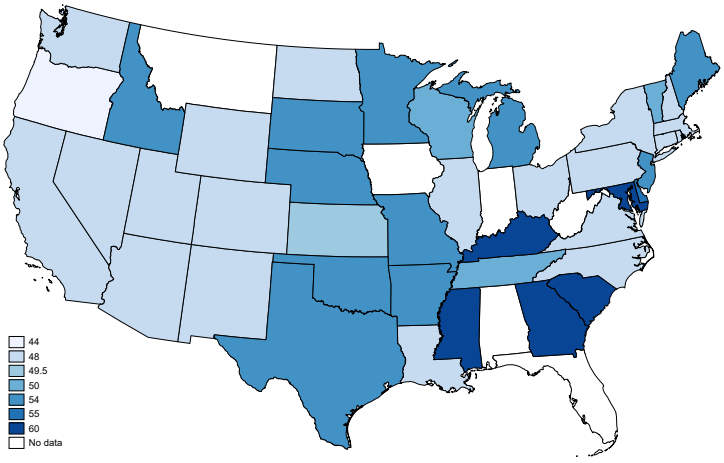
Several lawsuits provided evidence for the discriminatory effects of the GHRs. In the 1970 case *Potlatch Forests, Inc. v. Hays*, an employer brought suit against Arkansas arguing that Title VII preempted a state law requiring overtime pay. The court recognized that the effect "of the [state] statute 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 the 1971 case *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 the 1972 case *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

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.

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

3 Who Benefits from Repeal?

Repeal of state protective laws was deeply intertwined with the debate over the Equal Rights Amendment. Early versions of the ERA specifically *exempted* state-level protective laws from consideration. The "Hayden rider", introduced in the Senate in 1950 by Senator Carl Hayden of Arizona, stated that "The provisions of this article shall not be construed to impair any rights, benefits, or exemptions conferred by law upon persons of the female sex" (Neale, 2013). Versions of the ERA passed by the Senate over the 1950s included the rider. By the 1960s, the rider had fallen out of favor, and the 1964 Senate Judiciary Committee report stated that "[i]t is under the guise of so-called 'rights' or 'benefits' that women have been treated unequally and denied opportunities which are available to men."

The robust discussion about the necessity or invalidity of protective laws as part of the attempted enactment of the Equal Rights Amendment shows that the question of these laws was by no means settled by 1970. Myra Wolfgang, vice president of the Hotel and Restaurant Employees and Bartenders International Union AFL-CIO, argued before the Senate that women "frequently we obtain real equality through a difference in treatment, rather than identity in treatment" and hence "the passage of an hours limitation law for women provided them with a shield against obligatory overtime to permit them to carry on their life at home as wives and mothers". In a press conference held in response the next week, Cele Carrigan of the United Auto Workers said that the protective laws were invalid because of the Civil Rights Act, and that unions were fighting

against the laws; notably, this fight was being conducted six years *after* the Civil Rights Act was passed. In August 1970, *Time Magazine* said that "[m]ost of organized labor opposes [the ERA], arguing that it will destroy a broad carapace of laws that 'protect' women workers by regulating their hours and the kinds of work then can perform" (, 1970). To even reach a vote on the ERA in 1971 required an unusual discharge petition, as for 21 years, the chairman of the House Judiciary Committee, Emanuel Celler, blocked even a hearing on the law. According to the *New York Times*, Celler "argued mainly that the amendment should be defeated because it would probably render invalid laws aimed at protecting women"[16] (Shanahan, 1970).

According to a 1971 article in *The New York Times*, challenges to the protective laws tended to be brought by "working-class women" who argued that the laws "kept women from earning premium overtime pay that they wanted to earn, kept them out of better-paid job classifications and prevented their promotion to such jobs as foreman" (Shanahan, 1971). This sentiment was echoed in a 1970 article in the *St. Louis Post-Dispatch*. Mrs. Roy T. Hardaway, president of the Missouri Federation of Business and Professional Women, said that because of the workweek restriction, "[A] woman will be eliminated from executive-type jobs that often require more than nine hours work a day." The United Auto Workers, which had previously advocated for protective laws, became the first large union to hold that state laws were superseded by Title VII (Barnard, 2004, p. 398). At the time, companies were increasing overtime in preference to expanding hiring, which put women at a disadvantage under the protective laws.

