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ISSN: 2365-9793

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ABSTRACT

How the 1963 Equal Pay Act and 1964 Civil Rights Act Shaped the Gender Gap in Pay*

In the 1960s, two landmark statutes—the Equal Pay and Civil Rights Acts—targeted the long-standing practice of employment discrimination against U.S. women. For the next 15 years, the gender gap in median earnings among full-time, full-year workers changed little, leading many scholars to conclude the legislation was ineffectual. This paper revisits this conclusion using two research designs, which leverage (1) cross-state variation in pre-existing state equal pay laws and (2) variation in the 1960 gender gap across occupation-industry-state-group cells to capture differences in the legislation's incidence. Both designs suggest that federal anti-discrimination legislation led to striking gains in women's relative wages, which were concentrated among below-median wage earners. These wage gains offset pre-existing labor-market forces which worked to depress women's relative pay growth, resulting in the apparent stability of the gender gap at the median and mean in the 1960s and 1970s. The data show little evidence of short-term changes in women's employment but suggest that firms reduced their hiring and promotion of women in the medium to long term. The historical record points to the key role of the Equal Pay Act in driving these changes.

JEL Classification: J16, J71, N32

Keywords: gender gap, Equal Pay Act, Civil Rights Act

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* This work was generously supported by the University of Michigan (UM) Department of Economics (MITREG022729) and the UCLA Department of Economics. We gratefully acknowledge the use of the services and facilities of the California Center for Population Research at UCLA (P2C HD041022), which receives funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). During work on this project, Bryan A. Stuart was supported by the NICHD (T32 HD0007339) as a University of Michigan Population Studies Center trainee. We thank Francine Blau, Claudia Goldin, Hilary Hoynes, Lawrence Katz, and numerous seminar and conference participants for helpful comments and discussions. We also thank Kelsey Figone, Deniz Gorgulu, and Eric Wang for excellent research support. The views expressed here are solely those of the authors and do not necessarily represent the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

In the 1960s, two landmark pieces of legislation targeted the long-standing practice of employment discrimination against U.S. women. The Equal Pay Act of 1963 became the first piece of federal legislation to mandate equal pay for equal work through an amendment to the Fair Labor Standards Act (FLSA) (P.L. 8838). The following year, Title VII of the Civil Rights Act of 1964 went further to ban sex-based discrimination in hiring, firing, and promotion (P.L. 8-352). In the context of the 1960s, these Acts were nothing short of revolutionary: according to the 1963 Occupational Wage Survey (OWS), women earned around 19 percent less than men working in the same jobs (U.S. Department of Labor 1963).

Today, few histories conclude that the legislation succeeded, at least in its early years. Annual estimates reported by the Census Bureau show that—among full-time, full-year workers—women's median annual wage earnings hovered around 60 percent of men's for 15 years after the legislation passed (Figure 1A).[1] Goldin (1990) argues that "equal pay for equal work has been … a rather weak doctrine to combat discrimination" (p. 201) and that "Title VII of the 1964 Civil Rights Act has also been weak in counteracting pay inequities that arise from differences in jobs and promotion" (p. 209). Given high rates of occupational segregation (Blau 1977, Groshen 1991), the legal standard of "equal work" meant that firms could segregate workers across occupations or establishments to comply with the letter of the law while maintaining discriminatory pay practices. Gunderson (1989) notes that, "Because differences in pay across establishments and industries account for a substantial portion of the gap, this severely restricts the scope of policies like equal pay and comparable worth, both of which are limited to comparisons within the same establishment" (p. 68). In addition, there is little evidence of enforcement of Title VII for sex discrimination until the 1970s (Simchak 1971), which has led research on the law's consequences to focus on this later period (Beller 1979, Beller 1982a,b). Blau and Kahn's (2017) article in the *Journal of Economic Literature* summarizes the professional consensus: "We see no indication of a notable improvement in women's relative earnings in the immediate post-1964 period that might be attributable to the effects of the

[1] The Census Bureau has reported the gender gap at the median for full-time, full-year workers for decades in order to characterize pay gaps for individuals with a similar level of labor-market attachment. However, full-time, full-year women workers comprised only 45 percent of working women in 1964.

government's antidiscrimination effort; the gender pay ratio remained basically flat through the late 1970s or early 1980s, after which it began to increase" (p. 848).

Yet a closer examination of long-term trends for a broader set of wage earners hints that federal anti-discrimination legislation mattered more than previously believed. Figure 1B reports the evolution of the gender gap in weekly wage earnings after broadening the Census Bureau's sample to include full-time women working at least 27 weeks—a sample more similar to modern analyses (Bailey, Helgerman and Stuart 2021, Blau and Beller 1988).[2] Trends predating the 1960s show that the gender gap was *growing* rapidly in the aftermath of World War II, which makes the stability of the gap after 1964 a notable departure from pre-existing trends. In addition, the 10th and 25th percentiles saw sizable *reductions* in the gender gap after the mid-1960s, even though these gains are less evident at the median—the Census Bureau's standard metric. The historical record supports this conclusion as well. The Department of Labor reported great success with the Equal Pay Act's enforcement (Moran 1970), and the *Wall Street Journal* celebrated ten years of the legislation, headlining that $475 million (2022 dollars) had been awarded to 140,000 workers in the legislation's first decade (Hyatt 1973). Although few contemporaries claimed that Title VII affected sex discrimination before 1971, the law's timing and potential role in strengthening and broadening the Equal Pay Act make its effects difficult to rule out.

Motivated by this evidence, this paper reexamines the combined effects of the Equal Pay Act and Title VII on women's labor market outcomes in the 1960s. We develop two research designs that leverage variation in the incidence of anti-discrimination legislation across state labor markets and industry-occupation cells. Our first design builds on the analysis of Neumark and Stock (2006), who examine the wage and employment effects of state-level anti-discrimination laws passed prior to federal legislation. If state equal pay laws were effective in reducing pay discrimination, the Equal Pay Act and Title VII should have larger effects on women's relative pay in the 28 states without such laws after 1964. Drawing on the 1950-1960 Decennial Census and 1962-1975 Annual Social and Economic Supplement (ASEC) of the

[2] See Appendix Figure 1 for the gender gap at different percentiles for full-time, full-year workers and for annual wage earnings.

Current Population Survey (CPS), we find that women's weekly wages rose by around 9 percent (8.7 log points) more in states without pre-existing equal pay laws after the federal legislation took effect. These estimates are robust to controlling for state-by-birth-cohort fixed effects, which flexibly account for cohort-level shifts in women's aspirations and skills (Goldin 2006a,b, Goldin, Katz and Kuziemko 2006), as well as industry-by-year and occupation-by-year fixed effects, which flexibly account for national changes in the economy and help focus the analysis on the narrowly defined types of discrimination targeted by Equal Pay legislation. While this research design has the advantage of characterizing broad changes in the labor market, its internal validity is limited to the extent that unobserved forces may have differentially affected labor markets in states without pre-existing equal pay laws.

Our second design addresses this concern by examining within-state changes in women's weekly wages following the passage of the legislation. This approach follows Card's (1992) influential work on the minimum wage, which exploits the fact that a national policy varies in incidence across labor markets. Although we do not observe sex discrimination in the data, this paper hypothesizes that the gender gap in pay within industry-occupation-state-group cells is correlated with this latent variable. If this logic holds and federal anti-discrimination legislation was somewhat effective, we expect women's wages to rise more quickly after 1964 in job cells with larger pre-existing gender gaps. An advantage of this research design is that it permits the inclusion of state-by-year fixed effects to absorb potentially confounding time-varying state-level factors that could compromise the internal validity of the first research design.

Consistent with federal legislation narrowing gender gaps, we find that women's weekly wages grew more quickly after 1964 in job cells with larger pre-existing gender gaps—an effect equivalent to 11 percent (10 log points) at the mean gender gap. Noteworthy is that effect sizes do not differ for White and Black women, which suggests that the estimates are not driven by the Civil Rights Act's effects on racial discrimination. In addition, the research design recovers no effects of the legislation on men's wages, which ameliorates concerns that alternative labor-market shocks or policies drive these findings.

Heterogeneity tests underscore the complementarity and validity of the two empirical approaches. In states without pre-existing equal pay laws—where federal anti-discrimination legislation should have been more effective—women's weekly wages grew by 18 percent at the mean after 1964, whereas women's wages grew by one-third that amount (6 percent) in states with pre-existing equal pay laws. In addition, recentered-influence-function (RIF) regressions show that the largest effects of the legislation accrued to women in the lowest percentiles of the wage distribution, which connects these findings to the large wage growth after 1964 among women earning below median weekly wages in Figure 1B. These patterns are consistent with pay equalization being greater in jobs where the "equality of work" was more easily judged and where the Wage and Hour Division (WHD)—the agency tasked with enforcing the Equal Pay Act—focused its investigations of compliance with the minimum wage.

A final analysis investigates how federal anti-discrimination legislation affected women's employment. Consistent with firms having some monopsonistic power to set wages, the data provide little evidence that women's employment or annual hours fell in response to wage increases in the short run—findings that align closely with Manning's (1996) study of the Equal Pay Act in the United Kingdom. In the long run, however, we find some evidence that women's employment grew more slowly in more affected job cells, which is consistent with Neumark and Stock's (2006) study of state-level anti-discrimination legislation before 1960. Contemporary accounts provide direct evidence as to why this might have been the case. After the passage of the Equal Pay Act but prior to the Civil Rights Act (which made the practice illegal), employers told journalists that they planned to "segregate male and female job classifications" and "downgrade job classifications for women and assign higher-paying duties to men" in response to the Equal Pay Act (Washington Post 1964).

In summary, these results imply an important role for the Equal Pay Act and Title VII in reducing pay discrimination against U.S. women in the 1960s. The magnitudes of our findings are large enough to imply that federal anti-discrimination legislation reduced the within-job gender gap in pay by around 58 percent between 1964 and 1968. Some empirical evidence and the historical narrative suggest that this legislation slowed the integration of women into higher paying, historically male jobs in the longer term. Both sets of findings are consistent with occupational segregation being a key driver of the gender pay gap by the late 1970s (Blau 1977). At first glance, these findings appear inconsistent with the stability of the gender gap at the mean and median in the 1960s and 1970s in Figure 1. However, the results suggest that anti-discrimination legislation offset trends tending to widen the gender gap prior to the 1960s. Our findings imply that the Equal Pay Act and potentially Title VII increased women's wages and halted the growth in the gender gap that would have occurred with the increasing supply and changing composition of women workers during the 1960s and 1970s (see also Blau and Kahn 2017).

These findings contribute to a long but mixed literature on the role of anti-discrimination legislation in reducing the gender gap in the U.S., which has focused on the effects of affirmative action after 1967 or the later expansion or enforcement of Title VII after 1970 (Beller 1979, Beller 1982a,b, Leonard 1984, Carrington, McCue and Pierce 2000, Holzer and Neumark 2006, Kurtulus 2012, Helgerman 2023). Little evidence exists regarding the effects of the 1963 Equal Pay Act, and studies of equal pay initiatives in other countries suffer from a dearth of data, limited internal validity, and differences in policies and implementation (Gunderson 1989). This paper develops two new empirical strategies to show that the Equal Pay Act of 1963, which was potentially strengthened by Title VII, reduced the gender gap in pay in the mid-1960s.

I. A History of the Equal Pay Act and Title VII of the Civil Rights Act

Before the 1960s, sex discrimination was not only widely accepted in the U.S., it was legislated and institutionalized. State laws mandated different minimum wage, break, and rest requirements for men and women and placed different restrictions on the jobs men and women could hold (Marchingiglio and Poyker 2021, Moran 1970). Union contracts delineated different pay schedules by sex for the same job (Eaton 1965). Newspapers posted help-wanted advertisements for male and female jobs (Pedriana and Abraham 2006), along with explicitly different pay scales for what appear to be the same jobs.[3] Although marriage bars had largely disappeared by the 1950s, women tended to leave (or be pressured out of) jobs when they got married (Goldin 1991) or became pregnant (Gruber 1994).

[3] In an analysis of these advertisements, Hunt and Moehling (2021) find an advertised gender wage gap of 38 log points in three cities in 1960, 28 log points of which corresponds to within-agency differences in pay.

Although World War II opened many jobs to women and women's labor-force participation rates surged from 26 to 35 percent between 1940 and 1960, women tended to work in certain jobs—a pattern reinforced by the post-war rise of scheduled part-time work (Goldin 1990, Goldin 2006a). In the 1960 Census, approximately 83 percent of male workers were employed in occupations in which no more than 20 percent of the workers were female (Blau 1977, p. 12); 58 percent of women worked in occupations where they comprised more than 80 percent of the workers, with the other 42 percent working in more integrated occupations (Ibid). For example, many women worked as secretaries, teachers, nurses, librarians, and social workers.

These changes in women's work were accompanied by an expansion of the gender gap. Between 1950 and 1960, men's weekly wages grew by 32 log points, whereas women's weekly wages only grew by around half that figure, increasing the gap in pay by around 16 log points (Appendix Table 1A). Our investigation of the source of men's greater earnings growth over the 1950s reveals that their gains exceeded women's in almost every industry-occupation cell. A Blinder-Oaxaca-Kitagawa decomposition shows that around 90 percent of the change in the gender gap between 1950 and 1960 is explained by faster wage growth in jobs dominated by men but also faster wage growth for men who were working in the same industries and occupations as women. The remainder is accounted for by differential changes in men's representation in higher earning job cells (see Appendix Figures 2-3 and Appendix Table 2 for details).

A. State and Federal Equal Pay Acts

Within this broader context of a rising gender pay gap, the 1963 Equal Pay Act represented a watershed moment following decades of advocacy. Federal equal pay legislation was first introduced to Congress in 1945 after wage studies showed pervasive differences between women and men in wartime industries. The Women's Bureau in the Department of Labor documented multiple examples of sex-based pay discrimination, including discrepancies in entry wages and pay for more experienced workers in identical jobs (Fisher 1948).[4] Although federal legislation failed to pass for two decades, 22 states passed

[4] Fisher (1948) reports one particularly egregious example: "In the gun manufacturing industry…where *experienced* men and

equal pay laws before 1963 (U.S. Congress 1963). State equal pay laws were primarily in the Northeast, Midwest, and West (Figure 2), where their aim was often to keep women from undercutting men's wages rather than raising women's earnings. Arkansas was the sole state in the South to pass equal pay legislation.

State equal pay laws varied in their language and enforcement. Michigan and Montana, the two states that passed the first equal pay laws in 1919, illustrate these differences well. While Montana's law applied to nearly any enterprise employing men and women, Michigan's law applied only to employees in manufacturing. A common thread across these two states is that neither one went beyond making a "general declaration of law," which made these laws difficult to enforce (Fisher 1948, p. 54). In making the case for a national Equal Pay Act to Congress, the Women's Bureau noted that state laws "leave large groups of workers out, and often have inadequate provisions for administration and enforcement" (U.S. Congress 1963, p. 20).

The momentum to pass federal anti-discrimination legislation in the 1960s grew out of President John F. Kennedy's Commission on the Status of Women. The Equal Pay Act was first introduced to Congress in August of 1961 and managed to pass in both houses, but the business lobby undermined the bill during the reconciliation process (Harrison 1989). Esther Peterson, the Assistant Secretary of Labor and Director of the U.S. Women's Bureau under Kennedy, redoubled her efforts and revived the Equal Pay Act as an amendment to the FLSA (P.L. 75-718). In addition to producing detailed reports to document pay differences (U.S. Congress 1962), Peterson used her Congressional testimony to describe pervasive sex discrimination in employment. Analyzing pay differences among similarly experienced bank tellers working comparable hours, the Department of Labor found that women had lower weekly earnings in every city studied (U.S. Congress 1963, p. 31). Furthermore, surveys found that men outearned women with the same title in nearly all establishments (p. 30, 37).[5]

To quantify the gender gap in pay within narrowly defined jobs just before the Equal Pay Act

women worked on five different types of machines, the *lowest* rate for men was at least ten cents *above* the highest wage paid to women" (p. 51).

[5] Appendix Table 3 reprints tabulations of gender differences in average hourly earnings across several industry-occupation categories in Chicago, Winston-Salem, and Philadelphia.

passed, we digitized the 1963 Occupational Wage Survey (OWS), which contains weekly or hourly wage observations by sex from 82 cities and 58 narrowly defined job classifications (U.S. Department of Labor 1963). The OWS shows a 32-log-point gap in pay across all cities and jobs in 1963 (Appendix Table 4), which is similar to the gap in weekly wages in the Census and ASEC. When including fixed effects for detailed job classifications and cities, the within-job gap in weekly pay is 17 log points—a sizable wage gap within jobs that could be targeted by the Equal Pay Act. Jobs with hourly pay show a larger total gender gap in pay of 44 log points but a similar within-job difference in pay of 18 log points. The Labor Department noted that differences in pay occurred mostly in "large department stores, banks, airline reservation offices, chain stores, and other firms where men and women customarily perform similar work" (Eaton 1965).

Peterson's report also cited a National Office Management Association survey of employers in the U.S. and Canada, which asked, "Do you have a double standard pay scale for male and female office workers?" (U.S. Congress 1963, p. 27), where one third of employers answered, "Yes." In discussions with members of Congress, Peterson often cited a personal anecdote as well, noting that a manager told her, "We pay them less because we can get them for less" (quoted in Harrison 1989, p. 95).

Under Peterson's stewardship, the revised equal pay bill was introduced on February 14, 1963, and—after replacing the phrase "comparable work" with "equal work"—passed into law on June 10, 1963. The Equal Pay Act prohibited sex-based *wage* discrimination between men and women in the *same* establishment who perform jobs that require substantially *equal* skill, effort, and responsibility under similar working conditions. Sex discrimination can take many different forms, including women being paid less than their productivity solely due to their sex, being hired less, receiving different job assignments, and receiving different promotion opportunities. However, the Equal Pay Act only addresses sex discrimination to the extent that it manifests as unequal pay for equal work. For workers not covered under collective bargaining agreements, the Equal Pay Act took effect on June 10, 1964. For the 13 percent of women who were unionized in the early 1960s (LeGrande 1978), the Act took effect the following year on June 10,

1965. As an amendment to the FLSA, the Equal Pay Act only applied to workers covered under the FLSA.[6]

B. Title VII of the Civil Rights Act

Just one year after the Equal Pay Act passed, Congress enacted the 1964 Civil Rights Act. Title VII of the Civil Rights Act overlapped with the Equal Pay Act in its coverage of pay discrimination but also extended its provisions by (1) expanding coverage to many workers not covered under the FLSA and (2) prohibiting sex-based discrimination in employment, including hiring, firing, and promotions. Coverage was not universal: Title VII did not apply to public sector employees until 1972 (Posner 1989), and the legislation covered only employers with at least 100 employees as of July 1965, a threshold that was gradually reduced to 25 employees by 1968.

The goal of the Civil Rights Act had little to do with gender equality, and the initial legislation did not include sex among the protected classes of race, color, religion, and national origin. “Sex” was added to Title VII’s protected classes just one day before the final vote by a segregationist, Representative Howard Smith (D-Virginia), who opposed the Act’s passage. Many commentators believe Smith intended to make the bill unpassable (Harrison 1989).[7] Thomas (2016) explains how Rep. Smith played his amendment for laughs, claiming a letter from his constituent had asked him to “protect our spinster friends.” One of the twelve women House Representatives, Martha Griffiths (D-Michigan), silenced the laughter, saying, “if there had been any necessity to point out that women were a second-class sex, the laughter would have proved it” (p. 102). The next day the legislation passed, codifying prohibitions of sex-based employment discrimination into federal law.

[6] Not all workers are covered under the FLSA, but its coverage was expanded in the 1961 and 1966 Amendments and in the 1972 Educational Amendments. The 1961 Amendments extended FLSA coverage to employees in retail or service, local transit, construction, and gasoline service stations. The 1966 Amendments expanded coverage to include employees on large farms, federal service contracts, federal wage board employees, and certain Armed Forces employees (e.g., post exchanges). It also narrowed or repealed exemptions for employees of hotels, restaurants, laundries and dry cleaners, hospitals, nursing homes, schools, auto and farm implement dealers, small loggers, local transit and taxi companies, agricultural processing, and food services. Finally, the 1966 FLSA included an indirect expansion of coverage through its reduction in the enterprise volume test from $1 million (in the 1961 Amendments) to $250,000. See Bailey, DiNardo, and Stuart (2021) for a discussion of changes in coverage and minimum wages in the 1960s. Another quirk of the FLSA is that section 13(a)(1) carves out an exemption to the minimum wage and overtime provisions for any worker employed in a *bona fide* executive, administrative, or professional (EAP) capacity. Consequently, when the Equal Pay Act Amendment prohibited discrimination on the basis of sex by amending the FLSA, EAP-exempt workers were not covered. In 1972, Title IX of the Educational Amendments amended section 13(a)(1) to remove the EAP exemption from the Equal Pay provisions.

[7] Goldin (2023) notes some nuance to this interpretation, pointing out that Smith supported the Equal Rights Amendment.

C. The Effectiveness of Anti-Discrimination Legislation in the 1960s

As an amendment to the FLSA, the enforcement of the Equal Pay Act fell to the WHD in the Department of Labor, which monitors and enforces compliance with the FLSA (P.L. 75-718). Based on the WHD's long reputation, firms knew that non-compliance could be punished by mandating the payment of back wages and criminal prosecution, and courts had already settled many points of interpretation. Following the Equal Pay Act's effective date in 1964, the WHD instructed its field staff to check for compliance with the new equal pay provisions as part of *all* investigations under the FLSA (U.S. Department of Labor 1965). In addition, the Labor Department filed suits signaling its intent to enforce the law. *Wirtz v. Basic Incorporated* (1966) challenged an employer's claim that a male analyst was entitled to more money because he had greater experience and responsibility. The court supported the Labor Department's claim of discrimination, noting that the work of three employees (one man and two women) was the same and that the man's greater experience was not a requirement of the job. The ruling emphasized that the statutory requirement of "differences in working conditions" could not be established by job title alone and that the burden of proof for any exceptions to equal pay lay with the employer.

The Department of Labor continued to enforce compliance with the Equal Pay Act, both reviewing labor union contracts and bringing multiple lawsuits. By the end of 1964, investigators had found $55,000 in discriminatory wage payments owed to women, and one firm voluntarily paid $227,000 (in 2022 dollars) in back pay when the WHD began checking for discrimination. By 1965, around 80 percent of sex-discrimination complaints had led to back payments to workers. Likely due to the WHD's enforcement, Secretary Wirtz reported to Congress that "voluntary" compliance with the Equal Pay Act was high (U.S. Department of Labor 1966, p. 18). Many unions and employers made voluntary changes to eliminate contractual differences in wage rates, welfare and pension plans, sick leave, rest periods, and "marriage provisions" that dictated the loss of seniority and possible dismissal for women getting married. At the same time, the courts strengthened the law by issuing rulings to eliminate employer justifications for unequal pay. (See Online Appendix E for contemporary newspaper articles about these enforcement efforts.)

Building on the federal Equal Pay Act, many states extended existing fair employment practice laws to prohibit pay discrimination on the basis of sex, while others passed new equal pay legislation. These state measures supplemented the federal law by extending the equal pay principle to areas not covered by federal statutes (Simchak 1971). By the end of the 1960s, some contemporaries concluded that the Equal Pay Act had been successful in achieving its aims (Moran 1970). Hole and Levine (1971) argue that "the Equal Pay Act [is] the only law dealing with sex discrimination that is anywhere near properly enforced" (p. 29).

The enforcement of Title VII was a different story. The Equal Employment Opportunity Commission (EEOC)—the newly created agency tasked with the enforcement of the 1964 Civil Rights Act—had limited will and authority to enforce the law's sex-based provisions (Munts and Rice 1970). The EEOC regarded its primary mission as reducing racial discrimination, maintaining that "the addition of *sex* to the law had been illegitimate—merely a ploy to kill the bill" (Harrison 1989, p. 187).[8] Another complication was that Title VII challenged decades of state protective legislation that explicitly set different standards by sex. Because the 1965 EEOC did not see "any clear Congressional intent to overturn all of these [state] laws" (Ibid), it created a task force to provide states with guidelines—a process that took years (Munts and Rice 1970). Unlike the Labor Department, the EEOC was initially unable to bring its own lawsuits and could only refer cases to the Department of Justice. Consequently, the EEOC had pursued very few sex discrimination cases by 1970. Simchak (1971) notes, "Of the total number of court cases filed by the Department of Justice to date (approximately fifty) under all the discrimination criteria in Title VII, only one has pertained to sex discrimination" (p. 555).

Ambivalence about sex discrimination outside the Labor Department is also evident in President Johnson's 1965 Executive Order 11246, an affirmative action mandate that omitted "sex" entirely (Johnson 1965). The order prohibited the federal government and federal contractors from employment

[8] When a reporter asked Franklin D. Roosevelt, Jr., the EEOC's first commissioner, "What about sex?" Roosevelt joked, "I'm all for it." Similarly, the EEOC's second executive director, Herman Edelsberg, dismissed the sex provision as a "fluke" that was "conceived out of wedlock" (Thomas 2016). Title VII became known as the "Bunny Law," named after a satirized case in which Playboy turned down a man for a job as a Playboy bunny.

discrimination on the basis of race, color, religion, or national origin only. This inaction galvanized women's groups and advocacy efforts and eventually resulted in Executive Order 11375 in 1967, which amended Order 11246 to include "sex" (Harrison 1989, Johnson 1967). But the EEOC's active enforcement of Title VII's sex provisions did not increase in earnest until after the U.S. Supreme Court's first decision in *Phillips v. Martin Marietta Corporation* (1971), which ruled that an employer cannot hire men with young children while maintaining a policy to prohibit hiring women with young children.[9] Title VII was strengthened further by the amendments in the Equal Employment Opportunity Act of 1972, which gave the EEOC the authority to pursue independent lawsuits and expanded the Act's coverage of individuals employed by the government and smaller firms (P.L. 2-261).

Overall, the historical record provides a mixed picture of the success of the Equal Pay Act and Title VII in addressing labor-market discrimination against women in the 1960s. While the Equal Pay Act's provisions were seriously enforced starting in 1964 and extended through state legislation, the law's effects were likely limited by "equal work" requirements, which failed to address pay discrimination arising from differential hiring, assignment, and promotion of men and women. Title VII's provisions were broader, but the EEOC's reluctance to enforce the law's sex provisions and the EEOC's limited enforcement authority likely curbed the statute's effectiveness until the 1970s. Consistent with this history, research on the implications of Title VII for sex discrimination focuses on this later period (Beller 1979, Beller 1982a,b).

II. Data and Research Design 1: Variation in the Incidence of Anti-Discrimination Legislation due to Pre-Existing State Equal Pay Laws

Our analysis complements these historical accounts by quantifying the effects of the Equal Pay Act and Title VII on women's wages and employment. To do so, we combine the one-percent sample of the 1950 Decennial Census, the five-percent sample of the 1960 Decennial Census, and the 1962 to 1975 CPS ASEC to document labor-market outcomes in nationally representative data (Ruggles et al. 2021; Ruggles

[9] Following *Marietta*, considerable ambiguity about sex discrimination remained. For instance, the U.S. Supreme Court in *General Electric Co. v. Gilbert* held in 1976 that Title VII did not guarantee pregnant women equal coverage under employee benefit plans covering non-occupational sickness and accidents, which Congress remedied with the Pregnancy Discrimination Act of 1978 (Posner 1989).

et al. 2023). Some analyses also use the combined one-percent Form 1 and Form 2 state samples of the 1970 Decennial Census, as well as the full count 1940 Decennial Census (Ruggles et al. 2021).

A. Data Processing and Sample Restrictions

Our sample includes non-agricultural workers ages 25 to 64. We impose these age restrictions to limit the influence of school-going and retirement on our results. To increase consistency between the ASEC and censuses, we restrict the censuses to individuals not in the Armed Forces or institutionalized. We additionally require that observations have non-missing data for industry, occupation, and state group of residence, which are critical for our empirical approach. Our analysis uses nine industries (n), eight occupations (o), and 21 state groups (s).[10] We exclude individuals working in agriculture by dropping individuals with the occupation of "farmer" or "farm laborer" or the industry of "agriculture, forestry, and fishing." We also exclude individuals if they report being self-employed in the survey reference week or if the ratio of their self-employment and farm income to labor income exceeds 10 percent in absolute value (Lemieux 2006).

We convert annual wage earnings into 2022 dollars using the CPI-U. The census and ASEC ask about annual earnings and weeks worked in the year before the survey, so we index wages and employment to the appropriate year (e.g., the 1965 ASEC provides information about wages and employment in 1964). Our preferred wage measure is log weekly wages, which we construct by subtracting from log annual wage earnings the mean log number of weeks worked within each reported interval.[11] Because weekly wage earnings are measured with error due to (1) the aggregation of weeks worked into intervals and (2) misreporting by respondents about wage earnings and weeks worked, we evaluate the sensitivity of our

[10] The nine industries are mining, construction, manufacturing, transport/communications/electric/gas/sanitary services, wholesale trade, retail trade, finance/insurance/real estate, services, and public administration. The eight occupations are professional/technical, managers/officials/proprietors, clerical, sales, craftsmen, operatives, service, and non-farm laborers. The public ASEC only identifies 21 state groups consistently in our period of interest, which dictates our use of 21 "state groups."

[11] We prefer weekly wages as an outcome variable because this adjusts to some degree for labor supply (unlike annual earnings) and avoids combining questions on earnings and weeks worked in the prior year with hours worked in the survey reference week. The 1960 Census and 1962-1975 ASEC report weeks worked last year in categories (1-13, 14-26, 27-39, 40-47, 48-49, and 50-52 weeks), whereas the 1976-1979 ASEC report weeks worked in integers. We use the 1976-1979 ASEC to estimate the mean log number of weeks worked within each category in the 1962-1975 ASEC by sex, race, and 10-year age bin. Similarly, the 1960 Census reports hours worked in categories (1-14, 15-29, 30-34, 35-39, 40, 41-48, 49-59, and 60+). For 1960, we use the mean log hours worked within each category estimated from the 1962-1979 ASEC by sex, race, and 10-year age bin.

results to using annual earnings and hourly wage earnings (see Online Appendix A) and to winsorizing the lowest ten percentiles (see Online Appendix B). Our analysis sample for weekly wages and annual hours consists of individuals with positive annual earnings and weeks worked in the previous year and positive hours in the survey reference week. (Hours is used as a covariate in the weekly wage regressions and in the construction of the outcome in the case of annual hours.) Our analysis sample for employment is broader. To avoid missing potential disemployment effects among workers missing wages or hours, we count as employed all individuals with positive weeks worked (regardless of whether they also reported positive wage earnings or hours worked). Sample descriptions appear in the figure and table notes.

Figure 3 describes the evolution of mean log weekly wages in states with and without pre-existing equal pay laws for both women and men. Several features of these plots stand out. First, weekly wages show a dip in the early 1960s relative to the 1960 Census, which likely reflects changes in the CPS sampling frame between 1961 and 1963.[12] The dip in weekly wages is slightly larger for women and in states without equal pay laws, which should be kept in mind when interpreting our estimates. Second, states without equal pay laws tended to have lower average weekly wage earnings, which is not surprising given that the standards of living were lower in the South and western Midwest, which were less likely to have equal pay laws (Figure 2). Third, women's wages in states without pre-existing equal pay laws converge on those of women in states with equal pay laws after the mid-1960s—a pattern less evident among men. Our first research design formalizes these comparisons within an event-study framework.

B. Research Design 1: Pre-Existing State Equal Pay Laws

Our first research design posits that anti-discrimination legislation should have larger effects in areas with more sex discrimination. Motivated by Neumark and Stock (2006), we test whether women's wages grew more quickly after 1964 in the 28 states that did not have pre-existing equal pay laws. This would be the case if state equal pay laws had lowered sex discrimination somewhat before 1963, implying

[12] Changes to the sampling frame reflect changes in the population size and distribution as well as the industrial mix between areas as revealed in the 1960 Census. Interested readers may find a history of the CPS here, https://www2.census.gov/programs-surveys/cps/methodology/Techincal%20paper%2066%20chapter%202%20history.pdf (accessed December 30, 2021).

that federal anti-discrimination legislation would have smaller effects in these states.

We focus on the legislation's effects on women's pay and employment as proxies for multiple types of labor-market sex discrimination. Changes in women's weekly wage earnings capture the extent to which the Equal Pay Act directly raised women's pay or put upward pressure on market wages, which would have directly affected women in the same jobs as men and indirectly affected those employed in sex-segregated jobs and firms. Changes in women's weekly wages also embed changes in discrimination through hiring and promotion—both the extent to which Title VII allowed women to transition to more lucrative positions or the lack of its enforcement which may have increased occupational segregation and downgrading, mitigating women's pay growth. To the extent that Title VII's lack of enforcement allowed firms to lay off women, this should be reflected in reduced employment. In sum, changes and women's relative wages and employment potentially capture a broad set of changes in labor-market discrimination, even though we do not observe discrimination directly.

Event-Study Specification

We estimate the following event-study specification using ordinary least squares:

$$Y_{it} = \sum_{\tau=1949,\tau\neq 1964}^{1974} \alpha_\tau D_\tau NoEPL_{s(i)} + X_{it}'\beta + \gamma_{n(i)o(i)s(i)} + \delta_{s(i)b(i)} + \delta_{n(i)t} + \delta_{o(i)t} + \varepsilon_{it}. \tag{1}$$

The outcome, Y_{it}, is log weekly wage earnings of individual *i* in calendar year *t*=1949, 1959, 1961-1974. The independent variable of interest, $NoEPL_s$, is equal to 1 if a state group did not have an equal pay law as of January 1, 1963. In the three state groups containing states with and without equal pay laws, we use the share of workers in the state group residing in states without an equal pay law.[13] We identify whether states had an equal pay law using statutory coding from U.S. Congress (1963), which agrees with Neumark

[13] We calculate the share of workers within a state group that lived in a state without an equal pay law using the 1960 Census. In Arkansas-Louisiana-Oklahoma, 76 percent of wage earners were in a state without an equal pay law (Louisiana, Oklahoma). In Arizona-Colorado-Idaho-Montana-Nevada-New Mexico-Utah-Wyoming, 40 percent of wage earners were in a state without an equal pay law (Idaho, Nevada, New Mexico, Utah). In Maine-Massachusetts-New Hampshire-Rhode Island-Vermont, 5 percent of wage earners were in a state without an equal pay law (Vermont). Appendix Table 5 reports summary statistics by states' pre-existing equal pay law status.

and Stock (2006, Table 2). Note that $NoEPL_s$ does not vary across year—it is time invariant and captures a state's legal environment as of 1963.

We interact $NoEPL_s$ with a set of year indicator variables, D_τ, omitting 1964—the year the Equal Pay Act took effect. Our parameter of interest, α_τ, captures the combined effects of the Equal Pay Act and Title VII on women's wages. If (1) sex discrimination in pay or employment was larger in 1963 in states without state-level equal pay legislation and (2) national anti-discrimination legislation reduced sex discrimination, we expect women's wages to grow after its passage such that that $\alpha_\tau > 0$ for $\tau > 1964$. If the parallel trends assumption holds—implying that states with and without equal pay laws were trending similarly before the Equal Pay Act and Title VII took effect, then we expect $\alpha_\tau = 0$ for $\tau < 1964$. To the extent that the federal legislation affected discrimination in states with pre-existing equal pay laws, this approach will understate the legislation's effects on states without equal pay laws—a point we revisit with the second research design. Changes in state laws after 1964 that targeted labor-market discrimination tended to bring states into accord with federal law, and we regard these changes as part of the treatment effect of the federal legislation.

We include additional covariates to account for changes in workforce composition and improve precision. The vector X_{it} includes log hours worked in the reference week, an indicator variable for nonwhite race, and a quadratic in the worker's age.[14] Fixed effects for single-digit industry *n* by single-digit occupation *o* by state-group *s*, γ_{nos}, account for average differences in wages across *nos* job cells and labor markets. While these fixed effects focus the analysis on within industry-occupation-state-group wage changes, these cells are broader than the within-establishment, within-job pay gaps targeted by the Equal Pay Act. To the extent that men shifted to higher-paying jobs within industry-occupation-state-group cells, our results may understate the wage effects of the legislation within the same jobs. We view this as a feature of the research design: it recovers changes in women's pay net of these potentially offsetting shifts in

[14] We control for the log of hours worked in the reference week because the usual number of hours worked during the year is not available. Although this variable is not ideal, it allows us to adjust for potential differences in labor supply that could contribute to differences in weekly earnings. The aggregation of "nonwhite" is necessitated by the data. Detailed race/ethnicity coding that would be used today is not consistently reported during the 1960s. Hispanic/Latinx origin is not available in the ASEC until 1971.

employment as long as they occur within a single-digit industry-occupation-state group cell. In addition, even sex-segregated jobs and firms would have to pay more to attract women workers, both because of legislation-induced general equilibrium increases in women's market wages and because Title VII made it harder to exclude them from jobs. Our design captures this upward wage pressure as well as direct compliance with the law.

