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STATE AGE PROTECTION LAWS AND THE
AGE DISCRIMINATION IN EMPLOYMENT ACT

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ABSTRACT

Some anti-discrimination laws have the perverse effect of harming the very class they were meant to protect. This paper provides evidence that age discrimination laws belong to this perverse class. Prior to the enforcement of the federal law, state laws had little effect on older workers, suggesting that firms either knew little about these laws or did not see them as a threat. After the enforcement of the federal Age Discrimination in Employment Act (ADEA) in 1979, white male workers over the age of 50 in states with age discrimination laws worked between 1 and 1.5 fewer weeks per year than workers in states without laws. These men are also .3 percentage points more likely to be retired and .2 percentage points less likely to be hired. These findings suggest that in an anti-age discrimination environment, firms seek to avoid litigation through means not intended by the legislation – by not employing older workers in the first place.

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1 Introduction

Although the hope is that anti-discrimination laws will raise employment and wages for members of protected groups, a number of studies suggest that these laws may be counter-productive. For example, Gruber (1994) finds that although mandates which stipulated that childbirth be covered comprehensively in health insurance plans did not change employment, they caused a decrease in wages of women of child bearing age. Similarly, DeLiere (2000), Acemoglu and Angrist (2001), and Jolls and Prescott (2004), among others, find a negative effect on employment prospects for disabled workers following the 1990 Americans with Disabilities Act. In this paper I examine the impact of state and federal legislation meant to protect older workers. The 1968 Age Discrimination in Employment Act (ADEA) prohibits discrimination against older workers in hiring, laying off, firing, compensation, or other conditions of employment.

This paper examines whether age discrimination laws have unintended consequences for older workers. There are three margins upon which these laws can affect older workers' employment: firing, hiring, and retirement. Employment may increase or decrease for older workers depending on which margins are most affected by the laws. First, a firm affected by these laws will be unlikely to outright fire an older worker for fear of a lawsuit. However, it is very difficult to prove or detect discrimination in hiring, and thus employers may choose not to hire older workers who will be difficult to fire (Donohue and Siegelman 1991). Finally, since the line between unemployment and retirement tends to blur for older workers (Choi 2002), firms who wish to avoid being sued may increase retirement incentives for these workers (rather than fire them outright), thus decreasing the employment of older workers. At first

examination, increasing incentives for retirement for older workers may seem to benefit both the worker and the company. However, if the increase in retirement incentives is coupled with an increased threat of layoffs, then the resulting increase in retirement may not be entirely voluntary. Because it is difficult for older workers to find new employment, the possibility of losing one's job without the retirement package is a worse prospect for the older worker who may feel that he or she has no choice but to accept the retirement package, than for the younger worker who has a higher probability of finding new employment (Lahey 2005). Indeed, Schuster and Miller (1984) find that 31% of cases brought under the ADEA before 1981 involved involuntary retirement.

This paper uses state age discrimination laws matched by state and year to the March monthly Current Population Survey (CPS) to look at retirement outcomes for protected workers. To investigate the impact of hiring and job separation outcomes for older workers, I constructed measures of separations and accessions (hires) by matching CPS rotation groups as in Bleakley et al. (1999). My empirical strategy uses the assumption that, because of the Equal Employment Opportunity Commission (EEOC) backlog, workers in states with their own age discrimination laws are more likely to be affected by the federal ADEA law. Under this law, workers in states with age discrimination laws have almost twice as long to file. Additionally, in states with laws state Fair Employment Practices (FEP) offices may be able to process claims more quickly than the EEOC. Thus, I compare workers in states with laws who are affected by the law and workers in states with laws who are not affected by the law to those who are in states without laws.

I find that ADEA laws, including state laws, had no negative effects (using CPS March monthly data) on labor market outcomes before the 1968 federal law was enforced and given to the EEOC in the late 1970s. Even after enforcement, these laws also do not affect older women or minorities, possibly because minorities are granted stronger protections under the Civil Rights Act of 1964 and this cohort of older women in general does not bring about lawsuits.¹ After the 1978 legislation, white male workers over the age of 50 in states with ADEA laws worked fewer weeks per year and are less likely to be hired or separated from their jobs, but are more likely to be retired (perhaps involuntarily). These findings suggest that firms do not wish to hire older workers most affected by the law, are afraid to fire older workers, but remove older workers through incentives to retire in states where lawsuits are less of a hurdle for the worker.

The remainder of the paper is organized as follows. Section II provides background information on the legal environment surrounding age discrimination laws, including a brief literature review. Section III explains my empirical strategy. Section IV gives information on data and descriptive statistics. Section V presents results, including robustness checks. Section VI concludes.