On the other hand, a spokesman for the Amalgamated Clothing Workers of America said that "local members of the union–of whom at least 80 per cent are women–would oppose a repeal of the law" and "[women] don't want to work all the time." The debate over repeal echoes the debate over the introduction of these laws. Landes (1980) discusses a book by Henry (1925) about women in trade unions. In that case, the fears among women were about competition from female immigrants who were "asking for labor" and "being used to lower yet further wages for themselves and others." In the end, unions at the time gave up trying to organize the new immigrants and instead decided that "The one thing we can do to alleviate their hard lot is to secure legislation for shorter hours and for the minimum wage." That said, women members of the union "were by no means united" in support of repeal, specifically worrying about an increase in mandatory overtime. Unions as a whole were conflicted about the laws, although over the course of the 1970s they moved towards greater support of repeal. From a position of "vigorous opposition" towards repeal, they came to a belief that "State protective laws have often been used by employers, and by some labor unions, to prevent women from holding better paying jobs, from working overtime, and from accumulating plantwide security and seniority" (Raphael, 1974, p. 30).

Doepke et al. (2024), while focused primarily on the adoption of protective laws, briefly study

[16]More colorfully, Celler also argued that "There is no equality except in a cemetery" and that "there is more difference between a male and a female than between a horse chestnut and a chestnut horse."

a proxy for the repeal. Their theoretical argument suggests that unskilled single men working in "modern" (i.e., non-agricultural) work and unskilled married men in the modern sector with stay-at-home wives benefit from protective laws. They then construct a measure of predicted political support for protective laws based on the size of these groups. The repeal process was messier than adoption, with repeal coming via a panoply of court decisions, legislative actions, and administrative ruling. However, as the Equal Rights Amendment debate was in part a proxy argument over protective laws, they use the adoption of state-level ERAs and ratification of the federal ERA as outcomes, testing whether predicted support is correlated with these outcomes. They find predicted support for protective laws is strongly negatively correlated with state-level ERAs and ratification of the federal ERA.

4 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 consider the perfect complements case in addition to the perfect substitutes one.[17] 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 as in the original model and (2) along the intensive margin of how many hours a person works once they have chosen to work. This second dimension of heterogeneity allows us to capture the distribution of hours worked among those that work.[18] Importantly, this second dimension of heterogeneity is what generates disagreement between women about whether the GHR should be repealed. We study the comparative statics of a marginal increase in the legally imposed hours limit on women $\bar{h}$.[19]

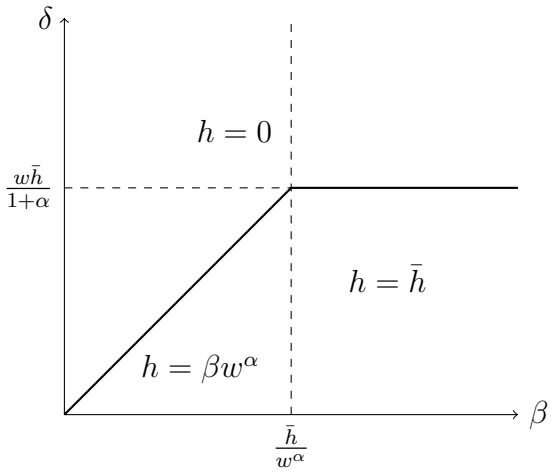
4.1 Labor Supply

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_i. Conditional on choosing to work, the individual chooses how many hours to work h_i. Preferences are given by

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

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

Figure 4: Hours Choices



The individual maximizes utility by choosing consumption and the number of hours to work subject to the budget constraint $c_i = wh_i$ where w is the) wage per hour, which is common across individuals (of the same gender). Here β_i represents an idiosyncratic marginal disutility from working an additional hour. It can also be interpreted as idiosyncratic productivity proportional to β_i and individuals get paid based on their individual-specific marginal product. We assume a common labor supply elasticity that is determined by the parameter α.

