

THE LABOR MARKET EFFECTS OF SEX AND RACE DISCRIMINATION LAWS

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We study the effects of state sex and race discrimination laws that were passed prior to federal antidiscrimination legislation. State sex discrimination laws targeted discrimination in pay only. Because an equal pay constraint raises the relative price of female labor, we would expect the relative employment of females to decline. We find robust evidence that state equal pay laws for women reduced relative employment of both black women and white women. We also find some evidence of positive effects of race discrimination laws on earnings of blacks relative to whites, although no evidence of employment effects. (JEL J15, J16, J18, J23)

I. INTRODUCTION

Public policies to narrow the gaps in labor market outcomes between men and women and between whites and minorities have a long and controversial history. Two pieces of federal legislation stand out as perhaps the most significant such policies. The first was the Equal Pay Act of 1963, which requires equal pay for equal work, noting some exceptions but explicitly prohibiting a worker's sex as one of them. The second was Title VII of the Civil Rights Act of 1964, making it illegal to discriminate in hiring, discharge, compensation, and so on, on the basis of race, color, religion, sex, or national origin. Two other important landmarks in the evolution of these policies at the federal level were amendments to Title VII embodied in the Equal Employment Opportunity Act (EEOA) of 1972, which expanded coverage and increased the enforcement powers of the Equal Employment Opportunity Commission (EEOC), and Exec-

utive Orders 10925 (1961), 11246 (1965), and 11375 (1967), which laid the groundwork for affirmative action, although the phrase has its origins in Title VII.¹

There are three broad controversies regarding these public policies. The first concerns the need for any government attack on labor market discrimination, hinging on questions of whether the observed group differences in labor market outcomes reflect discrimination and whether competition in labor markets and product markets will undermine discriminatory behavior.² The second concerns the fairness and social efficiency of affirmative action, which many, such as Steele (1990) and Carter (1991), regard as distinct from nondiscrimination policies in advocating preferential

1. For detailed discussions of these legislative and executive policies and of the numerous court cases that have shaped the evolution of antidiscrimination policy, see, for example, Bloch (1994). There were some earlier Executive Orders issued by President Roosevelt in 1941 outlawing racial discrimination in the defense industry and in training for defense production (see Collins 2003a).

2. Much of this controversy is based on Becker (1971). For a recent exchange and review of the evidence regarding discrimination see Heckman (1998) and Darity and Mason (1998). For evidence on the role of competition in eliminating discrimination, see, for example, Ashenfelter and Hannan (1986) and Hellerstein et al. (2002).

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ABBREVIATIONS

DDD: Difference-in-Difference-in-Differences
EEOA: Equal Employment Opportunity Act
EEOC: Equal Employment Opportunity Commission
FEPA: Fair Employment Practices Act
OLS: Ordinary Least Squares

treatment of particular groups.³ The third, with which this article is concerned, is the effectiveness of these policies, asking in particular whether antidiscrimination policies contributed to relative improvements in labor market outcomes for women and minorities (and presumably continue to contribute if discrimination persists). Failure to find evidence of these effects can reflect either ineffectiveness of the antidiscrimination laws, or no prior discrimination.

We focus much of our attention on the effects of laws prohibiting sex discrimination in pay, unlike most of the previous research on the impact of antidiscrimination legislation, which focuses on the effects of race discrimination laws on race differences in earnings. Much of the earlier work tries to infer the effects of federal legislation by asking whether, concurrent with the passage of federal antidiscrimination legislation, there was a jump or acceleration in, for example, the relative promotion rates of women or the relative earnings of blacks. The fundamental problem with such time-series analyses of the impact of federal antidiscrimination laws is that the laws have nearly universal applicability, which prevents identification of an appropriate comparison group that can be used to control for changes in the relative outcomes under study that are unrelated to the policy innovation. For example, if the black–white wage gap was narrowing prior to the passage of Title VII of the Civil Rights Act, then testing whether Title VII narrowed the gap requires a comparison of changes in the black–white gap for workers covered by Title VII and workers not covered in the same period.⁴ Researchers have of course considered other ways to bring complementary evidence to bear, including efforts to identify control groups and use of auxiliary data.

3. For a detailed review of the literature on affirmative action, see Holzer and Neumark (2000).

4. These concerns are echoed by Chay (1998), who points out that “the timing of the legislation (in the mid-1960s) corresponds with the timing of many other significant changes in the U.S. labor market. In addition, the nature of these laws, and in particular their nearly universal coverage, makes it difficult to control for changes that would have occurred even in the absence of the legislation” (pp. 608–9). Similarly, Hahn et al. (1999) note that the lack of consensus over the impact of Title VII and related laws “probably stems in part from the difficulty of assessing the impact of laws that have near universal coverage” (p. 14).

This article takes an alternative approach to the problem of inferring the effects of laws prohibiting sex and race discrimination to those taken in most previous research. In particular, prior to the enactment of the federal legislation, many states enacted similar laws or practices barring discrimination in wages (for women) and employment (for blacks, although those laws covered wage discrimination as well). Because these laws or practices were passed at different times in different states, a more natural control group is provided. Specifically, the quasi-experimental design afforded by the variation across time and over states allows us to assess the impact of state antidiscrimination statutes by constructing comparisons using data for the same time span from states that did not enact such statutes.⁵ Although this approach has some limitations, at a minimum our empirical strategy provides important complementary evidence to that in the existing literature on the impact of federal antidiscrimination laws. A recent survey of research on the effects of gender and race in the labor market by Altonji and Blank (1999) concurs, summarizing its review of existing evidence on the effects of federal antidiscrimination policy as follows:

Despite major public and private resources devoted to anti-discrimination policy, the research literature on the results of these efforts is sparse. While we recognize the difficulties of studying nationally enacted legislation, in many cases there are differences over time or across regions in the implementation of such legislation, or there is variation in related state-specific legislation. Such research . . . is likely to provide useful information, particularly in a world where existing anti-discrimination measures in . . . the labor market are at the center of a major public debate about the appropriate response to ongoing racial differentials. (p. 3250)

5. Landes (1968) employs a similar experimental design to investigate state laws prohibiting race discrimination over the 1940–60 period, as does Collins (2003b) in more recent work done concurrently with ours. Landes focuses on relative earnings but only in a regression that conditions on relative employment, which is endogenous. He does not study employment directly, only unemployment, which confounds employment and participation effects. Collins finds somewhat stronger earnings effects of the laws passed in the 1940–60 period for black women than for black men, but generally weak effects over the whole period and with different signs for laws passed in the 1940s and laws passed in the 1950s. Neither of these publications studies the effects of state sex discrimination laws, which arose concurrently with state race discrimination laws. In addition, we consider a greater variety of specifications of the effects of antidiscrimination laws, and as a result find stronger evidence of positive impacts of race discrimination laws than does Collins.

II. EXISTING RESEARCH

The body of research on the impact of federal antidiscrimination policy on sex differences in labor market outcomes is quite small. Eberts and Stone (1985) use panel data to examine relative rates of promotion to administrative positions of male and female public school teachers before and after the EEOA. They find declining evidence of discrimination in promotions of teachers in two states in the latter part of the 1970s and conclude that the EEOA contributed to that decline. But as just noted, attributing such changes to antidiscrimination laws rather than concurrent changes in labor markets and labor force behavior of males and females is tenuous.

Beller (1979) improves on this identification strategy by using information on regional variation in policy enforcement activity. She estimates models for earnings of men and women using Current Population Survey data for 1974, 1971, and 1967, incorporating measures of Title VII investigations and settlements by region (large states and state groups) but not including a time trend or year dummy variables. She finds relatively weak evidence that these measures reduced the sex wage gap prior to the EEOA (in 1972), but stronger evidence of this effect after the passage of the EEOA. O'Neill (1985) studies the evolution of the sex gap in wages but without an explicit focus on policy effects.⁶

There is a much more extensive set of time-series studies of the impact of legislation prohibiting race discrimination, examining evidence regarding alternative explanations of black economic progress in the late 1960s. The primary question addressed in the time-series studies is, as Heckman (1990) puts it, "Does continuous or discontinuous change characterize the recent economic history of black Americans?" (p. 242). That is, is there a discontinuity in the relative progress of blacks that is most consistent with an important role for federal antidiscrimination efforts? Heckman takes a strong stand regarding the positive impact of federal policy (based on

evidence in Donohue and Heckman 1991, and a review of the earlier evidence), arguing that "there is ample evidence of discontinuous change in the improvement of black status during the crucial period 1965–1975" (1990, p. 242).⁷ A principal alternative view is that black economic progress simply reflects longer term trends, perhaps obscured in some periods (and hence giving the impression of more rapid change in the 1960s and early 1970s) because of other changes. The latter view is put forth most forcefully by Smith and Welch (1989), who conclude that "slowly evolving historical forces . . . education and migration—were the primary determinants of long-term black economic improvement. At best affirmative action has marginally altered black wage gains around this long-term trend" (p. 519).⁸ A central reason for this view of the evidence is that relative black economic outcomes had been improving earlier, although this may have been partly masked by other changes. As an example, Margo (1995) and Goldin and Margo (1992) have documented the Great Compression of general wage inequality as well as black–white earnings differences from 1940 to 1950,⁹ and, as Margo asks, if antidiscrimination legislation played a strong role in racial wage convergence in the 1960s, "how did black workers manage such impressive relative wage gains in the 1940s, well before the modern civil rights movement bore its fruit?" (1995, p. 470).

To illustrate these facts, Table 1 reports estimates of specifications using census data that mimic the earlier time-series studies, simply inferring the effects of anti-discrimination legislation from changes in relative earnings

7. See also Bound and Freeman 1992; Brown 1982, 1984; Butler and Heckman 1977; Culp 1986; Donohue and Heckman 1991; Fosu 1992; Freeman 1973, 1981; Smith and Welch 1977; Vroman 1974.

8. In earlier work, Welch (1976) took a more nuanced view, noting, in reference to the Civil Rights Act of 1964 and Executive Orders 11246 and 11375, that "there is a real question of the impact of these statutes. It is clear that, with respect to blacks, both earnings and occupational status have improved relative to whites in the period since 1964. But relative wages were rising before then, and the extent of recent gains that can be attributed to antidiscriminatory mandates is unclear" (p. S106).

9. According to Margo (1995), this compression was due to numerous factors, including a decline in residual wage inequality favoring lower skill workers, other changes in the wage structure favoring lower skill workers, migration, shifts in demand stemming from World War II, and changes in school quality.

6. Britain implemented equal pay legislation (the Equal Pay Act) and equal employment opportunities legislation (the Sex Discrimination Act) at the end of 1975. There is a strand of literature on sex discrimination legislation in Britain that parallels the U.S. literature on race discrimination legislation in trying to estimate the effects of the legislation from time-series data (Pike 1985; Zabalza and Tzannatos 1985, 1988).