Although this specification cannot include state-by-year fixed effects to account for time-varying, within-state changes in labor markets or policies (Almond, Chay, and Greenstone 2003; Bailey and Duquette 2014; Bailey and Goodman-Bacon 2015; Cascio et al. 2010; Chay 1998; Goodman-Bacon 2018), it accommodates other flexible controls. In some specifications we include state-group-by-birth-year (b) fixed effects, δ_{sb}, which flexibly account for cohort-level shifts in women's aspirations and skills (Goldin 2006a,b) as well as differential state-level changes in labor-market skills (including educational quantity and quality, potential labor-market experience, and unobserved cohort characteristics). Industry-year and occupation-year fixed effects, δ_{nt} and δ_{ot}, capture unobserved, national changes that affect all workers in these groups.[15]

A triple-differences specification (DDD) accounts for gender neutral labor-demand or supply shocks by using men as an additional comparison group. To the extent that the Equal Pay Act and Title VII reduced men's wages (either as a means for firms to comply with the law or in response to general increases in the cost of labor), this specification may overstate the resulting gains in women's wages. On the other hand, this specification could understate the effect on women's wages if the legislation caused firms to increase men's responsibilities (and pay) to maintain pre-existing wage hierarchies. Consequently, this exercise provides a complementary characterization of labor-market adjustments, rather than a falsification test. This specification interacts all variables in equation (1) with an indicator variable for sex, which allows the relationship of all covariates and fixed effects to differ between men and women.

[15] Educational attainment is available in all years except the 1963 ASEC. We omit this covariate from our main specifications to avoid dropping 1962 as a pre-treatment observation. Including education as a covariate changes the estimates little (see Appendix Figures 7 and 15).

Employment Outcomes

Equation (1) cannot be estimated using employment as an outcome because industry and occupation tend to be reported only for individuals who are employed. To test for the legislation's employment effects, we define the dependent variable as the log of the survey-weighted number of employees or annual hours worked in a sex-specific industry-occupation-state-group (nos) cell in year t, where annual hours worked is the survey-weighted sum of the number of weeks worked last year multiplied by the number of hours worked in the reference week.[16] We estimate the following specification, which is similar to equation (1) with several modifications:

$$Y_{nost} = \sum_{\tau=1949,\tau\neq 1964}^{1974} \alpha_\tau D_\tau NoEPL_s + X'_{nost}\beta + \gamma_{nos} + \delta_{nt} + \delta_{ot} + \varepsilon_{nost}. \tag{2}$$

The first modification is that we replace the individual covariates with *nos* cell averages, including a quadratic in age and the share of workers that are nonwhite (we omit hours worked, which is a covariate in the earnings specifications). Second, we make two further adjustments to minimize the importance of small *nos* cells. We limit the employment regressions to *nos* cells that have at least one wage earner in each of our years of interest and weight by the product of each cell's share of observations in the 1960 Census and the total number of observations in each survey year. These two adjustments maintain the representation of different cells over time and account for year-to-year changes in census and ASEC sample sizes. This approach places higher weight on cells which have more observations in 1960 or come from survey years with larger total sample sizes, which reduces the influence of small, noisy cells (Solon, Haider and Wooldridge 2015). The weight does not depend on the number of industry-occupation-state-group observations in each survey year, as this would generate weights that reflect shifts in employment which might be driven by the legislation.

[16] We first construct annual hours worked for individuals by multiplying the *level* of weeks worked by hours worked, where the level is calculated using the procedure described in footnote 11. Then, we aggregate to the *nos* cell.

Spline Specification

Although the event-study specification provides a highly flexible and transparent description of the data, the estimates for individual years are often noisy. We, therefore, complement the event-study with a three-part spline specification with knots in 1964 and 1968, which summarizes the event-study estimates and improves precision. Using log weekly wage earnings as an outcome, the spline specification is,

$$\begin{aligned} Y_{it} = \widetilde{\alpha_0} NoEPL_{s(i)}(t-1964) + \widetilde{\alpha_1} NoEPL_{s(i)} 1(t>1964)(t-1964) \\ + \widetilde{\alpha_2} NoEPL_{s(i)} 1(t>1968)(t-1968) \\ + X_{it}'\tilde{\beta} + \tilde{\gamma}_{n(i)o(i)s(i)} + \tilde{\delta}_{s(i)b(i)} + \tilde{\delta}_{n(i)t} + \tilde{\delta}_{o(i)t} + \tilde{\varepsilon}_{it}. \end{aligned} \quad (3)$$

The first three terms interact linear time trends, t, with the $NoEPL_s$ variable as well as with indicator variables for the post-1964 and post-1968 period.[17] Thus, the spline succinctly summarizes trends in the data without placing too much emphasis on one (potentially noisy) point estimate or year. The remaining covariates correspond to those defined in equation (1). The spline provides a parsimonious method to test and, if necessary, adjust for pre-trends, as captured in $\widetilde{\alpha_0}$.[18] The coefficient, $\widetilde{\alpha_1}$, and corresponding standard error also admit a formal test for a trend break in outcomes after 1964, when the federal legislation first took effect. The coefficient, $\widetilde{\alpha_2}$, allows the effects of the legislation to differ in the longer term (1969-onwards) relative to the shorter term (1965-1968). We constrain the spline coefficients to ensure that the lines intersect at the knots. Specifications for employment outcomes are analogous but estimated at the aggregated *nos* level as previously described.

Standard Error Calculations

In all regressions for research design 1, we cluster standard errors to correct for heteroskedasticity and account for an arbitrary covariance structure at the state-group level (Arellano 1987, Bertrand, Duflo and Mullainathan 2004, Huber 1967, White 1980). Because we only have 21 state groups, our tables also report p-values for tests of two null hypotheses, $\widetilde{\alpha_0} = 0$ and $\widetilde{\alpha_1} = 0$, from a wild cluster bootstrap procedure with 499 replications (Cameron, Gelbach and Miller 2008).

[17] Note that the terms, $\widetilde{\alpha_3} t + \widetilde{\alpha_4} 1(t > 1964)t + \widetilde{\alpha_5} 1(t > 1968)t$, are not identified due to the inclusion of year fixed effects.

[18] For a discussion of pre-trend adjustments, see Freyaldenhoven, Hansen, and Shapiro (2019) and Rambachan and Roth (2022).

III. Results: Using Pre-Existing State Equal Pay Laws to Quantify the Effects of Federal Anti-Discrimination Legislation on Labor-Market Outcomes

Figure 4 presents event-study estimates for three different specifications: model 1 includes industry-occupation-state-group fixed effects, year fixed effects, and demographic controls, model 2 adds industry-year and occupation-year fixed effects to model 1, and model 3 adds state-group-by-year-of-birth fixed effects to model 2. The estimates are highly robust to additional controls. The three models show that women's weekly wages grew more slowly in states without equal pay laws between 1949 and 1963 relative to states with equal pay laws, but this pattern reversed after 1964. The event-study coefficients in Figure 4A show that women's weekly wages in states without equal pay laws rose by 7.3 log points (s.e. 1.9) more than in other states between 1964 to 1965, followed by more gradual gains through the late 1960s.[19]

The timing of effects helps alleviate concerns that our results are driven by several other factors, such as the differential effects of minimum wage legislation during this period. The 1961 FLSA raised the minimum wage for previously covered workers in September 1961 and September 1963. If our estimates capture the fact that women were disproportionately affected by these minimum wage hikes, we expect to see gains in their wages in 1962 and 1964. Instead, Figure 4A shows gains in 1965, which occurred in the aftermath of the Equal Pay Act's implementation. The 1961 FLSA also extended coverage to around 663,000 workers who were paid less than the minimum wage and worked primarily in large retail enterprises and construction (Martin 1967). For workers gaining FLSA coverage in 1961, a minimum wage was implemented in September 1961 and raised in September 1964 and September 1965. If our empirical strategy is capturing the effects of this coverage expansion, we expect to see gains in women's weekly wages in 1962, 1965, *and* 1966. Instead, Figure 4A shows only one large increase in women's weekly

[19] This estimate is the event-study coefficient on the year 1965 for model 2 (Appendix Table 6). Appendix Figure 4 shows that results are similar when examining log hourly or annual wages instead of log weekly wages. We construct log hourly wages as log annual wages minus the sum of log weeks worked and log hours worked. Categories for weeks and hours worked are translated into values using the procedure described in footnote 11. In addition, Appendix Figure 5 shows the robustness of our findings to winsorizing up to the tenth percentile of the 1960-1964 wage distribution for women, which is equivalent to around one-half of the 1964 minimum wage, which covered fewer workers and was at a higher real level than in recent periods. One-half the minimum wage is similar to Katz and Murphy (1992) and more aggressive than Blau and Kahn (2017), whose average "too-low-wage" is 29 percent of the federal minimum wage. Appendix Figure 6 shows that our results are similar when limiting to a sample of more attached workers, Appendix Figure 7 shows that our estimates are robust to controlling for education, and Appendix Figure 8 provides a similar conclusion when dropping states that adopted equal pay laws between 1959 and 1962.

wages in 1965. In addition, the estimated wage increases are nearly identical when excluding individuals employed in retail trade and construction (Appendix Figure 9), the industries which experienced the largest expansion in coverage under the 1961 FLSA (Martin 1967). We subsequently discuss how our analysis of men's wages also helps rule out the effects of the 1961 Amendments to the FLSA.

The timing of these effects also alleviates concerns that our results are driven by the adoption of Executive Order 11375, which prohibited sex-based discrimination by the federal government after November 1967 and federal contractors after October 1968; the 1966 Amendments to the FLSA (effective in 1967), which increased the minimum wage and expanded its coverage; or 1967 revisions to the ASEC sampling frame and definition of employment: our estimates show little change between 1966 and 1967, whereas Bailey, DiNardo and Stuart (2021) and Derenoncourt and Montialoux (2021) find effects of the 1966 FLSA in 1967 after it was implemented.

Our three-part linear spline specification averages across the small ASEC samples (and noisy estimates) in the early 1960s for our preferred model 2 (Table 1A, Figure 4). The event-study estimate for 1968 (8.0, s.e. 1.9, Appendix Table 6, column 2) is almost identical to the spline estimate of 8.7 log points (s.e. 2.1, Table 1A, column 1). The spline also admits a formal pre-trend test, which fails to reject parallel trends in women's weekly wages prior to the legislation's enactment (column 1). Finally, the spline estimates confirm a statistically significant, positive trend-break in women's wages after 1964 in states without equal pay laws (2.2 log points, s.e. 0.5).

These estimates do not include changes after 1968, which are also noteworthy although more difficult to attribute to the 1964 implementation of the Equal Pay Act and 1965 implementation of Title VII of the Civil Rights Act. The event-study estimates show a slight increase in women's wages around 1972, which corresponds to changes in the coverage and enforcement of anti-discrimination legislation. For example, Title IX of the 1972 Educational Amendments amended the Equal Pay Act to include executive, administrative, and professional workers (who were initially excluded from the federal law's coverage as an amendment to the FLSA). The EEOC's active enforcement of Title VII's sex provisions increased in earnest after the U.S. Supreme Court's first decision in *Phillips v. Martin Marietta Corporation* (1971).

The amendments to the Equal Employment Opportunity Act in 1972 also gave the EEOC the authority to pursue independent lawsuits and expanded Title VII coverage of individuals employed by the government and smaller firms (P.L. 92-261).

The absence of similar changes in men's wages helps rule out the hypothesis that broad changes in labor markets or policies—rather than federal anti-discrimination legislation—are driving these results. Using the same specification and men's weekly wages as the dependent variable, we find some evidence of gains in states without equal pay laws after the mid-1960s (consistent with Figure 3B). However, gains in men's weekly wages are entirely absent between 1964 and 1965 when the effects for women are largest. Figure 4B shows that men's weekly wages in states without equal pay laws rose slightly *before* the legislation took effect (in 1963), failed to grow between 1964-1965 after the anti-discrimination legislation was implemented, and increased slightly in 1967 following the implementation of the 1966 FLSA amendments. Highlighting the benefits of event-study analyses, these mistimed effects show up in the spline estimates as a positive trend-break for men after 1964 (Table 1A, column 2), but with a magnitude about half as large as for women. Finally, if the 1961 or 1966 Amendments to the FLSA are driving our findings, we would expect to find some increases for men's wages in the years of the minimum wage changes or coverage. Our analysis of the distributional effects of the legislation for men, however, show little evidence of a trend-break in men's weekly wages overall or below the median (Appendix Figure 10). For completeness, we report estimates from a triple-differences specification that uses men as an additional comparison group. However, the pre-treatment gains for men in the event-study suggest that this approach understates women's wage gains.

The lack of wage changes among men also helps to rule out that the Civil Rights Act's provisions to combat racial discrimination are driving these results (Donohue and Heckman 1991, Heckman and Payner 1989). Noteworthy is that the timing of women's gains in weekly wages, which occur between 1964 and 1965 (Figure 4A), largely pre-date the Civil Rights Act, which took effect in July of 1965, and are absent among men (Figure 4B), who show no gains in weekly wages between 1965 and 1966. It seems unlikely that the Civil Rights Act's race provisions would have such large effects between July and

December 1965 but smaller effects in the subsequent years, when the legislation was in place for the full 12 months covered in the ASEC earnings question. A third piece of evidence is that the estimates are not statistically different for White women (8.4, s.e. 2.0) and Black women (8.5, s.e. 5.1) (Appendix Table 7, columns 3 and 4).

Altogether, the results suggest that the Equal Pay Act and Title VII boosted wages of working women—a group accounting for roughly one third of the U.S. labor force in 1960. If labor markets were perfectly competitive and women were being paid their marginal product, differentials in pay would arise due to differences in men and women's skills. Consequently, mandating equal pay would encourage firms to lay women off, reduce their hours, and hire more men. However, if women's labor-supply to a firm were not perfectly elastic, firms might counterintuitively respond to the equal pay act by *increasing* the employment of women in response to higher mandated wages for them (Manning 1996).

To test this hypothesis, Figure 5 describes the evolution of the log of the number of employees and the log of annual hours worked by states' equal pay law status. The time series shows different pre-trends in both outcomes for both sexes, as employment in states without equal pay laws caught up with the rest of the country. The event-study estimates in Figure 6, which formalize these comparisons and also adjust for covariates, illustrate a violation of the parallel-trends assumption. (A differences-in-differences estimator would attribute the increase in the average difference in employment after 1964 to federal anti-discrimination policy, even though it is driven by a positive pre-trend, which is why we favor the spline in this context.) Consistent with the visual impression in Figure 6, we find no trend-break after 1964 in women's employment or hours worked, including when we compare to the same outcomes for men, suggesting the legislation had little effect on women's employment at the extensive or intensive margins (Table 1, panels B and C).

In summary, these findings suggest that the Equal Pay Act and Title VII increased women's wages rapidly. To put these effect sizes in perspective, our preferred estimate for women from column 1 of Table 1 (8.7 log points) is just over half of the average within-occupation weekly wage gap (17 log points) in the 1963 OWS (Appendix Table 4, column 3). There is little evidence from this research design of a decline in women's employment, which is consistent with Manning's (1996) findings of labor-market monopsony for women in the U.K. As state-level variation in pre-existing equal pay laws limits our ability to rule out alternative hypotheses, we use a second and complementary research design to narrow the scope for omitted variables.

IV. Research Design 2: Variation in the Incidence of Anti-Discrimination Legislation based on the 1960 Gender Pay Gap

Our second research design also hypothesizes that the Equal Pay Act and Title VII—if effective—should have larger effects after 1964 in jobs with more pre-existing sex discrimination. Under the assumption that a larger 1960 gender gap in pay is correlated with more sex discrimination, we expect larger relative wage gains after 1964 for women in jobs with larger gender gaps. An additional benefit of this approach is that it allows us to account for state-level shifts in labor demand or supply, policies, and economic conditions, which could confound the state equal pay law design.

A. The 1960 Gender Gap as a Proxy for Labor-Market Discrimination

We do not observe jobs or establishments in the censuses or ASEC, but we compute the gender gap in single-digit industry (n), occupation (o), and state group (s) "job cells." We rely on the 1960 Census (rather than the 1964 ASEC) because the census offers a much larger sample size, which yields more reliable gender wage gap estimates for a larger number of industry-occupation-state-group cells and mitigates concerns about mean reversion.[20] Nine single-digit industries, eight single-digit occupations, and 21 state groups yield 1,512 potential job cells. We exclude from our analysis 562 cells that have fewer than ten women or ten men working at least 27 weeks and 35 hours per week in the 1960 Census and eight that have no observations in the ASEC during our period of interest.[21] Our final sample consists of 942 industry-occupation-state-group job cells, which is slightly more restrictive than the wage earner sample used in our

[20] The 1960 Census has over 600,000 women in the wage earner sample, whereas the 1964 ASEC has around 6,000 such women, allowing us to construct only 75 job cells. If a high gender gap (due to lower women's wages) in a job cell in the 1964 ASEC reflects sampling variation, these job cells would tend to see higher wage growth for women in the year afterwards due to mean reversion. Using the 1960 Census to measure the gender wage gap eliminates this mechanical relationship.

[21] Included job cells are listed in Appendix Table 9, and excluded job cells are listed in Appendix Table 10. Appendix Table 11 describes the number of observations by sex, year, occupation, and industry.

state-level research design. For each job cell, we construct the unconditional gender wage gap in mean log hourly wages using the 1960 Census, $\widehat{Gap}_{nos} = logW^{m}_{nos} - logW^{w}_{nos}$, where *m* denotes men and *w* women, and the variable describes the extent to which men out-earn women.[22]

B. Descriptive Evidence that Federal Legislation Was More Effective in Jobs with Larger 1960 Gender Gaps

A key assumption of our approach is that a larger gender gap in wages in 1960 is correlated with greater sex discrimination. Available data makes it almost impossible to validate this assumption directly. However, if this assumption does not hold or the federal legislation was ineffective, we should find no association between the 1960 gender gap and subsequent growth in women's wages. We begin by presenting descriptive evidence from the 1960 and 1970 Censuses regarding the association between the gender gap, $\widehat{Gap}_{nos}$, and women's weekly wages. Figure 7 shows that the gender gap tends to be much larger in lower paying job cells, many of which were in services and retail sales (slope coefficient: -1.9, s.e. 0.2). Reassuringly, these findings hold when accounting for sampling variation using a split sample instrumental variables (IV) approach (slope coefficient: -1.9, s.e. 0.2; Inoue and Solon 2010), or when accounting for transitory wage shocks using the 1940 gender wage gap as an IV (slope coefficient: -2.0, s.e. 0.2).[23] Of course, this negative correlation is not causal and could reflect selection of women with more skill into certain jobs.

To motivate our research design, Figure 8A plots the change in women's relative wages over the 1960s against the 1960 gender gap in wages. Each point represents the difference in outcomes between women and men for an industry-occupation-state-group cell, and the size of each point represents the number of women working in the cell in 1960. Consistent with the Equal Pay Act and Title VII ameliorating

[22] We use the sample of individuals working at least 27 weeks and 35 hours per week when calculating the gender wage gap. In addition, we use the gender gap in hourly wage earnings to minimize the influence of differences in labor-market work between women and men. The gender wage gap is nearly identical when we control for individuals' demographic and education characteristics using a quadratic in age, an indicator for workers of a nonwhite race, and a set of indicators for each year of schooling. The correlation between the unadjusted gender gap and the covariate-adjusted gender gap is 0.97 (Appendix Figure 11A), so we use the unadjusted gender gap for simplicity. Appendix Figure 11B shows that the gender gap in hourly wages is very similar to the gender gap in weekly wages (correlation of 0.98), and Appendix Figure 11C shows that the gender gap in weekly wages is nearly identical after controlling for demographics and hours worked (correlation of 0.97).

[23] We use the full-count 1940 Decennial Census to compute the 1940 gender gap in hourly wages for this exercise (Ruggles et al. 2021).

pay discrimination and increasing women's relative wages, we find that women's wages grew more than men's during the 1960s in job cells with larger gender gaps at the start of the decade. The similarity of the results when using the split sample IV (slope coefficient: 0.31, s.e. 0.04) or 1940 gender gap IV (slope coefficient: 0.42, s.e. 0.04) provides reassurance that these patterns are not driven by mean reversion due to measurement error or real transitory shocks to the labor market. Moreover, Figure 8D shows that this relationship did not exist in the 1950s, before federal anti-discrimination legislation could have affected sex discrimination in pay. In the 1960s, women's employment and annual hours grew more slowly than men's in job cells where women's relative wages grew more quickly (Figures 8B-8C). As with wages, these patterns depart from the 1950s, where the gender gap was not predictive of changes in employment (Figures 8E-8F).

C. Event-Study and Spline Specifications

We use the following event-study specification to test whether these changes align with the passage of the Equal Pay Act and Title VII:

$$Y_{it} = \sum_{\tau=1949, \tau\neq 1964}^{1974} \theta_\tau D_\tau \widehat{Gap}_{n(i)o(i)s(i)} + X_{it}'\beta + \gamma_{n(i)o(i)s(i)} + \delta_{s(i)t} + \delta_{n(i)t} + \delta_{o(i)t} + \varepsilon_{it}. \quad (4)$$

The dependent variable, Y_{it}, is log weekly wages of individual *i* in calendar year *t*=1949, 1959, 1961-1974, and $\widehat{Gap}_{nos}$ is as defined previously. We interact $\widehat{Gap}_{nos}$ with a set of year indicator variables, D_τ, and omit 1964, the year the Equal Pay Act became effective in June. Because $\widehat{Gap}_{nos}$ varies within state groups, the addition of state-group-by-year fixed effects, δ_{st}, allows the analysis to account for unobserved state-level changes in labor markets and policies. The remaining notation remains as described previously. Specifications for employment outcomes are analogous to equation (2) but replace $NoEPL_s$ with $\widehat{Gap}_{nos}$ on the right side in equation (4) and add state-group-by-year fixed effects. Standard errors are corrected for heteroskedasticity and arbitrary correlation within industry-occupation-state-group cells (Arellano 1987, Huber 1967, White 1980).[24]

Our parameters of interest, θ_τ, capture changes across time in the correlation of women's weekly wages with the gender pay gap in 1960. If federal legislation reduced labor-market discrimination against women, we expect women's wages to increase more after 1964 in job cells with a larger gender gap (i.e., $\theta_\tau > 0$ for $\tau > 1964$). Testing for changes in this correlation before 1964 also helps to rule out potential confounders and assess the validity of the parallel-trends assumption. For instance, if women's productivity and work intensity were increasing differentially in jobs with larger gender gaps pre-dating the legislation, we would expect θ_τ to increase in years prior to 1964, leading us to reject the parallel trends assumption.

We summarize the event-study estimates using a three-part spline, or

$$\begin{aligned} Y_{it} = \widetilde{\theta_0}\widehat{Gap}_{n(i)o(i)s(i)}(t-1964) + \widetilde{\theta_1}\widehat{Gap}_{n(i)o(i)s(i)}1(t>1964)(t-1964) \\ + \widetilde{\theta_2}\widehat{Gap}_{n(i)o(i)s(i)}1(t>1968)(t-1968) \\ + X'_{it}\tilde{\beta} + \tilde{\gamma}_{n(i)o(i)s(i)} + \tilde{\delta}_{s(i)t} + \tilde{\delta}_{n(i)t} + \tilde{\delta}_{o(i)t} + \tilde{\varepsilon}_{it}, \end{aligned} \tag{5}$$

where notation remains as previously defined, and we restrict the spline parameters to intersect at the knots in 1964 and 1968.

V. Results: Using the 1960 Gender Gap in Wages to Quantify the Effects of Federal Anti-Discrimination Legislation on Labor-Market Outcomes

Figure 9A presents the event-study results for women, and Table 2A summarizes the event-study estimates using the spline. Point estimates and confidence intervals are scaled by the mean gender gap in the 1960 Census (equal to 0.374).[25] Model 1 includes demographic covariates and industry-occupation-state-group and year fixed effects. Model 2 adds state-group-by-year fixed effects to model 1, and model 3 adds industry-year and occupation-year fixed effects to model 2.

Consistent with the Equal Pay Act and Title VII reducing labor-market discrimination against women, the data show that women's weekly wages increased by 10 log points (s.e. 2.3) between 1964 and 1968 in job cells with the average 1960 gender gap in pay (Table 2A, column 1). The magnitude of this

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[24] Online Appendix C uses a combination of a parametric bootstrap and a Bayesian bootstrap to show that accounting for sampling variability in estimates of the gender gap variable leads to standard errors that are similar to those reported in the main tables.
[25] See Appendix Table 12 for the event-study coefficients and standard errors in numerical form.

estimate is equivalent to 58 percent of the average within-occupation weekly wage gap in the 1963 OWS (Appendix Table 4, column 3). Wages rise almost immediately following the legislation and remain stable between 1967 and 1970. Although changes in women's wages are not correlated with the gender gap after the implementation of the 1966 FLSA in 1967, the correlation again increases between 1970 and 1973. This timing is reminiscent of similar patterns in our first research design and corresponds to the Education Amendments broadening the coverage of the Equal Pay Act and the Supreme Court's 1971 decision and the Equal Employment Opportunity Act of 1972 strengthening and expanding the enforcement of Title VII's sex provisions.

These estimates are not only robust across specifications, they are also robust to using annual or hourly wage earnings (Appendix Figure 12), winsorizing low wage levels (Appendix Figure 13), limiting the sample to more attached workers (Appendix Figure 14), controlling for education (Appendix Figure 15), accounting for measurement error or mean reversion following transitory labor-market changes in the 1950s or early 1960s (Appendix Figure 16), excluding industries that saw substantial increases in minimum wage coverage under the 1961 FLSA (Appendix Figure 17), and including state-by-birth-cohort fixed effects (Appendix Figure 18). In contrast, we find no evidence of wage gains for men (Figure 9B; Table 2A, column 2), which narrows the scope for alternative labor-market or policy explanations. Recent work on differences-in-differences estimators highlights difficulties in interpreting the magnitudes of event-study regressions with a continuous treatment variable and treatment-effect heterogeneity, even in settings like ours without staggered treatment timing (Callaway, Goodman-Bacon and Sant'Anna 2021). Considering this issue, evidence of limited treatment effect heterogeneity for *nos* cells with average wages above and below the *nos*-cell median is reassuring (Appendix Figure 19).

We also explore the heterogeneity in women's wage gains to shed light on the mechanisms for these effects. Following Firpo, Fortin, and Lemieux (2009), we estimate RIF regressions to understand the effects of federal anti-discrimination legislation on the unconditional percentiles of women's log weekly wages. Figure 10A shows results, which are scaled by the mean gender gap in the 1960 Census. We find large increases in women's wages at the 10^{th} and 25^{th} percentiles after the legislation took effect (31 and 18 log points in 1968, respectively; Appendix Table 13), which is consistent with the legislation benefiting the lowest-earning women, for whom the gender gap in wages was largest (Figure 7) and for whom convergence in the gender gap was the most rapid in the 1960s (Figure 1B). RIF-regressions using only the 1950, 1960, and 1970 Decennial Censuses yield similar results (displayed as single points), which ameliorates concerns that the estimates are driven by revisions in the ASEC sampling frame. In contrast, percentiles above the median show little evidence of a trend break after 1964 or any change through the 1970s. The same specification for men's wages shows little change at any point in the distribution (Figure 10B), which mitigates concerns that the results are driven by broad labor-market trends or policies. These findings suggest that federal anti-discrimination legislation reduced the gender wage gap and also the wage gap in earnings between the highest and lowest paid women.[26]

As a final check on the validity of these results, we bring both research designs together. If state equal pay laws were somewhat effective in reducing sex discrimination, we expect women's wages to increase by more in job cells that had the same 1960 gender wage gap in states without pre-existing equal pay laws relative to states with equal pay laws. Said another way, effective prior legislation implies that the correlation of the same gender gap in pay in 1960 with sex discrimination should be weaker in states with pre-existing equal pay laws. Columns 4-5 of Table 2 confirm this prediction. In the 22 states with pre-existing equal pay laws, we find women's relative wages grew by 6.0 log points at the mean gender gap (s.e. 3.9, column 4). In states without equal pay laws, we find women's relative wages grew by much more after 1964—an increase of 16.2 log points by 1968 (s.e. 3.4, column 5). Although the estimates are not statistically different from one another (p-value on test of equality is 0.20), this evidence is consistent with anti-discrimination legislation—first at the state level and then at the federal level—reducing the gender gap in wages.

[26] Appendix Table 14 examines effect heterogeneity across other population subgroups. The results show that the within-job cell wage gains for women following the Equal Pay Act and Title VII were pervasive. Wage increases are evident for White workers, which addresses the concern that our results are driven by provisions in the Civil Rights Act targeting racial discrimination. Similar regressions yield no evidence of wage increases for White or Black men, which is consistent with a key role for the Equal Pay Act or our research design not picking up the race-based provisions of the Civil Rights Act.

Considering these large wage gains for women, how did the legislation affect their employment? Some direct evidence on this question comes from reports around the time the Equal Pay Act was passed. On June 14, 1964, the *Washington Post* interviewed different employers and reported (see Online Appendix E):

> *…the head of a new Virginia manufacturing plant put it: "We had planned to employ women in some of our light manufacturing jobs, but we decided against it because of anticipated complications arising from the equal pay law." An Ohio manufacturer said his plant would downgrade some job classifications for women and reassign higher-level, higher-paying duties to men….*
>
> *Many employers said they would hike women's wages to bring them into line with men's. Some firms said they would equalize salaries now, but in the future would segregate male and female job classifications.*

Although Title VII would make this type of behavior illegal the following year, honest reporting before it passed provides important context. Notably, no employer said they would fire women in response to the Equal Pay Act—which is consistent with our findings when examining employment responses using state equal pay laws. However, employers indicated that they planned to change job classifications and hiring, which could show up as industry-occupation level changes in women's employment in the longer term.

Figure 11 tests this prediction using the event-study and spline specifications.[27] In 1966, when women's wages soared in jobs with higher 1960 gender gaps, the number of female or male employees or annual hours worked changed little. Although Table 2 reveals a larger trend-break after 1964 for women than men, which translates into a reduction in employment of 11.8 log points by 1968 at the mean (s.e. 4.7, column 1) for women versus a 6.2-log-point decline for men (s.e. 2.9, column 2), the difference between the two groups is not statistically significant (column 3). The decline in women's employment in states without pre-existing equal pay laws is larger (where women's wages grew more quickly), but neither estimate is statistically significant at conventional levels. In these states, the number of female employees relative to male employees experienced a sizable and marginally statistically significant decline of 11.2 log

[27]See Appendix Table 15 for the event-study coefficients and standard errors in numerical form.

points (s.e. 6.9, column 5), although their relative number of annual hours did not fall discernibly.[28] In contrast, in states with pre-existing equal pay laws where wages grew by less than one-third the amount by 1968, the trend break in employment and annual hours worked was much smaller and statistically insignificant.[29]

In summary, this evidence shows that the Equal Pay Act and Title VII lifted the wages of working women and suggests that their employment may have fallen as a consequence in the longer term. Like what was reported in the *Washington Post*, different employers likely varied in their response to the legislation, which is difficult to detect with the limited data available in the 1960s on jobs and establishments.

VI. How the Equal Pay Act and Title VII Shaped the Gender Gap in Wages

Almost 60 years after the Equal Pay Act and Title VII passed, little quantitative work suggests this legislation reduced labor-market discrimination against women in the 1960s. Studies have noted the roles of Title VII and federal affirmative action mandates under Executive Order 11375 in facilitating women's wage and employment gains and increasing their enrollment in colleges and professional schools in the 1970s and later (Beller 1979, Beller 1982a,b, Leonard 1984, Carrington, McCue and Pierce 2000, Kurtulus 2012, Blau and Kahn 2017, Helgerman 2023). This paper provides new evidence that federal anti-discrimination legislation—and especially the Equal Pay Act—had larger effects on sex discrimination in the 1960s than previously understood.

Using two complementary research designs, we find that federal legislation prohibiting sex-based pay and employment discrimination led to large increases in women's wages, especially in lower-paying jobs where the "equality of work" was more easily measured and federal investigations of compliance with the minimum wage were focused. After the legislation took effect, women's weekly wages grew by around

[28]The p-values on the test of the null hypothesis that estimates in columns 4 and 5 of Table 2 are equal are 0.07 in panel B (employment) and 0.19 in panel C (annual hours worked).

[29] Appendix Table 14 shows that the employment effects of the Equal Pay Act and Title VII are large but imprecise across subgroups.

11 percent in jobs with the average gender gap, with most of these effects benefitting women in the lower half of the weekly wage distribution. Importantly, anti-discrimination legislation appears to have had a negligible effect on median wages among full-time, full-year workers, which has been the focal statistic released annually by the Census Bureau (Figure 1A). However, our estimates of larger gains among lower-wage workers in the mid-1960s correspond closely to the gains below the median in the timeseries during this period (Figure 1B) (Bailey, Helgerman, and Stuart 2021). Consistent with firms having some monopsony power, the Equal Pay Act and Title VII had little effect on women's employment in the short run. In the longer-term, however, historical accounts and suggestive evidence from our own analyses imply that some firms shifted their hiring away from women workers and reclassified them to lower-paying positions, which tracks with scholars' critiques of the legislation.

These findings are not at odds with stability of the gender earnings ratio at the mean and median during the 1960s, because this stability masks two opposing trends. First, economic forces pre-dating the legislation put downward pressure on women's relative pay increases. After World War II, strong economic growth drove up wages, but it raised wages for men faster than for women. Trends pre-dating the 1960s imply that the gender wage ratio would have *fallen* rather than stabilizing in the absence of federal legislation. Naively extrapolating from the 1950s using a linear trend, women's relative pay would have dropped by 1.8 log points had the path of the gender pay in the 1950s continued. We are not the first to point this out. Beller (1979) argues that Equal Employment Opportunity laws staved off a larger 7-point increase in the earnings gap in the 1970s, and others, notably Blau and Kahn (2017), suggest that the increase in female labor-force participation during the 1960s may have masked the effects of the legislation in the aggregate time series.

Second, our findings using the gender gap design reflect large changes in the *within-job* component of the gender gap, which is smaller than the overall gender gap. A Kitagawa-Blinder-Oaxaca decomposition shows that around 70 percent of the 1960 gender gap in wage earnings is attributable to differences within-industry-occupation-state-group cells used in our analysis.[30] Assuming the legislation had little effect on the allocation of workers across job cells, our estimate of a 10-log-point increase at the mean gender gap within job cells (Table 2) would translate into a 7.0 point gain in the aggregate gender gap in the absence of pre-trends slowing women's pay growth.

These two countervailing changes imply a net gain of 5.2 log points at the mean (7.0 less 1.8 log points due to the pre-trend). But this change is still larger than observed in the timeseries, likely because changes in firm hiring and promotion behavior, selection, and larger shifts in the economy worked to offset women's wage gains within jobs.

In conclusion, our findings claim an important role for the Equal Pay Act, strengthened by Title VII, in reducing pay discrimination against U.S. women in the 1960s. Yet they also provide a cautionary tale: targeting pay discrimination without sufficient protections against employment discrimination provided leeway for firms to shift *how* they discriminated, reshaping the gender gap—developments that led the economics literature to focus on occupational segregation and the legal community to focus on strengthening the breadth and enforcement Title VII over the next sixty years.

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[30] We calculate this number as the sum over industry-occupation-state-group cells of the difference in the mean log hourly wage for men and women, multiplied by the share of men employed in the cell. This calculation is 62.5 percent when multiplying the within-cell gender wage gap by the share of women employed in the cell. This share is not directly comparable to estimates of occupational segregation because our occupation/industry cells are larger groupings than job classifications. Polachek (1987) similarly finds that only 17-21 percent of gender differences in annual wage earnings in 1960 and 1970 can be explained by occupational segregation, which is similar to the conclusion of Goldin (1990, pp. 71-73). Blau (1977) finds that intra-firm pay differences are a small share of the total gender wage gap in 1970 in office occupations in three Northern cities for establishments with at least 50 employees (Tables 4-6). Using data from 1974 to 1983, Groshen (1991) finds that wage gaps from establishment and job segregation account for around 6 percent of the gender wage gap, whereas occupational segregation accounts for considerably more. These results are consistent with our findings that the Equal Pay Act and potentially Title VII narrowed within-job pay gaps.

VII. References

"Fair Labor Standards Act of 1938," (U.S. Statutes at Large 52, 1938).

"Equal Pay Act of 1963," (1963).

"Civil Rights Act of 1964," (1964).

"Wirtz v. Basic Incorporated," (U.S. District Court D. Nevada, 1966).

"Phillips v. Martin Marietta Corp.," (400 U.S. 542, 1971).

"Equal Employment Opportunity Act of 1972," (1972).

"General Electric Co. v. Gilbert," (426 US 125, 1976).

Almond, Douglas, Kenneth Y. Chay, and Michael Greenstone, "Civil Rights, the War on Poverty, and Black-White Convergence in Infant Mortality in the Rural South and Mississippi," MIT Working Paper (2003).

Arellano, Manuel, "Computing Robust Standard Errors for Within-Groups Estimators," Oxford Bulletin of Economics and Statistics, 49 (1987), 431-434.

Bailey, Martha J., John E. DiNardo, and Bryan A. Stuart, "The Economic Impact of a High National Minimum Wage: Evidence from the 1966 Fair Labor Standards Act," Journal of Labor Economics, 39 (2021), S329-S367.