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.[20] 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 propor-

[20] 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.

tional 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 increases utility depends solely on whether their total earnings go up or down. Those that enter the workforce are strictly better off and those that leave are strictly worse off 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.

We consider the equilibrium effects of a change in $\bar{h}$. Let ε_i^j denote the percentage change in aggregate variable j (e.g., employment $L = \Pr[U_i > \delta_i]$ or working hours $h = \mathbb{E}[h_i | U_i > \delta_i]$) 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 changes in 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. The labor supply part of the model provides 4 equations to calculate the equilibrium changes of 6 variables. The labor demand part of model will provide the two missing two equations.

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 the disutility of work β conditional on the fixed cost of being employed 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 new people becoming employed. The newly employed people would have had a high fixed cost of working, but conditional on working, they would have preferred to work long workweeks, but those were not legal before the workweek restriction was repealed. The elasticity is positive because conditional on the wage, there is no reason for people

who were already working to leave the workforce after repeal.

Next the elasticity of employment with respect to the wage is

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

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

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

These elasticities are positive since the value of the outside option is fixed while a higher wage increases the value of working any number of hours.

Rather than calculate the 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 $\bar{h} \to \infty$.

4.2 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 inputs. 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.[21] 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.

As we show in the appendix, the changes in 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 $s = \frac{h_f L_f}{h_f L_f + h_m L_m}$ is the share of total hours worked by women, $\gamma = \sigma + (1-s)\bar{\alpha}_m^H + s\bar{\alpha}_f^H$, and $\bar{\alpha}^H = \bar{\alpha}^L + \alpha^h$ for men and women respectively. We conclude that the wage rate for men and women falls 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 directly compete with women in the labor market.

The situation is more complicated for women. It 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

[21] 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.

if, for example, $s \approx 0$. That is, the share of female hours in total hours worked is (relatively) small. Note that 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.

Using similar steps to the perfect substitutes case, we show in the appendix that

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

where $\omega=\frac{w^{f}}{w^{f}+w^{m}}$ is the share of female wages in total wages and $\gamma=\bar{\alpha}_{m}^{H}\bar{\alpha}_{f}^{H}+(1-\omega)\bar{\alpha}_{m}^{H}+\omega\bar{\alpha}_{f}^{H}$. 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.[22] Table 1 collects the comparative statics for these different versions of the model.

To summarize, removing the workweek restriction acts as an expansion in the 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 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 the male wage.

Who wins and loses from repealing a GHR? For men, it will be a Pareto improvement 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. For women, removing the

[22]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.

hours restriction is not Pareto improving. To understand this, we can decompose the population of women into 6 groups depending on how their labor supply decisions change following repeal and whether they would support 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 repeal 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.

5 Data

5.1 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 believe this is a reasonable amount of time for any effects of the repeal to be present while limiting the number of potential confounders that come with including more years. One difficulty we face is that the CPS data prior to 1968 does not provide the detailed and consistent 1950 Census Bureau industrial classification system. This is a problem because many GHRs only applied to women working in particular industries. We therefore harmonize industry classifications across years into a coding system that is a bit finer than the 2-digit NAICS code but 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. Therefore, there is some measurement error in our identification of who is subject to the GHRs. Throughout the primary analysis, we restrict attention to people employed in either manufacturing or mercantile industries based on our coding.[23]

Another issue in working with the CPS is the timing of the employment and earnings variables. First, annual wage and salary incomes are reported for the previous calendar year while weekly hours are reported for the week before the survey was taken. In addition, weeks worked, which again refers to the prior year, is reported in intervals.[24] Taken together, this makes it difficult to accurately measure weekly or hourly earnings. In our first approach, following Bailey, DiNardo and Stuart (2021), we divide the annual wage earnings for year $t-1$ by the product of the midpoint of the interval for the number of weeks worked 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

[23]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.

[24]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.

above the minimum wage reasonably well. In our second approach, following Derenoncourt and Montialoux (2020), we 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. In this way, we estimate the *net* effect of lifting GWRs on the annual wage income resulting from other channels through hours of work.