TABLE 1
Effects of Race and Sex Discrimination Laws on Employment and Log Earnings,
Quasi-Time-Series Experiment, 1940–70, Regression Estimates

	White Females vs. White Males (1)	Black Females vs. White Males (2)	Black Females vs. Black Males (3)	Black Males vs. White Males (4)
<i>Employment</i>				
× Year ≥ 1950	0.001 (0.010)	−0.017 (0.015)	0.013 (0.019)	−0.035 (0.020)
× Year ≥ 1960	0.034 (0.008)	0.039 (0.015)	0.086 (0.012)	−0.045 (0.014)
× Year = 1970	0.088 (0.006)	0.072 (0.014)	0.070 (0.010)	0.002 (0.011)
<i>R</i> ²	0.277	0.225	0.167	0.187
<i>N</i>	2,684,138	1,352,275	293,382	1,313,255
<i>Log earnings</i>				
× Year ≥ 1950	−0.005 (0.016)	0.265 (0.061)	0.026 (0.036)	0.193 (0.031)
× Year ≥ 1960	−0.074 (0.011)	−0.105 (0.055)	−0.096 (0.026)	−0.041 (0.023)
× Year = 1970	−0.003 (0.010)	0.144 (0.048)	0.049 (0.023)	0.047 (0.023)
<i>R</i> ²	0.770	0.788	0.803	0.788
<i>N</i>	1,132,808	842,056	115,757	872,023

Notes: Data from the 1940, 1950, 1960, and 1970 Decennial Censuses of Population are used. The sample is restricted to those aged 18–70. When we study earnings, we exclude agricultural and private household workers, and we exclude from all analyses those in the armed forces, self-employed workers, and unpaid workers. The specifications also include controls for age and its square, residence in an SMSA, years of schooling, and marital status (currently married or divorced/widowed/separated). In addition, the specifications include dummy variables for race/sex and year and state dummy variables. Estimated coefficients reported are for interactions between the year indicators and dummy variables for white females (column 1), black females (columns 2 and 3), or black males (column 4). The results were similar including state-by-year interactions and interactions between race/sex and state. The earnings specifications also include dummy variables for two-digit industry and occupation and for hours and weeks worked. SEs are reported after the coefficient estimates and allow for nonindependent regression errors within groups defined by state, year, and race or sex category.

and employment over time.¹⁰ We estimate individual-level equations for employment and for log earnings, including dummy variables for race, year, and state, as well as control variables listed in the notes to the table. We augment the specifications to include interactions between year dummy variables and a dummy variable for blacks or women. The year dummy variables are defined to equal 1 if an observation is in or after a particular census year (e.g., year ≥ 1960), so that each of these interactions measures the change from the previous decade.¹¹ The identification strategy for the time-series analysis can be interpreted as comparing the coefficient estimates for race or sex differences in 1970 to those for earlier decades,

with a discrete jump or an acceleration providing evidence of an effect of the federal legislation, in the spirit of the discontinuous change criterion. As we show in the bottom panel of columns (2) and (4) of Table 1, in the census data that we use in this article we find the same evidence of earnings gains for blacks relative to whites between 1960 and 1970. But we also see the sharper relative earnings improvement for blacks from 1940 to 1950. The table also shows gains in the relative employment of both black and white women from 1950 to 1960 as well as 1960 to 1970.

The evidence in Table 1 makes two points. First, for the most part relative economic outcomes for women and blacks improved from 1960 to 1970, consistent with beneficial effects of federal antidiscrimination policies. On the other hand, changes were in some cases occurring in earlier decades, and the earlier changes were sometimes larger. Together, these findings make it difficult to draw strong conclusions regarding the effects of federal antidiscrimination policies enacted in the 1960s. Even if the changes in all other decades were 0, and

10. The data are explained in more detail shortly, when we get to the core of our analysis.
11. Denoting by Y_{ist} the dependent variable for individual i in state s in year t , X_{ist} a vector of control variables, I_s a set of dummy variables corresponding to states, I_t a set of year indicators as explained in the text, and, for example, BF_{ist} a dummy variables for black females, the equation for black and white females is: $Y_{ist} = \alpha + \beta_{BF}BF_{ist} + X_{ist}\beta_X + I_s\beta_s + I_t\beta_t + BF_{ist} \times I_t\eta_{BF,t} + \varepsilon_{ist}$, and the estimates of $\eta_{BF,t}$ are reported in Table 1.

in the expected direction from 1960 to 1970, alternative explanations other than effects of these policies would be possible, although less plausible. But the estimates reported in Table 1 are far from that scenario, emphasizing that it is difficult to draw inferences regarding the effects of antidiscrimination policies solely from changes over time in relative outcomes for protected groups, a conclusion that helps to motivate our analysis of state-level antidiscrimination laws.

In the face of the problem of identifying a comparison group that can be used to control for changes in the outcomes under study unrelated to the policy innovation, researchers have used additional information and/or alternative empirical strategies to identify the policy effects, based on regional differences in antidiscrimination efforts (e.g., Beller 1979; Donohue and Heckman 1991; Heckman and Payner 1989) and differences between businesses covered and not covered by antidiscrimination laws (e.g., Chay 1998; Carrington et al. 2000; Hahn et al. 1999; Leonard 1984). The studies in the second group are limited compared to the overall question regarding the effectiveness of antidiscrimination efforts, because they tend to focus on more narrowly tailored evidence, such as the effects concentrated at particular employer-size cutoffs. The evidence we present, based on variation across states and time in the introduction of antidiscrimination legislation, is of a more aggregated nature and in that sense closer in spirit to the earlier time-series studies in providing estimates of overall policy effects, while also building on the general empirical strategy of the newer research that develops better experiments for evaluating the effects of antidiscrimination legislation.

III. SEX AND RACE DISCRIMINATION LAWS

This article exploits cross-state variation in antidiscrimination legislation at the state level. Thus a major part of the research project was assembling information on this legislation with regard to both sex and race discrimination, as well as related legislation potentially impacting women. Information on laws regarding sex discrimination is summarized in Table 2. As the table shows, in almost every case through the 1960s these were equal pay laws and did not explicitly refer to discrimination in hiring, discharge, and so on. The only

exceptions are a voluntary Fair Employment Practices Act (FEPA) provision in Oregon as of 1950, and then, as of 1970, the extension of FEPAs to refer to sex in numerous states. In contrast, mandatory FEPAs, which were widely adopted by states with respect to race, establish two types of behavior as violations of the acts: refusing employment or discharging a nonwhite because of that person's race; and discriminating against nonwhites in terms or conditions of employment, including compensation.¹²

The state laws for women raise a couple of issues. First, given that the state laws cover wage discrimination only, the federal laws enacted in the 1960s are fundamentally different because they also incorporated nondiscrimination in hiring and discharge. As a consequence, we focus only on the impact of state equal pay laws through 1960. That is, there is no way to think of the passage of federal laws in the 1960s as the "extension" of similar laws to the remaining states, given the greater breadth of the federal laws regarding sex discrimination.¹³

A second issue is the potentially confounding effects of protective laws restricting women's work. At the end of the nineteenth and beginning of the twentieth century, most states adopted laws that in some way or other restricted women's work, most commonly by specifying maximum hours or prohibiting employment in particular occupations or at night. A detailed compendium of these laws is provided in Table 3. The types of laws covered include prohibitions on night work, prohibitions on employment of women in certain occupations and industries, and maximum hours laws. As the last column of the table shows, state attorneys general or other state bodies sometimes issued opinions in the 1960s noting that these laws were inconsistent with Title VII of the Civil Rights Act, so that such laws were by and large nonbinding by 1970. Nonetheless, if these laws were changing over the 1940–60 period, any effects of such changes could be

12. Such laws also refer to creed, color, and national origin.

13. There is somewhat more of a case for looking at the extension of federal laws regarding race discrimination to all states in the 1960s. Here, too, though, federal policy expanded to include affirmative action. Because of this and our emphasis on sex discrimination laws, we restrict all the analysis to the period prior to the federal legislation regarding sex and race discrimination.

TABLE 2
State Sex Discrimination Laws

State	1900–1939	1940–49	1950–59	1960–69
AK		1949: enacts EPL		1969: amends FEPA to include sex discrimination clause. Exempt: employment agencies, labor organizations
AR			1955: enacts EPL	
AZ				1962: enacts EPL 1965: enacts FEPA including sex discrimination clause
CA		1949: enacts EPL		1965: strengthens EPL enforcement 1968: extends EPL to include both men and women
CO			1955: enacts EPL	1969: amends FEPA to include sex discrimination clause. Exempt: employment agencies, labor organizations
CT		1949: enacts EPL	1953: amends EPL to permit employers to consider length of service and merit ratings as factors in determining wage/salary rates	1967: amends FEPA to include sex discrimination clause
DC				1965: enacts antidiscrimination ordinance including sex discrimination clause
FL				1969: enacts EPL
GA				1966: enacts EPL 1968: limits EPL to “employers in intrastate commerce”
HI			1959: enacts EPL	1963: enacts FEPA including sex discrimination clause
ID				1967: amends FEPA to include sex discrimination clause 1969: enacts EPL. Approves mandatory FEPA with greater emphasis on employment. Creates Commission on Human Rights. Exempt: employers with < 5 employees
IL		1944: enacts EPL. Applies only to manufacturing		
IN				1967: adds EPL to existing minimum wage law
KY				1966: enacts EPL
LA				1968: creates a Women’s Division within the Department of Labor. Establishes the Commission on the Status of Women, which conducts studies and develops recommendations regarding employment
MA		1945: enacts EPL		1965: amends FEPA to include sex discrimination clause

MD				1965: enacts FEPA including sex discrimination clause. Law also prohibits sex discrimination in wage rates. Exempt: labor organizations and employment agencies 1966: enacts EPL 1965: EPL becomes applicable to both men and women 1962: EPL strengthened to include all employers 1966: amends FEPA to include sex discrimination clause
ME		1949: enacts EPL		
MI	1919: enacts EPL. Covers only manufacturing	1940: EPL upheld as constitutional by state Supreme Court		
MN				1969: enacts EPL. Amends FEPA to include sex discrimination clause
MO				1963: enacts EPL 1965: amends FEPA to include sex discrimination clause. An additional amendment prohibits sex discrimination in apprenticeship and employment agencies
MT	1919: enacts EPL			
NB		1957: adopts resolution endorsing equal pay for equal work. Urges employers to adopt		1965: enacts FEPA including sex discrimination clause. Law also prohibits sex discrimination in wage rates 1967: enacts EPL
ND				1965: enacts EPL
NH		1947: enacts EPL		
NJ			1952: enacts EPL	
NM				1969: repeals Civil Rights Act and Equal Opportunity-FEPA and enacts Human Rights Act, which includes a clause on sex discrimination
NV				1967: amends FEPA to include sex discrimination clause. Law also prohibits sex discrimination in wage rates 1969: adds EPL to minimum wage law
NY		1944: enacts EPL		1965: amends FEPA to include sex discrimination clause. Exempt: employment agencies. State EPL is made to conform to Federal EPL 1967: amends FEPA to include employment agencies
OH			1959: enacts EPL	
OK				1965: enacts EPL 1968: enacts FEPA including sex discrimination clause. Effective beginning in 1969
OR		1947: enacts voluntary FEPA including clause on sex discrimination	1955: enacts EPL	1969: amends mandatory FEPA to include sex discrimination clause

continued

TABLE 2
Continued

State	1900–1939	1940–49	1950–59	1960–69
PA		1947: enacts EPL. Includes provision prohibiting sex discrimination in wage rates		1968: extends EPL to include state employees and respective political subdivisions. Exempt: those subject to the minimum wage provisions of the FLSA
RI		1946: enacts EPL		1969: amends FEPA to include sex discrimination clause
SD				1965: strengthens EPL by deleting exemption for individuals under union contract
UT				1966: enacts EPL
VT				1965: enacts FEPA including sex discrimination clause. Law also prohibits sex discrimination in wage rates
WA		1943: enacts EPL		1963: enacts FEPA that prohibits sex discrimination in wage rates, no commission
WI				1961: amends FEPA to include sex discrimination clause. Law also prohibits sex discrimination in wage rates
WV				1965: enacts EPL
WY			1959: enacts EPL	1965: enacts FEPA, including sex discrimination clause

Notes: EPL refers to Equal Pay Law. States with no sex discrimination laws are not listed.

Sources: Besner (1970), Bureau of National Affairs (1973), Lockard (1968), U.S. Bureau of Labor Standards (1967), U.S. Bureau of Labor Statistics, *Monthly Labor Review* (all years), U.S. Women’s Bureau (1965, 1969, 1970).