Bailey, Martha J., and Nicolas J. Duquette, "How Johnson Fought the War on Poverty: The Economics and Politics of Funding at the Office of Economic Opportunity," Journal of Economic History, 74 (2014), 351-388.

Bailey, Martha J., and Andrew J. Goodman-Bacon, "The War on Poverty's Experiment in Public Medicine: The Impact of Community Health Centers on the Mortality of Older Americans," American Economic Review, 105 (2015), 1067-1104.

Bailey, Martha J., Thomas Helgerman, and Bryan A. Stuart, "Changes in the US Gender Gap in Wages in the 1960s," American Economic Review Papers and Proceedings, 111 (2021), 143-148.

Beller, Andrea H., "The Impact of Equal Employment Opportunity Laws on the Male-Female Earnings Differential," in *Women in the Labor Market*, Cynthia B. Lloyd, Emily S. Andrews, and Curtis L. Gilroy, eds. (New York Chichester, West Sussex: Columbia University Press, 1979).

---, "The Impact of Equal Opportunity Policy on Sex Differentials in Earnings and Occupations," American Economic Review, 72 (1982a), 171-175.

---, "Occupational Segregation by Sex: Determinants and Changes," The Journal of Human Resources, 17 (1982b), 371-392.

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan, "How Much Should We Trust Differences-in-Differences Estimates?," Quarterly Journal of Economics, 119 (2004), 249-275.

Blau, Francine D., *Equal Pay in the Office* (Lexington, Massachusetts: Lexington Books, 1977).

Blau, Francine D., and Andrea H. Beller, "Trends in Earnings Differentials by Gender, 1971-1981," Industrial and Labor Relations Review, 41 (1988), 513-529.

Blau, Francine D., and Lawrence M. Kahn, "Swimming Upstream: Trends in the Gender Wage Differential in 1980s," Journal of Labor Economics, 15 (1997), 1-42.

---, "The U.S. Gender Pay Gap in the 1990s: Slowing Convergence," Industrial and Labor Relations Review, 60 (2006), 45-66.

---, "The Gender Wage Gap: Extent, Trends, and Explanations," Journal of Economic Literature, 55 (2017), 789-865.

Callaway, Brantly, Andrew J. Goodman-Bacon, and Pedro H. C. Sant'Anna, "Difference-in-Differences with a Continuous Treatment," Vanderbilt University Working paper, https://psantanna.com/files/Callaway_Goodman-Bacon_SantAnna_2021.pdf, (2021).

Cameron, A. Colin, Jonah B. Gelbach, and Douglas L. Miller, "Bootstrap-Based Improvements for Inference with Clustered Errors," Review of Economics and Statistics, 90 (2008), 414-427.

Card, David, "Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage," Industrial and Labor Relations Review, 46 (1992), 22-37.

Carrington, William J., Kristin McCue, and Brooks Pierce, "Using Establishment Size to Measure the Impact of Title

VII and Affirmative Action," The Journal of Human Resources, 35 (2000), 503-523.

Cascio, Elizabeth, Nora Gordon, Ethan Lewis, and Sarah J. Reber, "Paying for Progress: Conditional Grants and the Desegregation of Southern Schools," Quarterly Journal of Economics, 125 (2010), 445-482.

Chay, Kenneth Y., "The Impact of Federal Civil Rights Policy on Black Economic Progress: Evidence from the Equal Employment Opportunity Act of 1972," Industrial and Labor Relations Review, 51 (1998), 608-632.

DeNavas-Walt, Carmen, and Bernadette D. Proctor, "Income and Poverty in the United States: 2014," U.S. Census Bureau, ed. (Washington, D.C.: Government Printing Office, 2015).

Derenoncourt, Ellora, and Claire Montialoux, "Minimum Wages and Racial Inequality," Quarterly Journal of Economics, 107 (2021), 151-200.

Donohue, John, and James Heckman, "Continuous versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks," Journal of Economic Literature, 29 (1991), 1603-1643.

Eaton, William J, "Women Earning Equality," in *The Washington Post*, (1965).

Firpo, Sergio, Nicole M. Fortin, and Thomas Lemieux, "Unconditional Quantile Regressions," Econometrica, 77 (2009), 953-973.

Fisher, Marguerite J., "Equal Pay for Equal Work Legislation," Industrial and Labor Relations Review, 2 (1948), 50-57.

Freyaldenhoven, Simon, Christian Hansen, and Jesse M. Shapiro, "Pre-event Trends in the Panel Event-Study Design," American Economic Review, 109 (2019), 3307-3338.

Goldin, Claudia, *Understanding the Gender Gap: An Economic History of American Women* (New York: Oxford University Press, 1990).

---, "Marriage Bars: Discrimination Against Married Women Workers from the 1920's to the 1950's," in *Favorites of Fortune: Technology, Growth, and Economic Development Since the Industrial Revolution*, Henry Rosovsky, David Landes, and Patrice Higgonet, eds. (Cambridge, MA: Harvard University Press, 1991).

---, "The Quiet Revolution That Transformed Women's Employment, Education, and Family," American Economic Review, 96 (2006a), 1-21.

---, "The Rising (and then Declining) Significance of Gender," in *The Declining Significance of Gender?*, Francine D. Blau, Mary C. Brinton, and David B. Grusky, eds. (New York, NY: The Russell Sage Press, 2006b).

---, "Why Women Won," NBER Working Paper 31762, (2023).

Goldin, Claudia, Lawrence Katz, and Ilyana Kuziemko, "The Homecoming of American College Women: The Reversal of the College Gender Gap " Journal of Economic Perspectives, 20 (2006), 133-156.

Goodman-Bacon, Andrew J., "Public Insurance and Mortality: Evidence From Medicaid Implementation," Journal of Political Economy, 126 (2018), 216-262.

Groshen, Erica L., "The Structure of the Female/Male Wage Differential: Is It Who You Are, What You Do, or Where You Work?," The Journal of Human Resources, 26 (1991), 457-472.

Gruber, Jonathan, "The Incidence of Mandated Maternity Benefits," American Economic Review, 84 (1994), 622-641.

Gunderson, Morley, "Male-Female Wage Differentials and Policy Responses," Journal of Economic Literature, 27 (1989), 46-72.

Harrison, Cynthia, *On Account of Sex: The Politics of Women's Issues, 1945-1968* (Berkeley and Los Angeles: University of California Press, 1989).

Heckman, James J., and Brook S. Payner, "Determining the Impact of Federal Antidiscrimination Policy on the Economic Status of Blacks: A Study of South Carolina," The American Economic Review, 79 (1989), 138-177.

Helgerman, Thomas, "Health Womanpower: The Role of Federal Policy in Women's Entry into Medicine," University of Michigan Working Paper, (2023).

Hole, Judith, and Ellen Levine, *Rebirth of Feminism* (New York: Quadrangle Books, 1971).

Holzer, Harry J., and David Neumark, "Affirmative Action: What Do We Know?," Journal of Policy Analysis and Management, 25 (2006), 463-490.

Huber, P. J. , "The Behavior of Maximum Likelihood Estimates under Nonstandard Conditions," in *Proceedings of* *the Fifth Berkeley Symposium on Mathematical Statistics and Probability*, (Berkeley, CA: University of California Press, 1967).

Hunt, Jennifer, and Caroline Moehling, "Do Female-Named Employment Agencies Expand Opportunity for Women?," Working paper, (2021).

Hyatt, James C, "Flexing a Muscle: Women, Government, Unions Increasingly Sue Under Equal-Pay Act," in *The Wall Street Journal*, (1973).

Inoue, Atsushi, and Gary Solon, "Two-Sample Instrumental Variables Estimators," Review of Economics and Statistics, 92 (2010), 557-561.

Johnson, Lyndon B., "Executive Order 11246," (Santa Barbara, California: The American Presidency Project, 1965).

---, "Executive Order 11375—Amending Executive Order No. 11246, Relating to Equal Employment Opportunity," (Santa Barbara, California: The American Presidency Project, 1967).

Katz, Lawrence F., and Kevin M. Murphy, "Changes in Relative Wages, 1963-1987: Supply and Demand Factors," Quarterly Journal of Economics, 107 (1992), 35-78.

Kurtulus, Fidan Ana, "Affirmative Action and the Occupational Advancement of Minorities and Women During 1973–2003," Industrial Relations: A Journal of Economy and Society, 51 (2012), 213-246.

LeGrande, Linda H., "Women in Labor Organizations: Their Ranks Are Increasing," Monthly Labor Review 101 (1978), 8-14.

Lemieux, Thomas, "Increasing Residual Wage Inequality: Composition Effects, Noisy Data, or Rising Demand for Skill," American Economic Review, 96 (2006), 461-498.

Leonard, Jonathan S., "The Impact of Affirmative Action on Employment," Journal of Labor Economics, 2 (1984), 439-463.

Manning, Alan, "The Equal Pay Act as an Experiment to Test Theories of the Labour Market," Economica, 63 (1996), 191-212.

Marchingiglio, Riccardo, and Michael Poyker, "The Economics of Gender-Specific Minimum-Wage Legislation," University of Nottingham Working Paper, (2021).

Martin, Edward C., "Extent of Coverage Under FLSA as Amended in 1966," Monthly Labor Review, 90 (1967), 21-24.

Mellor, Earl F., "Investigating the Differences in Weekly Earnings of Women and Men," Monthly Labor Review, 107 (1984), 17-28.

Moran, Robert D., "Reducing Discrimination: Role of the Equal Pay Act," Monthly Labor Review, 93 (1970), 30-34.

Munts, Raymond, and David C. Rice, "Women Workers: Protection or Equality," Industrial and Labor Relations Review, 24 (1970), 3-13.

Neumark, David, and Wendy Stock, "The Labor Market Effects of Race and Sex Discrimination Laws," Economic Inquiry, (2006), 385-419.

Pedriana, Nicholas, and Amanda Abraham, "Now You See Them, Now You Don't: The Legal Field and Newspaper Desegregation of Sex-Segregated Help Wanted Ads 1965-75," Law and Social Inquiry, 31 (2006), 905-938.

Polachek, Solomon William, "Occupational segregation and the gender wage gap," Population Research and Policy Review, 6 (1987), 47-67.

Posner, Richard A., "An Economic Analysis of Sex Discrimination Laws," University of Chicago Law Review, 56 (1989), 1311-1335.

Rambachan, Ashesh, and Jonathan Roth, "A More Credible Approach to Parallel Trends," Review of Economic Studies, (2022), 1-37.

Ruggles, Steven, Catherine A. Fitch, Ronald Goeken, J. David Hacker, Matt A. Nelson, Evan Roberts, Megan Schouweiler, and Matthew Sobek, "IPUMS Ancestry Full Count Data: Version 3.0 [dataset]," IPUMS, ed. (Minneapolis, MN, 2021).

Ruggles, Steven, Sarah Flood, Matthew Sobek, Danika Brockman, Grace Cooper, Stephanie Richards, and Megan Schouweiler, "IPUMS USA: Version 13.0 [dataset]," (Minneapolis, MN: IPUMS, 2023).

Shrider, Emily A., Melissa A. Kollar, Frances Chen, and Jessica L. Semega, "Income and Poverty in the United States: 2020," in *Current Population Reports P60-273*, (U.S. Census Bureau, https://www.census.gov/library/publications/2021/demo/p60-273.html, 2021).

Simchak, Morag MacLeod, "Equal Pay in the United States," International Labor Review, 103 (1971), 541-558.

Solon, Gary, Steven J. Haider, and Jeffrey M. Wooldridge, "What are We Weighting For?," Journal of Human Resources, 50 (2015), 301-316.

Thomas, Gillian, *Because of Sex: One Law, Ten Cases, and Fifty Years that Changed American Women's Lives at Work* (New York: St. Martin's Press, 2016).

U.S. Census Bureau, Current Population Reports, P60-23, "Income of Families and Persons in the United States: 1955," (Washington, D.C.: Government Printing Office, 1956).

U.S. Census Bureau, Current Population Reports, P60-27, "Income of Families and Persons in the United States: 1956," (Washington, D.C.: Government Printing Office, 1958a).

U.S. Census Bureau, Current Population Reports, P60-30, "Income of Families and Persons in the United States: 1957," (Washington, D.C.: Government Printing Office, 1958b).

U.S. Census Bureau, Current Population Reports, P60-33, "Income of Families and Persons in the United States: 1958," (Washington, D.C.: Government Printing Office, 1960).

U.S. Census Bureau, Current Population Reports, P60-35, "Income of Families and Persons in the United States: 1959," (Washington, D.C.: Government Printing Office, 1961).

U.S. Census Bureau, Current Population Reports, P60-37, "Income of Families and Persons in the United States: 1960," (Washington, D.C.: Government Printing Office, 1962).

U.S. Congress, Senate Committee on Labor and Public Welfare. Subcommittee on Labor, "Hearing Before the Subcommittee on Labor of the Committee on Labor and Public Welfare on S. 2494 and H.R. 11677 to Provide Equal Pay for Equal Work Regardless of Sex. Eighty-seventh Congress, second session, August 1, 1962," (Washington, DC: Government Printing Office, 1962).

---, "Hearings Before the Subcommittee on Labor of the Committee on Labor and Public Welfare on S. 882 and S.910 to Amend the Equal Pay Act of 1963. Eighty-eighth Congress, first session, April 2,3, and 16, 1963," (Washington, DC: Government Printing Office, 1963).

U.S. Department of Labor, "An Evaluation of the Minimum Wage and Maximum Hours Standards of the Fair Labor Standards Act, January 1965," Wage and Hour and Public Contracts Divisions, ed. (Washington: Government Publishing Office, 1965).

---, "Minimum Wage and Maximum Hours Standards under the Fair Labor Standards Act: An Evaluation and Appraisal," (Washington, D.C.: Government Printing Office, 1966).

---, "United States Department of Labor Annual Report, 1968," (Washington, D.C.: Government Printing Office, 1969).

U.S. Department of Labor, Bureau of Labor Statistics, "Occupational Wage Survey," (Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, 1963).

---, "Highlights of Women's Earnings in 2014," (2015).

---, "Highlights of Women's Earnings in 2020. Report 1094," (https://www.bls.gov/opub/reports/womens-earnings/2020/pdf/home.pdf, 2021).

U.S. Department of Labor, Bureau of Labor Statistics "Labor Force Statistics from the Current Population Survey, 2016 Annual Averages, Household Data, Tables from Employment and Earnings, Table 37," (2020).

U.S. Equal Employment Opportunity Commission, "First Annual Report," (Washington, D.C.: Government Printing Office, 1967).

---, "Second Annual Report," (Washington, D.C.: Government Printing Office, 1968).

---, "Third Annual Report," (Washington, D.C.: Government Printing Office, 1969).

---, "Fourth Annual Report," (Washington, D.C.: Government Printing Office, 1970).

---, "Fifth Annual Report," (Washington, D.C.: Government Printing Office, 1971).

---, "Sixth Annual Report," (Washington, D.C.: Government Printing Office, 1972).

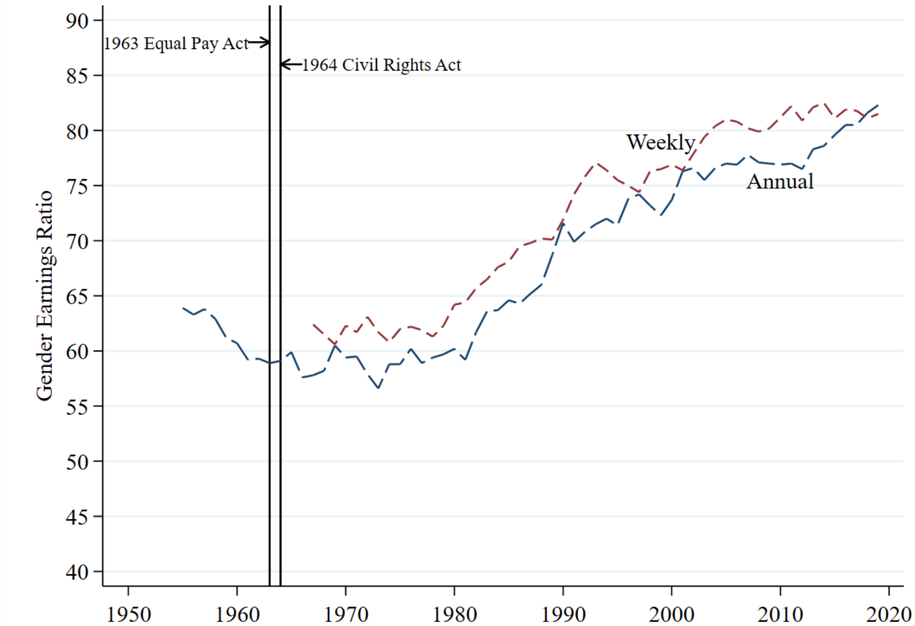
---, "Seventh Annual Report," (Washington, D.C.: Government Printing Office, 1973).

Washington Post, Times Herald, "Pay is Up: Will Jobs Go Down?," (1964).

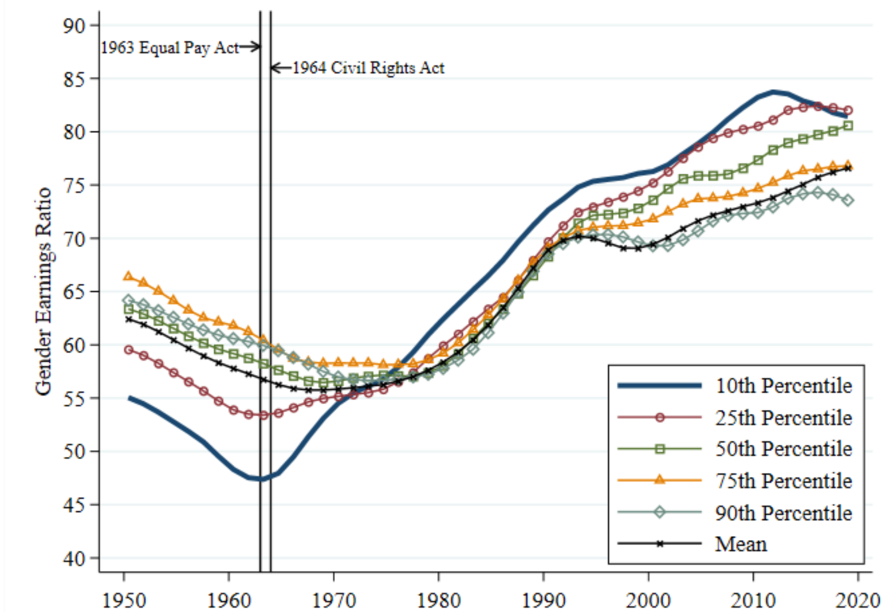
White, H., "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity," Econometrica, 48 (1980), 817–830.

Figure 1. Estimates of the U.S. Gender Wage Earnings Ratio in Annual and Weekly Wage Earnings

A. Census Bureau Estimates for Full-Time, Full-Year Workers at the Median

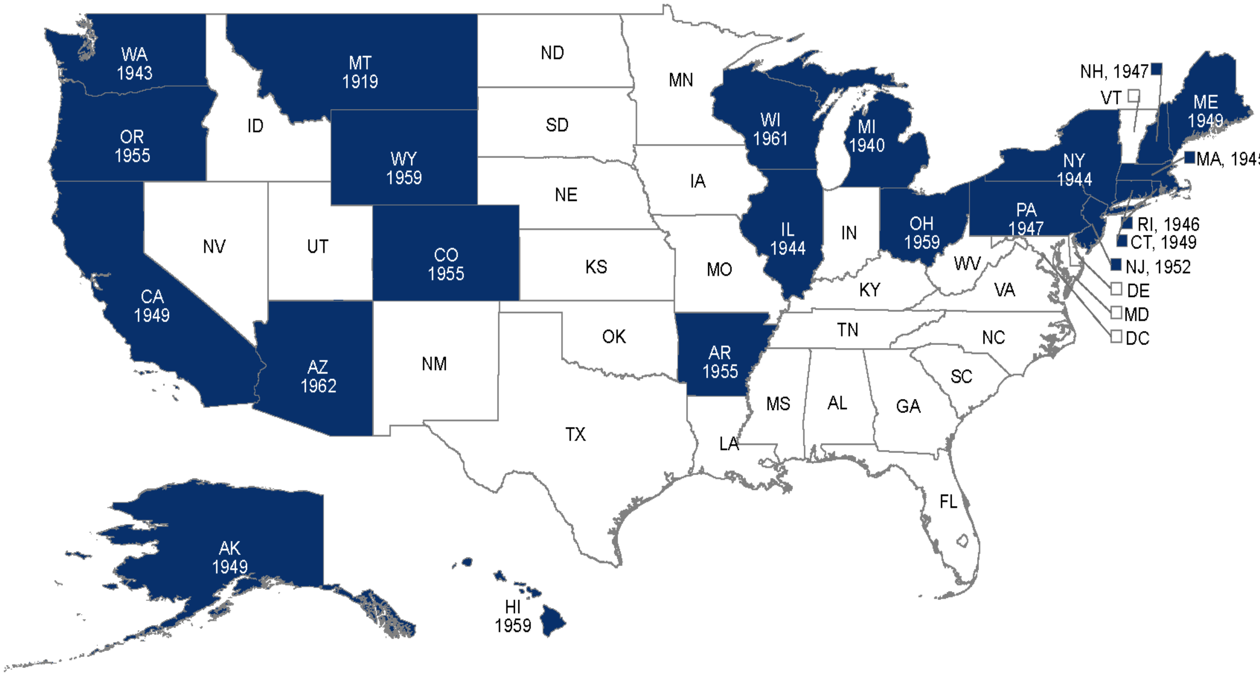


B. Authors' Estimates for Weekly Wages among Full-Time Workers with at least 27 Weeks of Work, by Percentile



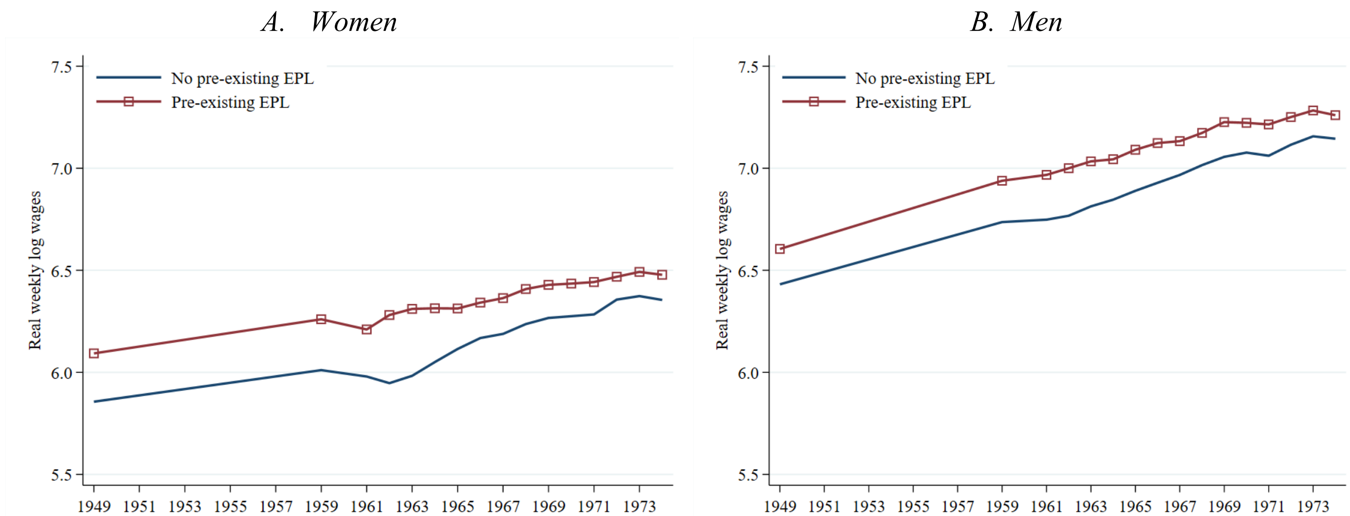
Notes: Panel A plots data on the ratio of median annual and weekly wage and salary earnings of full-time, full-year workers for women relative to men from the following sources: the Census Bureau's Consumer Income (P60) series for 1955 through 1960 (U.S. Census Bureau 1956, 1958a, b, 1960, 1961, 1962); the female-to-male annual earnings ratio for full-time, full-year workers from DeNavas-Walt and Proctor (2015) for 1961 through 2014; and Shrider et al. (2021) for 2015 through 2019. Data on the female-to-male ratio of usual weekly earnings for full-time wage and salary workers come from Mellor (1984) for 1967 through 1978, the U.S. Department of Labor (2015) for 1979 through 2014; and Proctor, Semega, and Kollar (2016) and U.S. Bureau of Labor Statistics (2021) for 2015 through 2019. Panel B uses a sample of 25- to 64-year-old, full-time workers working at least 27 weeks in the previous year. We plot the gender earnings ratio for weekly wages at the *pth* percentile/mean by taking the ratio of the *pth* percentile/mean of the weekly wage distribution for women over the *pth* percentile/mean of the weekly wage distribution for men. Panel B sources include the 1950 and 1960 Decennial Censuses and the 1962 to 2020 ASEC (Flood et al. 2022, Ruggles et al. 2023). We linearly extrapolate values for earnings years 1950–1958 and 1960, when Census and CPS data are not available. We smooth the series using a local linear regression with a bandwidth of 2 years. See Appendix Figure 1 for unsmoothed estimates.

Figure 2. Map of State Equal Pay Laws as of 1963



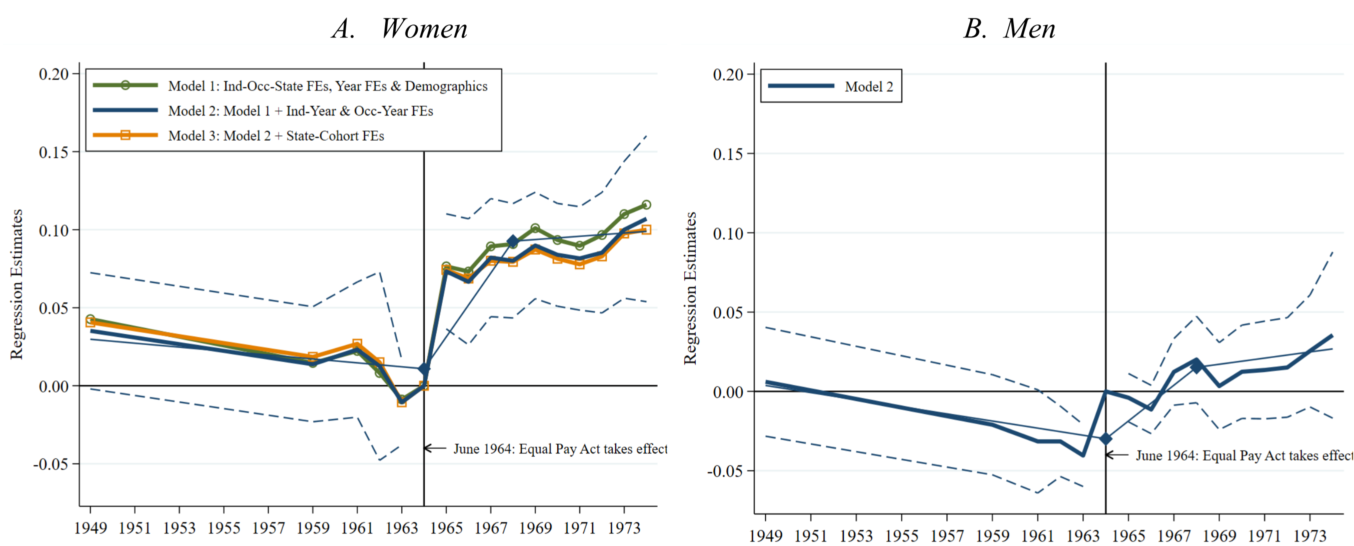
Notes: The figure plots the 22 states with equal pay laws in the U.S. as of 1963 (dark blue) and those without such a law (U.S. Congress 1963). The states with equal pay laws in 1963 are Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Hawaii, Illinois, Maine, Massachusetts, Michigan, Montana, New Jersey, New Hampshire, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Washington, Wisconsin, and Wyoming. The year listed next to each state indicates the year when the state enacted its equal pay law. See also Neumark and Stock (2006).

Figure 3. The Evolution of Women's and Men's Weekly Wages in States with and without Pre-Existing Equal Pay Laws



Notes: The figure plots the mean of log of weekly wages for women and men in state groups that did not have an equal pay law as of January 1, 1963, and state groups where at least one state did have such a law.
Sample: Individuals ages 25 to 64 with positive annual wage and salary earnings and positive weeks worked in the prior year (restrictions necessary to construct real weekly wages) who are not in the Armed Forces, institutionalized, employed in agriculture, or self-employed. Because our primary analysis conditions on having positive hours in the survey reference week, we make this additional sample restriction for this figure.
Sources: Authors' calculations using the 1% sample of the 1950 Decennial Census, 5% sample of the 1960 Decennial Census, and the 1962 to 1975 CPS ASEC (Flood et al. 2022, Ruggles et al. 2023).

Figure 4. The Effect of the Equal Pay Act and Title VII on Weekly Wages using Pre-Existing State Equal Pay Laws

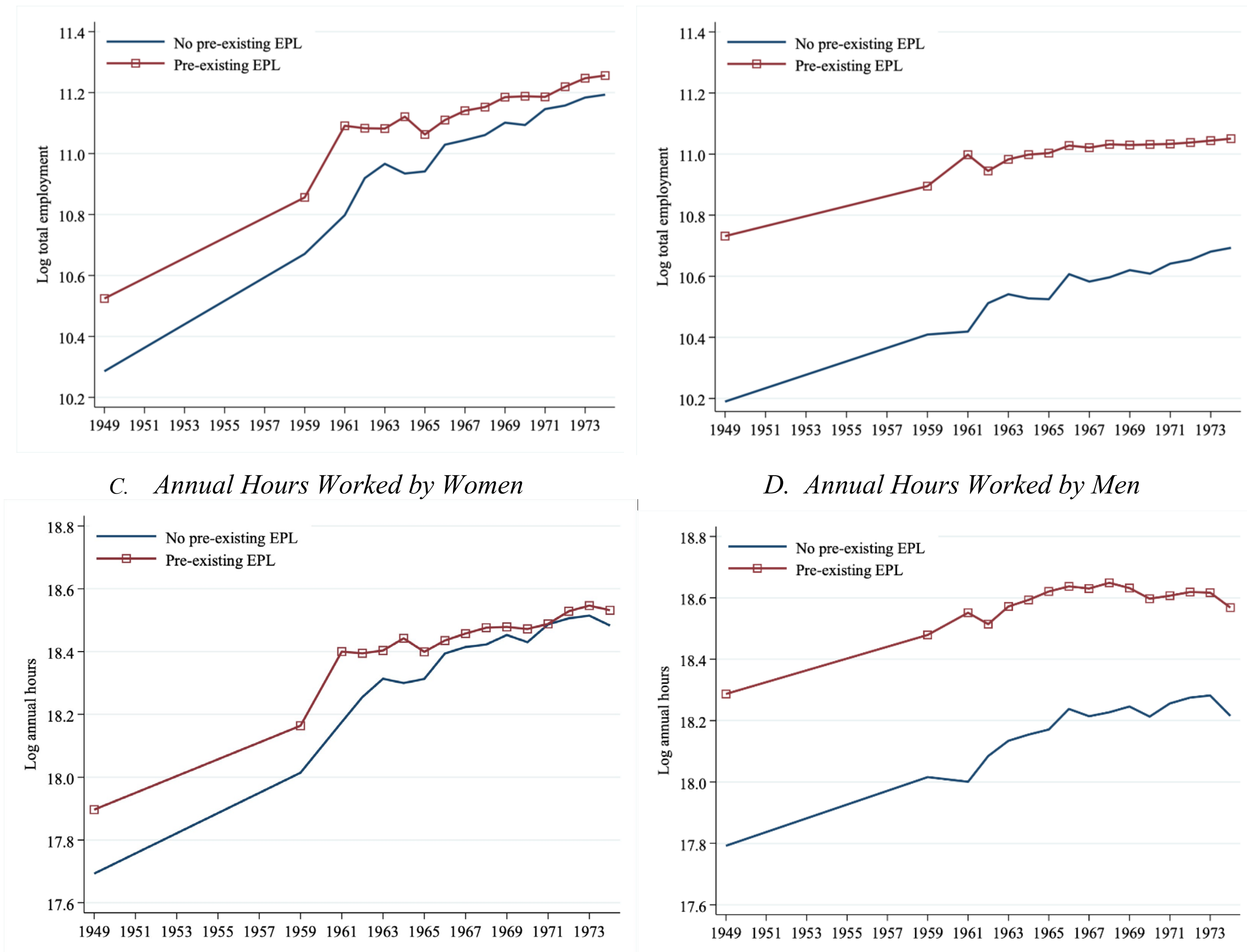


Notes: The figure plots the event-study coefficients from equation (1) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and an arbitrary correlation within state group (Huber 1967, White 1980, Arellano 1987). The spline specification is based on model 2 of equation (3). See Appendix Table 6 for the individual point estimates and standard errors.
Sample and Sources: See Figure 3 notes.

Figure 5. The Evolution of Women's and Men's Employment and Annual Hours in States with and without Pre-Existing Equal Pay Laws

A. Female Employees *B. Male Employees*

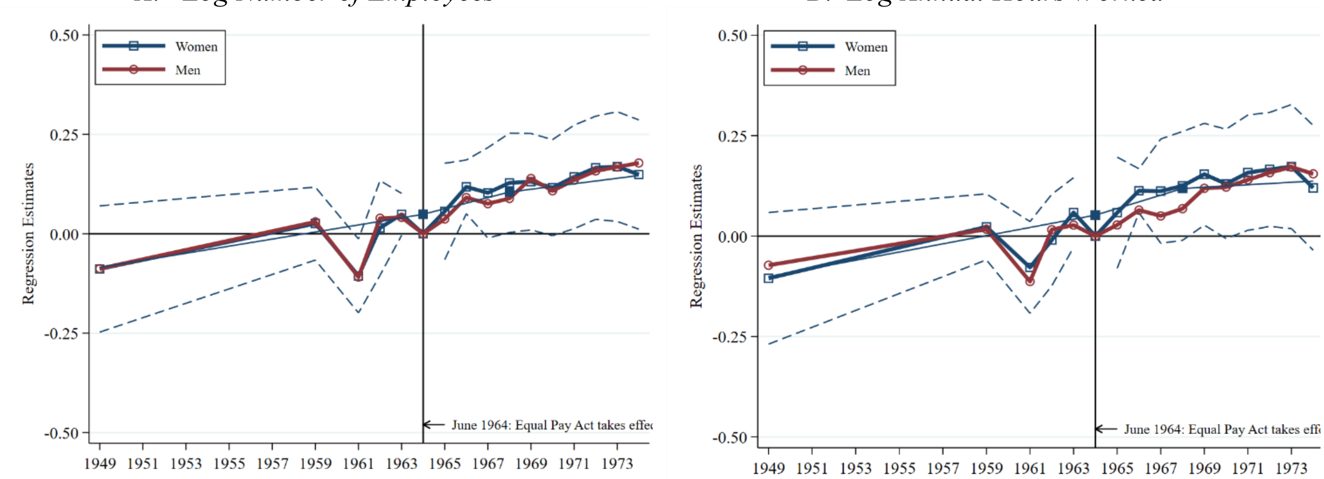
C. Annual Hours Worked by Women *D. Annual Hours Worked by Men*



Notes: Panels A and B plot the mean of log sum of employees (total employment) within an industry-occupation-state-group job cell for women and men in state groups that did not have an equal pay law as of January 1, 1963, and state groups where at least one state did have such a law. Because the total counts are depressed in 1961-1962 and, to a lesser extent, in 1963-1964, due to issues around whether variables were included in the February CPS, we inflate employment by the inverse of the fraction of observations in each year coded as a February-March match. Panels C and D show analogous results for the mean of log annual hours worked, which are adjusted using the same inflation factor.
Sample: Panels A and B include individuals ages 25 to 64 with positive weeks worked in the prior year who are not in the Armed Forces, institutionalized, employed in agriculture, or self-employed. In order to provide a broad characterization of employment, this sample is deliberately less restrictive than the sample in Figure 3. It includes 2% of individuals with positive weeks worked who do not report positive wage earnings in the previous year. In addition, the sample includes individuals who do not have positive hours in the survey reference week. Panels C and D additionally restrict the sample to individuals with positive hours worked in the survey reference week in order to construct annual hours worked (equal to the product of weeks and hours).
Sources: See Figure 3 notes.

Figure 6. The Effect of the Equal Pay Act and Title VII on Employment using Pre-Existing State Equal Pay Laws

A. Log Number of Employees *B. Log Annual Hours Worked*



Notes: The figure plots the event-study coefficients from model 2 of equation (2). Dependent variables are indicated in subtitles. Dashed lines are 95-percent, pointwise confidence intervals for women, where standard errors have been corrected for heteroskedasticity and an arbitrary correlation within state group (Huber 1967, White 1980, Arellano 1987). See Appendix Table 8 for the individual point estimates and standard errors.