An additional problem with the March CPS data is that the publicly available data report information by state *group* instead of state in 1962 and from 1968 to 1976, an important period for the repeals of GHRs. The grouped states which were placed into groups were relatively small and geographically close to each other (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 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.[25]

5.2 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 We also examine the interaction between the repeal of GHRs and changes in state-level policies on overtime compensation. Even though these overtime rules ap-

[25]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.

plied uniformly to men and women, they might have gendered effects given the differences between men and women in the average workweek. By 1967, fifteen states and D.C. had 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 acted as a deterrent to long hours and a nudge toward 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),

6 Empirical Strategy

6.1 Difference-in-Differences Specification

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

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

where i indexes individuals, 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 as well as different sets of fixed effects. In our preferred specification, we include state-by-occupation-by-industry fixed effects (τ_{oks}) and year-by-occupation-by-industry (μ_{okt}), respectively. 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. 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. Regressions are weighted using the CPS survey weights following Lemieux (2006).

In the main analysis, we solely focus on people working in the manufacturing and mercantile sectors and drop everyone outside of these two affected sectors. 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 a 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. Because of our sample selection, the treatment variable does not vary within a state-year by occupation or industry. 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.[26] Because the date of repeal was the date of the

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

action and not the actual date of implementing the repeal, the outcomes are one year in the future to account for the lag in implementation.

6.2 Event-Study Specification

We also estimate event-study specifications:

$$y_{it+1} = \sum_{\tau=-4,\tau\neq 1}^{7} \beta_{t+\tau} Repeal_{st+\tau} + \text{Controls}_{it} + \varepsilon_{it}, \tag{2}$$

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. The span of τ covers the 12 calendar years we focus on.

We show in the appendix that states that repealed their laws early in our sample had similar characteristics to those that repealed late. Nevertheless, all the recent concerns about staggered DID designs apply here (Goodman-Bacon, 2021). For example, there is the issue of always and never treated units. In our case, Georgia, Idaho, Texas, Utah, and Wyoming never repealed their GHRs throughout our sample period. There are also a few states that never had a GHR to begin with. We experiment with different ways of handling these states. There is another complexity in whether the repeals applied to all industries or narrowly. For example, in Colorado and South Carolina, the repeal only applied to certain industries.[27] We again experiment with different ways of treating these cases and cases for which the GHR initially applied to all female workers rather than just those in a handful of industries.

7 Effects of Repealing GHRs on the Workweek

To start, we investigate the impact of removing GHRs on men's and women's workweeks. 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 specifications in columns 1 and 4 for women and men, respectively, include the state effects, year effects, and

[27] In these cases, because the number of people in these states who were not in those industries was so small that we treated the repeal as applying to all industries.

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 other state-level policy changes. Results here and throughout the rest of the paper are for an unbalanced panel of states that were not part of a grouping of two or more states in the CPS in that year.[28]

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
Mean of DV Before Repeal	0.015	0.015	0.015	0.141	0.141	0.141

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.

We find that the probability of working over the initial GHR limit significantly increased among women. The magnitude and statistical significance are stable across all specifications. Given the

[28]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.

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. The effect of GHR repeal in the specification in column 4 is statistically significant and about two-thirds of the size of the female coefficient with similar controls in column 1. However, in columns 5 and 6, the coefficients are much smaller and not statistically significant. Moreover, prior to repeal, over 14 percent of men worked longer than the GHR so the percentage change in the share working beyond the limit is much smaller than for women.

In Table 4, using instead the length of the workweek as the dependent variable, the coefficients show that the repeal of these laws was associated with an increase of 0.47 to 0.74 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 a recurring theme, the repeal coefficients for men are 52 to 57 percent as large as for women, and two of the three coefficients are statistically significant. This repeal-related rise in the average workweek for men is consistent with male and female labor being more complements rather than substitutes in production.

To build move evidence for our causal interpretation of these results, we now turn to event studies. Figure 5 shows that immediately after repeal, the probability of working over the previous GHR limit for women jumped and remained high through the end of our sample. The post-repeal coefficients were typically around .01 for 8 periods and rose to around .02 in years 9 and 10. Four of the effects are statistically significant. Prior to repeal the coefficients show no trend as they were all similar, somewhat negative, and none were statistically different from zero. The effects for men were also generally positive, as 8 of the post-repeal coefficients are positive and 6 were relatively close to the women's coefficient. However, none of the ten post-repeal coefficients were statistically significant. Prior to repeal the coefficients show some sign of a positive trend but none were statistically significant.