TABLE 3
State Protective Laws for Women

State	1860–1939	1940–59	1960–69
AL	1893: passes law prohibiting women from employment in selected occupations. Occupations include M		
AR	1893: passes law prohibiting women from employment in selected occupations. Occupations include M 1915: passes enforceable maximum hours law. Industries include Mf, Mc, O		
AZ	1912: passes law prohibiting women from employment in selected occupations. Occupations include M 1913: passes enforceable maximum hours law. Industries include Mc, O 1927: amends hours law to include Mf		1968: employment that complies with FLSA requirements exempt from maximum hours law
CA	1911: passes enforceable maximum hours law. Industries include Mf, Mc, O 1916: Industrial Welfare Commission issues order prohibiting women from employment in selected occupations. Occupations include H 1918: Industrial Welfare Commission issues order prohibiting night work. Industries include Mf 1919: amends night work orders to include O		1960s: amendments to hours laws reduce scope/loosen restrictive nature of hours laws
CO	1885: passes law prohibiting women from employment in selected occupations. Occupations include M 1912: passes enforceable maximum hours law, effective in 1913. Industries include Mf, Mc, O		
CT	1887: passes enforceable maximum hours law. Industries include Mf, Mc 1909: passes law prohibiting night work. Industries include Mc 1913: amends night work law to include Mf 1917: amends maximum hours law to include O 1917: amends night work law to include O		1960s: amendments to hours laws reduce scope/loosen restrictive nature of hours laws
DC	1914: U.S. Congress passes enforceable maximum hours law for District of Columbia. Industries include Mf, Mc, O		
DE	1913: passes enforceable maximum hours law. Industries include Mf, Mc, O 1917: passes law prohibiting night work. Industries include Mf, O	1955: repeals night work law	1965: repeals maximum hours law
ID	1913: passes enforceable maximum hours law. Industries include Mf, Mc, O		

continued

TABLE 3
Continued

State	1860–1939	1940–59	1960–69
IL	1872: passes law prohibiting women from employment in selected occupations. Occupations include M 1893: passes enforceable maximum hours law. Industries include Mf 1895: State court declares hours law unconstitutional. 1909: passes enforceable maximum hours law. Industries include Mf, O 1911: amends maximum hours law to include Mc		
IN	1899: passes law prohibiting night work. Industries include Mf 1905: passes law prohibiting women from employment in selected occupations. Occupations include M		
KS	1915: passes law prohibiting women from employment in selected occupations. Occupations include H 1917: Industrial Welfare Commission issues enforceable maximum hours order. Industries include Mc, O 1917: Industrial Welfare Commission issues order prohibiting night work. Industries include Mc 1918: amends night work order to include O 1919: amends night work order to include Mf 1919: amends maximum hours order to include Mf		
KY	1912: passes enforceable maximum hours law. Industries include Mf, Mc, O		
LA	1886: passes enforceable maximum hours law, allowing an average maximum per day. Industries include Mf 1908: passes enforceable maximum hours law, enforcing a maximum limit on hours per day rather than an average. Industries include Mf, Mc, O 1908: passes law prohibiting women from employment in selected occupations. Occupations include H		
MA	1879: passes enforceable maximum hours law. Industries include Mf 1890: passes law prohibiting night work, effective in 1891. Industries include Mf 1900: amends maximum hours law to include Mc 1913: amends maximum hours law to include O		1960s: amendments to hours laws reduce scope/loosen restrictive nature of hours laws
MD	1902: passes law prohibiting women from employment in selected occupations. Occupations include M 1912: passes enforceable maximum hour law. Industries include Mf, Mc, O		1969: employment that complies with FLSA requirements exempt from maximum hours law
ME	1887: passes enforceable maximum hours law. Industries include Mf 1915: amends maximum hours law to include Mc, O		

MI	<p>1885: passes enforceable maximum hours law, allowing an average maximum per day. Industries include Mf</p> <p>1893: amends hours law to include only girls under 21</p> <p>1907: hours law again regulates work of all women, regardless of age. Law enforces a maximum limit on hours per day, rather than an average. Industries include Mf, Mc</p> <p>1909: maximum hours law now includes O.</p> <p>1919: passes equal pay law including a provision prohibiting women from employment in selected occupations. Occupations include H</p>	<p>1967: repeals maximum hours law. State Labor Department is given authority to adopt rules on special working conditions for women</p> <p>1969: State Attorney General invalidates protective laws for employment that are covered by federal Civil Rights Act</p>
MN	<p>1909: passes enforceable maximum hours law. Industries include Mc, Mf</p> <p>1913: amends hours law to include O</p> <p>1913: passes law prohibiting women from employment in selected occupations. Occupations include H</p> <p>1919: sets a basic maximum hour per week law for all industries</p>	
MO	<p>1881: passes law prohibiting women from employment in selected occupations. Occupations include M</p> <p>1891: amends law prohibiting women from working in selected occupations by including H</p> <p>1909: passes enforceable maximum hours law. Industries include Mf, Mc, O</p>	
MS	<p>1914: passes enforceable maximum hours law. All industries included</p>	<p>1969: State Attorney General opinion/administrative ruling given regarding state protective laws</p>
MT	<p>1913: passes enforceable maximum hours law. Industries include Mf, Mc, O</p>	
NB	<p>1899: passes enforceable maximum hours law. Industries include Mf, Mc, O</p> <p>1899: passes law prohibiting night work. Industries include Mf, Mc, O</p>	<p>1969: repeals maximum hours law</p>
NC	<p>1915: passes enforceable maximum hours law. Industries include Mf</p> <p>1933: amends maximum hours law to include Mc</p> <p>1935: amends maximum hours law to include O</p>	<p>1967: maximum hours law exemption for employment conforming to FLSA standards</p>
ND	<p>1919: passes enforceable maximum hours law. Industries include Mf, Mc, O</p> <p>1920: passes law prohibiting employment of women in selected occupations. Occupations include H</p> <p>1920: passes law prohibiting night work. Industries include Mc, O</p>	<p>1969: State Attorney General recognizes that prosecution of protective laws may be difficult given federal ban on sex discrimination in Title VII of the Civil Rights Act</p>
NH	<p>1887: passes enforceable maximum hours law. Industries include Mf</p> <p>1913: amends hours law to include O, Mc</p>	
NJ	<p>1892: passes enforceable maximum hours law. Industries include Mf</p> <p>1912: amends hours law to include Mc, O</p>	

continued

TABLE 3
Continued

State	1860–1939	1940–59	1960–69
NM	1917: Bureau of Hygiene and Sanitation issues orders prohibiting employment of women in selected occupations. Occupations include H 1937: passes law prohibiting night work. Industries include Mf, Mc 1921: passes enforceable maximum hours law. Industries include Mf, Mc, O		1969: maximum hours law not applicable if employee voluntarily agrees to more hours in writing and is paid overtime rates
NV	1917: passes enforceable maximum hours law. Industries include Mf, Mc, O		
NY	1896: passes law prohibiting employment of women in selected occupations. Occupations include H 1899: passes enforceable maximum hours law. Industries include Mf 1901: amends maximum hours law to include O 1906: amends law prohibiting women from working in selected occupations by including M 1913: passes law prohibiting night work. Industries include Mf, Mc 1913: amends maximum hours law to include Mc 1917: amends night work law to include O		
OH	1909: passes law prohibiting employment of women in selected occupations. Occupations include H 1911: passes enforceable maximum hours law. Industries include Mf, O 1913: amends maximum hours law to include Mc 1919: passes law prohibiting night work. Industries include O 1919: amends law prohibiting women from working in selected occupations by including M		1969: Department of Industrial Relations issues release saying it will not prosecute violations of state women's laws that are in conflict with federal antidiscrimination law
OK	1907: passes law prohibiting employment of women in selected occupations. Occupations include M 1915: passes enforceable maximum hours law. Industries include Mf, Mc, O		1969: State Attorney General invalidates state protective laws
OR	1903: passes enforceable maximum hours law. Industries include Mf, O 1907: amends maximum hours law to include Mc 1913: includes prohibition of night work in Industrial Welfare Commission orders for city of Portland. Includes rest of state in 1914 orders. Industries include Mc 1914: amends night work prohibition to include Mf, O 1919: includes prohibition of employment of women in selected occupations in Industrial Welfare Commission orders. Occupations include H		1967: repeals maximum hours law. However, state Labor Department is given authority to adopt rules on special working conditions for women
PA	1885: passes law prohibiting women from employment in selected occupations. Occupations include M		1969: State Attorney General invalidates state protective laws

	1897: passes enforceable maximum hours law. Industries include Mf, Mc, O	
	1913: passes law prohibiting night work. Industries include Mf	
	1915: Industrial Welfare Commission issues orders to prohibit employment of women in H	
RI	1885: passes enforceable maximum hours law. Industries include Mf	
	1913: amends maximum hours law to include Mc	
SC	1911: passes enforceable maximum hours law. Industries include Mc	1967: repeals night work law
	1914: passes law prohibiting night work. Industries include Mc	
SD	1913: passes enforceable maximum hours law. Industries include Mf, Mc, O	1969: State Attorney General rules that the maximum hours law is superseded by the sex discrimination ban in Title VII of the Civil Rights Act
		1969: maximum hours law exempt for employment conforming to FLSA standards
TN	1907: passes enforceable maximum hours law. Effective Jan. 1908. Industries include Mf	
	1915: amends maximum hours law to include Mc, O	
TX	1913: passes enforceable maximum hours law. Industries include Mf, Mc, O	
UT	1896: passes law prohibiting employment of women in selected occupations. Occupations include M	
	1911: passes enforceable maximum hours law. Industries include Mf, Mc, O	
VA	1890: passes enforceable maximum hours law. Industries include Mf	1966: maximum hours law exemption for employment conforming to FLSA standards
	1912: amends maximum hours law to include Mc	
	1912: passes law prohibiting employment of women in selected occupations. Occupations include M	
	1914: amends maximum hours law to include O	
VT	1912: passes enforceable maximum hours law. Industries include Mf	
	1917: amends maximum hours law to include O	
WA	1891: passes law prohibiting employment of women in selected occupations. Occupations include M	
	1901: passes enforceable maximum hours law. Industries include Mf, Mc, O	
	1913: passes act prohibiting employment of women in H	
	1920: Industrial Welfare Commission issues order prohibiting night work. Industries include O	
WI	1911: passes enforceable maximum hours law. Industries include Mf, Mc, O	
	1911: passes law prohibiting employment of women in selected occupations. Occupations include M	
	1917: Industrial Welfare Commission issues order prohibiting night work. Industries include Mf, O	

continued

TABLE 3
Continued

State	1860–1939	1940–59	1960–69
WV	1887: women prohibited from employment in selected occupations. Occupations include M		
WY	1890: passes law prohibiting employment of women in selected occupations. Occupations include M 1915: passes enforceable maximum hours law. Industries include Mf, Mc, O		

Notes: States without protective laws for women are not listed. The following are the abbreviations used to denote the prohibited industries or occupations in each state: M—Mining (may include but not be limited to the following: work in or around mines, quarries, coal breakers, coke ovens, or smelters); H—Heavy Lifting/Dangerous Occupations (may include but not be limited to the following: lifting “any excessive burden,” cleaning moving machinery, work on moving abrasives, work in core making rooms, manufacture of nitro compounds, handling of any dry substance with specified amount of lead, employment in work environments that are not sufficiently lighted, ventilated, or sanitary, messenger service, bell boy, trucking, gas/electric meter reader, taxi cab driver, elevator operator, guard on streets or subways, work in pool hall/bowling alley, delivery service, or “employing women under any conditions detrimental to their health or welfare”). The following are the abbreviations used for the industries covered by maximum hours and night work laws: Mf—Manufacturing, as defined by “all processes in the production of commodities” (may include but not be limited to work in the following: factories, packing and canning establishments, mechanical establishments, millinery workrooms (and other sorts of workrooms), upholstery, dressmaking, alteration, parts of mercantile establishments dealing with production, mills, or textiles); Mc—Mercantile establishments, as defined by “establishments operated for purpose of trade in purchase or sale of any goods or merchandise” (may include but not be limited to the following work: sales, newspaper reporting, pharmacists, or any person involved in the sale or purchase of a commodity); O—Other, which consists of miscellaneous occupations (may include but not be limited to the following work: laundry and dry-cleaning, telephone and telegraph, restaurant, hotel, hairdressing salon, photo gallery, bowling alley, billiards room, shoe-shine establishment, printing establishment, office, bakery, domestic labor, medical personnel, farm labor, elevator operator, conductor or guard on a street or subway, messenger, transportation, place of amusement, employee in mine or quarry).