Sample and Sources: See Figure 5 notes.

Figure 7. The Correlation of Women's Weekly Wages in 1960 with the 1960 Gender Wage Gap, by Industry, Occupation, and State-Group Cell

Notes: Each marker represents an industry-occupation-state-group job cell. The size of the marker represents the number of women working in the cell in 1960. The color of each marker captures the industry, and the marker shape captures the occupation as shown in the legend. The x-axis plots the gender wage ratio (*Gap*), which is calculated as the difference in average log hourly wages between men and women working full time (at least 27 weeks and at least 35 hours per week) in 1960. The y-axis plots the average log weekly wages for women in the 1960 Census. Figure is limited to cells within the x-axis and y-axis ranges, which omits several outliers.
Sample: The sample is the same as in Figure 3, but we additionally restrict the sample to individuals working in industry-occupation-state-group cells for which we estimate a gender wage gap variable.
Source: 5% sample of the 1960 Decennial Census.

Figure 8. Correlation of Changes in Relative Wages and Employment and the Gender Gap in Wages, by Industry, Occupation, and State-Group Cell

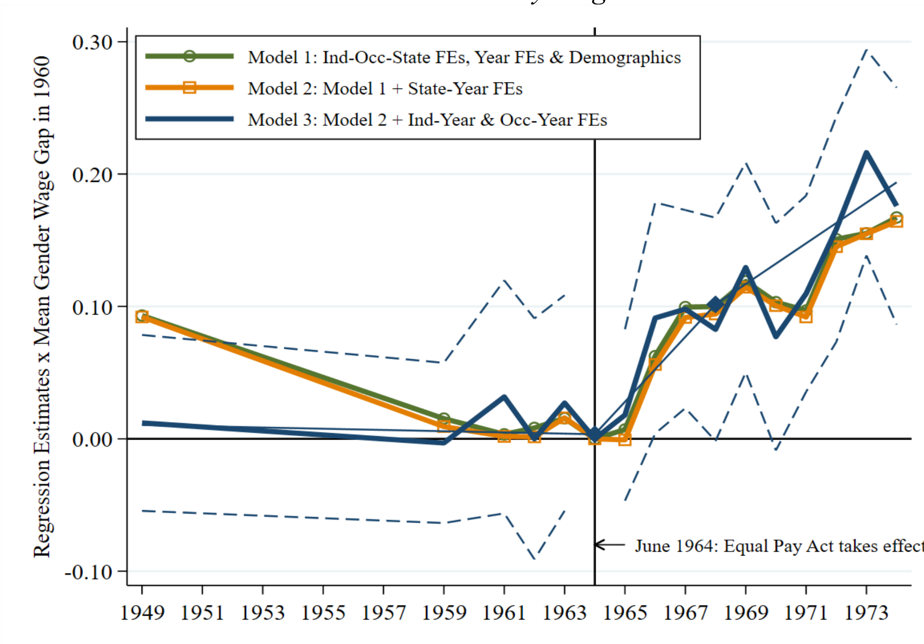
Notes: Each marker represents the difference in outcomes between women and men for an industry-occupation-state-group cell. The dependent variable in Panels A-C is $\left(Y^f_{nos,70} - Y^f_{nos,60}\right) - \left(Y^m_{nos,70} - Y^m_{nos,60}\right)$, where $Y^g_{nos,t}$ is the outcome (average log weekly wages, log number of employees, log sum of annual hours worked) for sex g in year t, where g is either female (f) or male (m). The dependent variable in Panels D-F is constructed similarly but uses the change between 1950 and 1960. The size of each marker represents the number of women working in the cell in 1960 (panels A-C) or 1950 (panels D-F). Figures are limited to cells with variables in the indicated ranges, but regressions are estimated on all observations. The slope coefficient and heteroskedasticity-robust standard error are calculated using a bivariate regression of the outcome on the y-axis against the gender wage gap with weights equal to the number of women in each cell in 1960 (panels A-C) or 1950 (panels D-F). As described in the text, we use a split sample instrumental variable procedure or use the 1940 gender wage gap as an instrument for the 1960 gender wage gap.

Sample: See Figure 3 and 5 notes for details on variations in the samples by outcome. We additionally restrict the sample to individuals working in industry-occupation-state-group cells for whom we estimate the gender wage gap.

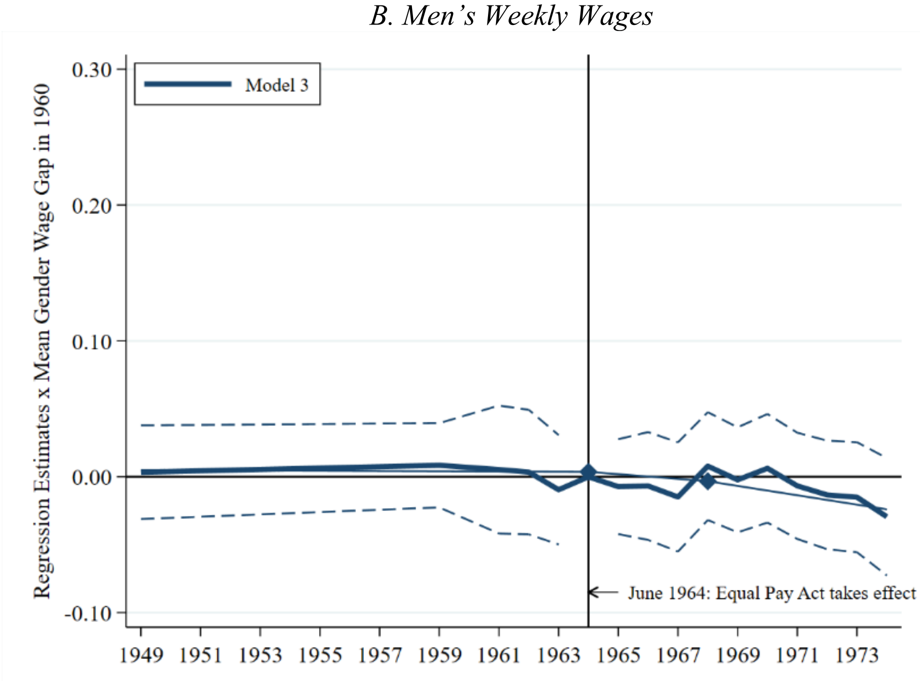
Sources: Authors' calculations using the 1% sample of the 1950 Decennial Census, 5% sample of the 1960 Decennial Census, and the combined 1% Form 1 and Form 2 state samples of the 1970 Decennial Census (Ruggles et al. 2023).

Figure 9. The Effect of the Equal Pay Act and Title VII on Weekly Wages using the 1960 Gender Wage Gap

A. Women's Weekly Wages



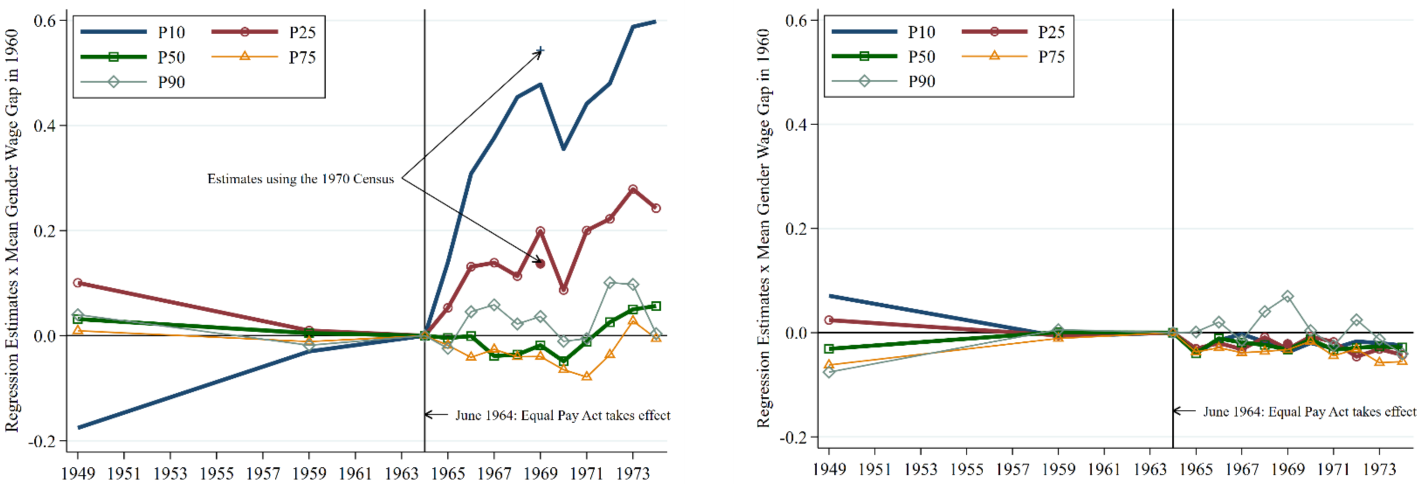
B. Men's Weekly Wages



Notes: The figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals based on standard errors corrected for heteroskedasticity and an arbitrary correlation within industry-occupation-state-group (Huber 1967, White 1980, Arellano 1987). Dependent variables are indicated in subtitles. The solid thin lines correspond to model 3 spline estimates of equation (5). Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for the relevant sample of women (equal to 0.374). See Appendix Table 11 for the individual point estimates and standard errors.
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

Figure 10. The Effect of the Equal Pay Act and Title VII on the Distribution of Wages using the 1960 Gender Wage Gap

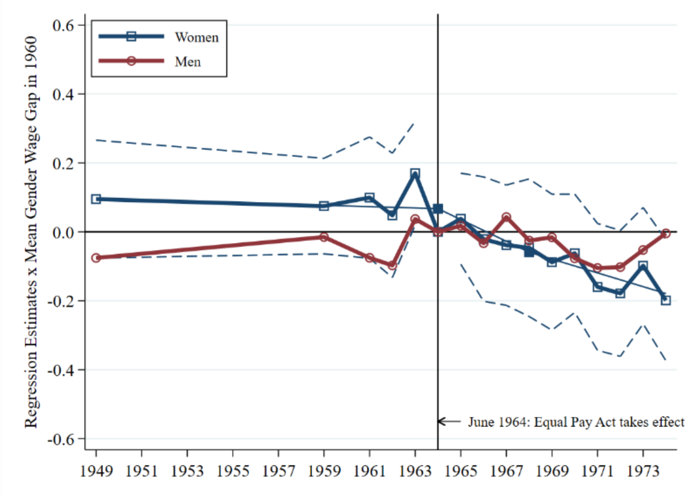
A. Women's Weekly Wages *B. Men's Weekly Wages*



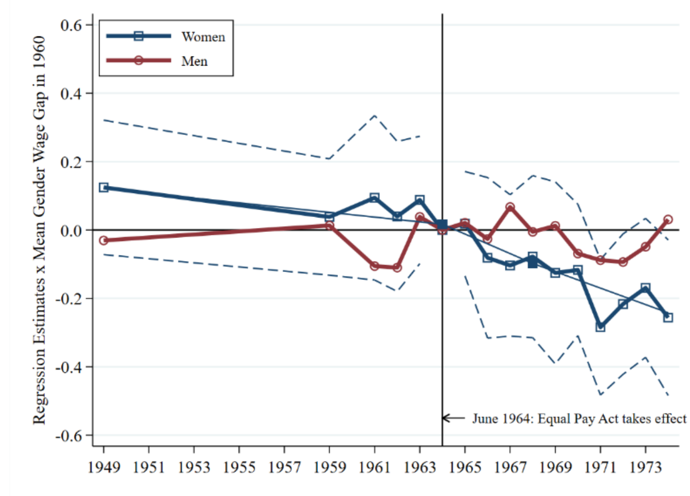
Notes: The figure plots estimates from model 3 of equation (4) where the dependent variable is the RIF for weekly log wages for women (panel A) and men (panel B). Because sample sizes are much smaller in the early ASEC years and because this is a demanding specification, we pool 1959 and 1962-1964 into a single event-study coefficient (plotted in 1959). Coefficients are scaled by the average gender wage gap (equal to 0.374). Estimates for the 1970 Census are shown for the 10th and 25th percentiles, from a regression estimated using only the 1950, 1960, and 1970 Censuses. See Appendix Table 13 for the estimates and standard errors.
Sample: See Figure 7 notes.
Sources: See Figure 3 notes and the combined 1% Form 1 and Form 2 state samples of the 1970 Decennial Census.

Figure 11. The Effect of the Equal Pay Act and Title VII on Female Employment using the 1960 Gender Wage Gap

A. Log Number of Employees



B. Log Annual Hours Worked



Notes: These figures plot the event-study coefficients from model 3 of equation (4) run on data aggregated at the industry-occupation-state-group-level. Dependent variables are indicated in subtitles. Point estimates and confidence intervals are multiplied by the average gender wage gap (equal to 0.374). Dashed lines are 95-percent, pointwise confidence intervals for women and based on standard errors corrected for heteroskedasticity and an arbitrary correlation within industry-occupation-state-group (Huber 1967, White 1980, Arellano 1987). See Appendix Table 15 for the individual point estimates and standard errors.
Sample: See Figure 8 notes.
Sources: See Figure 3 notes.

Table 1. The Effects of the Equal Pay Act and Title VII on Wages and Employment using Pre-Existing State Equal Pay Laws

	(1) Women	(2) Men	(3) Women - Men
A. Log weekly wage			
Spline estimate in 1968	0.087	0.054	0.033
	(0.021)	(0.018)	(0.010)
p-value, wild cluster bootstrap	[0.000]	[0.006]	[0.006]
Trend-break in 1964	0.022	0.014	0.008
	(0.005)	(0.004)	(0.003)
Pre-trend slope, 1949-1964	-0.001	-0.002	0.001
	(0.001)	(0.001)	(0.001)
p-value, wild cluster bootstrap	[0.168]	[0.074]	[0.449]
R-squared	0.398	0.331	0.501
Mean log wage in 1960, 2022 dollars	6.16	6.86	--
Mean wage in 1960, 2022 dollars	$595	$1,089	--
B. Log number of employees			
Spline estimate in 1968	0.020	-0.018	0.038
	(0.068)	(0.057)	(0.027)
p-value, wild cluster bootstrap	[0.784]	[0.796]	[0.166]
Trend-break in 1964	0.005	-0.005	0.010
	(0.017)	(0.014)	(0.007)
Pre-trend slope, 1949-1964	0.009	0.009	-0.000
	(0.005)	(0.006)	(0.003)
p-value, wild cluster bootstrap	[0.116]	[0.172]	[0.900]
R-squared	0.982	0.987	0.986
Mean nos cell log number of employees in 1960	11.06	10.97	--
Mean nos cell number of employees in 1960	90,282	103,153	--
C. Log number of annual hours worked			
Spline estimate in 1968	0.026	0.003	0.023
	(0.069)	(0.059)	(0.025)
p-value, wild cluster bootstrap	[0.739]	[0.962]	[0.319]
Trend-break in 1964	0.006	0.001	0.006
	(0.017)	(0.015)	(0.006)
Pre-trend slope, 1949-1964	0.010	0.007	0.003
	(0.006)	(0.006)	(0.003)
p-value, wild cluster bootstrap	[0.178]	[0.347]	[0.307]
R-squared	0.977	0.985	0.983
Mean nos cell log number of annual hours in 1960	18.38	18.59	--
Mean nos cell number of annual hours in 1960	132 M	202 M	--
Observations	800,345	1,561,633	2,361,978
Sex-Industry-Occupation-State-Year Cells	5,264	10,640	15,904

Notes: Table presents the spline estimates for model 2 as described in the text. Dependent variables are indicated in panel subtitles. In column 3, demographic controls and fixed effects are allowed to vary by sex. Standard errors in parentheses are corrected for heteroskedasticity and arbitrary correlation within state-group (Huber 1967, White 1980, Arellano 1987).Wild cluster bootstrap *p*-values using 499 replications are in brackets.
Sample: See Figure 7 notes (Panel A) and Figure 8 notes (Panels B & C).
Sources: See Figure 3 notes.

Table 2. The Effects of the Equal Pay Act and Title VII on Wages and Employment using 1960 Gender Wage Gaps

	(1)	(2)	(3)	(4)	(5)
				Equal Pay Law	
				State Law	No State Law
	Women	Men	Women - Men	Women - Men	Women - Men
A. Log weekly wage					
Spline estimate in 1968 at mean *Gap*	0.100	-0.007	0.107	0.060	0.162
	(0.023)	(0.011)	(0.025)	(0.039)	(0.034)
Trend-break in 1964	0.067	-0.004	0.071	0.041	0.103
	(0.015)	(0.008)	(0.017)	(0.027)	(0.022)
Pre-trend slope, 1949-1964	-0.001	-0.000	-0.001	0.007	-0.012
	(0.004)	(0.002)	(0.004)	(0.006)	(0.006)
R-squared	0.399	0.327	0.511	0.476	0.538
Mean log wage in 1960, 2022 dollars	6.17	6.89	--	--	--
Mean wage in 1960, 2022 dollars	$599	$1,114	--	--	--
B. Log number of employees					
Spline estimate in 1968 at mean *Gap*	-0.118	-0.062	-0.056	-0.009	-0.112
	(0.047)	(0.029)	(0.049)	(0.077)	(0.069)
Trend-break in 1964	-0.079	-0.041	-0.038	-0.006	-0.072
	(0.031)	(0.019)	(0.032)	(0.053)	(0.044)
Pre-trend slope, 1949-1964	-0.005	0.015	-0.020	-0.000	-0.033
	(0.011)	(0.005)	(0.011)	(0.014)	(0.020)
R-squared	0.989	0.991	0.990	0.991	0.989
Mean *nos* cell log number of employees in 1960	11.06	10.97	--	--	--
Mean *nos* cell number of employees in 1960	90,345	103,153	--	--	--
C. Log number of annual hours worked					
Spline estimate in 1968 at mean *Gap*	-0.087	-0.047	-0.039	-0.060	-0.046
	(0.052)	(0.030)	(0.054)	(0.095)	(0.081)
Trend-break in 1964	-0.058	-0.032	-0.026	-0.041	-0.030
	(0.034)	(0.020)	(0.036)	(0.065)	(0.052)
Pre-trend slope, 1949-1964	-0.019	0.008	-0.026	-0.003	-0.047
	(0.013)	(0.005)	(0.012)	(0.016)	(0.021)
R-squared	0.984	0.989	0.987	0.989	0.985
Mean *nos* cell log annual hours in 1960	18.38	18.59	--	--	--
Mean *nos* cell number of annual hours in 1960	132 M	202 M	--	--	--
Observations	797,272	1,362,199	2,159,471	1,435,264	724,204
Sex-Industry-Occupation-State-Year Cells	5,264	10,640	15,904	9,904	5,968

Notes: Table presents the spline estimates for model 3 of equation (5). The spline estimates and standard errors in 1968 are scaled by the mean gender gap in the 1960 Census (equal to 0.374). Columns 4 and 5 split the sample into state groups where at least one state had an equal pay law as of January 1, 1963, and state groups that did not (U.S. Congress 1963). We use separate values of the mean gender gap for these two columns (equal to 0.364 for column 4 and 0.392 for column 5). Standard errors are corrected for heteroskedasticity and an arbitrary correlation within industry-occupation-state-group (Huber 1967, White 1980, Arellano 1987).
Sample: See Figure 7 notes (Panel A) and Figure 8 notes (Panels B & C).
Sources: See Figure 3 notes.

Online Appendix for

How the 1963 Equal Pay Act and 1964 Civil Rights Act Shaped the Gender Gap in Pay

Martha J. Bailey, Thomas Helgerman, and Bryan A. Stuart

December 22, 2023

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A. Comparison of Effects on Hourly, Weekly, and Annual Earnings

Our preferred measure of earnings is the log weekly wage, which equals log annual earnings last year divided by weeks worked in the last year. This variable has the advantage of not relying on reports of the number of hours worked during the week before the survey, which is measured for a different time period than annual earnings and the number of weeks worked.

To account for intensive margin labor supply adjustments, we include log hours worked per week as a covariate when the dependent variable is log weekly wages; we include as a covariate log hours worked per week and log weeks worked per year when the dependent variable is log annual wage earnings.

This appendix shows that our results are similar when estimating impacts on hourly, weekly, or annual earnings. Appendix Figure 4 shows results for the state-level equal pay law research design (research design 1) for our preferred specification (model 2). Appendix Figure 12 shows results for the industry-occupation-state-group gender wage gap design (research design 2) for our preferred specification (model 3). For each of the three dependent variables and both research designs, our estimates are not only very similar but statistically indistinguishable.

B. Sensitivity to Low Earnings Amounts in the CPS

During the 1960s, the CPS changed its sampling design, which resulted in a large number of low hourly earnings observations. In addition, many workers were not covered by the federal minimum wage law. As a result, it is difficult to know whether some of the reported wages below the statutory minimum wage are real or due to measurement error in reports of annual earnings, weeks worked, or hours worked. We explore the robustness of our results to winsorizing hourly, weekly, and annual earnings for both men and women at the lowest 10 percentiles of the earnings distribution for women from 1960 to 1964. The real wage level used for winsorization is fixed across years to avoid introducing changes over time that reflect changes in the CPS sampling frame.

Appendix Table 16 lists the dollar values, in 1964 and 2022 dollars, of the first 10 percentiles of women's hourly, weekly, and annual wages. The first percentile of the hourly wage distribution is \$0.17 in 1964 dollars, which amounts to 14 percent of the minimum wage in January 1964 for workers who had FLSA coverage before the 1961 amendments. The tenth percentile is \$0.65, which is 52 percent of this minimum wage. Winsorizing up to the 10th percentile is in line with the literature, especially given the fact that our analysis is focused on a period with less extensive coverage of the minimum wage and a much higher real minimum wage. For comparison, Derenoncourt and Montialoux (2021) study the effects of the FLSA expansions on the Black-White wage gap in the 1960s and winsorize the annual wage earnings data at the 5-percent level. Blau and Kahn (2017) study the gender gap in earnings and identify wages as being “too low” if they are lower than $2 per hour in 2010 dollars, which amounts to $0.29 in January 1964 dollars, or between the 2nd and 3rd percentile in 1964. Katz and Murphy (1992) and Autor, Katz, and Kearney (2008) identify wages as being “too low” if they are below one-half of the 1982 minimum wage level for full-time workers, which is equivalent to $3.35 x 0.50 x 40 hours = $67 in 1982 dollars. Their use of a weekly minimum arises from their focus on full-time workers. Because our sample includes women working less than full-time, the hourly wage provides a more natural benchmark, and half of the $3.35 minimum wage in 1982 amounts to $0.55 in 1964 dollars, which falls just above the 7th percentile for our sample.

Appendix Figure 5 displays event-study estimates for hourly, weekly, and annual earnings for the state equal pay law research design when winsorizing low wage levels. The post-1964 wage increases are smaller when winsorizing, but the winsorized point estimates fall within the 95-percent confidence interval of our main results. The spline estimate in 1968 for women’s weekly wages is 0.087 (0.021) when not winsorizing and 0.070 (0.017) when winsorizing at the 7th percentile (p-value on the test of the difference = 0.004). Appendix Figure 13 shows comparable results for the 1960 gender wage gap research design. The spline estimate at the mean in 1968 for women’s weekly wages is 0.100 (0.023) when not winsorizing and 0.065 (0.018) when winsorizing at the 7th percentile (p-value on the test of the difference = 0.001). In summary, the appendix shows that the paper’s main results are smaller but survive winsorization of very low wages.

C. Adjusting Standard Errors for Estimates of the Gender Wage Gap

For our second research design, the key explanatory variable is a generated regressor: the estimated gender wage gap between men and women in 1960. It is possible that our standard errors are too small because they do not account for uncertainty in this estimate.

A common approach to accounting for generated regressors is to use a pairs bootstrap. In our setting, this would amount to re-sampling industry-occupation-state-group cells with replacement, keeping all observations within an industry-occupation-state cell together. However, because our gender gap variable is defined at the industry-occupation-state-level, the gender gap variable would be identical for each resampled cell. As a result, the pairs bootstrap cannot address the generated regressor issue in this setting.

Instead, we use an approach that combines the parametric bootstrap and the Bayesian bootstrap (Rubin 1981). First, we estimate the heteroskedasticity-robust standard error on each industry-occupation-state cell's gender wage gap by regressing log hourly wages on an indicator for being a man among observations in a given cell in 1960. The point estimate from this regression is identical to the gender wage gap used in our main analysis, and the standard error reflects uncertainty in the gender wage gap estimate due to a finite sample size. Second, we implement a clustered version of the Bayesian bootstrap by drawing industry-occupation-state-group-cell-specific weights following the procedure described in the appendix to Angrist et al. (2017). In isolation, the Bayesian bootstrap produces similar results as clustering standard errors by industry-occupation-state-group. However, we can combine the Bayesian bootstrap with the parametric bootstrap by generating a normally-distributed gender wage gap variable with mean and standard deviation given by the first-step regression estimate. By generating a new gender wage gap variable in each bootstrap sample, this "parametric clustered Bayesian bootstrap" procedure accounts for uncertainty in the generated regressor.

Appendix Table 17 reports our main estimates from Table 2, with cluster-robust standard errors based on asymptotic approximations in parentheses, alongside standard errors from the parametric clustered Bayesian bootstrap in brackets. Likely owing to the fact that our generated regressor is calculated using a fairly large sample (the 5% sample of the 1960 Census), the two sets of standard errors are very similar. This provides some reassurance that our conclusions are not materially affected by sampling variability in the gender wage gap variable.

Additional References

Angrist, Joshua D., Peter D. Hull, Parag A. Pathak, and Christopher Walters. 2017. "Leveraging Lotteries for School Value-Added: Testing and Estimation." *Quarterly Journal of Economics* 132 (2):871-919.

Autor, David H., Lawrence F. Katz, and Melissa S. Kearney. 2008. "Trends in U.S. Wage Inequality: Revising the Revisionists." *Review of Economics and Statistics* 90 (2):300-323.

Blau, Francine D., and Lawrence M. Kahn. 2017. "The Gender Wage Gap: Extent, Trends, and Explanations." *Journal of Economic Literature* 55 (3):789-865.

Derenoncourt, Ellora, and Claire Montialoux. 2021. "Minimum Wages and Racial Inequality." *Quarterly Journal of Economics* 107 (1):151-200.

Katz, Lawrence F., and Kevin M. Murphy. 1992. "Changes in Relative Wages, 1963-1987: Supply and Demand Factors." *Quarterly Journal of Economics* 107 (1):35-78.

Rubin, Donald B. 1981. "The Bayesian Bootstrap." *The Annals of Statistics* 9 (1):130-34.

D. Appendix Tables and Figures

Appendix Table 1. Kitagawa-Blinder-Oaxaca Decomposition of Changes in the Gender Gap in Weekly Wages, 1949 to 1959

Year	(1) 1949	(2) 1959	(3) 1949 to 1959
A. Selected characteristics (mean)			
Log weekly wages			
Men	6.549	6.872	0.323
Women	6.012	6.170	0.159
Gender gap (men minus women)	0.537	0.701	0.164
Log hours worked in week before survey			
Men	3.735	3.732	-0.002
Women	3.607	3.511	-0.096
Gender gap (men minus women)	0.127	0.221	0.094
Years of education			
Men	9.684	10.516	0.832
Women	10.326	10.819	0.493
Gender gap (men minus women)	-0.642	-0.303	0.339
B. Decomposition 1: Without occupation or industry			
Explained gender wage gap	0.067	0.089	0.022
Unexplained gender wage gap	0.470	0.613	0.142
Components of explained gap (differences in characteristics)			
Log hours worked	0.011	0.037	0.027
Education	-0.028	-0.018	0.010
Potential experience	0.007	-0.005	-0.012
Married	0.064	0.061	-0.003
Nonwhite	0.014	0.014	-0.000
Components of unexplained gap (differences in coefficients)			
Log hours worked	-0.907	-1.104	-0.196
Education	-0.079	-0.197	-0.118
Potential experience	0.155	0.084	-0.070
Married	0.111	0.199	0.088
Nonwhite	0.015	0.009	-0.007
Constant	1.176	1.622	0.446
C. Decomposition 2: With occupation and industry			
Explained gender wage gap	0.171	0.270	0.099
Unexplained gender wage gap	0.366	0.431	0.065
Components of explained gap (differences in characteristics)			
Log hours worked	0.015	0.041	0.025
Education	-0.021	-0.013	0.008
Potential experience	0.006	-0.005	-0.011
Married	0.047	0.045	-0.002
Nonwhite	0.009	0.009	-0.000
Occupation	0.033	0.056	0.024
Industry	0.081	0.138	0.056
Components of unexplained gap (differences in coefficients)			
Log hours worked	-0.616	-0.597	0.019
Education	0.068	0.092	0.024
Potential experience	0.084	0.022	-0.062
Married	0.090	0.165	0.074
Nonwhite	-0.009	-0.018	-0.009
Occupation	-0.175	0.388	0.563
Industry	-0.026	-0.049	-0.023
Constant	0.950	0.429	-0.521

Notes: Panel A reports averages of the indicated variables using the paper's sample restrictions. Panels B and C report Kitagawa-Blinder-Oaxaca decompositions of the difference in mean log weekly wages between men and women. We weight the difference in observed characteristics by the coefficients for men. For each panel, the decomposition is estimated separately for each year in columns 1 and 2, and column 3 reports the difference between each term from 1949 to 1959. *Sources*: 1% sample of the 1950 Decennial Census, 5% sample of the 1960 Decennial Census (Ruggles et al. 2023). See text for details on sample selection and exclusion criteria.

Appendix Table 2. Decomposing Changes in the Gender Gap in Log Weekly Wages, 1950-1960

	Occupation/industry aggregation used for decomposition			
	Eight occupations	Eight occupations x nine industries	22 occupations x 20 industries	263 occupations
Change in gender gap in log weekly wages, $\Delta w^m - \Delta w^f$	0.164	0.164	0.164	0.164
Changes in wage structure	0.151	0.146	0.156	0.155
% of total change	*0.921*	*0.890*	*0.951*	*0.945*
Changes in representation	0.014	0.018	0.004	0.000
% of total change	*0.085*	*0.110*	*0.024*	*0.000*
Changes in wage structure, detail				
$\sum_k (s_k^m - s_k^f)\Delta w_k^m$	0.012	0.029	0.069	0.061
% of total change	*0.073*	*0.177*	*0.421*	*0.372*
$\sum_k s_k^f(\Delta w_k^m - \Delta w_k^f)$	0.139	0.117	0.087	0.094
% of total change	*0.848*	*0.713*	*0.530*	*0.573*
Changes in representation, detail				
$\sum_k \Delta s_k^f(w_k^m - w_k^f)$	-0.003	-0.004	-0.007	-0.002
% of total change	*-0.018*	*-0.024*	*-0.043*	*-0.012*
$\sum_k (\Delta s_k^m - \Delta s_k^f)w_k^m$	0.017	0.022	0.011	0.002
% of total change	*0.104*	*0.134*	*0.067*	*0.012*

Notes: The table decomposes the change in the gender gap in log weekly wages from 1950-1960 using the following equation:

$$\Delta w^m - \Delta w^f = \sum_k (s_k^m - s_k^f)\Delta w_k^m + s_k^f(\Delta w_k^m - \Delta w_k^f) + \Delta s_k^f(w_k^m - w_k^f) + (\Delta s_k^m - \Delta s_k^f)w_k^m$$

The starting point for this decomposition is that $w_t^g = \sum_k s_{kt}^g w_{kt}^g$ is the mean log wage for gender g in year t, s_{kt}^g is the share of gender g workers employed in industry-occupation cell k at time t, w_{kt}^g is the mean log wage in cell k at time t. The terms $s_k^g = \frac{1}{2}(s_{kt}^g + s_{kt}^g)$ and $w_k^g = \frac{1}{2}(w_{kt}^g + w_{kt}^g)$ are equally-weighted averages across years, and the symbol Δ is used to indicate the change over time. The table presents the values of different terms in this equation as well as the share of the total change in the gender gap explained by these terms in italics. Changes due to the wage structure/representation summarizes the sum of the components from the bottom of the table. The components in columns 3 and 4 add up to slightly less than the total change in the gender wage gap of 0.164 because the change in women's wages is not defined for some cells that have no women workers in the 1950 Census.

Sample: Individuals ages 25 to 64 with positive annual wage and salary earnings and positive weeks worked in the prior year (restrictions necessary to construct real weekly wages) who are not in the Armed Forces, institutionalized, employed in agriculture, or self-employed. Because our primary analysis conditions on having positive hours in the survey reference week, we make this additional sample restriction here.

Sources: 1% sample of the 1950 Decennial Census and 5% sample of the 1960 Decennial Census (Ruggles et al. 2023).

Appendix Table 3. Evidence Presented at 1963 Equal Pay Senate Hearings

City, Industry, and Occupation	Difference in Average Hourly Earnings (Women - Men) (2022$)
A. Chicago	
Furniture Manufacturing	
Assemblers, case goods	-2.25
Off-bearers, machine	0
Packers, furniture	-1.69
Sanders, furniture, hand	-2.91
Power Laundries	
Assemblers	-0.75
Clerks, retail, receiving	-5.57
Identifiers	-2.17
Pressers, machine (dry cleaning)	-2.83
Tumbler operators (laundry)	-2.26
Wrappers, bundle	-2.55
B. Winston-Salem	
Furniture Manufacturing	
Assemblers, case goods	-1.03
Packers, furniture	-1.12
Rubbers, furniture, hand	-0.09
Rubbers, furniture, machine	-0.37
Sanders, furniture, hand	-0.84
Sprayers	-1.22
C. Philadelphia	
Eating and Drinking Places	
Bus girls and boys	1.32
Counter attendants	-1.23
Pantry workers	0
Power Laundries	
Assemblers	2.83
Identifiers	0
Tumbler operators (laundry)	-0.75
Wrappers, bundle	-0.66

Notes: Table reports the difference in average hourly earnings (women minus men) from the Hearings on the Equal Pay Act in April of 1963, inflated to January 2022 dollars using the CPI-U.
Sources: Hearings on the Equal Pay Act in April of 1963. Data on Furniture Manufacturing taken from Table 15 p. 38; Data on Power Laundries taken from Table 9 p. 33. Data on Eating and Drinking Places Taken from Table 12 p.36 (U.S. Congress 1963).

Appendix Table 4. Estimates of the Gender Gap using the 1963 Occupational Wage Survey

	(1)	(2)	(3)
	Dependent variable: Log weekly wage		
A. All jobs			
Women	-0.321	-0.314	-0.172
	(0.022)	(0.021)	(0.010)
Observations	4,337	4,337	4,337
R-squared	0.273	0.416	0.927
B. Jobs reporting hourly wages			
Women	-0.440	-0.433	-0.183
	(0.024)	(0.025)	(0.016)
Observations	1,843	1,843	1,843
R-squared	0.174	0.412	0.929
Covariates			
City FE		X	X
Narrow job classification FE			X

Notes: Coefficient on women captures the difference in log weekly wages earned by women relative to men (omitted). In panel A, we combine jobs reporting weekly wages and hourly wages by converting hourly wages into weekly equivalents (multiplying the hourly wage by 40 hours). In all regressions in panel A, we include a dummy variable equal to 1 for these jobs. In panel B, we examine the pay differential in log hourly wages in hourly wage jobs only and omit this covariate. Column 2 includes city fixed effects, and column 3 adds fixed effects for detailed occupational classes. Regressions are weighted by the number of employees in each sex-city-job observation. Heteroskedasticity robust standard errors are reported in parentheses.
Sources: Data were typed in by the authors from the Bureau of Labor Statistics' Occupational Wage Survey (U.S. Bureau of Labor Statistics 1963).

Appendix Table 5. Summary Statistics, by State Pre-Existing Equal Pay Law Status

	(1)	(2)	(3)	(4)
	Women		Men	
	No EPL	EPL	No EPL	EPL
Mean weekly wage in 1959 (2022 dollars)	525	634	975	1145
Mean weekly wage in 1964 (2022 dollars)	569	679	1087	1275
Mean *nos* cell number of employees in 1959	84,172	93,630	69,395	118,204
Mean *nos* cell number of employees in 1964	91,828	103,820	74,739	116,922
Mean *nos* cell number of annual hours in 1959	125 M	136 M	139 M	229 M
Mean *nos* cell number of annual hours in 1964	141 M	156 M	158 M	239 M
Mean *nos* cell gender wage gap in 1960	0.394	0.367	0.403	0.403

Notes: Table reports summary statistics for the main dependent and independent variables of interest for state groups that did not have an equal pay law (EPL) as of January 1, 1963 (columns 1 and 3) and state groups where at least one state did have such a law (columns 2 and 4). Gender wage gap in 1960 is calculated by industry-occupation-state-group cell.
Sample: See Figure 3 and Figure 5 notes.
Sources: 5% sample of the 1960 Decennial Census and the 1965 CPS ASEC (Flood et al. 2022, Ruggles et al. 2023).