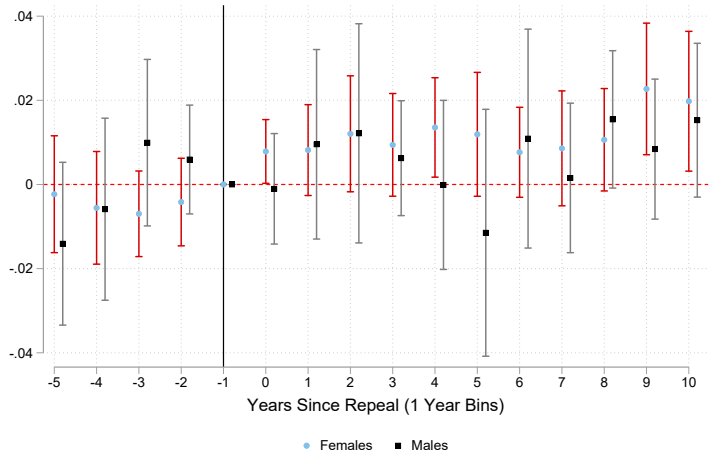
Similarly, Figure 6 shows that the workweek rose for both women and men repeal, as all but one of the post-repeal coefficients are positive for women and all were positive for men. For both groups the coefficients were tended to be higher in the last three years after repeal than in earlier years. None of the female coefficients were statistically significant, while the male coefficients for the last four years are statically significant. Prior to repeal none of the coefficients were statistically different from zero for both males and females.

Table 4: Effects on Workweek Length

	Workweek Length					
	Females			Males		
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
Mean of DV Before Repeal	36.576	36.576	36.576	44.064	44.064	44.064

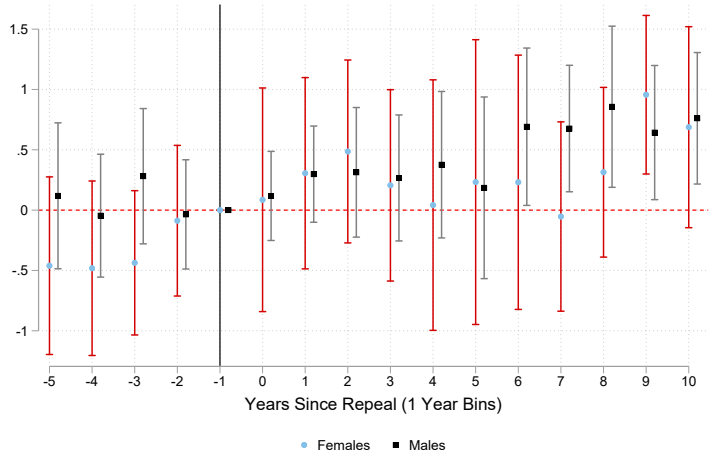
Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile 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.

8 Effects of Repealing 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 margin of hours worked and one employment change margin, the one arising from flows out of employment in the affected industries.

Table 5 summarizes our estimates of the effect on transitioning out of the treated industries into other industries using the same specifications as in Tables 3 and 4. Here we rely on the CPS question that asked respondents in which industry did they work at the time of the survey and the previous year. 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. The estimates show that the outflow rate fell by statistically significant amounts ranging from 1.1 to 1.9 percent for both men and women. The estimates for men and women are nearly the same when the specifications have the same controls.

The event study results for the transition rate to other sectors in Figures 7 seem consistent with the results in Table 5. 5. After a short delay after repeal, women experienced reductions in outflows at a rate of 2 percent in nearly every year. Meanwhile, men experienced a reduction in out-flows in every year, and most of the reductions were similar to those for women. Two of the point estimates for women and five for men were statistically significant. The results also do not show evidence of any statistically significant pre-trends for men or women.