Sources: Goldin (1990), Smith (1932a, 1932b), U.S. Bureau of Labor Standards (1953, 1965, 1967, 1969), U.S. Bureau of Labor Statistics, *Monthly Labor Review* (all years), Walstedt (1976).

difficult to sort out from changes in antidiscrimination laws. As the table shows, however, with the exception of Delaware, there was no activity regarding these laws in this period.¹⁴ As the table also documents, only following the Civil Rights Act of 1964 did the dismantling of protective legislation occur. Thus, it turns out that we need not be concerned about confounding the effects of state antidiscrimination laws with effects of changes in protective laws.

Finally, information on race discrimination laws is tabulated in Table 4. The most common type of legislation is the enactment of a mandatory FEPA (e.g., Alaska, California, and Massachusetts). However, Table 4 also reveals that there is heterogeneity in the FEPAs, including variation in exemptions for employers below certain size thresholds (e.g., Indiana, Minnesota, and Pennsylvania), differences in enforcement mechanisms (e.g., New Jersey, New York, and Wisconsin), and whether compliance is mandatory or voluntary (e.g., Colorado, Kansas, and Oregon).

Table 5 summarizes our coding of the sex and race discrimination laws. Because we study the effects of these laws using data from the decennial census, we only show the laws in effect at the end of each decade. In the empirical work, we do not pay attention to all of the variation in state legislation documented in Tables 2 and 4, in part because we do not have the requisite information (such as employer size). Table 5 does distinguish mandatory FEPAs (*MRD*), voluntary FEPAs (*VRD* or *VSD*), and race discrimination laws that target only wages (*MRDW*), although the results reported in the tables are from specifications limited to mandatory laws.¹⁵ The table also distinguishes laws passed in years ending in 9, which are the years covered by the Census earnings questions; in the empirical analysis,

we allow for such laws to have potentially weaker impacts, because they were in effect only part of the year.¹⁶ Finally, because the federal law kicks in during the 1960s and supercedes the state law, Table 5 only reports the coding through 1960.¹⁷

The sex discrimination laws we study are limited to equal pay laws that prohibit pay discrimination. A question arises as to how interesting evidence on the effects of such laws is—from a policy perspective—given that federal policy essentially enacted equal pay legislation and prohibitions of employment discrimination simultaneously. In our view, there are two reasons that an analysis of equal pay laws is of considerable policy interest. First, the ongoing debate over affirmative action may eventually weaken laws barring employment discrimination in hiring. Although the policy debate is focused on affirmative action per se, numerical guidelines also play a critical role in antidiscrimination enforcement efforts, as noted by Bloch (1994). Although we do not anticipate a return to a world where sex (or race) discrimination in labor markets is regulated only by equal pay laws, we can envision one in which these laws become a relatively much more important part of the arsenal of antidiscrimination efforts, making the independent effects of equal pay laws of interest.

Second, there is considerable interest in the effects of equal pay laws per se because of skepticism about whether the effects of prohibitions on discrimination in hiring played a major role, particularly in black economic progress in the 1960s, and conversely because of a sense that equal pay laws are more enforceable. For example, although arguing that the overall thrust of federal antidiscrimination policy helped spur black economic progress in the United States beginning in the mid-1960s, Donohue and Heckman (1991) argue that this progress was due to much more than efforts to eradicate hiring discrimination via direct EEOC enforcement (and affirmative action),

14. Goldin (1990) documents how needs for female workers during World War II helped bring about the demise of marriage bars, but presents no information suggesting that protective legislation eroded during the war. Aldrich (1989) reports that maximum hours restrictions for women generally remained in effect during the war.

15. Because the voluntary laws entered insignificantly into the regressions we estimate, and their inclusion did not affect the estimated effects of the mandatory laws, we do not report these results in the article. Hawaii is the only state with a race discrimination law targeting wages only. However, because Hawaii (and Alaska) became states only in 1959, they are excluded from our analysis.

16. Specifically, we set the indicator for these laws to 0.5 rather than 1. Our qualitative results are unchanged when we allow these laws to have impacts similar to laws passed earlier in each decade (i.e., when we set the indicator for them equal to 1). However, as we would expect, in the latter case the estimated coefficients of the laws are generally slightly smaller in absolute value, as their impact is likely overstated.

17. However, state variation in laws regarding discrimination along other dimensions (such as disability) then began to emerge.

TABLE 4
State Race Discrimination Laws

State	1900–1939	1940–49	1950–59	1960–69
AK			1953: enacts mandatory FEPA. Exempt: employers with < 10 employees 1957: amends FEPA to include all employers	
AZ				1961: enacts mandatory FEPA covering public contracts only 1965: amends FEPA to include all employment 1965: extends FEPA to include apprenticeships
CA		1949: passes act prohibiting inclusion of any race-related questions on any application form	1959: enacts mandatory FEPA	
CO			1951: enacts voluntary FEPA. Mandatory for public employers 1957: enacts mandatory FEPA for all types of employment	1963: amends FEPA to include apprenticeships and other training programs
CT		1943: establishes Interracial Commission to compile/investigate claims of discrimination 1947: broadens powers of commission by enacting mandatory FEPA. Exempt: employers with < 6 employees	1951: state court rules for first time on FEPA breach by ice cream parlor	1967: extends FEPA coverage by changing exemption to employers with < 3 employees
DC				1965: enacts ordinance against discrimination in employment based on race, religion, creed, or national origin
DE				1960: enacts mandatory FEPA. Creates the Division against Discrimination in the Labor Commission
HI			1959: enacts law prohibiting race discrimination in wage rates	1963: enacts mandatory FEPA. Effective in Jan. 1964
IA			1955: legislature adopts resolution directing governor to appoint a commission to study the problem of discrimination and recommend remedies	1963: enacts mandatory FEPA

ID				1961: enacts mandatory FEPA. Largely directed to discrimination in public accommodations, but includes provision making it a misdemeanor to discriminate in hiring and discharge
IL	1935: enacts law that prohibits discrimination on account of race or color in employment in public works			1969: approves mandatory FEPA with greater emphasis on employment. Creates Commission on Human Rights. Exempt: employers with < 5 employees 1961: enacts mandatory FEPA. Exempt: employers with ≤ 100 employees. Beginning Jan. 1963, employers with ≤ 75 employees exempt. Beginning Jan. 1965, employers with ≤ 50 employees exempt. 1967: removes numerical exemptions to FEPA
IN		1945: enacts voluntary FEPA	1953: amendment defining unfair labor practices passed. Exempts employers with < 6 employees from FEPA	1963: voluntary FEPA becomes mandatory
KS	1935: enacts law prohibiting discrimination on account of race or color in employment in public works	1941: passes law prohibiting discrimination because of race or color by labor unions 1949: authorizes a commission to study discrimination practices in employment	1953: enacts voluntary FEPA. Creates Antidiscrimination Commission	1961: FEPA becomes mandatory for employers with > 7 employees. 1965: passes amendments to FEPA. Extends coverage to employers with > 3 employees
KY				1960: enacts voluntary FEPA 1966: voluntary FEPA becomes mandatory
MA		1946: enacts mandatory FEPA. Exempt: employers with < 6 employees. Establishes independent FEPA commission to administer law	1950: changes name of FEPA Commission to Commission against Discrimination; broadens its power	1966: amends FEPA to permit keeping of records relating to race, color, or national origin by employers or labor organizations
MD				1965: enacts mandatory FEPA. Includes training programs
ME				1963: passes law requiring that standards for apprenticeship agreements contain nondiscrimination provisions 1965: enacts mandatory FEPA, no commission

continued

TABLE 4
Continued

State	1900–1939	1940–49	1950–59	1960–69
MI			1955: enacts mandatory FEPA. Exempt: employers with < 8 employees	
MN			1955: enacts mandatory FEPA. Exempt: employers with < 8 employees	1965: removes numerical exemption for FEPA 1967: broadens scope of FEPA by creating a Department of Human Rights, which is given authority not available to previous commission
MO				1961: enacts mandatory FEPA. Exempt: employers with < 50 employees 1965: amends FEPA to include apprentice programs. Coverage is extended to employers with ≥ 25 employees
MT				1965: enacts mandatory FEPA, no commission
NB		1941: enacts law stating “it is against public policy” for a representative of labor in collective bargaining to discriminate with regard to race or color. Law does not specify method of enforcement. 1949: authorizes commission to study discriminatory practices in employment		1961: enacts mandatory FEPA for public contracts only 1965: amends FEPA to include all employment
NH				1965: enacts mandatory FEPA. Passes prohibitions against discrimination in employment agencies
NJ	1938: establishes the Good Will Commission to promote racial understanding	1945: enacts mandatory FEPA. Exempt: employers with < 6 employees 1949: amends existing FEPA by combining it with existing civil rights law. Places administration of both under a new agency, the Commission on Civil Rights		1966: removes FEPA numerical exemption for employers
NM		1949: enacts mandatory FEPA		1969: repeals Civil Rights Act and Equal Employment Opportunity-FEPA. Passes in its place the Human Rights Act with administration vested in the newly created Human Rights Commission

TABLE 4
Continued

State	1900–1939	1940–49	1950–59	1960–69
OR		1947: enacts voluntary FEPA 1949: voluntary FEPA becomes mandatory	1957: amends FEPA by authorizing the State Attorney General and any person claiming to be discriminated against to file a complaint 1955: enacts mandatory FEPA. Exempt: employers with < 12 employees	1969: amends FEPA to include employers with >1 employee, state agencies, political subdivisions, and municipalities
PA	1935: enacts law prohibiting discrimination on account of race or color in employment in public works			
RI		1949: enacts mandatory FEPA		
SD				1968: establishes the Commission on Human Rights Relations, which is authorized to hear complaints alleging violation of rights because of race, color, or creed, and to recommend legislation 1965: enacts mandatory FEPA
UT		1945: establishes committee to investigate discrimination because of race, color, or creed, and to recommend legislation		
WA		1949: enacts mandatory FEPA	1957: enacts law that makes it an unfair employment practice to advertise or inquire in such a way as to express any discrimination	1969: passes law requiring joint apprentice programs that receive state assistance to include, when available, members of minority races in a ratio at least equal to the ratio such races bear to population of the city
WI		1945: passes law empowering State Labor Department to hear cases of discrimination in employment and to make recommendations to parties or publicize findings	1951: enacts voluntary FEPA 1957: voluntary FEPA becomes mandatory	
WV				1961: enacts voluntary FEPA 1967: voluntary FEPA becomes mandatory
WY				1965: enacts mandatory FEPA

Notes: To the best of our knowledge, all state FEPAs cover both public and private employers, labor organizations, and employment agencies. Additions or exemptions to this standard are noted. States with no race discrimination laws are not listed.

Sources: Bureau of National Affairs (1973), Norgren and Hill (1964), U.S. Bureau of Labor Standards (1967), U.S. Bureau of Labor Statistics, *Monthly Labor Review* (all years).