Appendix Table 6. The Effect of the Equal Pay Act and Title VII on Weekly Wages using Pre-Existing State Equal Pay Laws, Event-Study Estimates

	(1)	(2)	(3)	(4)
		Women		Men
Year	Model 1	Model 2	Model 3	Model 2
1949	0.043	0.035	0.041	0.006
	(0.019)	(0.019)	(0.019)	(0.018)
1959	0.015	0.014	0.018	-0.021
	(0.019)	(0.019)	(0.019)	(0.016)
1961	0.022	0.023	0.027	-0.032
	(0.021)	(0.022)	(0.022)	(0.017)
1962	0.008	0.013	0.015	-0.032
	(0.030)	(0.031)	(0.030)	(0.011)
1963	-0.009	-0.011	-0.011	-0.040
	(0.014)	(0.014)	(0.014)	(0.010)
1964 (omitted)				
1965	0.076	0.073	0.074	-0.004
	(0.019)	(0.019)	(0.019)	(0.008)
1966	0.073	0.067	0.069	-0.011
	(0.020)	(0.021)	(0.021)	(0.008)
1967	0.089	0.082	0.080	0.012
	(0.019)	(0.019)	(0.019)	(0.011)
1968	0.091	0.080	0.079	0.020
	(0.019)	(0.019)	(0.019)	(0.014)
1969	0.101	0.090	0.087	0.003
	(0.017)	(0.017)	(0.017)	(0.014)
1970	0.093	0.084	0.081	0.012
	(0.016)	(0.017)	(0.017)	(0.015)
1971	0.090	0.082	0.078	0.013
	(0.017)	(0.017)	(0.017)	(0.016)
1972	0.097	0.085	0.083	0.015
	(0.021)	(0.020)	(0.019)	(0.016)
1973	0.110	0.100	0.098	0.025
	(0.024)	(0.022)	(0.023)	(0.018)
1974	0.116	0.107	0.100	0.035
	(0.029)	(0.027)	(0.026)	(0.027)
Observations	800,345	800,345	800,344	1,561,633

Notes: Table presents the event-study coefficients and standard errors from equation (1) presented in Figure 4. The standard errors have been corrected for heteroskedasticity and an arbitrary correlation within state group.
Sample and Sources: See Figure 4 notes.

Appendix Table 7. Heterogeneity in the Effects of the Equal Pay Act and Title VII on Wages and Employment of Women using Pre-Existing State Equal Pay Laws

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All wage earners	Full-time wage earners	White	Black	Less than 12 years education	At least 12 years education	Age 25-44	Age 45-64	Married	Unmarried
A. Log weekly wage, mean 1960 level:	*$595*	*$646*	*$625*	*$387*	*$482*	*$700*	*$586*	*$607*	*$575*	*$631*
Spline estimate in 1968	0.087	0.079	0.084	0.085	0.112	0.074	0.072	0.101	0.092	0.066
	(0.021)	(0.019)	(0.020)	(0.051)	(0.029)	(0.018)	(0.026)	(0.023)	(0.024)	(0.025)
p-value, wild cluster bootstrap	[0.000]	[0.000]	[0.000]	[0.188]	[0.000]	[0.002]	[0.018]	[0.002]	[0.002]	[0.034]
Trend-break in 1964	0.022	0.020	0.002	-0.005	-0.004	0.004	-0.002	0.005	0.002	-0.001
	(0.005)	(0.005)	(0.007)	(0.013)	(0.010)	(0.006)	(0.008)	(0.008)	(0.008)	(0.006)
Pre-trend slope, 1949-1964	-0.001	-0.003	0.005	0.005	0.005	0.004	0.006	0.005	0.007	0.002
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
B. Log employees, mean 1960 level:	*90,282*	*55,710*	*77,544*	*63,140*	*85,057*	*47,738*	*51,055*	*47,123*	*60,355*	*38,588*
Spline estimate in 1968	0.020	-0.001	0.007	0.046	0.143	-0.094	-0.017	0.002	0.034	-0.002
	(0.068)	(0.068)	(0.073)	(0.085)	(0.080)	(0.067)	(0.065)	(0.068)	(0.064)	(0.045)
p-value, wild cluster bootstrap	[0.784]	[0.992]	[0.912]	[0.635]	[0.120]	[0.160]	[0.790]	[0.988]	[0.637]	[0.984]
Trend-break in 1964	0.005	-0.000	-0.017	-0.020	-0.019	-0.009	-0.015	-0.014	-0.011	0.016
	(0.017)	(0.017)	(0.018)	(0.017)	(0.022)	(0.018)	(0.015)	(0.016)	(0.015)	(0.010)
Pre-trend slope, 1949-1964	0.009	0.012	0.021	-0.001	0.020	0.011	0.018	0.014	0.010	-0.004
	(0.005)	(0.007)	(0.005)	(0.005)	(0.006)	(0.007)	(0.006)	(0.007)	(0.004)	(0.006)
C. Log annual hours worked, mean 1960 level:	*132 M*	*111 M*	*115 M*	*83 M*	*119 M*	*73 M*	*73 M*	*70 M*	*83 M*	*62 M*
Spline estimate in 1968	0.026	0.006	0.010	0.060	0.153	-0.098	-0.015	0.008	0.027	0.016
	(0.069)	(0.006)	(0.073)	(0.107)	(0.085)	(0.073)	(0.071)	(0.067)	(0.065)	(0.051)
p-value, wild cluster bootstrap	[0.739]	[0.938]	[0.888]	[0.663]	[0.126]	[0.176]	[0.858]	[0.926]	[0.697]	[0.780]
Trend-break in 1964	0.006	0.001	-0.025	-0.024	-0.025	-0.019	-0.023	-0.024	-0.016	0.015
	(0.017)	(0.017)	(0.017)	(0.020)	(0.022)	(0.019)	(0.016)	(0.016)	(0.015)	(0.012)
Pre-trend slope, 1949-1964	0.010	0.012	0.024	0.001	0.024	0.016	0.023	0.018	0.013	-0.005
	(0.006)	(0.007)	(0.007)	(0.005)	(0.007)	(0.008)	(0.008)	(0.007)	(0.005)	(0.007)
Observations	800,345	550,813	695,541	98,485	354,690	441,614	443,988	356,230	514,032	286,184
Industry-Occupation-State-Year Cells	5,264	4,640	4,992	863	2,460	4,395	3,888	3,584	4,319	3,008

Notes: Table presents the spline estimates and standard errors for women. Column 1 replicates column 1 of Table 1. Column 2 limits the sample to full-time wage earners (at least 35 hours per week and 27 or more weeks per year). Columns 3-4 restrict the sample to White and Black workers (race covariate excluded in these specifications). Columns 5-6 restrict the sample to individuals with less than or at least 12 years of education. Columns 7-8 restrict the sample to workers of different ages (age covariates excluded). Columns 9-10 restrict the sample to married and unmarried individuals. Individual observations are reported for Panel A, and the number of job cells are reported for Panels B and C.
Sample and Sources: See Table 1 notes.

Appendix Table 8. The Effect of the Equal Pay Act and Title VII on Employment using Pre-Existing State Equal Pay Laws, Event-Study Estimates

	(1)	(2)	(3)	(4)
	Log Number of Employees		Log Annual Hours Worked	
Year	Women	Men	Women	Men
1949	-0.088	-0.088	-0.105	-0.072
	(0.081)	(0.098)	(0.084)	(0.104)
1959	0.026	0.030	0.023	0.017
	(0.047)	(0.057)	(0.042)	(0.063)
1961	-0.106	-0.109	-0.078	-0.113
	(0.047)	(0.048)	(0.058)	(0.049)
1962	0.015	0.039	-0.010	0.016
	(0.061)	(0.052)	(0.058)	(0.059)
1963	0.049	0.041	0.059	0.027
	(0.027)	(0.034)	(0.044)	(0.042)
1964 (omitted)				
1965	0.056	0.037	0.058	0.028
	(0.062)	(0.044)	(0.071)	(0.048)
1966	0.118	0.091	0.113	0.065
	(0.035)	(0.027)	(0.028)	(0.027)
1967	0.103	0.076	0.112	0.050
	(0.058)	(0.047)	(0.066)	(0.050)
1968	0.128	0.089	0.125	0.068
	(0.064)	(0.052)	(0.069)	(0.055)
1969	0.131	0.139	0.154	0.119
	(0.062)	(0.051)	(0.065)	(0.050)
1970	0.116	0.108	0.130	0.122
	(0.062)	(0.047)	(0.069)	(0.047)
1971	0.143	0.135	0.158	0.140
	(0.066)	(0.057)	(0.073)	(0.057)
1972	0.166	0.158	0.166	0.158
	(0.066)	(0.050)	(0.072)	(0.052)
1973	0.169	0.168	0.173	0.172
	(0.070)	(0.060)	(0.079)	(0.059)
1974	0.149	0.178	0.120	0.155
	(0.070)	(0.064)	(0.079)	(0.071)
Observations	5,264	10,640	5,264	10,640

Notes: Table presents the event-study coefficients and standard errors from model 2 of equation (2) presented in Figure 6. The standard errors have been corrected for heteroskedasticity and an arbitrary correlation within state group.
Sample and Sources: See notes to Figure 6.

Appendix Table 9. Cells Included in the 1960 Gender Wage Gap Analysis, by Occupation and Industry

Occupation	Industry	Number of State Groups
Professional, Technical	Mining	2
	Construction	6
	Manufacturing	21
	Transportation, Communications, Electric, Gas & Sanitary Services	19
	Wholesale Trade	5
	Retail Trade	19
	Finance, Insurance & Real Estate	19
	Services	21
	Public Administration	21
Managers, Officials and Proprietors	Mining	1
	Construction	10
	Manufacturing	21
	Transportation, Communications, Electric, Gas & Sanitary Services	18
	Wholesale Trade	19
	Retail Trade	21
	Finance, Insurance & Real Estate	21
	Services	21
	Public Administration	21
Clerical	Mining	13
	Construction	21
	Manufacturing	21
	Transportation, Communications, Electric, Gas & Sanitary Services	21
	Wholesale Trade	21
	Retail Trade	21
	Finance, Insurance & Real Estate	21
	Services	21
	Public Administration	21
Sales	Manufacturing	20
	Transportation, Communications, Electric, Gas & Sanitary Services	3
	Wholesale Trade	17
	Retail Trade	21
	Finance, Insurance & Real Estate	21
	Services	18
Craftsmen	Construction	2
	Manufacturing	21
	Transportation, Communications, Electric, Gas & Sanitary Services	15
	Wholesale Trade	4
	Retail Trade	20
	Finance, Insurance & Real Estate	1
	Services	19
	Public Administration	5
Operatives	Manufacturing	21
	Transportation, Communications, Electric, Gas & Sanitary Services	18
	Wholesale Trade	20
	Retail Trade	21
	Finance, Insurance & Real Estate	2
	Services	21
	Public Administration	14
Service Workers	Manufacturing	20
	Transportation, Communications, Electric, Gas & Sanitary Services	19
	Wholesale Trade	1
	Retail Trade	21
	Finance, Insurance & Real Estate	20
	Services	21
	Public Administration	20

(table is continued on next page)

Non-farm Laborers	Manufacturing	20
	Transportation, Communications, Electric, Gas & Sanitary Services	6
	Wholesale Trade	2
	Retail Trade	9
	Services	10
	Public Administration	2
Total		**942**

Notes: Table reports the number of industry-occupation-state-group cells included in the analysis. The final column reports the number of state-groups within each occupation-industry pair.
Sources: 5% sample of the 1960 Decennial Census (Ruggles et al. 2023).

Appendix Table 10. Cells Excluded from the 1960 Gender Wage Gap Analysis, by Occupation and Industry

Occupation	Industry	Number of State Groups
Professional, Technical	Mining	19
	Construction	15
	Transportation, Communications, Electric, Gas & Sanitary Services	2
	Wholesale Trade	16
	Retail Trade	2
	Finance, Insurance & Real Estate	2
Managers, Officials and Proprietors	Mining	20
	Construction	11
	Transportation, Communications, Electric, Gas & Sanitary Services	3
	Wholesale Trade	2
Clerical	Mining	8
Sales	Mining	21
	Construction	21
	Manufacturing	1
	Transportation, Communications, Electric, Gas & Sanitary Services	18
	Wholesale Trade	4
	Services	3
	Public Administration	21
Craftsmen	Mining	21
	Construction	19
	Transportation, Communications, Electric, Gas & Sanitary Services	6
	Wholesale Trade	17
	Retail Trade	1
	Finance, Insurance & Real Estate	20
	Services	2
	Public Administration	16
Operatives	Mining	21
	Construction	21
	Transportation, Communications, Electric, Gas & Sanitary Services	3
	Wholesale Trade	1
	Finance, Insurance & Real Estate	19
	Public Administration	7
Service Workers	Mining	21
	Construction	21
	Manufacturing	1
	Transportation, Communications, Electric, Gas & Sanitary Services	2
	Wholesale Trade	20
	Finance, Insurance & Real Estate	1
	Public Administration	1
Non-farm Laborers	Mining	21
	Construction	21
	Manufacturing	1
	Transportation, Communications, Electric, Gas & Sanitary Services	15
	Wholesale Trade	19
	Retail Trade	12
	Finance, Insurance & Real Estate	21
	Services	11
	Public Administration	19
Total		**570**

Notes: Table reports the number of industry-occupation-state-group cells *excluded* from the analysis. The final column reports the number of state-groups within each occupation-industry pair that are dropped from the analysis because fewer than 10 men and women wage earners are observed in 1960 or there are no observations in the ASEC during our period of interest. We also drop cells in the agriculture industry or farmer and farm-laborer occupations.
Sources: 5% sample of the 1960 Decennial Census (Ruggles et al. 2023).

Appendix Table 11. Observation Counts by Sex for Year, Industry, and Occupation

	Observations	
Year, Industry, and Occupation	Men	Women
A. Year (of wage or weeks observation, or survey year – 1)		
1949	68,888	28,639
1959	1,329,790	674,676
1961	11,078	5,819
1962	7,811	4,249
1963	11,373	6,109
1964	11,331	6,215
1965	24,093	13,234
1966	15,408	8,493
1967	23,981	14,149
1968	24,300	14,393
1969	23,437	14,146
1970	23,322	14,305
1971	22,354	13,900
1972	21,740	13,734
1973	21,334	13,778
1974	20,935	13,948
B. Industry		
Mining	32,695	1,424
Construction	160,298	6,432
Manufacturing	649,683	223,953
Transportation, Communications, Electric, Gas & Sanitary Services	185,461	31,865
Wholesale Trade	76,048	20,241
Retail Trade	171,370	154,370
Finance, Insurance & Real Estate	59,935	47,009
Services	204,015	330,382
Public Administration	121,670	44,111
C. Occupation		
Professional, technical	198,752	125,208
Managers, Officials and Proprietors	160,075	26,786
Clerical	132,717	265,676
Sales	107,363	64,267
Craftsmen	416,512	12,589
Operatives	408,780	174,146
Service Workers	110,528	186,145
Non-farm Laborers	126,448	4,970

Notes: Table reports the number of observations in our wage earner sample by sex for each year, industry, and observation.
Sample: See Figure 5 notes.

Appendix Table 12. The Effect of the Equal Pay Act and Title VII on Weekly Wages using the 1960 Gender Wage Gap, Event-Study Estimates

	(1)	(2)	(3)	(4)
		Women		Men
Year	Model 1	Model 2	Model 3	Model 3
1949	0.093	0.092	0.012	0.003
	(0.021)	(0.020)	(0.034)	(0.018)
1959	0.015	0.009	-0.003	0.008
	(0.020)	(0.020)	(0.031)	(0.016)
1961	0.003	0.002	0.032	0.005
	(0.031)	(0.031)	(0.045)	(0.024)
1962	0.008	0.001	-0.000	0.003
	(0.033)	(0.030)	(0.046)	(0.023)
1963	0.016	0.016	0.027	-0.010
	(0.025)	(0.024)	(0.042)	(0.021)
1964 (omitted)				
1965	0.007	-0.001	0.018	-0.007
	(0.027)	(0.022)	(0.033)	(0.018)
1966	0.062	0.056	0.091	-0.007
	(0.035)	(0.031)	(0.045)	(0.020)
1967	0.099	0.092	0.098	-0.015
	(0.030)	(0.027)	(0.038)	(0.020)
1968	0.100	0.094	0.083	0.008
	(0.031)	(0.027)	(0.043)	(0.020)
1969	0.119	0.114	0.129	-0.002
	(0.031)	(0.027)	(0.040)	(0.020)
1970	0.103	0.101	0.077	0.006
	(0.031)	(0.027)	(0.044)	(0.020)
1971	0.097	0.092	0.110	-0.007
	(0.030)	(0.027)	(0.038)	(0.020)
1972	0.151	0.145	0.158	-0.013
	(0.035)	(0.031)	(0.043)	(0.020)
1973	0.155	0.155	0.216	-0.015
	(0.034)	(0.028)	(0.040)	(0.021)
1974	0.167	0.164	0.176	-0.029
	(0.037)	(0.030)	(0.046)	(0.022)
Observations	797,272	797,272	797,272	1,362,199

Notes: Table presents the event-study coefficients and standard errors from equation (4) presented in Figure 9. The standard errors have been corrected for heteroskedasticity and an arbitrary correlation within industry-occupation-state-group. Point estimates and standard errors are multiplied by the average gender wage gap in the 1960 Census (equal to 0.374).
Sample and Sources: See notes to Figure 9.

Appendix Table 13. The Effects of the Equal Pay Act and Title VII on The Distribution of Weekly Wages using 1960 Gender Wage Gaps

	(1) P10	(2) P25	(3) P50	(4) P75	(5) P90
A. Women					
Spline estimate in 1968 at mean *Gap*	0.314	0.184	-0.036	-0.032	0.085
	(0.099)	(0.040)	(0.029)	(0.024)	(0.037)
Trend-break in 1964	0.079	0.046	-0.009	-0.008	0.021
	(0.025)	(0.010)	(0.007)	(0.006)	(0.009)
Pre-trend slope, 1949-1964	0.016	-0.006	-0.002	-0.001	-0.004
	(0.004)	(0.004)	(0.002)	(0.002)	(0.002)
B. Men					
Spline estimate in 1968 at mean *Gap*	0.052	0.014	-0.046	-0.057	-0.031
	(0.023)	(0.020)	(0.012)	(0.014)	(0.025)
Trend-break in 1964	0.013	0.004	-0.012	-0.014	-0.008
	(0.006)	(0.005)	(0.003)	(0.004)	(0.006)
Pre-trend slope, 1949-1964	-0.007	-0.003	0.002	0.004	0.006
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Covariates					
Demographics, Ind-Occ-State FEs, Year FEs	X	X	X	X	X
Ind-Year FEs, Occ-Year FEs, State-Year FEs	X	X	X	X	X

Notes: Table reports estimates of equation (5), where the dependent variable is the recentered influence function for weekly log wages and all regressions include as covariates an indicator for nonwhite race, a quadratic function in age, and fixed effects for industry-occupation-state-group, industry-year, occupation-year, and state-group-year. Spline estimates at mean *Gap* are multiplied by the average gender gap (equal to 0.374). As in Figure 9, we pool years 1959 and 1961-1963 because of small sample sizes in the CPS. See notes to Table 2 for details on sample and specification.
Sample and Sources: See Figure 10 notes.

Appendix Table 14. Heterogeneity in the Effects of the Equal Pay Act and Title VII on Wages and Employment of Women using 1960 Gender Wage Gaps

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All wage earners	Full-time wage earners	White	Black	Less than 12 years education	At least 12 years education	Age 25-44	Age 45-64	Married	Unmarried
A. Log weekly wage										
Spline estimate in 1968 at mean *Gap*	0.100	0.140	0.079	0.045	0.093	0.095	0.096	0.102	0.090	0.111
	(0.023)	(0.023)	(0.024)	(0.059)	(0.030)	(0.028)	(0.027)	(0.035)	(0.030)	(0.031)
Trend-break in 1964	0.067	0.098	0.056	0.022	0.052	0.077	0.065	0.065	0.060	0.074
	(0.015)	(0.016)	(0.017)	(0.029)	(0.017)	(0.023)	(0.018)	(0.022)	(0.020)	(0.021)
Pre-trend slope, 1949-1964	-0.001	-0.010	0.001	-0.008	-0.002	-0.005	0.002	-0.002	0.003	-0.006
	(0.004)	(0.004)	(0.005)	(0.009)	(0.005)	(0.006)	(0.004)	(0.007)	(0.005)	(0.005)
B. Log number of employees										
Spline estimate in 1968 at mean *Gap*	-0.118	-0.060	-0.050	-0.752	-0.239	-0.005	-0.160	-0.115	-0.085	-0.213
	(0.047)	(0.055)	(0.050)	(0.321)	(0.085)	(0.068)	(0.056)	(0.073)	(0.067)	(0.069)
Trend-break in 1964	-0.079	-0.042	-0.035	-0.372	-0.133	-0.004	-0.108	-0.073	-0.057	-0.143
	(0.031)	(0.039)	(0.035)	(0.159)	(0.047)	(0.055)	(0.038)	(0.046)	(0.045)	(0.046)
Pre-trend slope, 1949-1964	-0.005	-0.010	0.024	0.059	0.000	0.026	-0.016	0.007	-0.016	0.016
	(0.011)	(0.016)	(0.012)	(0.030)	(0.010)	(0.018)	(0.017)	(0.015)	(0.014)	(0.015)
C. Log annual hours worked										
Spline estimate in 1968 at mean *Gap*	-0.087	-0.086	-0.063	-0.573	-0.157	-0.021	-0.130	-0.079	-0.058	-0.135
	(0.052)	(-0.086)	(0.058)	(0.502)	(0.081)	(0.076)	(0.056)	(0.077)	(0.076)	(0.080)
Trend-break in 1964	-0.058	-0.060	-0.044	-0.284	-0.088	-0.017	-0.088	-0.050	-0.038	-0.090
	(0.034)	(0.039)	(0.041)	(0.249)	(0.045)	(0.062)	(0.038)	(0.049)	(0.051)	(0.053)
Pre-trend slope, 1949-1964	-0.019	-0.016	0.012	0.019	-0.019	0.017	-0.026	-0.001	-0.025	-0.004
	(0.013)	(0.015)	(0.014)	(0.016)	(0.011)	(0.018)	(0.017)	(0.017)	(0.015)	(0.018)
Group mean *Gap*	0.374	0.358	0.356	0.505	0.449	0.309	0.370	0.394	0.374	0.374
Observations	797,272	548,891	693,141	97,935	353,102	440,266	442,429	354,843	512,242	285,029
Industry-Occupation-State-Year Cells	5,264	4,640	4,976	847	2,430	4,395	3,888	3,568	4,319	3,008

Notes: Table presents the spline estimates and standard errors for women. Column 1 replicates column 1 of Table 2. See notes to Appendix Table 7 for descriptions of samples in remaining columns. The spline estimates in 1968 are scaled using the mean gender gap for the group, whose value in the data is reported in the third-to-last row. Individual observations are reported for Panel A, and the number of job cells are reported for Panels B and C. See Table 2 notes and text for details.
Sample and Sources: See Table 2 notes.

Appendix Table 15. The Effect of the Equal Pay Act and Title VII on Employment using the 1960 Gender Wage Gap, Event-Study Estimates

	(1)	(2)	(3)	(4)
	Log Number of Employees		Log Annual Hours Worked	
Year	Women	Men	Women	Men
1949	0.095	-0.076	0.125	-0.030
	(0.087)	(0.043)	(0.100)	(0.045)
1959	0.075	-0.015	0.038	0.013
	(0.071)	(0.037)	(0.087)	(0.039)
1961	0.099	-0.075	0.094	-0.105
	(0.090)	(0.056)	(0.123)	(0.062)
1962	0.048	-0.097	0.040	-0.110
	(0.092)	(0.055)	(0.112)	(0.060)
1963	0.170	0.037	0.088	0.039
	(0.077)	(0.042)	(0.095)	(0.044)
1964 (omitted)				
1965	0.038	0.018	0.018	0.021
	(0.067)	(0.043)	(0.078)	(0.045)
1966	-0.021	-0.033	-0.081	-0.026
	(0.092)	(0.048)	(0.120)	(0.049)
1967	-0.039	0.043	-0.104	0.067
	(0.089)	(0.046)	(0.105)	(0.048)
1968	-0.046	-0.025	-0.078	-0.005
	(0.102)	(0.046)	(0.121)	(0.048)
1969	-0.088	-0.016	-0.125	0.012
	(0.101)	(0.045)	(0.136)	(0.049)
1970	-0.062	-0.077	-0.117	-0.069
	(0.088)	(0.048)	(0.098)	(0.052)
1971	-0.160	-0.105	-0.284	-0.088
	(0.094)	(0.047)	(0.101)	(0.048)
1972	-0.178	-0.102	-0.217	-0.093
	(0.093)	(0.047)	(0.105)	(0.049)
1973	-0.098	-0.052	-0.169	-0.049
	(0.086)	(0.047)	(0.104)	(0.048)
1974	-0.199	-0.004	-0.256	0.031
	(0.089)	(0.049)	(0.116)	(0.056)
Observations	5,264	10,640	5,264	10,640

Notes: Table presents the event-study coefficients and standard errors from model 3 of equation (4) presented in Figure 11. The standard errors have been corrected for heteroskedasticity and an arbitrary correlation within industry-occupation-state-group. Point estimates and standard errors are multiplied by the average gender wage gap in the 1960 Census (equal to 0.374).
Sample and Sources: See notes to Figure 11.

Appendix Table 16. Dollar Values of Percentiles of Hourly, Weekly, and Annual Wages for Women

	Hourly Wage		Weekly Wage		Annual Wage	
Percentile	Value in 1964$	Value in 2022$	Value in 1964$	Value in 2022$	Value in 1964$	Value in 2022$
1	0.17	1.53	3.92	35.63	68.44	622.68
2	0.25	2.32	6.02	54.76	121.97	1109.79
3	0.32	2.92	8.00	72.74	182.96	1664.69
4	0.38[a]	3.44	9.93	90.31	218.43	1987.43
5	0.43[b]	3.87	11.75	106.91	274.78	2500.14
6	0.48	4.36	12.81	116.57	316.26	2877.52
7	0.52[c]	4.76	14.69	133.68	373.29	3396.42
8	0.57	5.16	15.82	143.95	414.76	3773.80
9	0.61	5.55	17.56	159.74	484.81	4411.12
10	0.65	5.90	18.82	171.23	518.46	4717.25

Notes: Percentiles are calculated separately for each outcome using the 1960 Census and 1962-1964 CPS. [a] Blau and Kahn (2017) exclude workers earning less than 29% of the minimum wage, or around \$0.36 per hour in 1964 dollars (\$1.25 x 0.29 = \$0.36). [b] Derenoncourt and Montialoux (2020) study the effects of the FLSA expansions on the Black-White wage gap in the 1960s and winsorize the annual wage data at the 5-percent level. [c] Katz and Murphy (1992) exclude workers earning less than 50% of the 1982 minimum wage (\$3.35), which is equivalent to around \$0.55 per hour in 1964.
Sample: Women ages 25 to 64 who are not in the Armed Forces, institutionalized, employed in agriculture, or self-employed.
Sources: 1% sample of the 1960 Decennial Census, 1962-1964 CPS ASEC (Flood et al. 2022, Ruggles et al. 2023).

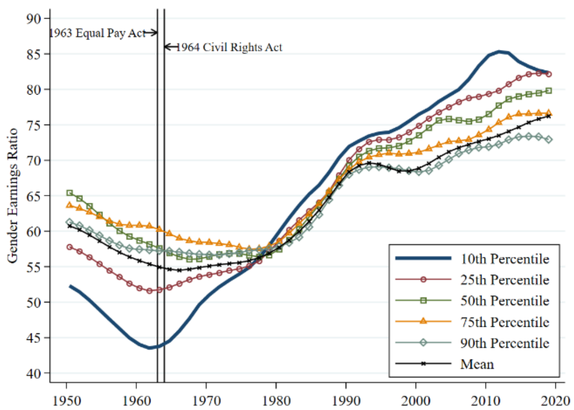
Appendix Table 17. The Effects of the Equal Pay Act and Title VII on Wages and Employment using 1960 Gender Wage Gaps, Robustness to Accounting for the Gender Gap as a Generated Regressor

	(1)	(2)	(3)
	Women	Men	Women -Men
A. Log weekly wage			
Spline estimate in 1968 at mean *Gap*	0.100	-0.007	0.107
	(0.023)	(0.011)	(0.025)
	[0.023]	[0.010]	[0.025]
Trend-break in 1964	0.067	-0.004	0.071
	(0.015)	(0.008)	(0.017)
	[0.015]	[0.007]	[0.016]
Pre-trend slope, 1949-1964	-0.001	-0.000	-0.001
	(0.004)	(0.002)	(0.004)
	[0.004]	[0.002]	[0.004]
B. Log number of employees			
Spline estimate in 1968 at mean *Gap*	-0.118	-0.062	-0.057
	(0.047)	(0.029)	(0.048)
	[0.044]	[0.026]	[0.051]
Trend-break in 1964	-0.079	-0.041	-0.038
	(0.031)	(0.019)	(0.032)
	[0.030]	[0.017]	[0.034]
Pre-trend slope, 1949-1964	-0.005	0.015	-0.020
	(0.011)	(0.005)	(0.011)
	[0.010]	[0.005]	[0.011]
C. Log number of annual hours worked			
Spline estimate in 1968 at mean *Gap*	-0.087	-0.047	-0.039
	(0.052)	(0.030)	(0.054)
	[0.053]	[0.027]	[0.056]
Trend-break in 1964	-0.058	-0.032	-0.026
	(0.034)	(0.020)	(0.036)
	[0.035]	[0.018]	[0.038]
Pre-trend slope, 1949-1964	-0.019	0.008	-0.026
	(0.012)	(0.005)	(0.012)
	[0.012]	[0.005]	[0.012]
Observations	797,272	1,362,199	2,159,471
Sex-industry-occupation-state-year cells	5,264	10,640	15,904
Covariates			
Demographics, Ind-Occ-State FEs, Year FEs	X	X	X
Ind-Year FEs, Occ-Year FEs, State-Year FEs	X	X	X

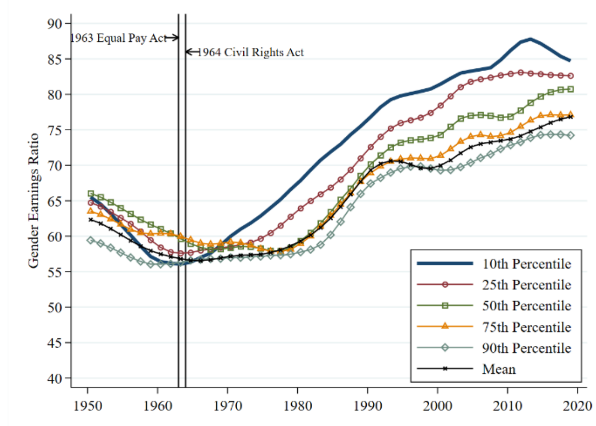
Notes: Table presents the spline estimates and asymptotic standard errors clustered by industry-occupation-state-group in parentheses. The standard errors in brackets are based on the parametric clustered Bayesian bootstrap described in Appendix C, which accounts for the fact that *Gap* is a generated regressor. See notes to Table 2.
Sample and Sources: See Table 2 notes.

Appendix Figure 1. Additional Estimates of the U.S. Gender Gap in Wage Earnings

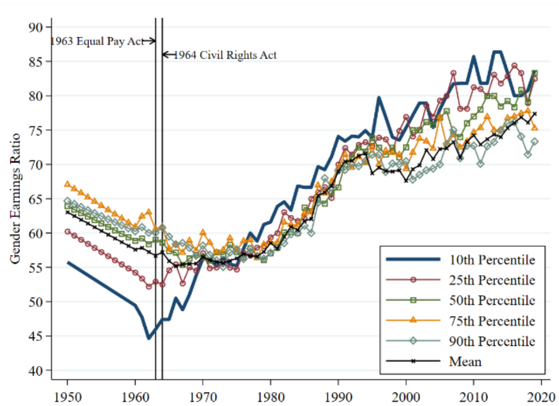
A. Smoothed Estimates for the Gender Earnings Ratio in Annual Wages for Full-Time Workers with at least 27 Weeks of Work, by Percentile



B. Smoothed Estimates for the Gender Earnings Ratio in Weekly Wages for Full-Time, Full-Year Workers, by Percentile

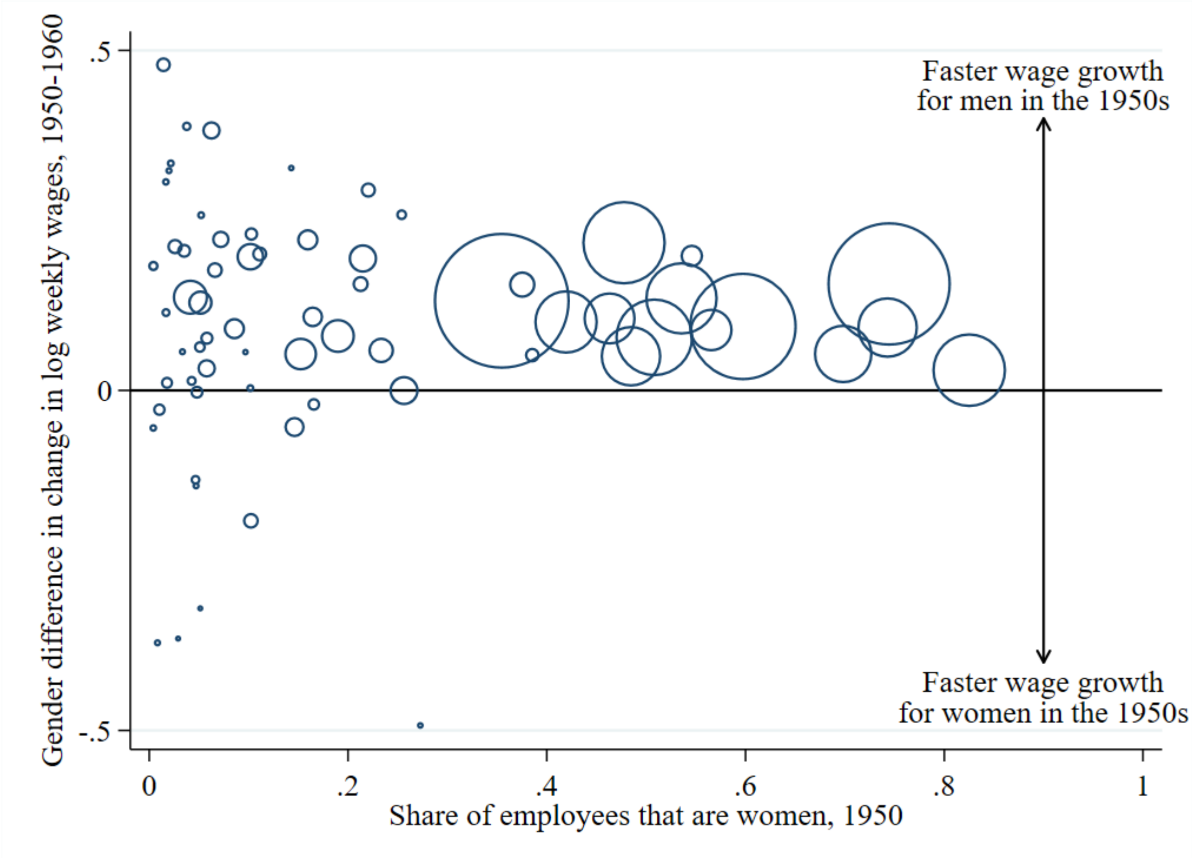


C. Unsmoothed Estimates for the Gender Earnings Ratio in Weekly Wages for Full-Time Workers with at least 27 Weeks of Work, by Percentile



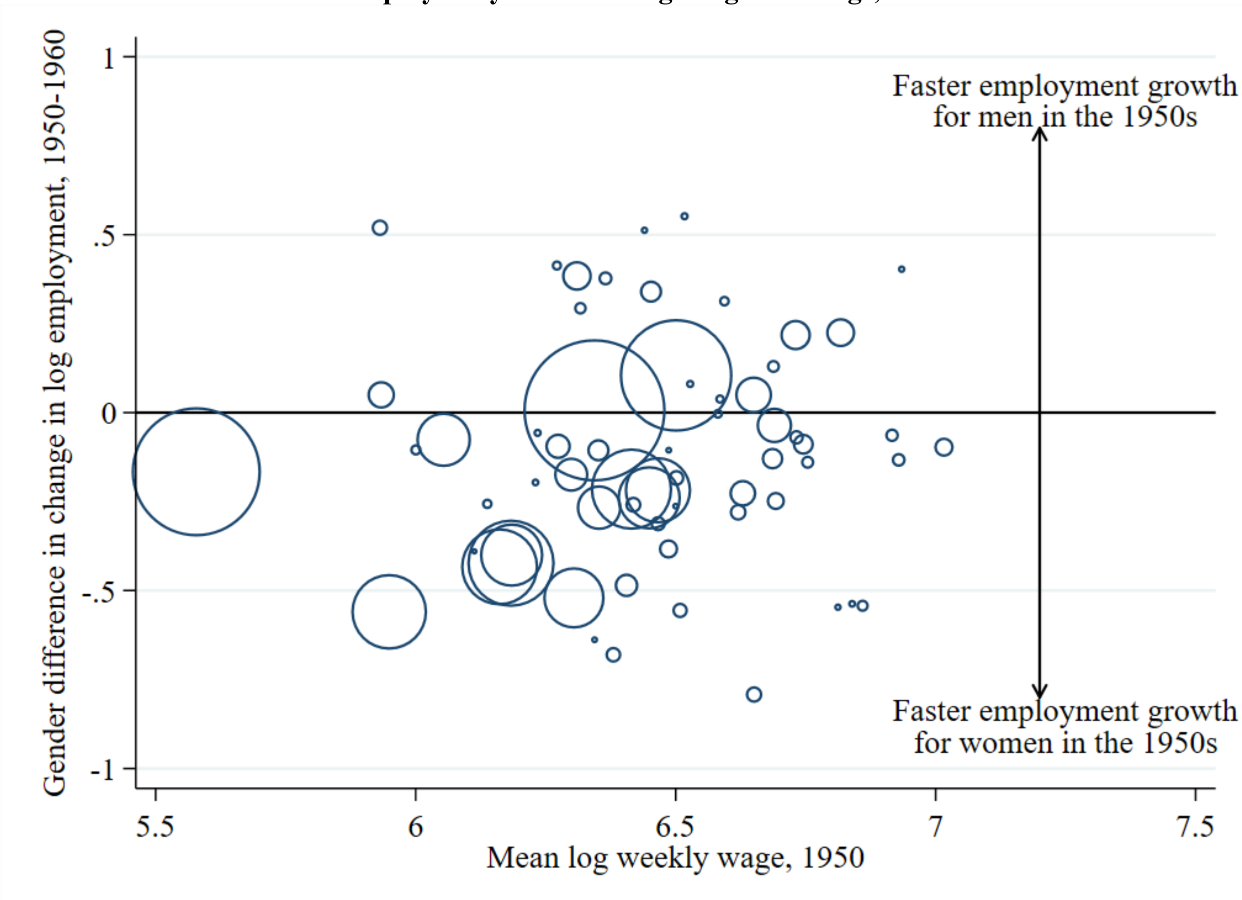
Notes: Figure uses the 1950 and 1960 Decennial Censuses and the 1962 to 2020 ASEC. We linearly extrapolate values for earnings years 1950-1958 and 1960 when Census and CPS data are not available. Panel A uses a sample of wage and salary workers ages 25-64 who work full-time (35+ hours in the survey reference week), work at least 27 weeks in the previous year, and report positive wage income in the previous year. Panel B uses a sample of wage and salary workers ages 16-64 who work full-time, full-year (50+ weeks worked), and report positive wage income in the previous year. Panel C uses the same sample as Panel B of Figure 1. In panels A and B, we smooth the series using a local linear regression with a bandwidth of 2 years. We plot the gender earnings ratio at the *pth* percentile/mean by taking the ratio of the *pth* percentile/mean of the wage distribution for women over the *pth* percentile/mean of the wage distribution for men. See notes to Figure 1 for details on sources.