2 Background

The first state age discrimination law came on the books in 1903 in Colorado. By 1960, eight states had age discrimination laws.² Although the US Civil Service had

¹ Although the decision of whether to file under the Civil Rights Act or the Age Discrimination in Employment Act (or both) is dependent on the individual circumstances of a case, from the hiring employer's perspective, race and gender may be more salient features, or employers may have different beliefs about the propensity to sue of older women and older minorities than older white men.

² I have not been able to find any pattern to the introduction of these laws. States with and without laws look very similar across measured characteristics. In the robustness checks portion of the results section I run a test as if states with laws had introduced them 5 years earlier and find no evidence of any underlying differences between states that introduce and have not yet introduced laws.

banned maximum hiring ages in federal employment in 1956 and legislated against age discrimination in federal contracting in 1964, federal legislation protecting older workers overall did not appear until 1967 with the introduction of the Age Discrimination in Employment Act, or ADEA. The 1967 ADEA prohibited age-based discrimination for those aged 40-65 in firms with 20 or more workers. Under this act, employers were barred from using age in hiring, laying off, firing, compensation, or other conditions of employment. It also prohibited employers from using age-specific language in advertising. Although Adams (2004) finds a small effect of the introduction of this law, most researchers agree that the federal law had little effect until the 1978 amendment to the ADEA³ (Neumark and Stock 1999, O'Meara 1989). In 1978, Congress extended the protected age group to 40-70 and eliminated mandatory retirement for most federal employees. A second major change, in terms of enforcement, came in 1979 when the Department of Labor (and, for federal employment, the US Civil Service Commission) gave administrative responsibility to the US Equal Employment Opportunity Commission (EEOC). Most researchers agree that this change strengthened the power of the ADEA because the change came with an increase in resources and an increase in "pattern and practice" lawsuits (Neumark 2001).⁴

In 1986, Congress amended the ADEA to eliminate the upper protected age range for age discrimination, effectively eliminating mandatory retirement for all except in cases where a safety issue related to age might be considered a bona fide occupational

³ Neumark and Stock (1999) note that the existence of the law may have given plaintiffs higher standing in court even in the absence of enforcement mechanisms.

⁴ Although some law scholars argue that EEOC pattern and practice lawsuits are irrelevant, publicity surrounding the laws and the lawsuits could be the driving force behind differences in employer reaction to age laws. O'Meara (1989) argues that while the 1964 law was passed with little publicity, the events surrounding the 1978 amendment and enforcement were well publicized.

qualification (BFOQ), such as for pilots, or where the existence of job tenure would impose an undue hardship on the employer, such as for professors.⁵ In 1990, the Older Workers Benefits Protection Act (OWBPA) imposed restrictions on the financial tools employers could use to induce worker retirement (Neumark 2001, O'Meara 1989).

The procedure to file a claim under the ADEA differs importantly between states with and without their own age discrimination laws. Because the EEOC has a large backlog of cases, it rarely prosecutes claims itself. Instead, if a state has its own age discrimination statutes, then the ADEA requires the claimant to file with the state Fair Employment Practices (FEP) office within 300 days. Otherwise, in states that do not have statutes, the claimant must file with the EEOC within 180 days.⁶ The EEOC can then dismiss the claim, at which point the claimant may pursue a civil action in court, or the EEOC can seek to settle or mediate. If the settlement or mediation is unsuccessful, the EEOC can then sue, or if it chooses not to sue, the claimant may sue (Neumark 2001). Over 95% of employment discrimination cases are brought by private attorneys, not the EEOC (Gregory 2001).⁷ Since claimants have more time to file if their state has a law, and, because the claim may be processed faster by the state FEP than the backlogged EEOC, claimants in states with age discrimination laws have less of a hurdle to suing than claimants in states without those laws.

Awards are limited to "make whole" status and lawyers' fees, that is, the award returns the plaintiff to where he or she would have been had he or she not been the subject of discrimination. These awards include hiring, reinstatement or promotion, back

⁵ Ashenfelter and Card (2000) looked at the end of mandatory retirement for college faculty.

⁶ "For ADEA charges, only state laws extend the filing limit to 300 days."

http://www.eeoc.gov/charge/overview_charge_filing.html

⁷ As a side-note, only 8% of employment discrimination cases filed in federal court proceed to the trial state (Gregory 2001).

pay and restoration of benefits and lawyers' fees. Attorney's fees often make up the bulk of the payment by the firm. Unlike race cases covered by the Civil Rights Act (CRA), additional damages are not awarded except in cases involving willful violation of law and these are limited to twice the amount of actual damages (Gregory 2001, Levine 1988, O'Meara 1989).⁸ Thus, among those who believe that they have been discriminated against during this time period, suing under the CRA may be more attractive to women and minorities, but the ADEA is the best option for older white men.⁹

The motivation behind the ADEA seems to be lawmakers' concern that employers incorrectly perceive older workers to be less productive or unwilling to make modest adjustments to accommodate them.¹⁰ Additionally, lawmakers may worry that capable individual older workers are not granted opportunities based on beliefs about average characteristics of the elderly. Although the labor market fortunes of older workers tend to be better than those of younger workers, older workers are less likely to find employment after being separated from a job (Diamond and Hausman 1984). When older workers do find new jobs, they are clustered into a smaller set of industries and occupations than younger workers (Hutchens 1988).