TABLE 5

Census Year Type of Law	1940 Sex	1940 Race	1950 Sex	1950 Race	1960 Sex	1960 Race
AL						
AK			EPL(9)		EPL	MRD
AR					EPL	
AZ						
CA			EPL(9)		EPL	MRD(9)
CO					EPL	MRD
CT			EPL(9)	MRD	EPL	MRD
DC						
DE						
FL						
GA						
HI					EPL(9)	MRDW(9)
IA						
ID						
IL			EPL		EPL	
IN				VRD		VRD
KS						VRD
KY						
LA						
MA			EPL	MRD	EPL	MRD
MD						
ME			EPL(9)		EPL	
MI	EPL		EPL		EPL	MRD
MN						MRD
MO						
MS						
MT	EPL		EPL		EPL	
NB					VEPL	
NC						
ND						
NH			EPL		EPL	
NJ				MRD	EPL	MRD
NM				MRD(9)		MRD
NV						
NY			EPL	MRD	EPL	MRD
OH					EPL(9)	MRD(9)
OK						
OR			VSD	MRD(9)	EPL,VSD	MRD
PA			EPL		EPL	MRD
RI			EPL	MRD(9)	EPL	MRD
SC						
SD						
TN						
TX						
UT						
VA						
VT						

continued

TABLE 5
Continued

Census Year Type of Law	1940 Sex	1940 Race	1950 Sex	1950 Race	1960 Sex	1960 Race
WA			EPL	MRD(9)	EPL	MRD
WI						MRD
WV						
WY					EPL(9)	

Notes: Table reports laws as of year indicated in top of column; years of passage are indicated in earlier tables. MRD—mandatory race discrimination law. MRDW—mandatory law prohibiting race discrimination in wage rates only. VRD—voluntary race discrimination law (these states have voluntary FEPAs, which have no enforcement authority). EPL—equal pay wage discrimination law (includes EPLs, and FEPAs with clauses forbidding sex discrimination in wage rates). VSD—voluntary sex discrimination law (states with voluntary FEPAs are included). VEPL—voluntary wage discrimination law, including voluntary EPLs. Codes ending in (9) indicate that the relevant law was passed in a year ending with a nine (e.g., 1969)—a year covered by the census earnings questions. We allow these laws to have weaker effects in the empirical specifications. Four states (IL, KS, NY, and PA) passed a law in 1935 preventing race discrimination in public works only, and other states did so later. Laws covering public sector employees only are not covered in this table.

and also depended on efforts to combat wage discrimination, as well as on broader federal efforts extending beyond the labor market. Others, such as Bloch (1994), have noted that antidiscrimination laws targeting employment discrimination may be more likely to be effective against discrimination in discharge than in hiring, and conversely that equal pay laws may be quite effective because of the combination of a readily identifiable and potentially large class and potentially high damages.

A final question concerns whether state laws have any “teeth.” With regard to state laws requiring equal pay for women, although we have been unable to uncover much direct empirical evidence on enforcement activities, resolution of disputes, and so on, the historical record does point toward enforcement of these laws and perceptions of them having some impact. According to a U.S. Department of Labor report discussing state equal pay laws, “The labor administrators of the respective States are generally responsible for enforcement of State equal pay laws. However, experience in the equal pay States indicates that once a law is enacted, with its subsequent publicity which serves an educational purpose, most employers comply voluntarily with its provisions” (U.S. Bureau of Labor Standards, 1967, p. 249).¹⁸ Although this may just reflect wishful thinking, the report does cite two cases—in Michigan and in California—in

which female employees who had suffered from wage discrimination were given financial awards under their states’ equal pay laws.

In addition, the record from a 1963 U.S. Senate hearing on the Equal Pay Act provides a number of different types of evidence on the relevance of earlier state equal pay laws (Committee on Labor and Public Welfare 1963). First, a digest of such laws submitted by the Women’s Bureau of the U.S. Department of Labor (1970, pp. 43–54) lists record-keeping requirements (such as wages, salaries, occupation, job classification, etc., of each worker), possible court actions (generally employee lawsuits, possibly as a class), and penalties (for example, back wages plus fines or even an additional amount equal to back wages) and indicates which administrator in each state is responsible for enforcement. Second, the record from the hearing also lists selected court cases involving state equal pay laws. It is unclear on what basis the particular cases listed were chosen, but the evidence of litigation surrounding these lawsuits indicates that they had some teeth. Third, the Women’s Bureau also submitted evidence from inquiries sent to the states with equal pay laws regarding the use of administrative or informal hearings to resolve equal pay disputes, and of the 18 that responded, 11 verified that they held some hearings in administering their statutes. Many of these reported that some actions were taken, and four are quoted as attesting to the effectiveness of their compliance efforts (Women’s Bureau 1970, pp. 63–64). Fourth,

18. This perhaps reinforces the argument made earlier that equal pay laws are easily enforceable.

the record includes testimony from William Miller, representing the U.S. Chamber of Commerce, suggesting that the chamber was at least concerned that these laws have some impact: "More and more women are beginning to realize that the more you legislate specifically with respect to women, the more you hurt their job opportunities" (Women's Bureau 1970, p. 71). Similarly, former Labor Secretary Maurice Tobin is quoted indirectly as saying that "employers in States which have equal pay laws and consequently higher wage standards are often put at a competitive disadvantage with those in States where there is no legal barrier to unfair exploitation of women workers by means of discriminatory wage cutting practices" (Women's Bureau 1970, pp. 91–92). At the same time, the record also suggests some concerns with the effectiveness of the state laws. James B. Carey, representing the AFL-CIO, is quoted as saying: "Twenty-two states now have equal pay laws of varying effectiveness. Unfortunately, too many are limited in scope, while others have few enforcement teeth" (Women's Bureau 1970, p. 83).

Turning to race discrimination laws, there is somewhat more information suggesting that these laws had some actual impact. Mandatory state FEPAs can be viewed as operating in a similar fashion to Title VII of the Civil Rights Act.¹⁹ Landes (1968) presents some

descriptive information on violations "cleared up" in New York, New Jersey, Connecticut, and Massachusetts in the period between 1945 and 1961. The number of cases ranges from about 500 to 700 for the three smaller states, to nearly 3,300 for New York. These cases in turn are only a subset of complaints for which state commissions found probable cause to support the complaint. Lockard (1968) presents data on the number of FEPA cases closed over the 1940s, 1950s, and 1960s in 10 states, with the numbers ranging from about 150 to 6,000; he also reports that in 64% of cases no probable cause was found. Similarly, a report written by the New York State Commission against Discrimination (1958) details efforts to counter discrimination in the hotel industry in New York City, including information on complaints received and the settling of those complaints that were sustained (i.e., judged as valid) through conference and conciliation.²⁰

Addressing the question of effectiveness, Lockard (1968) cites a study by the New Jersey Division against Discrimination showing that among 54 firms that had been involved in discrimination cases that resulted in adjustments in behavior, total employment was up 22%, but minority employment was up 107%. Undermining the claims of effectiveness, however, Lockard argues that budgets for enforcement were low (although providing no basis for comparison), and notes cases where top administrative positions were left empty (1968, pp. 82–94). Of course, one could argue that the EEOC has similarly experienced periods of weak enforcement of antidiscrimination laws at the federal level.

Ultimately, we cannot definitively establish the level of enforcement of state antidiscrimination efforts, especially in comparison with later federal efforts. But it appears clear that there was indeed some antidiscrimination enforcement at the state level prior to the federal legislation, based on state-level antidiscrimination laws.

19. A 1973 Bureau of National Affairs report described the workings of FEPAs as follows: "The enforceable state FEP laws share a common pattern. They rely upon civil, rather than criminal, proceedings and vest responsibility for enforcement in an administrative agency. They stress education and conciliation, using public hearings and court proceedings as a last resort. Under the state FEP laws, an individual may file a complaint with the commission. If the commission, after investigating, finds no probable cause to support the complaint, it dismisses the complaint. Most commissions, however, still may study the employer's general employment pattern and attempt to eliminate any discriminatory practice found. If the commission finds probable cause to believe the complaint, or finds evidence of other discriminatory practices, it attempts to adjust the matter through conciliation. If conciliation fails, the dispute becomes public for the first time, and a hearing is held. This results either in dismissal of the complaint or issuance of an order requiring the accused to cease and desist from discriminating and to take affirmative remedial action. Such orders may be enforced or reviewed in the courts" (pp. 68–69). Note that this 1973 report refers to state FEPAs as operative even after the Civil Rights Act, because Title VII directed federal authorities to first defer processing of discrimination charges to states or their political subdivisions that had antidiscrimination laws.

20. The report notes that in New York at that time, if efforts at conciliation failed, a public hearing was held before members of the commission. If the respondent was found to have been engaged in discrimination, a cease and desist order enforceable by the state Supreme Court (which is under the state Court of Appeals) would be issued.

IV. EMPIRICAL STRATEGY

Our empirical strategy relies on a difference-in-difference-in-differences (DDD) estimator, which estimates how changes in the dependent variables between sets of demographic groups differ between states that did and did not enact laws prohibiting sex and race discrimination. We estimate the effects of these laws on both employment and earnings. The earnings results for women should be interpreted cautiously, however, because the sharp increases in female employment over this period may generate potential problems posed by selection into the paid labor force, and we have no information in the census data with which to correct for such selection bias in a compelling manner.

Turning to the specifics of the analysis, denote by Y_{ist} the dependent variable for individual i in state s in year t . Denote by X_{ist} a vector of control variables, including age and its square, residence in an urban area, years of schooling, and marital status. Let I_s be a set of dummy variables corresponding to states, and I_t be a set of dummy variables corresponding to years. Let BF_{ist} , BM_{ist} , and WF_{ist} denote dummy variables for black females, black males, and white females. We restrict attention to equal pay laws by sex (EPL_{st}) and mandatory race discrimination laws (MRD_{st}), and estimate the effects of these laws on black females, black males, and white females relative to white males, and on black females relative to black males.

For purposes of explanation, consider studying outcomes for black females relative to white males. Our baseline DDD regression equation is then:

$$(1) \quad Y_{ist} = \alpha + \beta_{BF} BF_{ist} + \gamma_{BF} BF_{ist} \times EPL_{st} \\ + \delta_{BF} BF_{ist} \times MRD_{st} + BF_{ist} \times X_{ist} \beta_{BFX} \\ + X_{ist} \beta_X + I_s \beta_s + I_t \beta_t + I_s \times I_t \beta_{st} \\ + BF_{ist} \times I_s \theta_{BF,s} + BF_{ist} \times I_t \eta_{BF,t} + \varepsilon_{ist}.$$

In this specification, the coefficient β_{BF} identifies the differences in Y between black females and white males common to all states and years. This would capture, for example, unobserved differences between demographic groups that affect the outcomes we study, as long as these are approximately fixed over the sample period and across states. The coef-

ficients on the state and year dummy variables, β_s and β_t , identify differences across states and years for white males, whereas the coefficients on the interactions between BF and the state and year dummy variables, $\theta_{BF,s}$ and $\eta_{BF,t}$, allow for group differences in levels of Y across states (common to all years), and across years (common to all states). These interactions may again reflect unobserved differences between demographic groups, but here the differences can vary over time or across states. As an example, if antidiscrimination laws pass in states with smaller race differences in employment and these are constant over time, this will be controlled for by the $BF_{ist} \times I_s$ interactions.²¹ Alternatively, $BF_{ist} \times I_t$ may capture other sources of different aggregate trends in outcomes for black females versus white males. The coefficients β_X and β_{BFX} capture the effects of different earnings- or employment-related characteristics on the outcomes, allowing these effects to differ across groups.

Our main parameters of interest are γ_{BF} , which identifies the shift in the difference in Y between black females and white males associated with the enactment of equal pay laws by sex in particular states and years, and δ_{BF} , which identifies the shift in this difference associated with the enactment of race discrimination laws in particular states and years. This identification strategy rests on the assumption that there are not state-level changes in other factors driving relative economic status by sex or race that coincide with changes in antidiscrimination laws. Because the state-level strategy averages over many instances of the imposition of antidiscrimination laws in different time periods and relies on differences in the same period between states passing and not passing such laws, the problem of biased estimates from coincident state-level changes in other factors is likely to be much less of a concern than the related problem at the aggregate level using time-series data.

21. Chay (1998), for example, suggests that state laws are "more likely to be passed in states where prejudice is relatively low" (p. 612). Without controlling for these interactions, this might generate evidence of beneficial effects of antidiscrimination laws. On the other hand, Landes (1968) suggested that endogeneity bias may run in the opposite direction, with states with more serious discrimination problems passing laws earlier and directing more resources toward their enforcement.

Note that the inclusion of the interactions between the state and year dummy variables ($I_s \times I_t$) in equation (1) implies that we do not identify the effects of these laws on Y for the reference group of white males. The focus is therefore on relative changes among demographic groups, paralleling the earlier time-series analyses in focusing attention on the effects of antidiscrimination policies on relative earnings and employment. We can identify the absolute effects on white males if we omit the $I_s \times I_t$ interactions, although this restriction rules out shifts in Y across states and years for reasons other than antidiscrimination laws, a rather severe restriction over such long time horizon. Nonetheless, we first report estimates of this specification in the tables that follow.