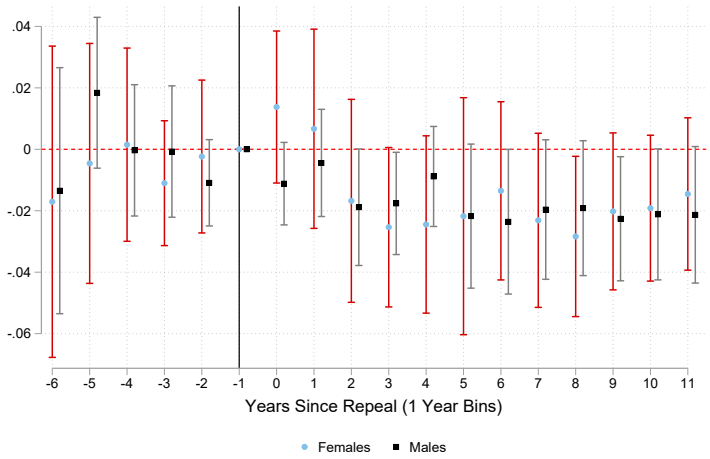
The findings that hours worked rose and there was reduced outflow from employment for women after GHR repeal in manufacturing and mercantile endeavors shows that repeal influenced both margins for changes in hours worked for women. Thus, after repeal women tended to stay with their employment and work longer hours. A similar story can be told for the results for men, which is consistent with complementarity between men and women in their work. It might seem 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

Table 5: Effects on the Probability of Transitioning Out of Affected Industries

	Females			Males		
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
Mean of DV Before Repeal	0.045	0.045	0.045	0.030	0.030	0.030

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 any other employment status.

Figure 7: Event Study on Transition Rate Out of Affected 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

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.

9 Effects of Repealing GHRs on Earnings

Finally, we examine the effects of lifting the GHR limits on labor earnings. Following Bailey, Helgerman and Stuart (2023), we construct hourly earnings.[29] We note that this measure, in effect, incorporates both "straight-time" earnings and any overtime received. The other question is how exactly does this hourly wage measure 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 the top part of Table 6 show hourly earnings fell 1.9 to 3.2 percent after repeal relative to states that had not repealed the GHRs. The effects for men were nearly the same. After repeal annual earnings, which are measured directly, fell 2 to 4.8 percent relative to states without repeal. The fall after repeal for men was somewhat smaller, ranging from 1 to 3.5 percent.

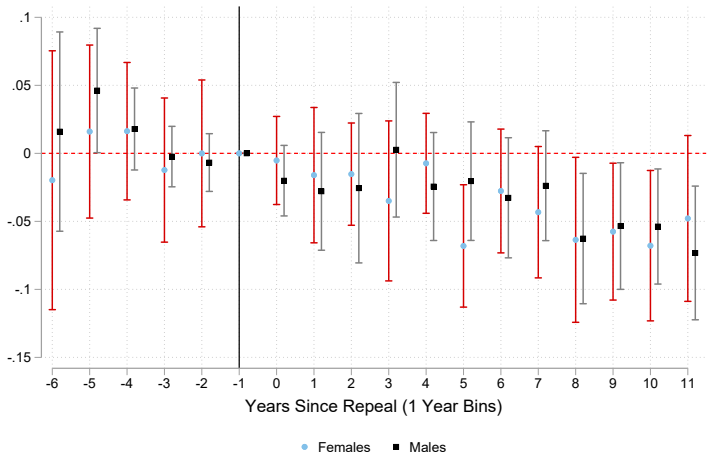
[29]In the appendix, we show that results are similar if we use reported annual earnings as the dependent variable and control for the number of weeks worked in the last year and the length of the workweek.