Appendix Figure 2. Changes in Men's Log Weekly Wages Relative to Women's Log Weekly Wages by the Share of Female Employees, 1950-1960



Notes: Figure plots the change from 1950 to 1960 in men's average log weekly wages minus the change in women's average log weekly wages (y-axis) against the share of employees that are women in 1950 (x-axis) for single digit industry-occupation cells. To minimize the visual influence of outliers, the figure excludes the observation for the mining industry and sales occupation, for which the x-axis value is 0.17 and the y-axis value is 1.4.
Sample: The underlying sample consists of 25-64-year-olds with positive annual wage and salary earnings and weeks worked in the prior year who are not in the Armed Forces, institutionalized, employed in agriculture, or self-employed.
Sources: Authors' calculations using the 1% sample of the 1950 Decennial Census and 5% sample of the 1960 Decennial Census. See text for details on sample selection and exclusion criteria.

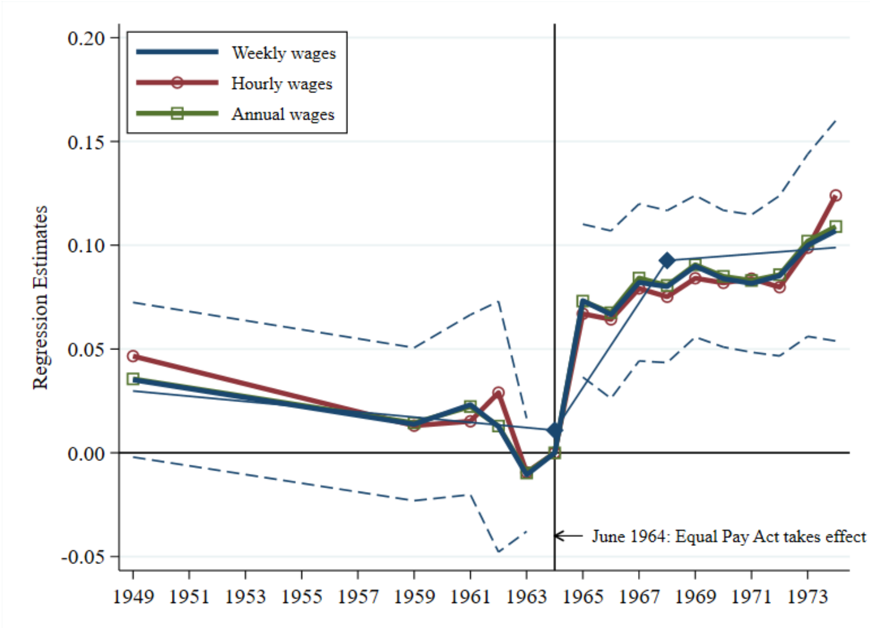
Appendix Figure 3. Changes in the Log Number of Men Employed Relative to the Log Number of Women Employed by the 1950 Log Wage Earnings, 1950-1960



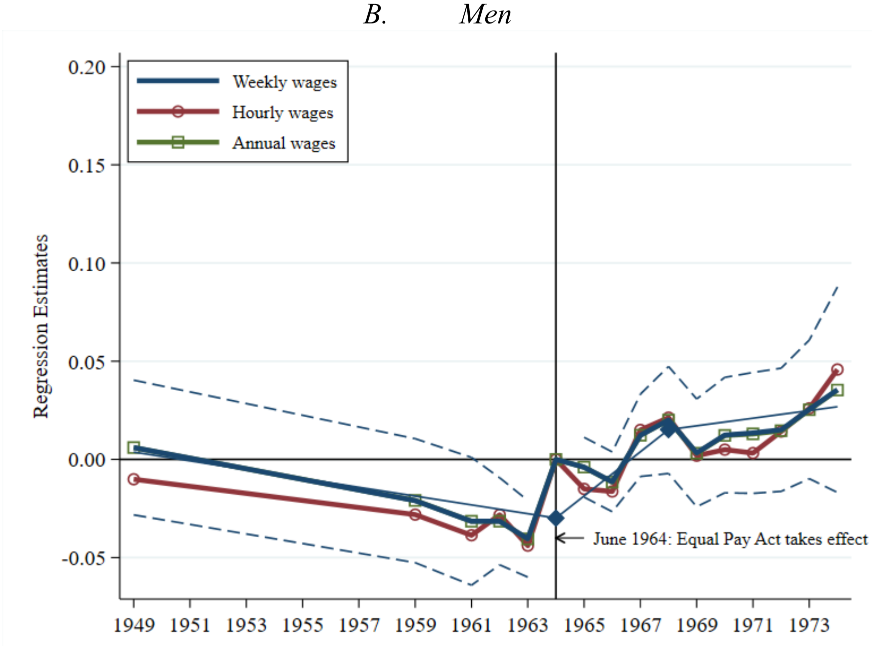
Notes: Figure plots the change from 1950 to 1960 in the log number of employees who are men minus the change in the log number of employees who are women (y-axis) against the average log weekly wage for all individuals in 1950 (x-axis) for single digit industry-occupation cells. To minimize the visual influence of outliers, the figure excludes observations for the mining industry and sales occupation (x-axis: 6.8, y-axis: 1.4), the construction industry and service workers (6.1, -1.7), and the wholesale trade industry and professional occupation (6.8, -1.1).
Sample: The underlying sample consists of 25-64-year-olds with positive annual wage and salary earnings and weeks worked in the prior year who are not in the Armed Forces, institutionalized, employed in agriculture, or self-employed.
Sources: Authors' calculations using the 1% sample of the 1950 Decennial Census and 5% sample of the 1960 Decennial Census. See text for details on sample selection and exclusion criteria.

Appendix Figure 4. The Effect of the Equal Pay Act and Title VII on Wages using Pre-Existing State Equal Pay Laws, Robustness to Using Hourly and Annual Wages

A. Women

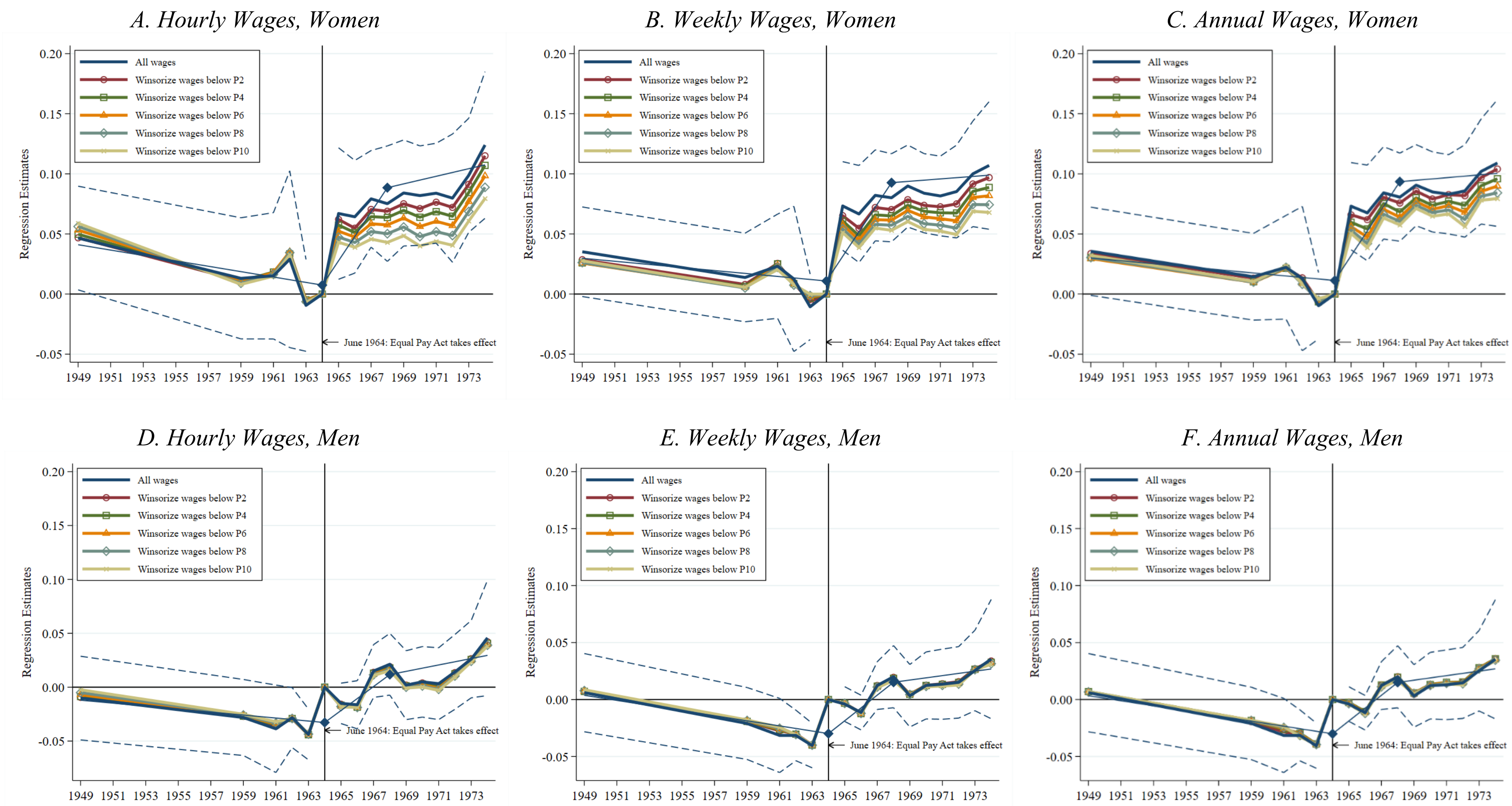


B. Men



Notes: Figure plots the event-study coefficients from equation (1) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within state-group. The dependent variable is either the log weekly wage (our preferred approach), log hourly wage, or log annual wage. Log hourly wage is log annual wage earnings less log weeks worked last year and log hours worked in the reference week. The spline (equation 3) is shown for the log weekly wage. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, and fixed effects for industry-occupation-state-group, industry-year, and occupation-year. We include log hours worked as a covariate when the dependent variable is log weekly wages and log hours worked and log weeks worked when the dependent variable is log annual wages. See description in Appendix A.
Sample and Sources: See Figure 3 notes.

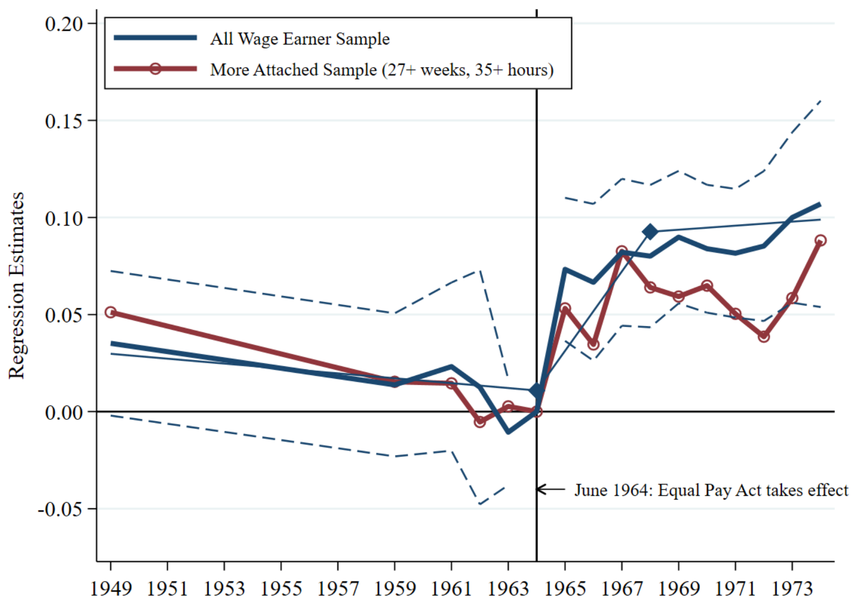
Appendix Figure 5. The Effects of the Equal Pay Act and Title VII on Wages using Pre-Existing State Equal Pay Laws, Robustness to Winsorizing Low Wages



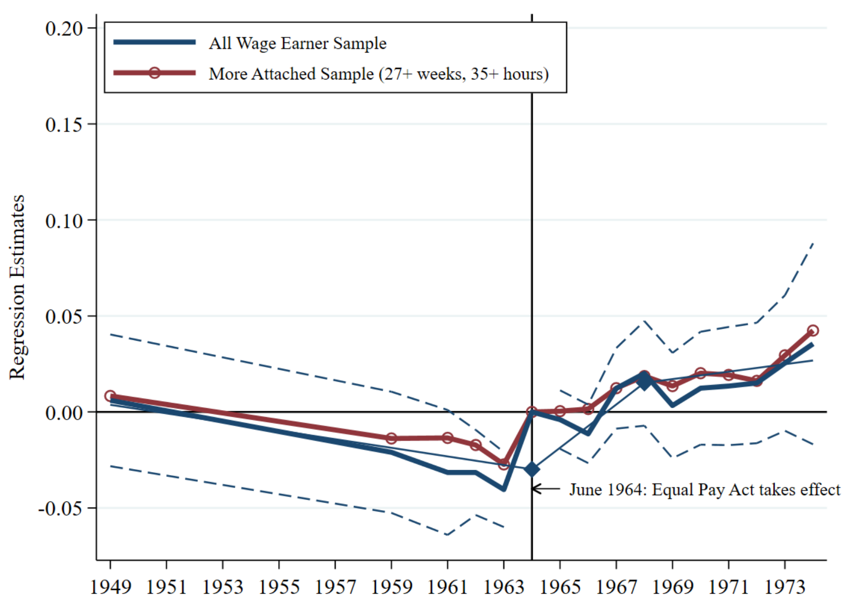
Notes: Figure plots the event-study coefficients from equation (1) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within state-group. The dependent variables are the unwinsorized log hourly, weekly, or annual wage ("all wages") and their winsorized counterparts at the indicated percentile (see Appendix Table 16 for the value in levels). The spline (equation 3) is shown for the unwinsorized dependent variable. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, and fixed effects for industry-occupation-state-group, industry-year, and occupation-year. We include log hours worked as a covariate when the dependent variable is log weekly wages and log hours worked and log weeks worked when the dependent variable is log annual wages. See description in Appendix B for details on winsorizing and Appendix A for details on dependent variables.
Sample and Sources: See Figure 3 notes.

Appendix Figure 6. The Effect of the Equal Pay Act and Title VII on Wages using Pre-Existing State Equal Pay Laws, Robustness to Limiting Sample to More Attached Workers

A. Women



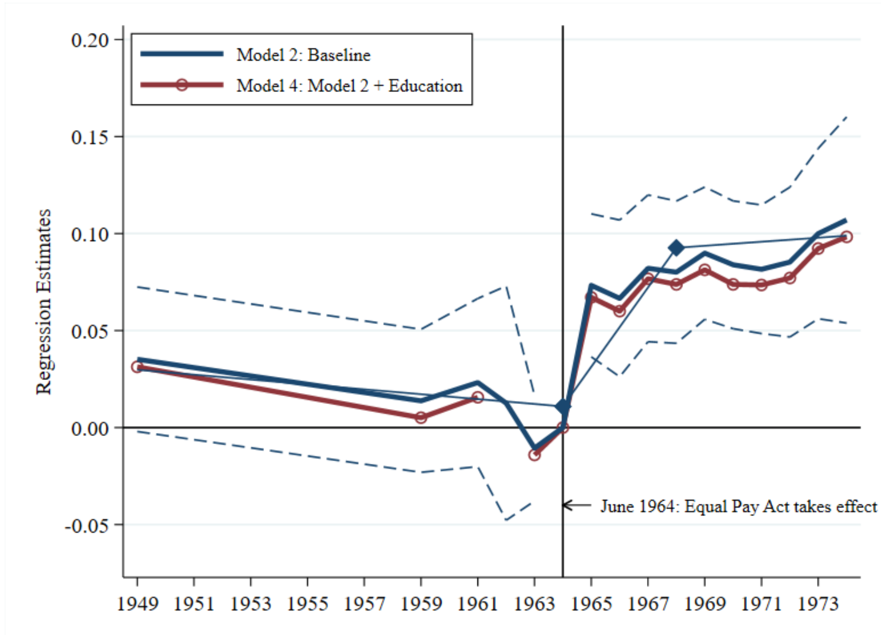
B. Men



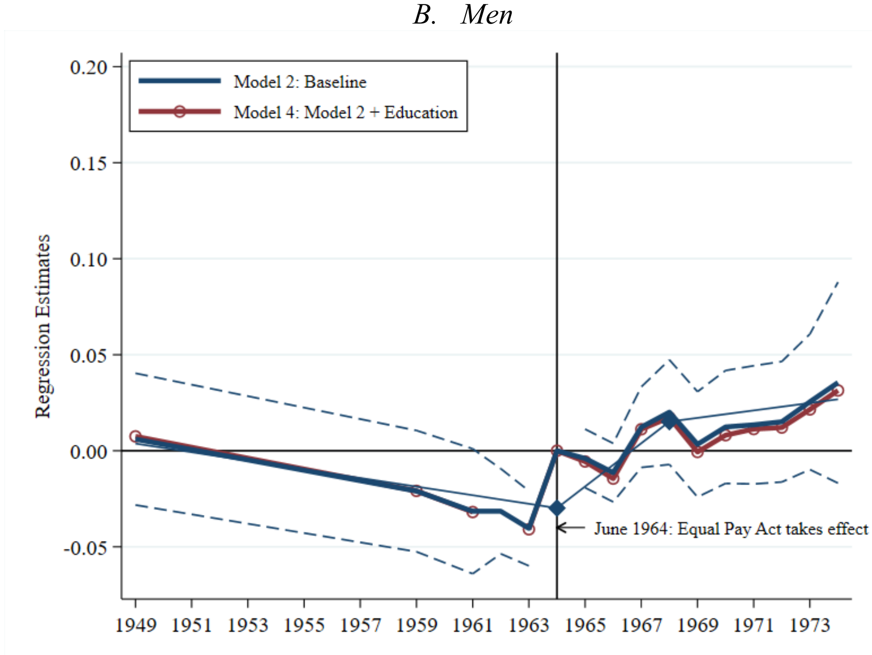
Notes: Figure plots the event-study coefficients from equation (1) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and an arbitrary correlation within state group. The thin lines correspond to spline estimates of equation (3) for the baseline specification. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, log hours worked, and fixed effects for industry-occupation-state-group, industry-year, and occupation-year. The estimates in red are based on a sample of individuals who worked at least 27 weeks in the previous year and at least 35 hours in the reference week.
Sample and Sources: See Figure 3 notes.

Appendix Figure 7. The Effect of the Equal Pay Act and Title VII on Wages using Pre-Existing State Equal Pay Laws, Robustness to Controlling for Education

A. Women



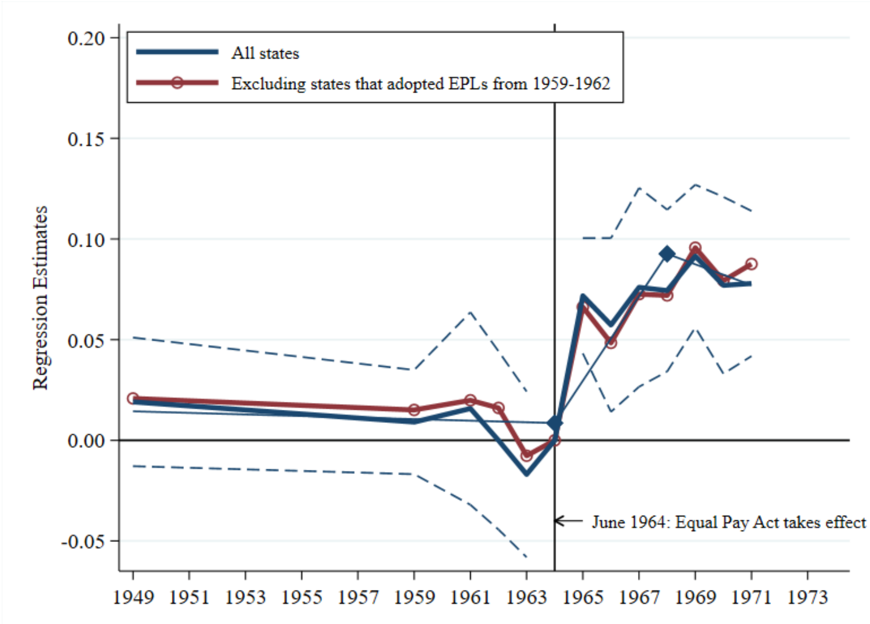
B. Men



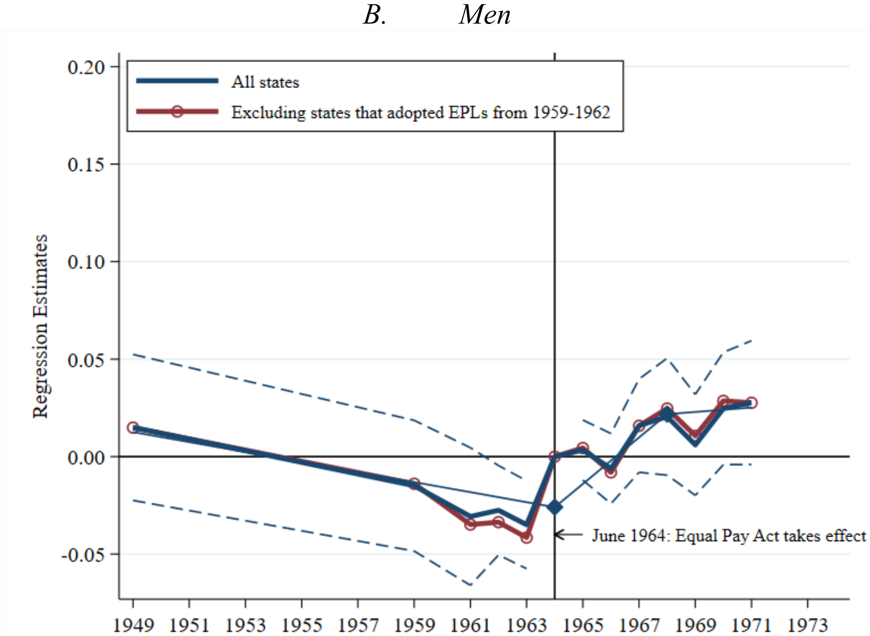
Notes: Figure plots the event-study coefficients from equation (1) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and an arbitrary correlation within state group. The thin lines correspond to spline estimates of equation (3) for the baseline specification. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, log hours worked, and fixed effects for industry-occupation-state-group, industry-year, and occupation-year. The estimates in red include years of education as a covariate. We omit earnings year 1962 from the regression because education is not available in that year.
Sample and Sources: See Figure 3 notes.

Appendix Figure 8. The Effect of the Equal Pay Act and Title VII on Wages using Pre-Existing State Equal Pay Laws, Robustness to Dropping States that Enacted Equal Pay Laws from 1959-1962

A. Women



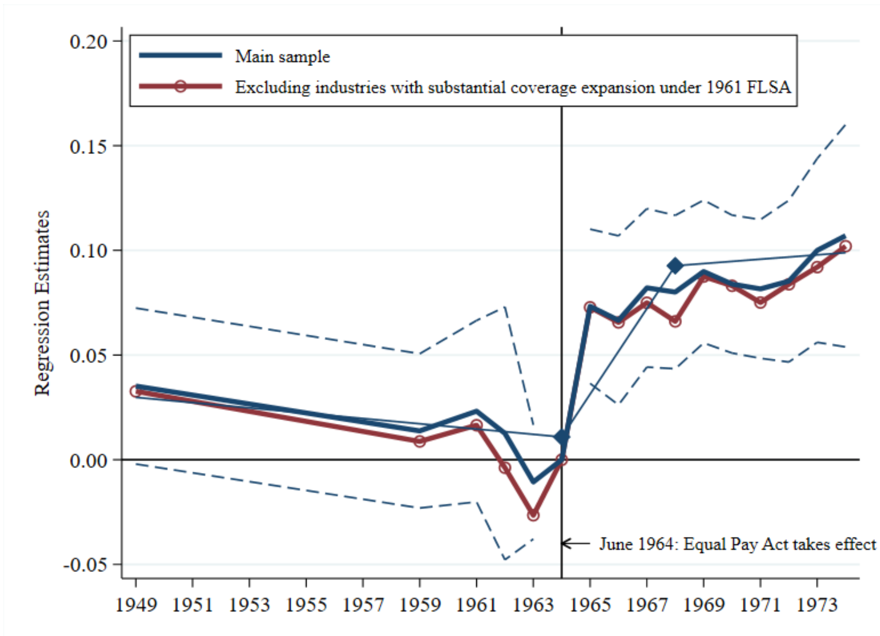
B. Men



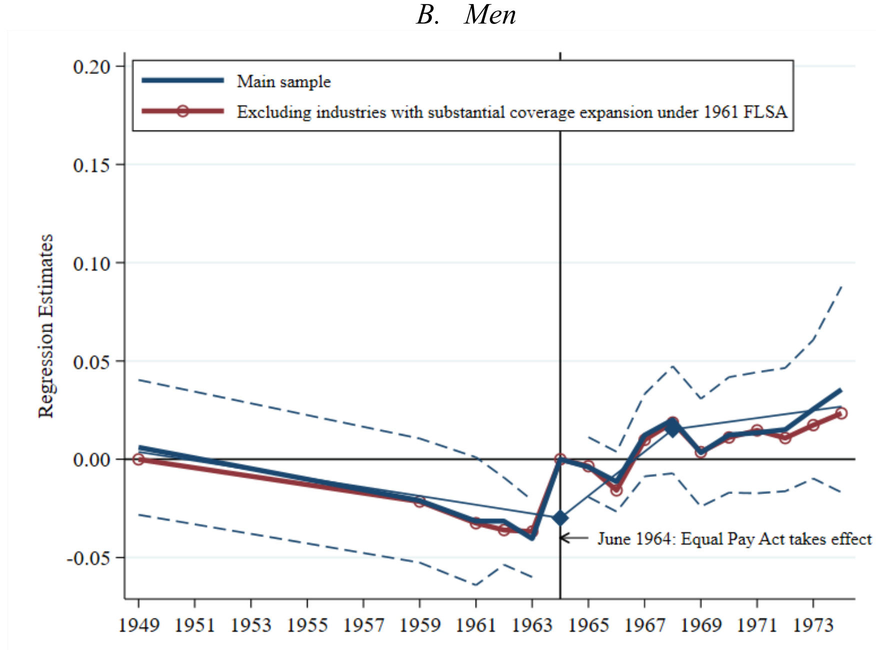
Notes: Figure plots the event-study coefficients from equation (1) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within state-group. We present results for a sample of wage earners in all states, as well as an auxiliary sample that excludes individuals living in state groups that adopted or expanded equal pay laws between 1959 and 1962 (Arizona-Colorado-New Mexico, Alaska-Hawaii-Washington, Michigan-Wisconsin, Ohio, Idaho-Montana-Nevada-Utah-Wyoming). We end the analysis with the 1972 CPS to obtain more detailed state group definitions for this robustness check. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, log hours worked and fixed effects for industry-occupation-state-group, industry-year, and occupation-year. See text for more details.
Sample and Sources: See Figure 3 notes.

Appendix Figure 9. The Effect of the Equal Pay Act and Title VII on Wages using Pre-Existing State Equal Pay Laws, Robustness to Excluding Industries Newly Covered under the 1961 FLSA Amendments

A. Women



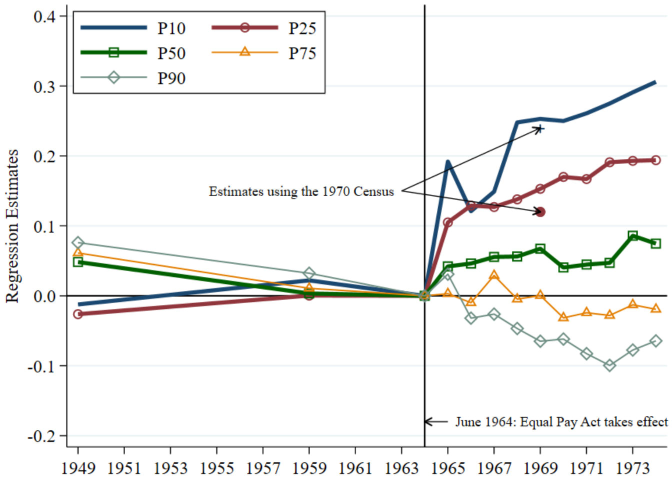
B. Men



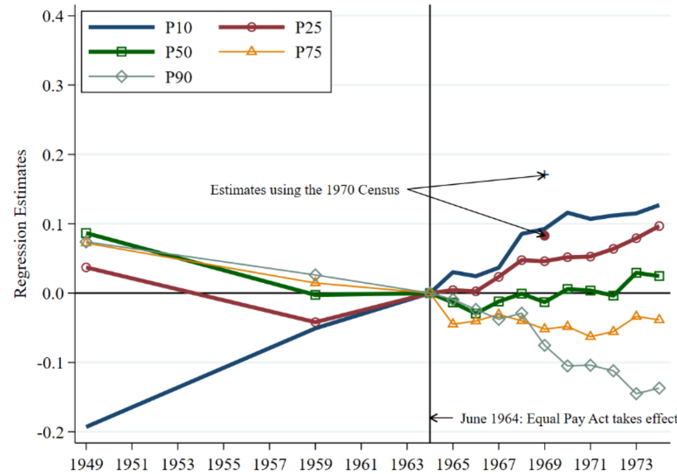
Notes: Figure plots the event-study coefficients from equation (1) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within state-group. We present results for all industry-occupation-state-group cells in our main sample in blue and results when excluding industries where coverage of the minimum wage expanded under the 1961 FLSA amendments in red. These industries are retail trade and construction. The spline (equation 3) is shown for the main sample. All regressions use the covariates from model 2.
Sample and Sources: See Figure 3 notes.

Appendix Figure 10. The Effect of the Equal Pay Act and Title VII on the Distribution of Wages using Pre-Existing State Equal Pay Laws

A. Women's Weekly Wages



B. Men's Weekly Wages

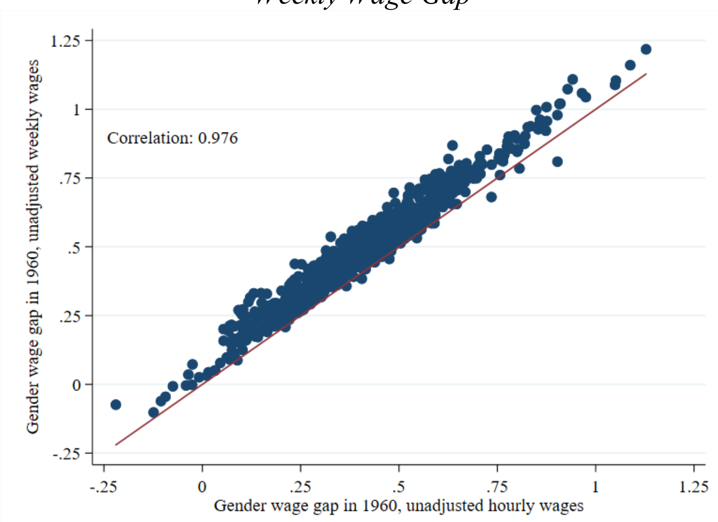


Notes: The figure plots estimates of model 2 of equation (1) where the dependent variable is the RIF for weekly log wages for women (panel A) and men (panel B). Because sample sizes are much smaller in the early ASEC years and because this is a demanding specification, we pool 1959 and 1962-1964 into a single event-study coefficient (plotted in 1959). Estimates for the 1970 Census are shown for the 10th and 25th percentiles, from a regression estimated using only the 1950, 1960, and 1970 Censuses.
Sources: See Figure 3 notes and the combined one-percent Form 1 and Form 2 state samples of the 1970 Decennial Census.
Sample: See Figure 3 notes.

Appendix Figure 11. Comparison of Different Measures of 1960 Gender Wage Gap

A. Unadjusted Hourly Wage Gap to Demographic-Adjusted Hourly Wage Gap

B. Unadjusted Hourly Wage Gap to Unadjusted Weekly Wage Gap

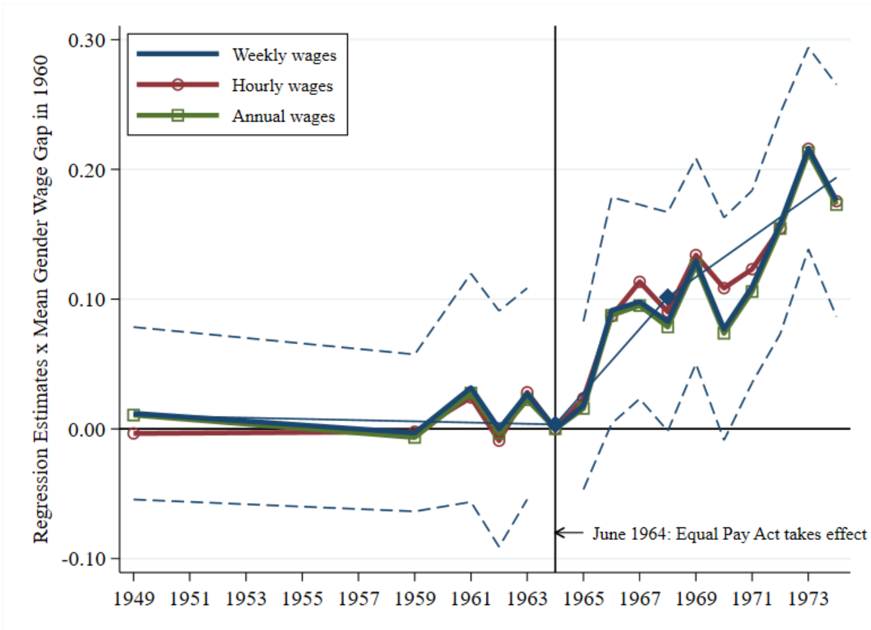


C. Unadjusted Weekly Wage Gap to Demographic and Hours-Adjusted Weekly Wage Gap

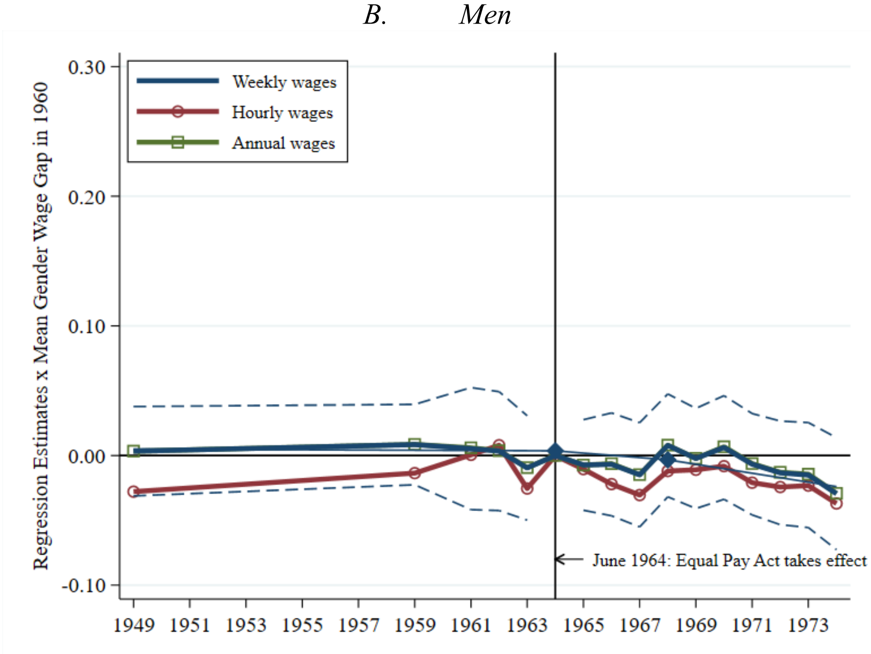
Notes: Each point represents the gender wage gap in an industry-occupation-state-group cell. We construct the unadjusted hourly and weekly wage gaps as the difference between mean log wages of men and women as described in the text. The covariate-adjusted hourly wage gap is estimated from a regression that pools women and men and includes as covariates an indicator for nonwhite race, a quadratic in age, and indicators for educational attainment (with all covariates assumed to have the same coefficient for women and men). The covariate-adjusted weekly wage gap also includes the log of usual hours worked as a covariate in the regression.
Sources: 5% sample of the 1960 Decennial Census (Ruggles et al. 2023).
Sample: See Figure 7 notes.