Equation (1) controls for an association between the adoption of antidiscrimination policies and differences in the levels of Y by group that are fixed across states or years. But it does not control for differences in the patterns of change in relative outcomes over time and across states that are correlated with the adoption of equal pay or race discrimination laws. If we allowed for this possibility in the most flexible manner, by including interactions between $I_s \times I_t$ and the race-sex indicator variables, we would be unable to identify any policy effects.²² However, we can allow for this in a somewhat more restrictive manner by letting the time pattern of relative changes in Y (between our three “minority” groups and white males) differ between the states that adopt their own antidiscrimination laws by 1960, and those that do not. This results in a modified version of equation (1):

$$\begin{aligned}
 (2) \quad Y_{ist} = & \alpha + \beta_{BF} BF_{ist} + \gamma_{BF} BF_{ist} \times EPL_{st} \\
 & + \delta_{BF} BF_{ist} \times MRD_{st} + BF_{ist} \times X_{ist} \beta_{BFX} \\
 & + X_{ist} \beta_X + I_s \beta_s + I_t \beta_t + I_s \times I_t \beta_{st} \\
 & + BF_{ist} \times I_s \theta_{BF,s} + BF_{ist} \times I_t \eta_{BF,t} \\
 & + BF_{ist} \times EEPL_s \times I_t \lambda_{BF} \\
 & + BF_{ist} \times EMRD_s \times I_t \mu_{BF} + \varepsilon'_{ist}.
 \end{aligned}$$

22. Nonetheless, because the treatment (the antidiscrimination laws) is applied at the state level, in computing standard errors of the regression estimates we allow the errors of the equations we estimate to be correlated within state, year, and sex or race cells.

In equation (2), interactions have been added between the dummy variable for black females, year dummy variables, and dummy variables indicating whether the state ever passed an equal pay law (*EEPL*) or race discrimination law (*EMRD*) before 1960. This allows states passing either type of law to have a unique pattern of changes in relative outcomes for Y —although the pattern is restricted to be the same across all states passing such laws by 1960—and identifies the effects of sex and race discrimination laws in comparison to these overall changes. Clearly this specification can only be identified because the laws are implemented in different decades in different states; if the state laws were all passed in the same year, then the added variables would be perfectly collinear with $BF_{ist} \times EPL_{st}$ and $BF_{ist} \times MRD_{st}$.

The specifications considered thus far do not allow for the possibility that the impact of a sex or race discrimination law takes some time to be manifested.²³ To address this, we modify the equations we estimate to also include variables measuring the number of years the two types of laws have been in effect. This allows the effects of antidiscrimination laws to increase over time, perhaps as “enforcement capital” is built up. We estimate each variant of the regressions discussed above including measures of the number of years the states’ laws were in effect.²⁴

We noted earlier that Donohue and Heckman (1991) document that federal policy efforts were targeted toward the South, perhaps because more discrimination was occurring there. As a consequence, we explore the robustness of our results to excluding Southern states from the analysis. The results restricted to non-Southern states may also help mitigate concerns about the endogenous

23. One minor exception was noted earlier, where we set the dummy variables for sex and race discrimination laws passed in the last year before the census to 0.5 rather than 1.

24. We explored using both linear and quadratic specifications of the number of years since the state’s law passed. However, the quadratic specifications did not reveal any significant evidence of nonmonotonic effects or convey different qualitative results than the linear specifications. In addition, we do not have a lot of variation in these years variables with which to pin down differences in the time pattern of effects. Consequently, we only report the linear specifications.

TABLE 6
Descriptive Statistics and Sample Sizes

	Black Females (1)	White Females (2)	Black Males (3)	White Males (4)
<i>Employment</i>				
<i>Means</i>				
1940	0.29	0.20	0.70	0.71
1950	0.31	0.24	0.70	0.75
1960	0.37	0.30	0.67	0.78
<i>Sample sizes</i>				
1940	38,194	376,834	26,553	285,004
1950	13,911	131,894	10,503	100,681
1960	50,925	459,225	40,482	365,576
<i>Log earnings</i>				
<i>Means</i>				
1940	6.13	6.71	6.46	7.16
1950	7.17	7.54	7.49	7.98
1960	7.65	7.97	8.00	8.51
<i>Sample sizes</i>				
1940	2,178	51,622	10,917	158,128
1950	1,718	24,164	5,679	64,332
1960	8,279	99,888	21,144	252,090

Notes: There are fewer observations for 1950 because in that year state identifiers are available only for “sample line” records, not all person records.

determination of antidiscrimination laws, given their paucity in the South.²⁵

V. DATA

Aside from the numerous sources used to assemble the information on antidiscrimination laws, we rely on individual-level data from the 1940–60 U.S. Censuses of Population. For all of the equations we estimate, the samples are restricted to those who are black or white, and aged 18 to 70. We drop those in the armed forces, self-employed workers, and unpaid workers. When we study earnings, we also exclude agricultural and private household workers to focus on more standard,

25. As an alternative means of addressing the endogeneity question more directly, we explored instrumenting for antidiscrimination laws with indicators for the presence of antidiscrimination laws in contiguous states or the number of years since laws passed in contiguous states. However, the resulting estimates were very imprecise, and we have doubts about the identifying assumption that laws in neighboring states have no effect on a state’s labor market.

formal work arrangements, and those for which earnings are well defined.²⁶ We further restrict the earnings analysis to individuals who are closer to full-time, full-year workers, excluding those who worked fewer than 27 weeks per year or fewer than 30 hours per week.²⁷ We drop those with hourly wages—based on an assumption of half-time, half-year work—below \$1 (in 1980 dollars). Table 6 reports the means and the sample sizes for each dependent variable, year, and demographic group.

VI. EXPECTED EFFECTS

The sex discrimination laws primarily concern equal pay, without employment protection. In a Becker-type model of employer discrimination, the pay gap reflects discriminatory tastes, and an equal pay constraint acts like a relative price increase for the protected group, which could reduce their employment. Because these laws may principally act to increase the relative price of female labor, they are predicted to reduce relative female employment.²⁸ In the case of race discrimination laws, the predicted effects on employment are not necessarily clear. On the one hand, these laws prohibit discrimination in hiring, dismissals, terms of employment, and so on, and should therefore boost employment of the protected minority. On the other hand, if the overriding effect of race discrimination laws turns out to be increased difficulties of dismissing protected workers, this cost-increasing effect

26. Cunningham and Zalokar (1992) note that in earlier decades in-kind pay was common for private household workers and farm laborers. This restriction has substantial bite early in the sample, resulting, for example, in 23.8% of black males compared with 6.4% of white males being dropped in 1940. But much smaller percentages are dropped in later years.

27. Because of data limitations, the 27 weeks and 30 hours criteria are the best we can do in restricting the sample to full-time, full-year workers on a consistent basis across the census years.

28. As explained in section IV, we also estimate the effects of race discrimination laws on relative female–male employment outcomes and of sex discrimination laws on relative black–white outcomes. Even if we assume that workers in different demographic groups—at least conditional on the control variables included in our regressions—are substitutes, there are no clear predictions for the cross-effects. For example, the increase in the relative price of female labor owing to sex discrimination laws should boost demand for white male and black male workers, all else the same, but we do not know how it will affect the relative demand for these two groups of male workers, and we do not focus on such estimates in our discussion.

could in principle deter hiring (see Bloch 1994, p. 104, with reference to Title VII and the Age Discrimination in Employment Act; and Acemoglu and Angrist 2001, with reference to the Americans with Disabilities Act). Of course, the general equilibrium effects of race and sex discrimination laws, especially if there are complementarities among workers of different types, can go in a number of directions, and evidence against the predictions laid out here may suggest more complex effects of these laws.

VII. RESULTS

Effects of State Antidiscrimination Laws on Employment and Earnings of Women

Tables 7 and 8 report evidence on the effects of state antidiscrimination laws on relative employment and earnings of black and white women. The first three specifications (reported down the rows of the table) use simple dummy variables for the antidiscrimination laws, beginning with the specification without state-by-year interactions, then reporting the baseline DDD estimator with these interactions added, and finally adding the different trends for states that did and did not pass these laws. The next three specifications report results from regressions augmented to include measures of how long the laws have been in effect. In all cases, the estimated effects of the sex discrimination laws on relative outcomes are highlighted in the tables.

Beginning with the employment effects in Table 7, the estimates for specifications 1–3 are quite consistent. In nearly every case, we find a statistically significant and negative effect of sex-related equal pay laws on the relative employment of women. In contrast to the sex discrimination laws, race discrimination laws are unlikely to play a role here (except for the black female–white male estimates), and therefore it is not surprising that their estimated effects are small and insignificant. For the effects of sex discrimination laws, the only exceptions to the evidence of negative employment effects are for some of the black female–white male estimates for specifications 1 and 2. Even for this sample, though, once we use the richer specification that allows for differential time patterns of change associated with passage of antidiscrimination laws (specification 3), evidence of negative employment effects

emerges. In the results for specifications 4–6, which allow the effects of the laws to evolve over time, the evidence regarding sex discrimination laws is largely unchanged. There is an immediate negative employment effect of sex discrimination laws, and the duration effects are statistically insignificant in almost every case. The evidence pointing to negative and significant effects of sex discrimination laws is consistent with such laws effectively raising the price of female labor and—absent laws regarding employment discrimination against women—leading to substitution away from female labor.²⁹

Table 8 presents the earnings estimates, using the same set of specifications as in Table 7. For specifications 1–3, which capture the effects of equal pay laws with dummy variables, there is generally no statistically significant evidence of earnings effects, with one exception for specification 3. The results for specifications 4–6 are somewhat more interesting, providing evidence of an immediate negative effect of sex discrimination laws on women's relative pay, but with a growing positive effect over time that offsets this. To fix ideas, in column (3) for specification 5—for white females relative to white males—the immediate reduction due to a sex discrimination law is approximately 1.5%, but the positive effect of the duration variable indicates that women's earnings grow by 0.26% per year (note that the years variable is divided by 10), implying that after about six years women's relative earnings are boosted on net. Although the initial dip in earnings indicated by these estimates is somewhat puzzling, one could imagine that an initial response to equal pay laws is to reduce the number of women in jobs in which their pay can be easily compared to men's pay. Nonetheless, as long as these laws boost women's relative earnings in the longer run, we would expect the negative employment effects that we found in Table 7, and

29. The top panel of Appendix Table A1 reports additional robustness checks. Estimates of the baseline DDD model with ordinary least squares (OLS) standard errors indicate that the standard errors are for the most part only somewhat larger with the correction for clustering in Table 7. Estimates of the model that exclude the race discrimination variables are very consistent with the results in Table 7. Note that we report results for the baseline DDD specification 2 (rather than 5), because we generally did not find evidence of the effects of sex discrimination laws changing over time.