Table 6: Effects on Hourly and Annual Earnings

	Females			Males		
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 8: Event Study on Hourly Earnings

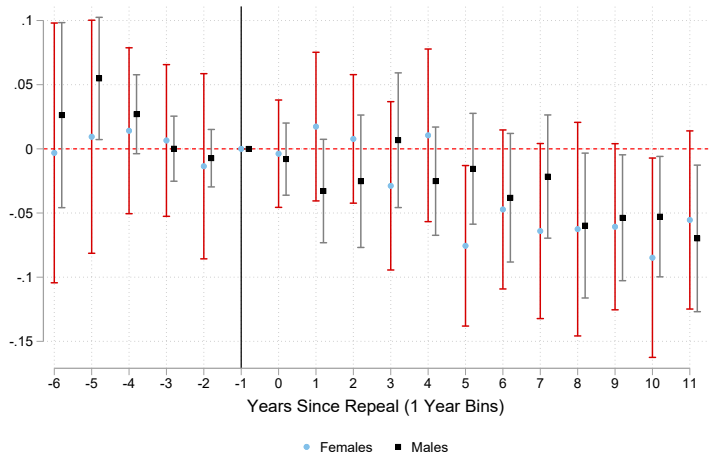


Notes: Data are drawn from March CPS sample (1963-1981). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (26-56) in manufacturing or mercantile industries. All standard errors are clustered by state groups. Regressions are weighted using the CPS 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 8 and 9 show the event study results for hourly and annual earnings, respectively. The annual post-repeal point estimates for hourly earnings in Figure 8 were all negative for women and became more negative from 5 to 11 years after repeal with 4 estimates that were statistically significant. The results for men were similar with all but one negative point estimate and statistically significant estimates below 5 percent from year 8 to 11. The point estimates for annual earnings in Figure 9 tell a similar story as for hourly earnings with stronger negative effects several years after repeal. There is no sign of a pre-repeal trend for women in either figure. For men a high point estimate of 5 percent 5 years prior to repeal might suggest a negative pre-trend but it might also be an outlier because the estimates before and after are much smaller and not statistically significant.

The negative effect on hourly earnings for women is easy to make economic sense if repealing GHRs increased the supply of female labor. On the other hand, the decline in the annual earnings falls while the average workweek rises is puzzling. It is possible for average earnings to fall in the model, but only happens when the average workweek falls and the adjustment to the repeal of the GHR takes place along the employment margin. In the appendix, we sketch out one explanation for these results by extending the model to allow for groups of workers that are paid different wages. For simplicity, we assume that the labor demand is perfectly elastic. We consider a simple case where there are two groups: the first always workers and the second only workers after repeal. Think of this second group as hardworking but low productivity workers who will earn

Figure 9: 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

lower hourly wages and will face high fixed costs of entering employment and thus will want long hours that will raise their earnings high enough for them to choose to enter employment. When the GHR is in effect, the gap in the workweek between what these women want and what employers offer leads them not to work at all. Lifting the GHR allows them to enter the workforce, which has the effect of increasing the average workweek while reducing the average wage. These changes are solely due to changes in the composition of the workforce. Even though it would appear on the basis of average earnings and hours worked that women are made worse off, in fact, removing the GHR in this model is a Pareto improvement. Women in group 1 are indifferent between repeal and those in group 2 are made strictly better off with the GHR gone.

The other question from the viewpoint of the model is what to make of the negative effects on hourly, weekly, and annual earnings for men. 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. 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. 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 must be that the repeal of these female specific workweek restrictions also increased male labor supply directly. We now provide

a mechanism for this increase in male labor supply.

10 Why Did Male Labor Supply Increase?

The rise in hours worked, the decline in employment outflows, and the decline in earnings after GHR repeals for men suggest that a rise in the supply of male labor outweighed the rise in the demand for male labor predicted by the model when men and women are complements. Why did male labor supply go up following the removal of the GHRs? Theoretically, the expansion in male labor supply could have happened if the model is expanded to consider the complementarities in utility related to hours of market work, work at home, and leisure for husbands and wives in the household.

To explore this possible mechanism, we examine the labor supply response of married men relative to single men following repeal in a triple interaction formulation. We focus on the same sample of men and basic specifications as for previous results. The estimates in Table 7 show that after GHR repeal, the workweek of married men rose by a statistically significant amount of roughly 0.45 more hours than for unmarried men. After repeal unmarried men had increases of 0.14 to 0.32 hours, but only one of the effects was statistically significant. This estimate does not identify whether the married men had a spouse in jobs affected by GHR repeal, so it is more like an intent to treat measure.