Appendix Figure 12. The Effect of the Equal Pay Act and Title VII on Wages using 1960 Gender Wage Gaps, Robustness to Using Hourly and Annual Wages

A. Women

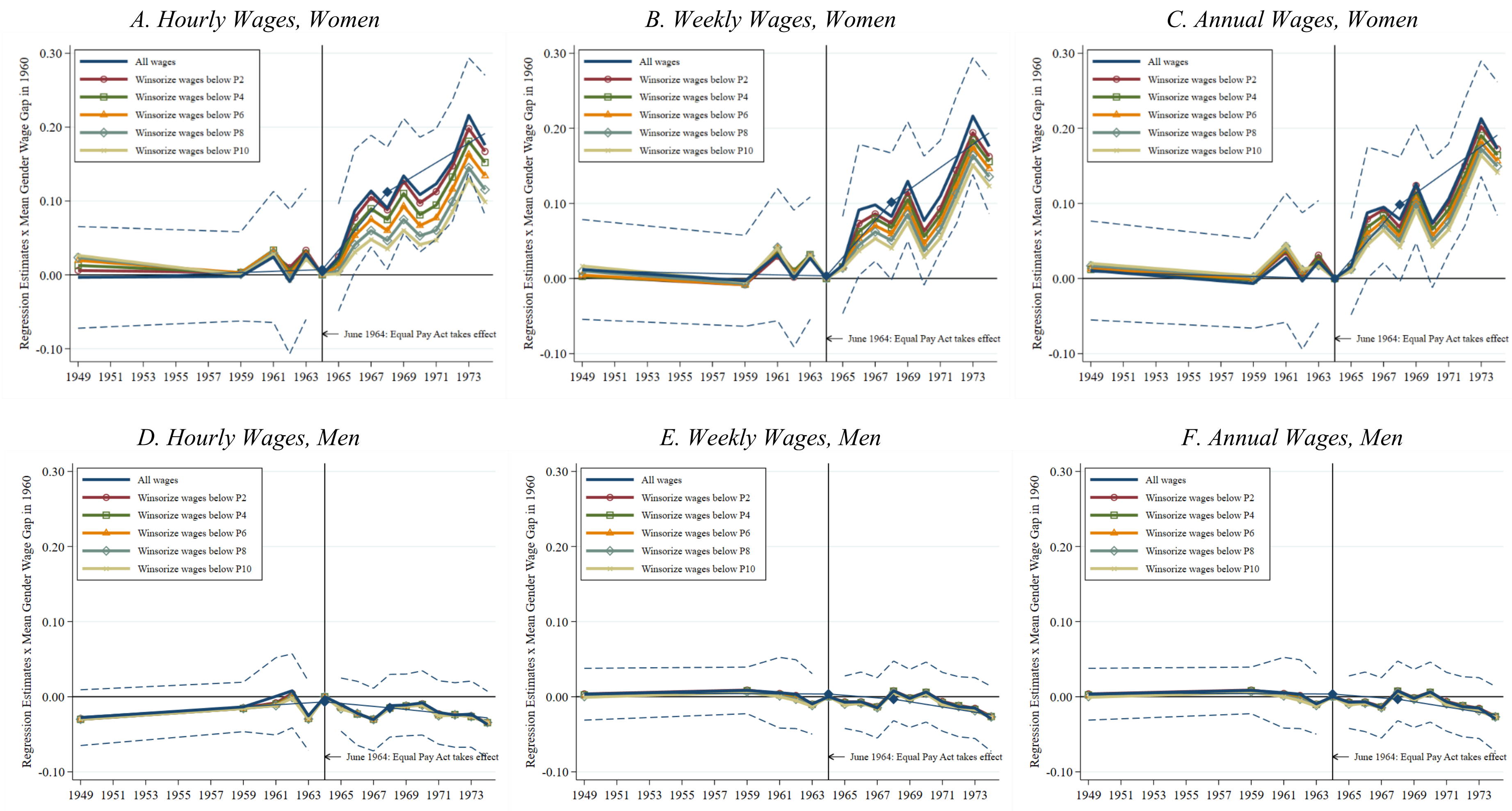


B. Men



Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within industry-occupation-state-group. The dependent variable is either the log weekly wage (our preferred approach), log hourly wage, or log annual wage. Log hourly wage is the log annual wage earnings less log weeks worked last year and log hours worked in the reference week. The spline (equation 5) is shown for the log weekly wage. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, and fixed effects for industry-occupation-state-group, industry-year, occupation-year, and state-group-year. We include log hours worked as a covariate when the dependent variable is log weekly wages and log hours worked and log weeks worked when the dependent variable is log annual wages. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374). See description in Appendix A.
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

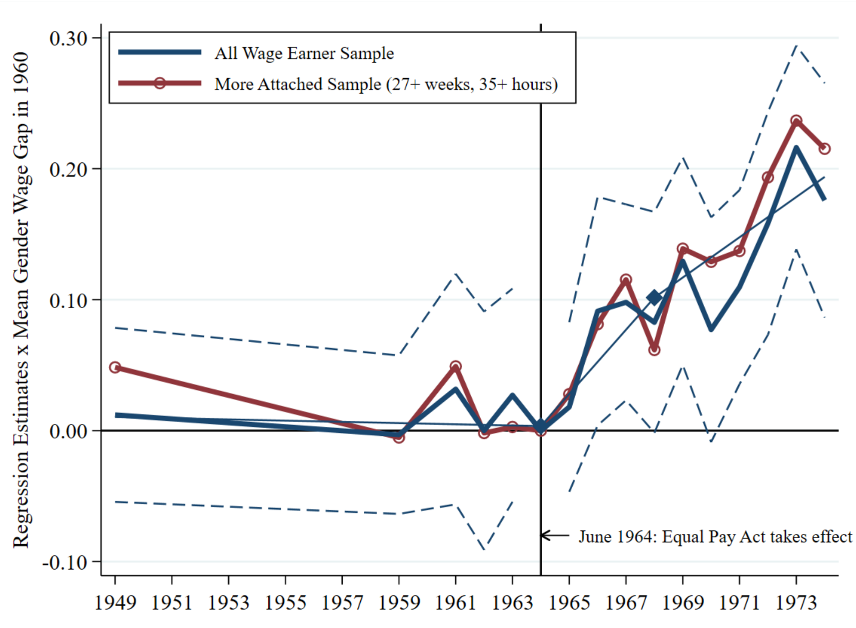
Appendix Figure 13. The Effects of the Equal Pay Act and Title VII on Wages using 1960 Gender Wage Gaps, Robustness to Winsorizing Low Wages



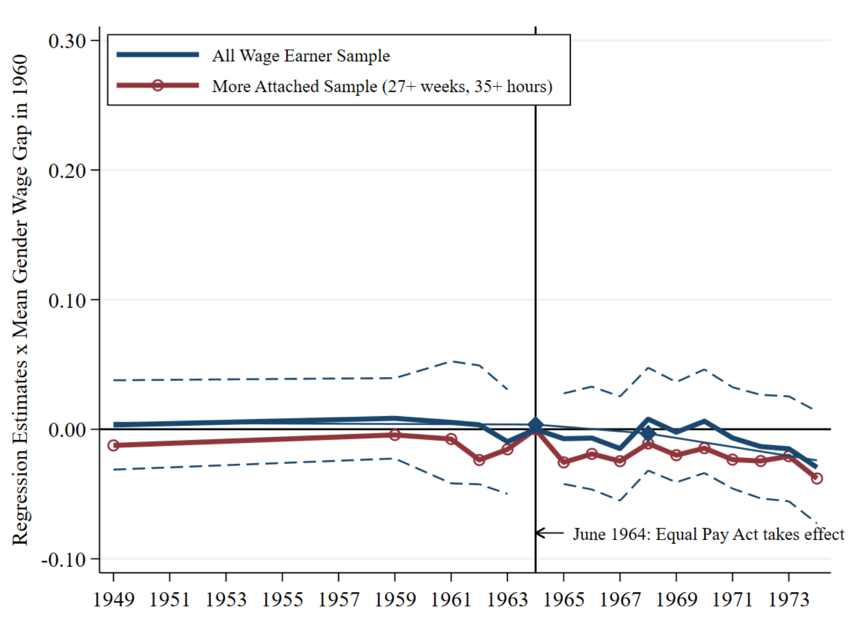
Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within industry-occupation-state-group. The dependent variables are the unwinsorized log hourly, weekly, or annual wage ("all wages") and their winsorized counterparts at the indicated percentile (see Appendix Table 16 for the value in levels). The spline (equation 5) is shown for the unwinsorized dependent variable. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, and fixed effects for industry-occupation-state-group, industry-year, occupation-year, and state-group-year. We include log hours worked as a covariate when the dependent variable is log weekly wages and log hours worked and log weeks worked when the dependent variable is log annual wages. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374). See description in Appendix B for details on winsorizing and Appendix A for details on dependent variables.
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

Appendix Figure 14. The Effect of the Equal Pay Act and Title VII on Wages using 1960 Gender Wage Gaps, Robustness to Robustness to Limiting Sample to More Attached Workers

A. Women



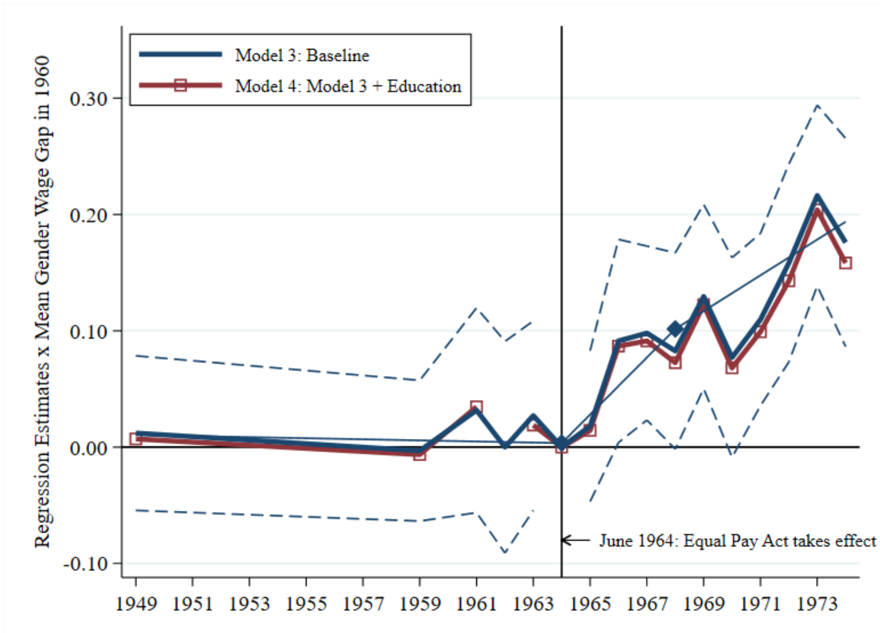
B. Men



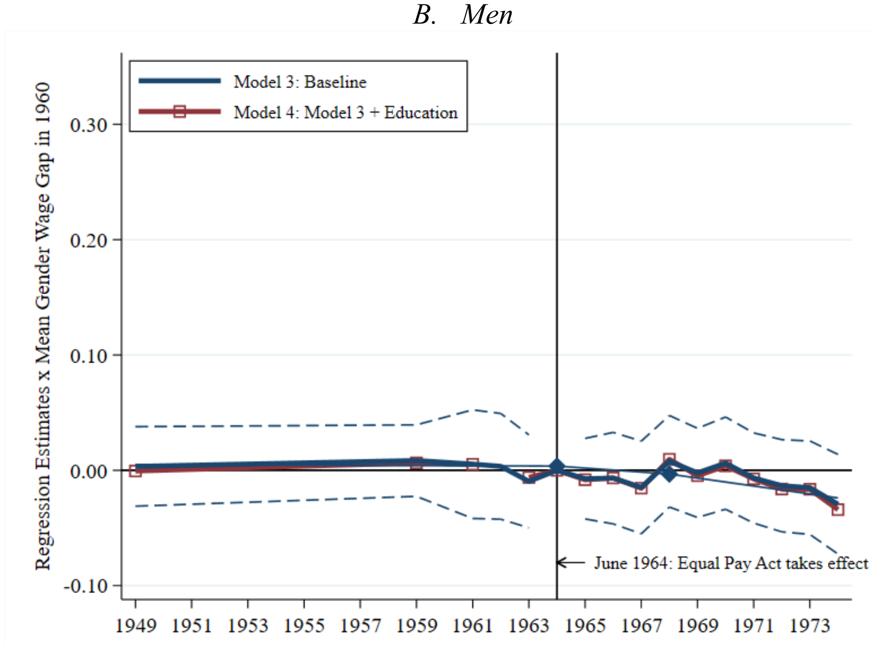
Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation by industry-occupation-state-group. The thin lines correspond to spline estimates of equation (5) for the baseline specification. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, log hours worked, and fixed effects for industry-occupation-state-group, industry-year, occupation-year, and state-group-year. The estimates in red are based on a sample of individuals who worked at least 27 weeks in the previous year and at least 35 hours in the reference week. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374).
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

Appendix Figure 15. The Effect of the Equal Pay Act and Title VII on Wages using 1960 Gender Wage Gaps, Robustness to Controlling for Education

A. Women

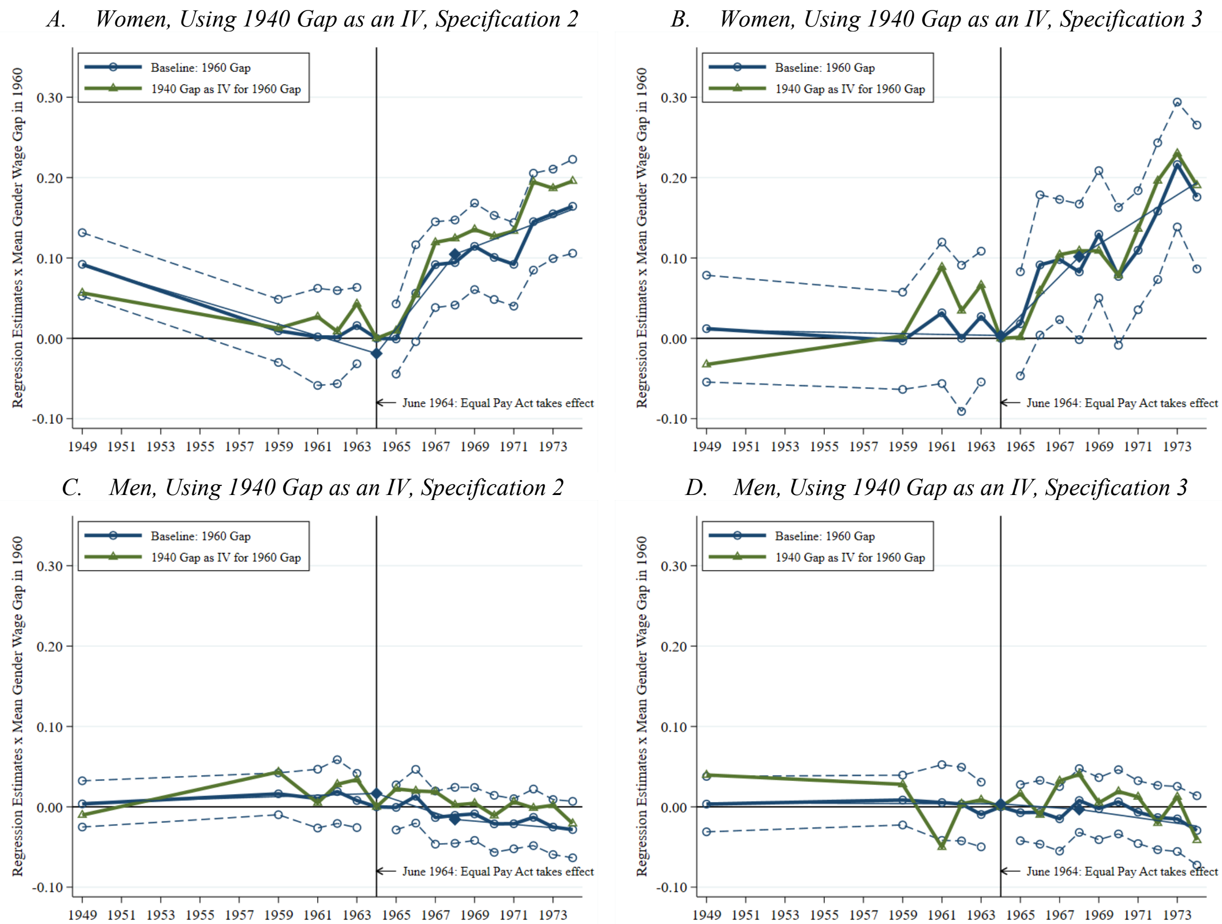


B. Men



Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation by industry-occupation-state-group. The thin lines correspond to spline estimates of equation (5) for the baseline specification. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, log hours worked, and fixed effects for industry-occupation-state-group, industry-year, occupation-year, and state-group-year. The line in red adds years of education as a covariate. We omit earnings year 1962 from the regression because education is not available in that year. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374).
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

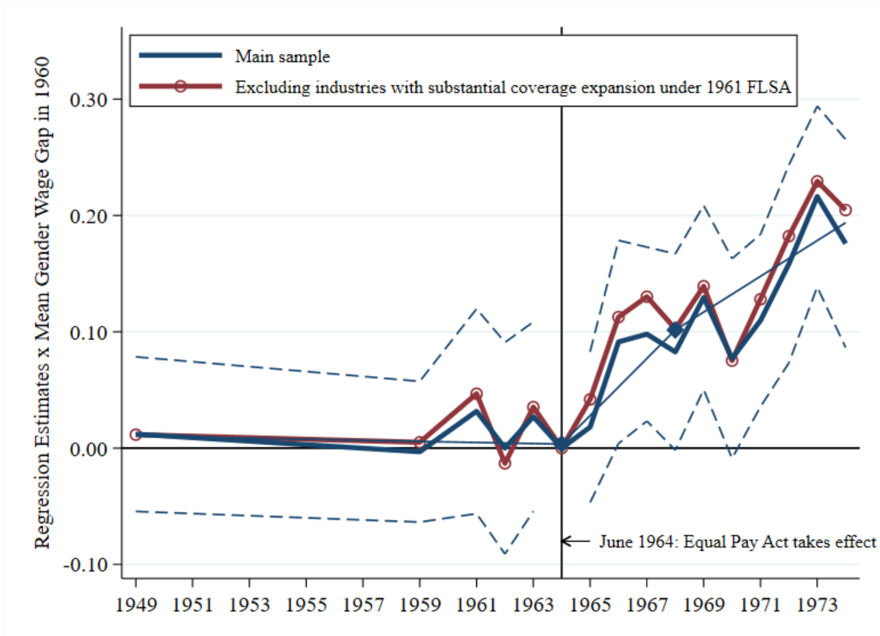
Appendix Figure 16. The Effect of the Equal Pay Act and Title VII on Wages using 1960 Gender Wage Gaps, Robustness to Using the 1940 Gender Wage Gap as an Instrumental Variable



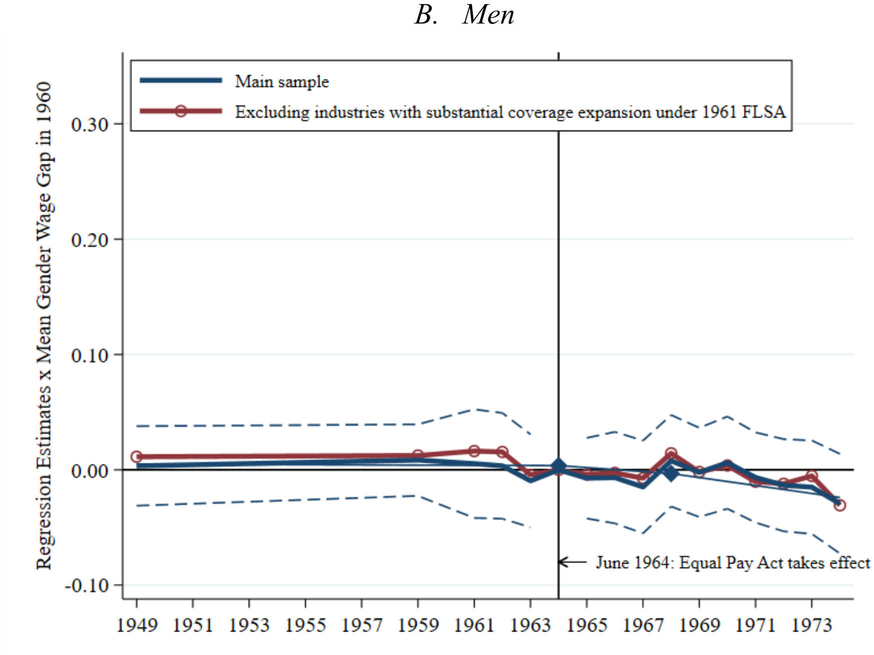
Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within industry-occupation-state-group. The blue line displays our baseline results, which use the 1960 gender wage gap as the key explanatory variable. The green line displays results in which the 1940 gender wage gap is an instrumental variable for the 1960 gender wage gap. The spline (equation 5) is shown for the baseline approach. Panels A and C use the covariates from model 2 of Figure 9A, and panels B and D use the covariates from model 3 of Figure 9A. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374). See text for more details.
Sample: The sample is the same as in Figure 3, but we additionally restrict the sample to individuals working in industry-occupation-state-group cells for whom we estimate a gender wage gap variable (which requires at least 10 men and 10 women full-time, full-year workers with non-missing hourly wages in 1940 and 1960. *Sources:* Full count of the 1940 Decennial Census, 1% sample of the 1950 Decennial Census, 5% sample of the 1960 Decennial Census and the 1965 CPS ASEC (Flood et al. 2022, Ruggles et al. 2023).

Appendix Figure 17. The Effect of the Equal Pay Act and Title VII on Wages using 1960 Gender Wage Gaps, Robustness to Excluding Industries with Coverage Expansions under the 1961 FLSA Amendments

A. Women



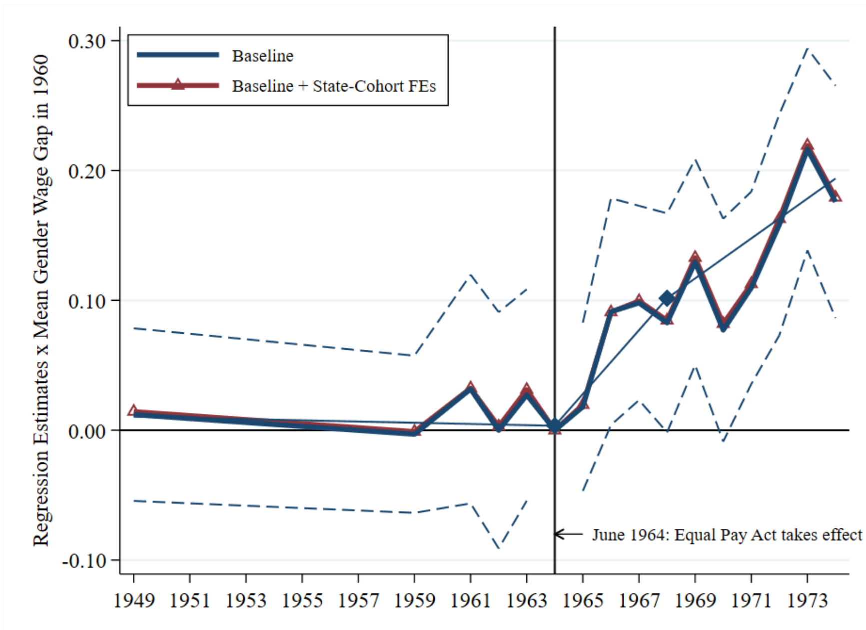
B. Men



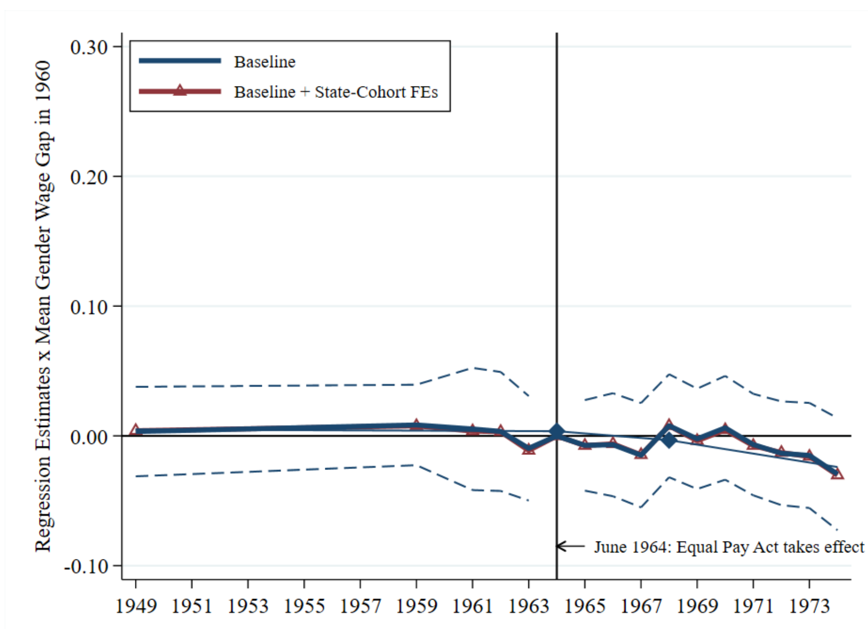
Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within industry-occupation-state-group. We present results for all industry-occupation-state-group cells in our main sample in blue and results when excluding industries where coverage of the minimum wage expanded under the 1961 FLSA amendments in red with circle markers. These industries are retail trade and construction. The spline (equation 5) is shown for the main sample. All regressions use the covariates from model 3. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374).
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

Appendix Figure 18. The Effect of the Equal Pay Act and Title VII on Weekly Wages using the 1960 Gender Wage Gap, Robustness to Adding State-by-Cohort Fixed Effects

A. Women



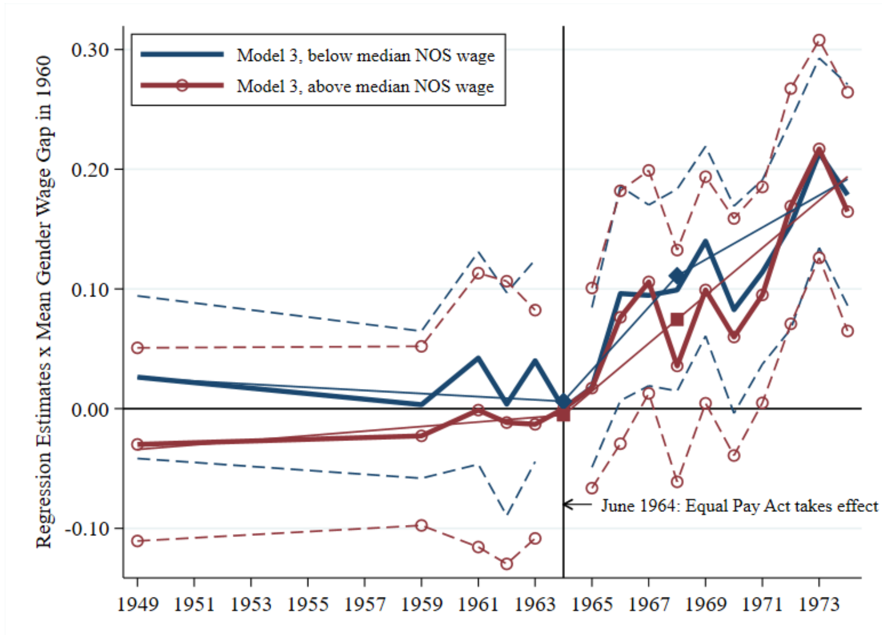
B. Men



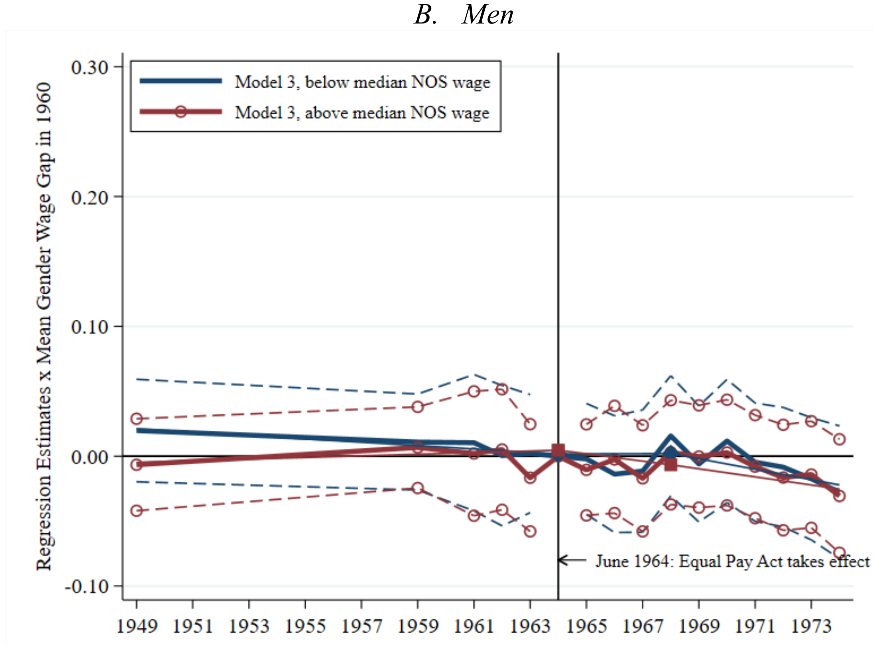
Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation by industry-occupation-state-group. The thin lines correspond to spline estimates of equation (5) for the baseline specification. All regressions include as covariates an indicator for nonwhite race, a quadratic function in age, log hours worked, and fixed effects for industry-occupation-state-group, industry-year, occupation-year, and state-group-year. The line in red adds fixed effects for state-by-birth-year as a covariate. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374).
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

Appendix Figure 19. The Effect of the Equal Pay Act and Title VII on Wages using 1960 Gender Wage Gaps, by 1960 Average Wage Level in Industry-Occupation-State-Group Cell

A. Women



B. Men



Notes: Figure plots the event-study coefficients from equation (4) as well as 95-percent, pointwise confidence intervals using standard errors that have been corrected for heteroskedasticity and arbitrary correlation within industry-occupation-state-group. The thin lines correspond to spline estimates of equation (5). We allow the event-study coefficients to differ based on whether an industry-occupation-state-group cell has a 1960 average wage that is above or below the median cell-level average wage. Otherwise, this specification is the same as model 3, shown in Figure 9A. Point estimates and confidence intervals are multiplied by the average gender wage gap in the 1960 Census for women (equal to 0.374).
Sample: See Figure 7 notes.
Sources: See Figure 3 notes.

E. Selected Newspaper Articles

Equal Pay Act Brings Raise for Women
By Elizabeth Shelton Washington Post Staff Writer
The Washington Post, Times Herald (1959-1973); Sep 20, 1966;
ProQuest Historical Newspapers: The Washington Post
pg. B1

Equal Pay Act Brings Raise for Women

By Elizabeth Shelton
Washington Post Staff Writer

Cases are being settled out of court and back wages are being paid in restitution to women employes under the Equal Pay Act as a result of a Federal court decision in Reno, Nev.

Labor Department spokesmen said yesterday voluntary compliance was one of the results of the decision in the first test case, which it brought "to explore a hypothesis."

The Reno case, on which a decision was handed down July 22, was listed yesterday in the Status of Women newsletter as one of the major advances women have made in the past year.

District Court Judge Bruce R. Thompson awarded back pay to two women laboratory analysts who had been getting less money than a more experienced male co-worker performing the same services.

The employer, Basic, Inc., claimed the male analyst was entitled to more money because he had more experience and responsibility.

Judge Thompson decided that the work the three employes were doing was substantially the same and found, in addition, that the man's longer experience was not a requirement of the job.

The Basic case was brought by the Labor Department to test the act, which went into effect in July, 1965.

JUDGE THOMPSON referred in his opinion to a statement by the laboratory's division manager, when warned in 1963 of the imminence of passage of the Equal Pay Act, that "Congress would never pass such a foolish law."

"This 'foolish law' is now before the Court for interpretation . . .," he began, adding humorously:

"The case for the plaintiff was presented by a feminine attorney (Mildred Law) of the Department of Labor, resisted by a masculine attorney of the Nevada Bar, and considered by a judge who, for the purposes of this case at least, must be sexless, a possibility not apparent when the oath of office was taken and one which may bespeak the appointment of older judges."

His holdings covered the points that wage differentials are permissible only for the actual hours during which working conditions and responsibilities differ and that a "paper" job classification unrelated to true working conditions does not justify a differential.

He ruled that the burden of proof of the exceptions is on the employer.

The two women who won a raise and back pay were Ann Jones and Jo Ann Barredo who work in the Basic plant laboratory in Gabbs, Nev.

THE OUTCOME of the appropriately named "Basic case" was reported here in the newsletter of the Interdepartmental Committee on the Status of Women and Citizens' Advisory Council.

The newsletter also reported some new interpretations of the Office of Equal Employment Opportunity affecting job equality, one that employers may not refuse to consider women for jobs that require travel.

Pay Is Up; Will Jobs Go Down?

THE EQUAL PAY ACT may be a mixed blessing for some of the women workers whose salaries it is supposed to boost.

Instead of getting higher pay for the job, they may not get the job at all.

As the head of a new Virginia manufacturing plant put it: "We had planned to employ women in some of our light manufacturing jobs, but we decided against it because of anticipated complications arising from the equal pay law."

An Ohio manufacturer said his plant would downgrade some job classifications for women and reassign higher-level, higher-paying duties to men.

BUT they were in the minority of 335 employers surveyed by Prentice-Hall about expected results of the law that went into effect last week.

Many employers said they would hike women's wages to bring them into line with men's. Some firms said they would equalize salaries now, but in the future would segregate male and female job classifications.

In the long run, thanks to the example of the Federal Government's drive to wipe out discrimination against its own women employes, the Equal Pay Act may be an easing of promotional channels for qualified women, the researchers found.

Women Reap Crop of Gains
The Washington Post, Times Herald (1959-1973); Nov 14, 1964;
ProQuest Historical Newspapers: The Washington Post
pg. A18

Vintage Years

Women Reap Crop of Gains

THE STATUS of American women has improved more over the last three years than at any time since they got the vote in 1920, the head of the Women's Bureau of the Department of Labor said last night.

Mary Dublin Keyserling traced many improvements in the distaff lot to the establishment in 1961 by President Kennedy of the Commission on the Status of Women.