TABLE 7
Effects of Sex and Race Discrimination Laws on Employment of Females Relative to Males, 1940–60

	Black Females vs. Black Males		White Females vs. White Males		Black Females vs. White Males	
	All States (1)	Nonsouth (2)	All States (3)	Nonsouth (4)	All States (5)	Nonsouth (6)
<i>N</i>	180,568	66,688	1,719,214	1,282,903	854,291	605,443
<i>1. Fixed state and year effects</i>						
Sex discrimination law	0.080 (0.015)	0.045 (0.025)	0.019 (0.006)	0.008 (0.007)	0.019 (0.006)	0.008 (0.007)
Black/white female \times sex discrimination law	−0.069 (0.022)	−0.070 (0.030)	−0.027 (0.007)	−0.018 (0.008)	−0.008 (0.017)	−0.033 (0.018)
Race discrimination law	0.017 (0.015)	−0.007 (0.017)	0.006 (0.006)	−0.004 (0.006)	0.006 (0.006)	−0.004 (0.006)
Black/white female \times race discrimination law	−0.010 (0.022)	0.007 (0.025)	−0.017 (0.007)	−0.007 (0.007)	0.002 (0.017)	0.005 (0.020)
<i>2. Add state \times year interactions</i>						
Black/white female \times sex discrimination law	−0.069 (0.014)	−0.070 (0.022)	−0.026 (0.004)	−0.017 (0.004)	−0.027 (0.017)	−0.045 (0.019)
Black/white female \times race discrimination law	−0.010 (0.016)	0.007 (0.018)	−0.018 (0.004)	−0.007 (0.004)	0.001 (0.017)	0.006 (0.021)
<i>3. Add different trends in race/sex gaps for states ever passing antidiscrimination laws by 1960</i>						
Black/white female \times sex discrimination law	−0.088 (0.024)	−0.106 (0.026)	−0.027 (0.006)	−0.025 (0.006)	−0.068 (0.016)	−0.091 (0.012)
Black/white female \times race discrimination law	0.019 (0.022)	0.020 (0.023)	0.003 (0.006)	0.002 (0.006)	0.024 (0.014)	0.024 (0.013)
<i>4. Fixed state and year effects, including years laws in effect</i>						
Sex discrimination law	0.067 (0.020)	0.040 (0.032)	0.021 (0.006)	0.012 (0.007)	0.021 (0.006)	0.012 (0.007)
Sex discrimination law, years in effect $\times 10^{-1}$	0.014 (0.014)	0.007 (0.020)	−0.004 (0.005)	−0.009 (0.005)	−0.004 (0.005)	−0.009 (0.005)
Black/white female \times sex discrimination law	−0.059 (0.025)	−0.067 (0.036)	−0.020 (0.007)	−0.014 (0.008)	−0.013 (0.017)	−0.040 (0.016)
Black/white female \times sex discrimination law, years in effect $\times 10^{-1}$	−0.006 (0.020)	0.000 (0.023)	−0.004 (0.005)	−0.000 (0.006)	0.012 (0.015)	0.017 (0.012)
Race discrimination law	−0.004 (0.023)	−0.015 (0.020)	0.002 (0.006)	−0.005 (0.005)	0.002 (0.006)	−0.005 (0.005)
Race discrimination law, years in effect $\times 10^{-1}$	0.016 (0.013)	0.012 (0.012)	0.008 (0.004)	0.005 (0.005)	0.008 (0.004)	0.005 (0.005)
Black/white female \times race discrimination law	0.011 (0.029)	0.016 (0.027)	−0.002 (0.007)	0.003 (0.006)	0.004 (0.019)	0.006 (0.019)
Black/white female \times race discrimination law, years in effect $\times 10^{-1}$	−0.022 (0.020)	−0.018 (0.017)	−0.020 (0.005)	−0.017 (0.005)	−0.014 (0.016)	−0.011 (0.012)
<i>5. Add state \times year interactions, including years laws in effect</i>						
Black/white female \times sex discrimination law	−0.060 (0.019)	−0.068 (0.025)	−0.019 (0.004)	−0.014 (0.005)	−0.030 (0.015)	−0.049 (0.016)
Black/white female \times sex discrimination law, years in effect $\times 10^{-1}$	−0.006 (0.015)	0.000 (0.017)	−0.003 (0.003)	0.000 (0.004)	0.010 (0.012)	0.012 (0.012)
Black/white female \times race discrimination law	.0011 (0.017)	0.018 (0.018)	−0.003 (0.004)	0.003 (0.003)	0.007 (0.017)	0.009 (0.019)
Black/white female \times race discrimination law, years in effect $\times 10^{-1}$	−0.022 (0.010)	−0.019 (0.011)	−0.019 (0.003)	−0.017 (0.003)	−0.016 (0.013)	−0.014 (0.013)
<i>6. Add different trends in race/sex gaps for states ever passing antidiscrimination laws by 1960, including years laws in effect</i>						
Black/white female \times sex discrimination law	−0.092 (0.024)	−0.110 (0.026)	−0.030 (0.005)	−0.028 (0.005)	−0.070 (0.015)	−0.094 (0.011)
Black/white female \times sex discrimination law, years in effect $\times 10^{-1}$	−0.025 (0.013)	−0.023 (0.017)	−0.013 (0.005)	−0.009 (0.005)	−0.016 (0.010)	−0.018 (0.011)
Black/white female \times race discrimination law	0.022 (0.023)	0.021 (0.026)	0.008 (0.005)	0.006 (0.005)	0.024 (0.015)	0.026 (0.016)
Black/white female \times race discrimination law, years in effect $\times 10^{-1}$	−0.031 (0.011)	−0.035 (0.010)	−0.021 (0.003)	−0.021 (0.004)	−0.025 (0.012)	−0.027 (0.011)

Notes: All states are used except Alaska and Hawaii. All specifications include controls for age and its square, residence in an SMSA, years of schooling, and marital status (currently married or divorced/widowed/separated), interactions of these with race, and dummy variables for race/sex and year and state dummy variables. The earnings equation also controls for two-digit industry and occupation, and hours and weeks worked. In the earnings regressions, we exclude individuals working fewer than 27 weeks or fewer than 30 hours per week, and those whose wages would have been less than \$1 per hour in 1980 dollars, based on half-time, half-year work; this wage restriction is approximately equally binding on white males in each of the census years we study. The earnings data were adjusted to use consistent top codes across the years, and to use midpoints of reported earnings intervals where required. SEs are reported after the coefficient estimates and allow for nonindependent regression errors within groups defined by state, year, and race or sex category. Discrimination law variables are coded as 0.5 if they were passed in the year covered by the census data.

TABLE 8
Effects of Sex and Race Discrimination Laws on Log Earnings of Females Relative to Males, 1940–60

	Black Females vs. Black Males		White Females vs. White Males		Black Females vs. White Males	
	All States (1)	Nonsouth (2)	All States (3)	Nonsouth (4)	All States (5)	Nonsouth (6)
<i>N</i>	49,915	22,314	650,224	459,911	486,725	369,264
<i>1. Fixed state and year effects</i>						
Sex discrimination law	−0.047 (0.018)	−0.016 (0.018)	−0.024 (0.008)	−0.026 (0.008)	−0.023 (0.008)	−0.025 (0.008)
Black/white female × sex discrimination law	−0.006 (0.026)	−0.003 (0.033)	0.008 (0.014)	−0.005 (0.013)	−0.020 (0.019)	0.010 (0.033)
Race discrimination law	−0.034 (0.018)	−0.060 (0.015)	−0.041 (0.008)	−0.046 (0.008)	−0.040 (0.008)	−0.045 (0.008)
Black/white female × race discrimination law	0.016 (0.023)	0.074 (0.027)	0.032 (0.013)	0.023 (0.012)	0.044 (0.018)	0.068 (0.025)
<i>2. Add state × year interactions</i>						
Black/white female × sex discrimination law	−0.014 (0.022)	−0.005 (0.036)	0.007 (0.008)	−0.005 (0.008)	−0.036 (0.021)	−0.007 (0.036)
Black/white female × race discrimination law	0.012 (0.023)	0.069 (0.027)	0.032 (0.007)	0.023 (0.006)	0.043 (0.023)	0.070 (0.030)
<i>3. Add different trends in race/sex gaps for states ever passing antidiscrimination laws by 1960</i>						
Black/white female × sex discrimination law	−0.032 (0.046)	−0.075 (0.045)	−0.018 (0.010)	−0.021 (0.009)	−0.047 (0.039)	−0.068 (0.040)
Black/white female × race discrimination law	0.026 (0.042)	0.030 (0.045)	0.040 (0.012)	0.040 (0.011)	0.025 (0.041)	0.031 (0.045)
<i>4. Fixed state and year effects, including years laws in effect</i>						
Sex discrimination law	−0.041 (0.022)	0.009 (0.016)	−0.007 (0.009)	−0.005 (0.009)	−0.007 (0.009)	−0.004 (0.009)
Sex discrimination law, years in effect × 10 ^{−1}	−0.022 (0.017)	−0.061 (0.012)	−0.023 (0.007)	−0.032 (0.006)	−0.022 (0.007)	−0.032 (0.006)
Black/white female × sex discrimination law	−0.020 (0.031)	−0.049 (0.029)	−0.014 (0.016)	−0.020 (0.017)	−0.054 (0.022)	−0.032 (0.029)
Black/white female × sex discrimination law, years in effect × 10^{−1}	0.035 (0.022)	0.109 (0.022)	0.028 (0.011)	0.023 (0.010)	0.043 (0.016)	0.078 (0.021)
Race discrimination law	−0.037 (0.022)	−0.040 (0.011)	−0.028 (0.010)	−0.031 (0.008)	−0.028 (0.010)	−0.031 (0.008)
Race discrimination law, years in effect × 10 ^{−1}	0.025 (0.022)	−0.002 (0.017)	−0.005 (0.007)	−0.011 (0.006)	−0.005 (0.007)	−0.011 (0.006)
Black/white female × race discrimination law	0.013 (0.026)	0.037 (0.026)	0.014 (0.015)	0.011 (0.013)	0.014 (0.018)	0.034 (0.021)
Black/white female × race discrimination law, years in effect × 10 ^{−1}	−0.028 (0.022)	0.014 (0.019)	0.011 (0.011)	0.009 (0.010)	0.014 (0.018)	0.030 (0.016)
<i>5. Add state × year interactions, including years laws in effect</i>						
Black/white female × sex discrimination law	−0.027 (0.028)	−0.054 (0.022)	−0.015 (0.007)	−0.022 (0.007)	−0.055 (0.024)	−0.046 (0.026)
Black/white female × sex discrimination law, years in effect × 10^{−1}	0.034 (0.020)	0.115 (0.016)	0.026 (0.003)	0.024 (0.004)	0.024 (0.017)	0.081 (0.020)
Black/white female × race discrimination law	0.011 (0.023)	0.031 (0.022)	0.015 (0.004)	0.012 (0.005)	0.024 (0.023)	0.035 (0.022)
Black/white female × race discrimination law, years in effect × 10 ^{−1}	−0.028 (0.018)	0.019 (0.015)	0.011 (0.004)	0.010 (0.005)	0.007 (0.021)	0.034 (0.017)
<i>6. Add different trends in race/sex gaps for states ever passing antidiscrimination laws by 1960, including years laws in effect</i>						
Black/white female × sex discrimination law	−0.017 (0.032)	−0.055 (0.017)	−0.014 (0.008)	−0.018 (0.007)	−0.029 (0.032)	−0.047 (0.025)
Black/white female × sex discrimination law, years in effect × 10^{−1}	0.106 (0.024)	0.158 (0.016)	0.025 (0.006)	0.023 (0.006)	0.108 (0.019)	0.132 (0.022)
Black/white female × race discrimination law	−0.002 (0.032)	−0.011 (0.029)	0.031 (0.009)	0.031 (0.008)	0.018 (0.027)	0.020 (0.028)
Black/white female × race discrimination law, years in effect × 10 ^{−1}	0.008 (0.028)	0.014 (0.027)	0.017 (0.006)	0.017 (0.006)	0.051 (0.017)	0.055 (0.020)

Notes: See notes to Table 7.

these may well predate the price changes as long as the price changes are anticipated.³⁰

Effects of State Antidiscrimination Laws on Employment and Earnings of Men

Table 9 presents the regression evidence on the effects of state anti-discrimination laws on employment and earnings of black men relative to white men. The structure of the table is the same as the tables for women, although because we report results only for black men relative to white men, there are fewer estimates to report and the employment and earnings results can be combined into one table.

The results in specifications 1–3 reveal no significant effects of race discrimination laws on either employment or earnings of black men relative to white men, with the estimated effects small and insignificant.³¹ The earnings results contrast with the findings of positive effects of federal legislation on relative earnings of black men in past research that was reviewed earlier, although as we noted, the subset of that work based on time-series data may face substantial identification questions. However, in specifications 4–6, we see that once we allow the effects of these laws to grow over time, we find statistically significant evidence of positive effects of race discrimination laws on the relative earnings of black men, with no offsetting immediate decline. For example, the estimates of the baseline DDD regression (specification 5) with year effects indicates that black men's relative earnings grow by about 0.28% per year following the passage of state laws barring race discrimination.³² Thus this augmentation of the specification, which might be interpreted as allowing for the accumulation of enforcement capital or for effects on workers via human capital invest-

ment, reveals effects of race discrimination laws at the state level that parallel the effects of the federal laws found in past research.