We therefore focus next in Table 8 on the sample of married men and compare those with a wife in an affected industry to those who were not in the previous analysis. Husbands in the latter category might have had a wife working in a non-affected industry or not working at all. The interaction coefficient shows that married men with spouses in jobs affected by repeal worked around 0.3 more hours per week than other married men. The other married men worked an extra 0.12 to 0.27 hours per week. However, none of the estimates are statistically significantly different from zero, so we consider the estimates to be suggestive evidence for an increase in male labor supply due to complementarities in the workweek choices of spouses.

Table 7: Effects on Workweek by Marital Status

	Workweek		
Repeal X Married	0.389***	0.438***	0.432***
	(0.106)	(0.119)	(0.119)
Repeal	0.326*	0.221	0.155
	(0.181)	(0.172)	(0.163)
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	101207	101152	101152

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.

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

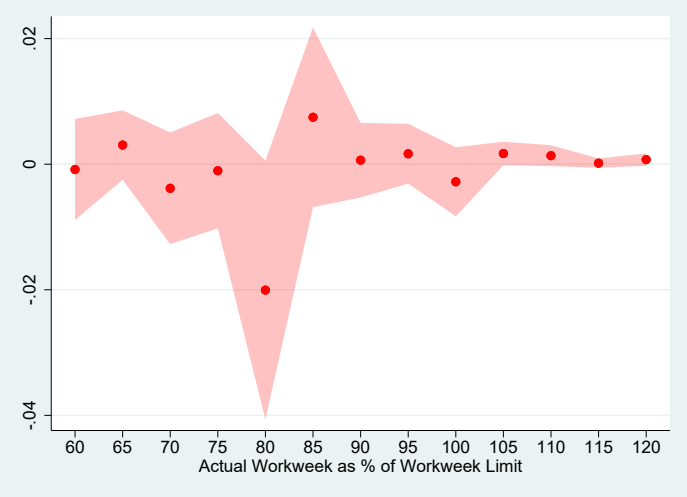
Note: *** 1% statistically significant, ** 5% statistically significant, * 10% statistically significant. Data are drawn from March CPS sample (1962-1980). The sample is restricted to private-sector workers working for wages and salaries of primary working ages (25-55) in manufacturing or mercantile 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.

11 Who Was Most Affected?

The model makes predictions about the labor supply response for different types of workers. For example, women not constrained by the workweek limit initially should reduce their hours worked because the hourly wage falls. Some fraction of those initially constrained will want to work more while some will actually end up working less because of the lower wage. The difficulty we face is that we cannot follow individual workers over time and, in addition, the model implies that the composition of workers will change as new people enter the workforce after the GHR is lifted.

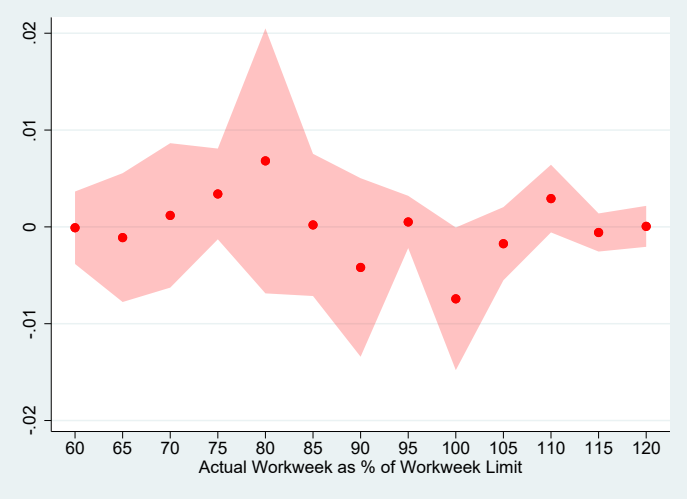
The question is where in the workweek distribution does the increase in the average workweek come from. Does it come from people initially working well below the limit working more? Or does it come mainly from those initially constrained working more after repeal? To answer this question, we calculate 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 6 for the effect of repeal on the probability of working in a given bin. We plot the coefficients from each of these regressions for the workweek bins in Figures 10 and 11. 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 10: 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 11: 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.

12 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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