Since the Commission issued its findings in October 1963, Mrs. Keyserling told the American University Faculty Women's Club, these "significant gains have been won":

- Passage of the Equal Pay Law, which went into effect last June 11.
- Appointment by President Johnson of 68 women to top Government positions, plus the appointment of 311 women and promotion of more than 1230 others by executive agencies to jobs at salary levels of $10,000 and above.
- Efforts by the United States Employment Service to encourage use by employers throughout the country of hiring specifications based exclusively on job performance factors.
- Passage of the Civil Rights Act, with its Title VII that prohibits sex discrimination in employment.
- Establishment by 33 governors of State Commissions on the Status of Women.

Women Losing Battle for Jobs
The Washington Post, Times Herald (1959-1973); May 9, 1964;
ProQuest Historical Newspapers: The Washington Post
pg. C6

Women Losing Battle for Jobs

United Press International

THE LABOR Department told America's career girls last week that they are losing the battle of the sexes.

On just about every job front, it said, men are getting ahead of the fairer sex. There are still few women doctors, engineers and accountants—work traditionally performed by men—while even greater numbers of men are invading the female domain as librarians, social workers and grade school teachers.

Unless women try harder, they will find the competition even tougher in the decade ahead, Labor Department experts said in the April edition of the monthly Labor Review.

They did not say how this will affect President Johnson's campaign to put more women in high-level government jobs. Mr. Johnson himself admitted last week that qualified "can-do" women are hard to find.

"Despite the publicity given the growing acceptance of women in the occupations once reserved exclusively for men," the experts said, some old-fashioned obstacles stand in the way of better jobs for girls.

Private employers are said to prefer men because women constantly leave to get married and have babies. Besides, women rarely plan a lifetime career because they expect to get married—and nearly all of them do.

And some bosses simply do not like to have women in the office.

Pay is still often lower for women performing the same jobs as men, despite the equal pay act of 1963. A typical male doctor, for example, earned $14,784 in 1959 but his female counterpart took in just $6562. The picture in other fields, too, has not changed much since then.

"The increasing competition with men for jobs is a very real problem for college women," the report said.

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See full page image or microfilm.

By Harry Naltchayan, Staff Photographer

TENNESSEE'S Carolyn Adair, alternate Maid of Cotton, wears Maurice Rentner's casual cotton gown with red plaid skirt, black plaid bodice and kerchief in Jelleff's Maid of Cotton fashion show Thursday.

States Boost Women's Status More Than U.S.
By Winzola McLendon Washington Post Staff Writer
The Washington Post, Times Herald (1959-1973); Feb 24, 1965;
ProQuest Historical Newspapers: The Washington Post
pg. C1

States Boost Women's Status More Than U.S.

By Winzola McLendon
Washington Post Staff Writer

A great deal more is being done to improve the status of women at the state level than at the Federal level, Secretary of Labor Willard Wirtz said yesterday.

The state commissions are spearheading drives for better state standards of labor, Wirtz told a news conference. And among the improvements the states are interested in are the Government's goals of $1.25 an hour, plus premium pay for overtime and equal-pay-for-equal work laws.

Wirtz said the growth of the state commissions on the status of women "has been almost phenomenal" and that the number of commissions has tripled (from 13 to 39) in the past year, with even more states expected to follow suit.

THE COMMISSIONS were discussed by Wirtz following an Inter-Departmental meeting on the Status of Women.

Esther Peterson, the President's assistant who coordinates the work of the Inter-Departmental Committee and the Citizens' Advisory Council on the Status of Women (both are outgrowths of a Presidential Commission on the Status of Women established by President John F. Kennedy to look into problems of discrimination against women), also attended the news conference and said there would be a meeting here in July of the state commissions on the status of women and the government bureaus.

Wirtz then noted that the state commissions are taking effective leadership in their states, and are making efforts in behalf of both men and women employes who do not come under the wage regulations set down by the Federal Government.

MARY KEYSERLING, head of the Women's Bureau, reported on labor statistics involving women, noting that more than half the women working today are in the age group of 45 to 54 and 68 per cent of this group are college graduates.

Before World War II, said Mrs. Keyserling, the majority of working women were in the 18-to-24 age group.

She also noted that of the women who have five years or more of college education, 81 per cent are gainfully employed. But when it comes to wages, Mrs. Keyserling said, women are not faring so well. The median earnings of women are only 58 per cent of what the men are earning.

Commission Will Enforce Sex Clause In Title VII With 'Common Sense'

By Elizabeth Shelton
Washington Post Staff Writer

Common sense will be the rule in interpreting Title VII of the Civil Rights Act, chairman Franklin D. Roosevelt of the Equal Employment Opportunity Commission said Monday.

He said this means it is still legal under the Title's ban on sex discrimination to advertise for, and to hire, a masseur for a men's Turkish bath and a masseuse for a women's establishment.

Roosevelt called a press conference to make public new guidelines prepared by the Commission for the use of employers. He said he did not foresee any "revolution in job patterns," such as more male nurses and secretaries, as a result of the interpretations.

THE COMMISSION has asked Congress and the state legislatures to examine all their "protective" laws designed to guard women against danger and exploitation.

The Commission said its study of these laws demonstrated that many are irrelevant to present-day needs of women and are capable of denying equality of opportunity to them.

The Status of Women Commission will make recommendations to the state legislatures where the protective laws are found to have lost their rationale.

Where compliance is not achieved voluntarily through conciliation, with the Commission acting as the conciliator, it will be up to individual employes and would-be employes to bring suits in Federal Court.

THE COMMISSION'S general counsel, Charles Duncan, told of an effective series of talks with a large shoe warehouse company.

The company previously had maintained separate work lines, with jobs labeled as "men's" and "women's." The highest paying women's job was equal in salary to the lowest paying men's job.

The "men's" jobs of crating, packing, unpacking and lifting are now open to women and the "women's" jobs of inspecting, labeling and record-keeping are now open to men.

The separate seniority lines were combined when the jobs were opened up to both sexes.

ROOSEVELT said "confidentiality" prevented his listing specific cases but he told of a company with a policy of firing women who got married.

One of the guidelines issued Monday states that a company may not fire women who marry unless it also has a policy of firing men who marry.

Other provisions include:

- Sex will be considered a bona fide occupational qualification in the case of an actor or actress but the Commission will not accept refusals to hire based on general assumptions such as that the job change rate is higher among women than among men.
- It is unlawful to maintain separate promotion and seniority lines, or to classify jobs as "male" or "female."
- Help wanted ads may not specify "male" or "female" unless there is a bona fide occupational qualification, such as masseur or actress.
- Employment agencies may not discriminate against any individual because of sex. Roosevelt was asked about Kelly Girls and male chorus lines. Here he said that the large national employment agencies are open to both males and females.

(Later his associate, Herman Edelsberg, executive director of the Commission, jokingly told the press that "there are people on this Commission who think that no man should be required to have a male secretary—and I am one of them.")

- It is legal to list "male" or "female" or "Mr., Mrs. and Miss" on a job application form, providing the information is sought for a non-discriminatory purpose.
- The Commission will seek the opinion of the Administrator of the Wages and Hours division of the Department of Labor when complaints that equal pay is not being received for equal work are filed.

Roosevelt, in a prefatory statement, said the Commission's main business is to enforce compliance when discrimination is due to race. He said about 83 per cent of the complaints received thus far deal with racial discrimination. About 15 per cent deal with discrimination due to sex.

In Paychecks

Women Earning Equality

By William J. Eaton
United Press International

A little-noticed law is taking sex out of the paycheck for 28 million American workers.

The signs are that industry generally is complying with a year-old statute designed to prevent wage-scale discrimination against women.

But a Labor Department study indicates that labor-management agreements often contain pay provisions that unduly favor men.

These were outlawed June 11 as the final stage of the Equal Pay Act of 1963 went into effect. A two-year period from the date of passage was allowed to permit changes in labor contracts affected by the law.

About 8 million women are among the 28 million workers covered by the new statute. The equal pay clause also bars discrimination against men.

ITS MAIN standard declares: "The employer must not discriminate on the basis of sex within his establishment by paying to employes of one sex wages at rates lower than he pays employes of the opposite sex for doing equal work on jobs requiring equal skill, effort and responsibility which are performed under similar working conditions."

In a report sent to Congress last January, the Labor Department said it had received reports on 159 establishments checked by wage-hour division investigators. About 10 per cent said women's wages already had been raised.

"The comments received thus far indicate that generally the new standard has been accepted," the Department said at the time. "To a considerable extent, reports of discrimination appear to involve differences of opinion whether the jobs held by men and women are substantially the same."

ASSISTANT Secretary of Labor Esther Peterson, who might be called the "Mother of the Equal Pay Law," told UPI the legislation has had a clear impact on pay practices.

"And it has not been a terrible burden as some businessmen claimed it would be," she said. "There have been disputes over its application, based mainly on claims of superior ability of men over women. But I think most of them are what I call nitpicking."

A Labor Department spokesman said violations seemed to occur most often in large department stores, banks, airline reservation offices, chain stores and other firms where men and women customarily perform similar work.

Secretary of Labor W. Willard Wirtz has filed a suit against a Texas wholesale grocer to force him to raise the pay of a single woman victim of alleged wage discrimination.

Investigators said they found that $6,000 in wages were withheld in violation of the Equal Pay provision during the first six months of enforcement. One firm voluntarily paid $25,000 when the wage-hour division began checking for possible discrimination.

THE LAW specifically exempts lower pay rates if the employer can show that the differential is based on a seniority system, merit program, piecework or any factor other than sex.

The Department has started a study of union contracts to see if they contain provisions that discriminate against women. Its early findings indicated there were differentials between men and women in wage rates, welfare and pension plans, sick leave, rest periods and seniority provisions.

In some cases, the study said, unions negotiate larger wage increases for men than for women. In one case, agreement provided loss of seniority and possible dismissal for any female employe who got married.

AND THE Department reported that one contract, which had a clause adopting the principle of equal pay for equal work, also had a provision which said: "During the life of this agreement, male employes shall be paid a minimum rate of $2.59 an hour; female employes shall be paid a minimum of $2.35."

This clause — presuming men and women performed the same work under similar conditions on jobs requiring equal skill, effort and responsibility — is now illegal.

Employers who violate the provisions may be fined up to $10,000 for the first offense and may be sent to prison for any succeeding violations.

Employes may sue for unpaid wages and an equal amount as damages or apply to the Wage-Hour Administration for help in collecting pay due under the Equal Pay Law.

THE WALL STREET JOURNAL.

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VOL. CLXXXII NO. 37 ★★★ EASTERN EDITION WEDNESDAY, AUGUST 22, 1973 MICROWAVE TRANSMISSION—PRINCETON, NEW JERSEY 15 CENTS

Flexing a Muscle

Women, Government, Unions Increasingly Sue Under Equal-Pay Act

Law, Passed Ten Years Ago And Recently Broadened, Has Yielded $72 Million

Batman and Robin and Batgirl

By JAMES C. HYATT
Staff Reporter of THE WALL STREET JOURNAL

Today's public-service announcement from the Labor Department:

Announcer: "High noon in Gotham City. . . . In a deserted warehouse Batman and Robin are shackled to a post—desperately struggling to break loose! Inches away, a time bomb ticks ominously . . . suddenly, a crash of glass!"

Robin: "Holy breaking and entering! It's Batgirl!"

Batman: "Quick, Batgirl, untie us before it's too late!"

Batgirl: "It's already too late. I've worked for you a long time, and I'm paid less than Robin."

Robin: "Holy discontent!"

Batgirl: "Same employer, same job means equal pay for men and women."

Batman: "This is no time for jokes, Batgirl."

Batgirl: "It's no joke—it's the Federal Equal Pay Law."

The radio message is corny, but it's risky for employers to scoff. Because for thousands of women, the principle of equal pay for equal work is taking on real dollar-and-cents meaning as a result of federal lawsuits, private litigation and just plain protests from the female ranks.

Some Victories For Women

For example:

—A few months ago, Andrea Logan received $1,750 in back pay from the Chesapeake & Potomac Telephone Co. in Washington as part of a massive $7.5 million equal-pay settlement involving several federal agencies and the Bell System. Mrs. Logan, who works as a "frame-man" connecting telephone equipment in a central office, says her pay has increased by about $45 a week, to $198. The specific reason: added allowance for seniority. She's getting credit for her entire seven years with the company rather than just her 18 months on the present job.

—Some 350 women at a General Electric Co. plant in Fort Wayne last month began receiving raises totaling $250,000 a year plus an estimated $300,000 in back pay in the settlement of an equal-pay lawsuit brought by the International Union of Electrical Workers.

—Faculty members at the University of Louisville have negotiated about $60,000 a year in pay raises designed to correct inequities for 41 women. Inez Webb, a professor of home economics who has taught at the school for 27 years, is getting about $1,000, or nearly 10%, more in annual pay. Such changes, she suggests, "will make a difference" to young women who seek teaching jobs and scrutinize male vs. female pay comparisons.

The government, unions, women's groups and individual women are all increasingly measuring employer practices against the demands of the Equal Pay Act passed by Congress in 1963. That law, in essence, requires the same pay for the same work done by men or women.

$72 Million, 140,000 Workers

Federal enforcers, in particular, are bearing down harder. In the early days of the law, the Labor Department was finding that employers owed back-pay totaling $2 million to $3 million a year. But court decisions broadening the scope of the Equal Pay Act helped boost the sum to $14.8 million in the fiscal year ended June 30, 1971. And the Labor Department's finding mounted to $18 million in the year just ended. In all, since the Equal Pay Act was passed, the department's investigations have found more than 140,000 workers, most of them women, were owed more than $72 million.

This figure will presumably swell further. Dozens of new lawsuits are likely to be filed, by both the government and private plaintiffs, as the result of recent broadening of the law. Last year, an additional 15 million workers in executive, administrative, educational and outside-sales jobs were brought under its coverage; most hourly paid workers were already protected.

Yet after nearly a decade of enforcement effort, there remains considerable resistance to the idea of equal pay for equal work. Francis W. McGowan, director of the Labor Department's division of equal pay and employment standards, says that society still has "this widespread belief that when women work it isn't worth as much as when men work."

Without question, a huge gap still exists between the wages of male and female workers. In 1971, federal figures show, women working full-time earned $5,593, or 60%, of the $9,399 median earnings of men. Differences of that magnitude have existed since the mid-1950s.

Much of the gap, of course, has nothing to do with deliberate refusal to equalize wages. Men often have more work experience than women of the same age. Men often receive more job training and education. With women excluded from many higher-paying jobs, an oversupply of female applicants for less desirable positions tends to depress their wages. In such

Please Turn to Page 18, Column 1

A Victory in Tennis

Equal pay might not have come to the factory, but it has come to the tennis court.

For the U.S. Open Tennis championships at Forest Hills next month, Bristol-Myers has agreed to donate enough prize money to equalize the purses and make first prize for both men and women $25,000. In last year's open, male winner Ilie Nastase of Rumania earned $25,000 for his victory while women's champ Billie Jean King received only $10,000.

Women professional tennis players long have grumbled because they receive smaller prizes in major tournaments. Such stars as Mrs. King have threatened boycotts.

What's News—

Business and Finance

CONSUMER PRICES in July rose at a seasonally adjusted annual rate of 2.4%, down sharply from June's 7.2% and the narrowest rise in seven months. Food prices, held in check by the freeze, rose an unexpectedly strong 6%, but well below the 10.8% adjusted annual increase in June. Nixon aides, however, said the initial weeks of the post-freeze Phase 4 controls brought a substantial surge in prices.

(Story on Page 3)

Durable goods orders in July fell 0.7% to a seasonally adjusted $42.71 billion, down from the upward-revised $43.02 billion in June, when the rise was 1.3%. The Commerce Department, in a preliminary report, said the decline was primarily due to fewer transportation equipment and primary metals bookings.

(Story on Page 3)

The United Auto Workers picked Chrysler Corp. as the strike target for this year's contract negotiations with the "Big Three" auto makers.

(Story on Page 2)

The Teamsters union said it will abandon efforts to organize farm workers in the Delano, Calif., grape fields, a move that may restore some stability to a bitter jurisdictional dispute with the United Farm Workers.

(Story on Page 5)

Mutual funds in July posted their first monthly net sales position in 18 months as investors bought shares valued at $363.7 million. Gross redemptions totaled $356.6 million, leaving a net sales position of $7.1 million.

(Story on Page 4)

Short interest on the New York Stock Exchange fell 2,181,894 shares to 17,959,611 in the month ended Aug. 15, and dropped 569,943 shares to 3,885,607 on the American exchange.

(Story on Page 16)

Gold's price slumped sharply on international markets, while the U.S. dollar posted gains against most major currencies. At London, the afternoon bullion quote dropped $3.80 to $105.70 an ounce from Monday.

(Story on Page 6)

Job hazards for employes must be eliminated by employers wherever possible and by more than just providing protective equipment, a federal safety court ruled in an American Smelting & Refining case.

(Story on Page 4)

Western Union Corp. said it plans to trim capital outlays next year to $200 million from as high as $275 million set earlier. It said it would also lay off about 1,000 employes.

(Story on Page 9)

General Motors signed an agreement with Engelhard Minerals & Chemicals for precious-metal catalysts used to reduce auto emissions.

(Story on Page 11)

U.S. Financial, the troubled real estate developer, described in court papers an alleged scheme by former management to finance transactions that resulted in millions of dollars of phony profits for itself and its units.

(Story on Page 8)

Signal Cos. filed suit to enjoin a group of international investors from proceeding with an offer to acquire up to 1.5 million of its shares.

(Story on Page 9)

Penn Central's rail unit narrowed its loss in July to $22.3 million from $29.8 million the year before.

(Story on Page 4)

Soviet oil and gas resources in Siberia and the Arctic would be developed with the cooperation of Western oil companies if suitable agreements could be reached, Russian officials indicate. The Soviets are interested in production and service contracts, not merely in exporting oil and gas.

(Story on Back Page)

Texas Eastern asked the Federal Power Commission for a $97.1 million annual increase in natural gas rates to wholesale customers, as of Sept. 14.

(Story on Page 5)

Lockheed's shipbuilding unit must refund $42.2 million to the U.S. for warship contract overpayments but can defer repayment until an appeal is decided, the Navy ruled.

(Story on Page 8)

Markets—

Stocks – Volume 11,480,000 shares. Dow Jones industrials 857.84, off 9.56; transportation 152.86, off 1.62; utilities 95.03, off 0.13.

Bonds—Dow Jones 40 bonds 71.44, up 0.06.

Commodities – Dow Jones futures index 306.87, up 1.23; spot index 323.63, off 2.33.

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World-Wide

AGNEW ACCUSED the Justice agency of a move to indict him through smear tactics.

The Vice President charged that some department officials have mounted "a clear and outrageous" campaign to influence the grand jury investigating allegations that he accepted kickbacks from contractors while governor of Maryland and, for a time, during his vice presidency. Reasserting his innocence, Agnew challenged Attorney General Richardson to open a new grand jury investigation to discover who's leaking "smear publicity" about him. Richardson responded with a promise to pursue "any possible lead" that might identify the source of the leaks, but for the present he apparently rejected Agnew's request for an inquiry.

In San Clemente, Calif., a presidential spokesman said it was "totally false" to assume Agnew might be asked to resign.

A Maryland county grand jury handed down one indictment on four counts of conspiracy in connection with last year's "Salute to Ted Agnew" dinner. The state attorney said the indictment could involve more than one person, but identity of those charged won't be made public until at least tomorrow. The case revolves around admissions that some $50,000 for the fund-raising dinner was lent by the Finance Committee to Re-elect the President, while reports filed with the state attributed the contributions to individual donors.

COX HAS RECEIVED requested ITT files from the White House.

A spokesman for Special Watergate Prosecutor Archibald Cox confirmed that the International Telephone & Telegraph data had been released. Cox had described the file as of the utmost importance to his investigation of the ITT antitrust settlement. The case played a major part in the Senate confirmation hearings on the nomination of Richard Kleindienst as Attorney General. It cropped up again at the Senate Watergate panel hearings when a White House memo was released that said documents existed that could link President Nixon to the 1971 settlement.

Disclosure of the file's release came on the eve of the court debate on Cox's demand for tapes of presidential conversations about Watergate. Nixon has refused to obey a subpoena for the tapes.

Sen. Mondale will seek to impose control over federal funds spent at the private homes of any President. The Minnesota Democrat said the Watergate scandal has "brought to the surface a variety of improper expenditures by the White House using monies appropriated by Congress." He also said he would move to block the $1 million contingency fund given to the White House annually with almost no restrictions on how it is spent.

Lawmen pressed the search for Edwin M. Gaudet, a former New Orleans policeman charged with threatening the life of President Nixon. Gaudet escaped Monday from a northern New Mexico commune where Secret Service agents had gone to arrest him on a federal warrant. Meanwhile, Secret Service officials said in Washington that "we're still actively investigating" a possible conspiracy to kill Nixon during his New Orleans visit Monday. Gaudet wasn't thought connected with that plot.

Cambodia appealed to the U.S. to continue $180 million to $200 million in military and economic aid and indicated it would request resumed bombing raids if North Vietnam steps up support for insurgent forces. Cambodian Ambassador Um Sim said in Washington the Lon Nol government felt it had been abandoned when U.S. bombing was halted last Wednesday. In another development, senior U.S. sources said the military situation in Cambodia has improved substantially but warned of a new battle for Phnom Penh. Skirmishes were reported north and south of the capital.

Laos executed many rebels after Monday's attempted rightist coup and said others would be shot without trial as soon as interrogation was completed. The neutralist government of Prince Souvanna Phouma was said to be in full control following the abortive overthrow. The government reportedly has protested to Thailand because the rebels, all believed to be exiles, crossed into Laos from Thai territory.

Chilean leftists clashed with anti-Marxists in downtown Santiago, with two persons reported killed and at least six wounded. The fighting erupted as an estimated 500,000 Chileans participated in walkouts to show sympathy for a 27-day-old transport strike and to protest the policies of Marxist President Salvador Allende. Earlier, terrorists firebombed a labor union district office in Santiago and dynamited a rail line.

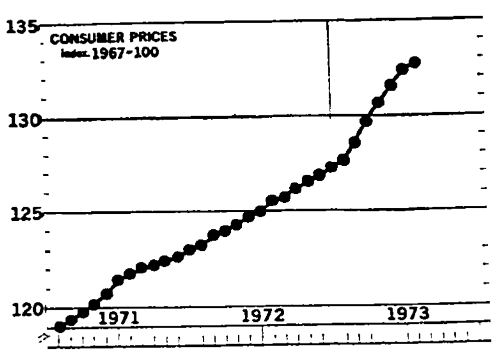
Greece freed most political prisoners, including President Papadopoulos' would-be assassin. Alexander Panagoulis, who was charged with trying to blow up Papadopoulos' car five years ago, said as he was released, "I don't regret and I don't repent for what I did." He called Papadopoulos a "ridiculous colonel." Papadopoulos ordered the amnesty Sunday shortly after he was sworn in as the first president of the new Greek republic.

Skylab's crew photographed a giant bubble in the sun's outer atmosphere, and scientists called it the most significant solar event in this mission. The bubble was caused by an explosion on the back side of the sun and was about three-fourths the size of the sun itself, according to Astronaut Alan Bean.

Growing indications of arson in the 20 major forest fires burning in five Western states prompted the Forest Service to bring in special lawmen to investigate. Hundreds of additional firefighters from around the country were pulled into the effort to control the blazes that spread across 130,000 acres, or more than 200 square miles, of timber and brushland.

A Soviet physicist warned that if the West accepts detente on Soviet terms, it might face a Russia "armed to the teeth." Andrei Sakharov, a developer of the Soviet H-bomb and an outspoken champion of civil rights, said in Moscow that "detente without democratization . . . would mean a capitulation to our real or exaggerated strength." Sakharov, who is under threat of reprisals for his criticism of the regime, assailed Western businessmen for focusing "on the attempt to get from us gas and oil, ignoring all other aspects of the problem."

Consumer Prices Up



CONSUMER PRICES in July rose to 132.7% of the 1967 average from 132.4% in June, the Labor Department reports. (See story on page 3.)

You Weren't So Happy With Corvair or Edsel? Step Into a Firenza

Owners of the Auto in Canada Form Club to Tell of Woes; But GM Says It's No Lemon

By JACK L. BRITTON
Staff Reporter of THE WALL STREET JOURNAL

TORONTO—When General Motors of Canada introduced its sporty subcompact Firenza auto here three years ago, radio commercials urged customers to "tell your fir-ends-ahh" about the car. But Robert Moore went them one better. He formed a Firenza club to spread the word about the car.

But not the good word. Mr. Moore, a hospital worker, bought his little Firenza last August. Within seven months and 8,000 miles, its transmission and its speedometer each broke three times, and three sets of spark plugs burned out. The ignition system failed, as did the headlight switch, the windshield wipers and the locks on the doors. The paint (which Mr. Moore describes as "lemon yellow") began peeling off the front fender. Meanwhile, GM stopped importing the British-built car, and the resale value of used Firenzas plummeted.

In disgust, Mr. Moore and some friends founded the Dissatisfied Firenza Owners Association. Today, five months after its founding, the group has nearly 900 members across Canada. They're all telling their fir-ends-ahh (and anyone else who'll listen) that the Firenza, in their opinion, is a turkey.

"A Sporty Performer"

When GM launched its Firenza here in 1970 it hailed the car as a "sporty looking performer that is comfortable, economical and fun to drive." It also was hard to sell. Last fall—with only 12,800 Firenzas sold in two years in Canada—GM pulled the auto off the market. It said it was doing that because of the high cost of bringing the Firenza up to stiffened Canadian safety and antipollution standards.

GM hotly denies that the car's a lemon. It says that more than 90% of the Firenza owners haven't registered complaints about their cars and concludes most must be satisfied.

But to calm the unhappy buyers, after the car was discontinued here GM began offering a $250 certificate to owners, applicable to their purchase of any new GM model. (GM's offer wasn't unique—its U.S. parent made a similar deal when it dropped the Corvair.)

That payoff isn't enough for many of those stuck with Firenzas, however. The cars cost $2,500 to $3,200 new, and a dealer here figures they're depreciating at twice the rate of other models. So some owners are seeking reparations. Four of them—with the backing of the Dissatisfied Owners and another consumer group, the Automobile Protective Association—recently filed a $5 million class-action suit against GM. The plaintiffs—who claim they've been offered only about $800 on trade-ins for their year-old Firenzas—are asking GM to make up the estimated loss in the cars' resale values.

A Trip to Parliament

What's more, the two groups are collecting and publicizing owners' gripes (they claim to have nearly 1,000 reverse testimonials) and are sponsoring protest picnics and Firenza cavalcades to dealer showrooms and other sensitive spots (on a cavalcade to Ottawa last April, two of the cars steamed up in front of Canada's Parliament buildings, to their owners' delight). And the groups successfully pressured the government's Department of Transport into a safety investigation of the Firenza.

That three-month investigation, conducted by a university professor and recently completed, didn't find any defect in the design or construction of the Firenza that would affect its safe operation. However, it concluded that the quality of workmanship on the car "appeared to be inferior to that to which Canadian motorists have become accustomed."

An Owner's Hope

Some dissatisfied owners have taken things into their own hands. There's Debbie Bernstein, for example, who says she leaves her Firenza parked with the engine running, "hoping against hope someone will steal it." (Helen Naken figures no one will steal her Firenza because "it's always in the shop. It has gone through four drive shafts in 4,000 miles, and I've put more mileage on dealer courtesy cars than I have on my own car," she says.) And Sam Rabba planned to set fire to his Firenza at a recent owners picnic, until he learned he could be fined $5,000 for polluting the air.

Mr. Moore, the founder and president of the owners group, admits his troubles probably were extreme. After his car went in for its 16th or 17th set of repairs last May (he doesn't remember exactly how many visits it made to the shop, but quips that it seemed like "every Tuesday"), GM made him an offer he couldn't refuse: in return for his Firenza and about $380, he got a new Astra, another GM model.

Mr. Moore's grateful for that, but he figures he got a special deal. "It's obvious GM is trying to buy off the loud ones," he says. Mr. Moore vows that neither he nor his group will shut up until they all get a standardized deal, "either in cash or the same as I got."

Tax Report

A Special Summary and Forecast Of Federal and State Tax Developments

THE TREASURY IS URGED to publicize its private meetings with a tax lawyer group.

The American Bar Association's tax arm has considerable influence on federal tax policies and regulations, and the manner in which it wields its power is troubling an increasing number of critics. Ira Tannenbaum, a Washington attorney who specializes in public interest tax law, claims the ABA's influence is exerted mainly in private and tends to favor special economic interests rather than the interests of the public at large. That's because ABA tax specialists usually are lawyers for big corporations and wealthy individuals.

Tannenbaum points out that ABA tax representatives meet privately with Treasury and IRS officials and staff members several times a year, often at the government's request, to discuss current tax topics. He feels the meetings should be made subject to a federal law which requires that meetings held at the government's instigation between government representatives and private advisory groups be public and their minutes open to public inspection. In addition to opening the meetings, Tannenbaum says, the Treasury should encourage public interest tax groups to participate in them.

Tannenbaum stated his views recently in a letter to the Treasury. The agency replied it is studying the matter but doesn't now believe the meetings should be open.

LONG SHOT: An IRS agent tries to buck a strictly enforced tax agency policy.

He deducted the cost of going to law school, noting that Treasury regulations permit a taxpayer to deduct educational expenses incurred in "maintaining or improving" his job skills. A lot of people, including many IRS agents, feel agents would do a better job if they had more training in law.

But while deductions for skill improvement training are permitted, tax regulations bar deductions where the education qualifies the taxpayer for a new vocation. Even though law school presumably made the man a better agent, it also enabled him to switch careers and become a practicing lawyer if he wanted to. So a federal district court denied the agent's deduction.

THE TAX COURT RAPS an IRS bureaucrat for "abusing his discretion."

To encourage everyone to pay taxes on time, federal tax rules contain a lot of deadlines for making certain payments and taking other actions related to them. The IRS is supposed to enforce these deadlines, but it also may extend a deadline if the taxpayer has a good reason for failing to meet it.

Theron Lemly, a Memphis businessman, felt the reason he hadn't applied for an extension of a tax deadline before it passed was valid. He personally didn't know about the deadline, and the accountant who had handled Lemly's taxes for years died shortly before the deadline passed without having made sure Lemly met it. Lemly finally applied for the extension less than six months after the deadline passed and about a month after concluding negotiations about his taxes with an IRS agent. However, despite repeated appeals to the IRS district director in Nashville, the director stuck to the view that Lemly had been negligent. (Missing the deadline meant he missed a substantial tax savings.)

But the Tax Court concluded Lemly's excuse was legitimate and he was entitled to the tax saving.

DRINKING AND DYING produced less tax revenue for New York State in April through July, the first four months of its fiscal year, than in the like period a year ago. Alcoholic beverage tax receipts fell 8%; estate tax receipts declined 14%. (Total state tax collections rose 7%.)

HERE'S HOW NOT TO PROVE your trip abroad was mainly for business. A California couple, both art teachers, tried to deduct the cost of a six-month tour of Europe. They claimed their ability to teach had been enhanced by visiting art museums and schools. But they didn't keep any notes or diaries during the trip and they prepared an itinerary purporting to justify the excursion as a business trip only after they returned and learned the IRS was auditing their returns. Deduction denied.

THE ODDS YOU'LL BE INDICTED for tax fraud are rising. Some 1,186 people were indicted for tax evasion and related crimes in fiscal 1973 ended June 30. That continues a steady rise from 1,085 in 1972, 956 in 1971 and 924 in 1970. The IRS credits improved administration in its criminal division, formation of additional investigative teams and computerization of some procedures for the increase.

A REAL ESTATE COMPANY in Massachusetts is hit with the accumulated earnings tax.

The tax is a club the IRS uses to keep owners of small companies from manipulating their personal tax liability by failing to declare dividends to themselves and letting profits pile up beyond the company's legitimate business needs. If the IRS concludes a company's owner is doing this, he must disprove the charges or pay a penalty tax.

The Massachusetts concern claimed it had accumulated its profits because it planned a major expansion of its facilities. But it wasn't able to show the IRS any "specific or definite" expansion plan. The Tax Court further found "scarcely any evidence" that the company's board had made a forecast of how much money the expansion would require. The coup de grace, however, was the IRS's revelation that the company's owners avoided $73,170 in personal taxes by failing to declare a dividend.

The failure of the "corporate controllers" to explain adequately why dividends hadn't been paid is "particularly suspect when those same persons happen also to be the sole shareholders," the court said.

BRIEFS: A U.S. appeals court in New York recently upheld the IRS's seizure of funds from the Merrill Lynch account of Clifford and Edith Irving. . . . New York University sets its 32d annual Institute on Federal Taxation for Oct. 31-Nov. 9 at the Waldorf-Astoria.

The Greeters

Privately Held Hallmark Regards Philanthropy As Key Company Policy

It Subsidizes Civic Ventures, Backs Cultural Projects, Jealously Guards Privacy

Millions & Two '63 Buicks

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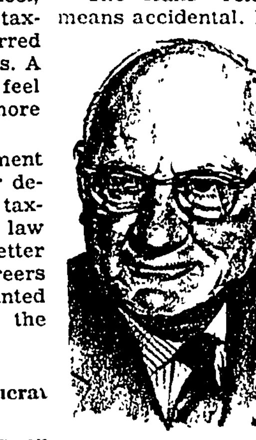
KANSAS CITY — When Joyce Hall, chairman and founder of Hallmark Cards Inc., turns 82 next Wednesday, it is a safe assumption that the occasion will elicit a barrage of greeting cards. It is also safe to assume that the bulk of these congratulatory messages will bear the Hallmark imprint, since propriety, after all, would hardly dictate otherwise—and, furthermore, Hallmark turns out one of every four greeting cards sold in the U.S.

Beyond these conjectures, it is safe to assume little. For despite the fact that Hallmark is among the best-known trade names in American business, the doings of the Hall family—unlike, say, the Fords, the Rockefellers or the Watsons—invariably transpire well beyond the glare of nationwide publicity. Indeed, outside this Midwestern city that is the Halls' corporate headquarters and their home, few of the nation's millions of greeting-card senders and recipients know that the first syllable of Hallmark is a family name.

The Halls' relative anonymity is by no means accidental. In fact, it is in keeping with their company's status as one of the dwindling number of large, privately owned companies in the U.S. — a status that allows Hallmark to cling to its privacy, free from criticism and pressure from outside investors. As Donald J. Hall, Hallmark's 45-year-old president and chief executive and Joyce Hall's only son, explains it: "This way we can do our own things and have to answer to nobody."



Joyce Hall

The retention of privacy has obvious advantages for a company. If the top executives want yachts and planes and hunting lodges, all purchased with corporate funds, they can have them—without fear of slaps on the wrists from corporate gadflies. But in the case of Hallmark, whose annual sales are estimated at $350 million (with estimated profits of $25 million), the company's freedom from outside interference has let it spend its money in what might be termed the pursuit of good taste.

"Good taste is good business," Joyce Hall has said on more than one occasion. And what the Halls consider good taste seems to go well beyond the promotion of a public image of quality—to the point that its "tasteful" practice of what might be called good corporate citizenship is considered by many publicly owned companies to be daring in the extreme, if not downright foolhardy.

Consider Crown Center, a $400 million Hallmark real-estate venture here in Kansas City. The project, surrounding the company headquarters, involves the redevelopment of 23 square blocks; and, when completed, it will comprise office buildings, a bank, a large open plaza, a retailing complex with 65 stores, apartment houses, a 730-room hotel, and a motel. It has won praise for its architectural beauty. It is said to have provided the spark for a plan to revive the city's decaying downtown area not far away. And yet hear the assessment of a friend of the Halls who heads a large publicly owned company: "I have nothing but admiration, because everything is absolutely first class, as you'd expect of Hallmark. But if I proposed anything like Crown Center to my directors, they'd probably fire me."

For one thing, real-estate ventures are far removed from Hallmark's manufacturing and marketing expertise. For another, the undertaking is mammoth indeed—it will take 10 years to complete—for a company of Hallmark's size. But most important is the fact that Hallmark officials concede Crown Center, with its attention to detail, will take twice as long to become profitable as most large real-estate developments.

Or take the Hallmark Hall of Fame. Since 1951, Hallmark has spent more than $50 million to produce this series of television dramatic "specials." The ratings have been largely mediocre—a fact that would give many another company pause—but critics have acclaimed the Hall of Fame as, among other superlative descriptions, "an oasis in television's wasteland." And last November, Donald Hall announced that the company planned to continue the shows for at least 10 more years at a cost of more than $60 million.

And what publicly held company would continue year after year to operate what is said to

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A Chicken in Sneakers

KANSAS CITY—Until he was well into his 70s and decided to become less active in the affairs of Hallmark Cards Inc., Joyce Hall personally approved each of the new cards dreamed up by his company's creative staff. His favorite design, first used in 1941, is an old-fashioned rendition of a pansy bouquet in a basket. His favorite greeting is a sentiment by Edgar Guest that says, "I'd like to be the kind of a friend you've been to me."

Hallmark says that both the pansy card, which is only just this year being discontinued, and the Guest saying, which was used on various cards from 1916 to 1971, were overwhelming successes. However, tastes change, and Hallmark's business is to cater to the public's demands.

The outside of a recent greeting, for example, shows a chicken-like creature wearing ankle-high sneakers saying "Happy Birthday." A message on the inside of the card asks: "You was expecting maybe the Bluebird of Happiness?"