VIII. SUMMARY AND CONCLUSIONS

The question of the effects of sex and race discrimination laws on relative economic outcomes for women and blacks has been of interest at least since the Civil Rights and Equal Pay Acts passed in the 1960s and remains of interest today as some components of this legislation, particularly those that led to affirmative action, are reassessed. We present new evidence on the effects of these laws based on variation induced by state antidiscrimination statutes in the period 1940–60. Our evidence potentially improves on earlier time-series studies of the effects of federal antidiscrimination legislation and is complementary to more recent work that revisits this question using data and statistical experiments that rely on treatment and comparison groups.

Prior research has often ignored the effects of sex discrimination laws, and we therefore devote more attention to their effects. We find robust evidence that sex discrimination/equal pay laws reduced the relative employment of black women and white women—a result that is consistent with theory but has received relatively little attention previously. This does not imply that laws prohibiting wage discrimination based on sex do not on net help women, but rather emphasizes that such laws may impose trade-offs between higher wages and lower employment. Such considerations may become increasingly important if there is some retrenchment of affirmative action in the United States, which would likely weaken policies combating employment discrimination and leave equal pay legislation as the stronger arm of federal antidiscrimination efforts.

With regard to race discrimination laws, our evidence yields qualitatively similar results to the earlier time-series research and the newer research using quasi-experimental designs (e.g., Chay 1998; Donohue and Heckman 1991), finding that race discrimination laws boosted the earnings of black males relative to white males. However, we find that this is not an immediate effect of the passage of these laws, but rather—as we might expect—arises over time, presumably as enforcement capacity or ability increases or workers' behavior (including human capital investment) adjusts.

30. Robustness checks similar to those we conducted for the employment estimates are reported in the bottom panel of Appendix Table A1 (here reported for specification 5 instead of 2, since the laws' duration variables were significant in the earnings regressions). We also report estimates excluding hours and weeks controls, which may be subject to choice on the part of individuals. The findings are robust in all three specifications.

31. The robustness analyses in the top panel of Appendix Table A2 show one exception: For all states considered together and when sex discrimination laws are ignored (as in Landes 1968, and Collins 2003b), there is evidence of a positive employment effect. This illustrates the importance of taking account of both types of laws; indeed, Table 5 indicates a tendency for antidiscrimination laws regarding race and sex to be enacted in the same state.

32. Again, the results reported in Appendix Table A2 are similar.

TABLE 9
Effects of Race Discrimination Laws on Employment and Log Earnings of Black Males Relative to White Males, 1940–60

	Employment		Log Earnings	
	All States (1)	Nonsouth (2)	All States (3)	Nonsouth (4)
<i>N</i>	828,799	598,391	512,290	379,458
<i>1. Fixed state and year effects</i>				
Race discrimination law	0.006 (0.006)	−0.004 (0.006)	−0.040 (0.008)	−0.045 (0.008)
Black male × race discrimination law	0.012 (0.016)	−0.002 (0.018)	0.010 (0.020)	−0.012 (0.017)
Sex discrimination law	0.019 (0.006)	0.008 (0.007)	−0.023 (0.008)	−0.025 (0.008)
Black male × sex discrimination law	0.061 (0.016)	0.037 (0.026)	−0.020 (0.020)	0.007 (0.020)
<i>2. Add state × year interactions</i>				
Black male × race discrimination law	0.010 (0.013)	−0.001 (0.015)	0.007 (0.014)	−0.007 (0.012)
Black male × sex discrimination law	0.042 (0.012)	0.026 (0.019)	−0.029 (0.013)	−0.002 (0.015)
<i>3. Add different trends in racelsex gaps for states ever passing antidiscrimination laws by 1960</i>				
Black male × race discrimination law	0.005 (0.025)	0.004 (0.025)	0.008 (0.014)	0.007 (0.015)
Black male × sex discrimination law	0.023 (0.025)	0.018 (0.030)	0.006 (0.019)	0.019 (0.018)
<i>4. Fixed state and year effects, including years laws in effect</i>				
Race discrimination law	0.002 (0.006)	−0.005 (0.005)	−0.028 (0.010)	−0.031 (0.008)
Race discrimination law, years in effect × 10 ^{−1}	0.008 (0.004)	0.005 (0.005)	−0.005 (0.007)	−0.011 (0.006)
Black male × race discrimination law	−0.006 (0.024)	−0.011 (0.021)	−0.013 (0.024)	−0.010 (0.020)
Black male × race discrimination law, years in effect × 10^{−1}	0.008 (0.013)	0.007 (0.013)	0.037 (0.013)	0.016 (0.012)
Sex discrimination law	0.021 (0.006)	0.012 (0.007)	−0.007 (0.009)	−0.005 (0.009)
Sex discrimination law, years in effect × 10 ^{−1}	−0.004 (0.005)	−0.009 (0.005)	−0.022 (0.007)	−0.032 (0.006)
Black male × sex discrimination law	0.047 (0.021)	0.027 (0.033)	−0.035 (0.024)	0.010 (0.017)
Black male × sex discrimination law, years in effect × 10 ^{−1}	0.019 (0.014)	0.017 (0.021)	0.003 (0.019)	−0.028 (0.012)
<i>5. Add state × year interactions, including years laws in effect</i>				
Black male × race discrimination law	−0.003 (0.020)	−0.007 (0.019)	−0.004 (0.012)	−0.007 (0.012)
Black male × race discrimination law, years in effect × 10^{−1}	0.005 (0.010)	0.005 (0.011)	0.028 (0.009)	0.017 (0.009)
Black male × sex discrimination law	0.031 (0.018)	0.020 (0.025)	−0.028 (0.016)	0.006 (0.012)
Black male × sex discrimination law, years in effect × 10 ^{−1}	0.015 (0.012)	0.011 (0.015)	−0.014 (0.011)	−0.028 (0.009)
<i>6. Add different trends in racelsex gaps for states ever passing antidiscrimination laws by 1960, including years laws in effect</i>				
Black male × race discrimination law	0.003 (0.028)	0.005 (0.028)	0.024 (0.011)	0.030 (0.009)
Black male × race discrimination law, years in effect × 10^{−1}	0.005 (0.017)	0.007 (0.018)	0.056 (0.010)	0.047 (0.009)
Black male × sex discrimination law	0.024 (0.025)	0.018 (0.028)	0.008 (0.011)	0.019 (0.008)
Black male × sex discrimination law, years in effect × 10 ^{−1}	0.007 (0.014)	0.004 (0.018)	0.008 (0.013)	−0.016 (0.009)

Notes: See notes to Table 7.

APPENDIX TABLE A1
Additional Employment and Log Earnings Regressions for Women

	Black Females vs. Black Males		White Females vs. White Males		Black Females vs. White Males	
	All States (1)	Nonsouth (2)	All States (3)	Nonsouth (4)	All States (5)	Nonsouth (6)
<i>A: Employment</i>						
<i>N</i>	180,568	66,688	1,719,214	1,282,903	854,291	605,443
<i>1. OLS standard errors, with state × year interactions (specification 2, Table 7)</i>						
Black/white female × sex discrimination law	−0.069 (0.013)	−0.070 (0.017)	−0.026 (0.003)	−0.017 (0.003)	−0.027 (0.008)	−0.045 (0.011)
Black/white female × race discrimination law	−0.010 (0.013)	0.007 (0.016)	−0.018 (0.003)	−0.007 (0.003)	0.001 (0.009)	0.006 (0.010)
<i>2. Excluding race discrimination law, with state × year interactions (specification 2, Table 7)</i>						
Black/white female × sex discrimination law	−0.074 (0.011)	−0.069 (0.019)	−0.035 (0.005)	−0.019 (0.004)	−0.027 (0.012)	−0.044 (0.016)
<i>B: Log earnings</i>						
<i>N</i>	49,915	22,314	650,224	459,911	486,725	369,264
<i>1. OLS standard errors, with state × year interactions, including years laws in effect (specification 5, Table 8)</i>						
Black/white female × sex discrimination law	−0.027 (0.034)	−0.054 (0.038)	−0.015 (0.007)	−0.022 (0.007)	−0.055 (0.029)	−0.046 (0.033)
Black/white female × sex discrimination law, years in effect × 10^{−1}	0.034 (0.024)	0.115 (0.028)	0.026 (0.005)	0.024 (0.005)	0.024 (0.020)	0.081 (0.024)
Black/white female × race discrimination law	0.011 (0.036)	0.031 (0.035)	0.015 (0.006)	0.012 (0.006)	0.024 (0.030)	0.035 (0.030)
Black/white female × race discrimination law, years in effect × 10 ^{−1}	−0.028 (0.024)	0.019 (0.025)	0.011 (0.005)	0.010 (0.005)	0.007 (0.020)	0.034 (0.021)
<i>2. Excluding race discrimination laws, with state × year interactions, including years laws in effect (specification 5, Table 8)</i>						
Black/white female × sex discrimination law	−0.037 (0.028)	−0.041 (0.022)	−0.006 (0.007)	−0.016 (0.007)	−0.045 (0.025)	−0.026 (0.030)
Black/white female × sex discrimination law, years in effect × 10^{−1}	0.030 (0.019)	0.118 (0.016)	0.031 (0.004)	0.025 (0.004)	0.033 (0.017)	0.084 (0.022)
<i>3. Omitting weeks and hours controls, with state × year interactions, including years laws in effect (specification 5, Table 8)</i>						
Black/white female × sex discrimination law	−0.039 (0.031)	−0.069 (0.024)	−0.009 (0.007)	−0.015 (0.007)	−0.079 (0.027)	−0.067 (0.030)
Black/white female × sex discrimination law, years in effect × 10^{−1}	0.031 (0.020)	0.110 (0.016)	0.018 (0.003)	0.017 (0.003)	0.028 (0.019)	0.089 (0.022)
Black/white female × race discrimination law	0.027 (0.023)	0.043 (0.023)	0.017 (0.005)	0.015 (0.005)	0.034 (0.025)	0.047 (0.025)
Black/white female × race discrimination law, years in effect × 10 ^{−1}	−0.037 (0.019)	0.009 (0.016)	0.010 (0.005)	0.009 (0.005)	0.005 (0.024)	0.036 (0.019)

Notes: See notes to Table 7.

APPENDIX TABLE A2
Additional Employment and Log Earnings Regressions for Men

	All States (1)	Nonsouth (2)
<i>A: Employment</i>		
<i>N</i>	829,799	598,391
<i>1. OLS standard errors, with state × year interactions (specification 2, Table 9)</i>		
Black male × race discrimination law	0.010 (0.009)	−0.001 (0.011)
Black male × sex discrimination law	0.042 (0.009)	0.026 (0.012)
<i>2. Excluding sex discrimination laws, with state × year interactions (specification 2, Table 9)</i>		
Black male × race discrimination law	0.035 (0.013)	0.005 (0.015)
<i>B: Log earnings</i>		
<i>N</i>	512,290	379,458
<i>1. OLS standard errors, with state × year interactions, including years laws in effect (specification 5, Table 9)</i>		
Black male × race discrimination law	−0.004 (0.017)	−0.007 (0.016)
Black male × race discrimination law, years in effect × 10^{−1}	0.028 (0.011)	0.017 (0.011)
Black male × sex discrimination law	−0.028 (0.015)	0.006 (0.017)
Black male × sex discrimination law, years in effect × 10 ^{−1}	−0.014 (0.011)	−0.028 (0.013)
<i>2. Excluding sex discrimination laws, with state × year interactions, including years laws in effect (specification 5, Table 9)</i>		
Black male × race discrimination law	−0.028 (0.013)	−0.020 (0.014)
Black male × race discrimination law, years in effect × 10^{−1}	0.021 (0.008)	0.023 (0.008)
<i>3. Omitting weeks and hours controls, with state × year interactions, including years laws in effect (specification 5, Table 9)</i>		
Black male × race discrimination law	−0.006 (0.011)	−0.007 (0.011)
Black male × race discrimination law, years in effect × 10^{−1}	0.034 (0.011)	0.028 (0.009)
Black male × sex discrimination law	−0.038 (0.014)	−0.001 (0.011)
Black male × sex discrimination law, years in effect × 10 ^{−1}	−0.007 (0.010)	−0.014 (0.009)

Notes: See notes to Table 7.

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