The majority of people who sue under the ADEA are white male middle managers or professionals over the age of 50.¹¹ Employment termination in the form of wrongful discharge and involuntary retirement, not differential hiring, is the cause of most suits. It is thus possible that the ADEA acts as a form of employment protection. At

⁸ Gender cases did not allow punitive damages until the passage of the 1991 Civil Rights Act.

⁹ The Americans with Disabilities Act was not introduced until 1991.

¹⁰ The US Department of Labor Report (1965) states that employers are making, "assumptions about the effect of age on the ability to do a job when there is in fact no basis for these assumptions."

¹¹ O'Meara (1989) has a literature review for the demographics of people who brought lawsuits under the ADEA.

the beginning of EEOC enforcement, 14% of claimants were women. By 1995 this number had risen to only 30% (Donohue and Siegelman 1991, Gregory 2001, Schuster and Miller 1984). As mentioned before, women and minorities may have greater protection under the Civil Rights Act, which also allows punitive damages. Thus my identification strategy focuses on white men over the age of 50, who are most likely to sue under the law.

This paper is the first to examine the impact of the ADEA from its early years through a significant time period after its enforcement. It also uses yearly CPS data and examines the effects on many segments of the labor force, not just those over or under the age of retirement. Adams (2004) looks at the introduction of the federal law in 1968 and finds an increase in employment for those protected by the federal law and a decrease for those older than the protected ages. His identification strategy relies on the assumption that states with laws prior to the introduction of the ADEA are not affected by its passage, an assumption which may or may not be valid since the 1968 ADEA had no enforcement mechanism. There is also some question about the validity of the early CPS which Adams uses in his pre-period. Neumark and Stock (1999) look at censuses from 1940 to 1980, and thus have only one data point after the enforcement of the ADEA.¹² The census may not be the best source of data to examine the impact of these laws since it cannot follow year to year changes.

The end of mandatory retirement in 1986 and 1994 has been more extensively studied than other aspects of the ADEA. Till von Wachter (2002) looks at the shift of mandatory retirement to age 70 in 1978 and its end in 1986 using imputed probability of

¹² I update Neumark and Stock's list of state laws for use in this paper. In some cases I made corrections, but these corrections to their list were for laws after 1980 and thus do not affect their results.

being covered by mandated retirement and finds that the labor force participation of workers age 65 and older increases by 10 to 20% in 1986. Mitchell and Luzadis (1988) find that in 1960, pension plans rewarded delayed retirement, but by the 1980s, union plans actively encouraged early retirement. However, non-union plans still rewarded delayed retirement. Ashenfelter and Card (2000) show that the abolition of retirement for college professors in 1994 reduced retirement for those age 70 and 71. Although the end of mandatory retirement is important, it does not tell the story of the entire effect of the ADEA, particularly the consequences of this legislation on older workers wishing to be hired or promoted and the effects on workers who are over the age of 50 (and thus “old”) but too young for mandatory retirement to have affected them. This paper fills these gaps in the literature.

3 Empirical Strategy

To study the effect of state age discrimination laws, I use an OLS Differences in Differences specification:

$$y_{it} = X_i \beta_1 + \beta_2 (H_{st} * A_i^{\text{over}50}) + \beta_3 (H_{st} * A_i^{\text{under}50}) + \theta_t + \partial_a + \varphi_s + \zeta_{st} + \varepsilon_{ist} \quad (1)$$

where i denotes individuals and t denotes time; y_{it} is either weeks worked, a dummy indicating employed, a dummy indicating retirement, a dummy indicating hired this month, or a dummy indicating being separated from a job this month; X_i is a set of controls including a dummy for married and a dummy for high school graduate. H is an indicator that is equal to one if the state s in which the individual resides has an age discrimination law in year t . $A_i^{\text{over}50}$ is an indicator equal to one if the individual is over the age of 50, and $A_i^{\text{under}50}$ is an indicator equal to one if the individual is age 50 or under.

θ_t is a set of time dummies; φ_s is a set of state dummies; ∂_a is a full set of age dummies; and ζ_{st} is a state specific linear time trend. The assumption behind this strategy is that it is easier for workers to sue, and thus to enforce age discrimination laws, in states that have their own age discrimination laws than in states which do not. Thus workers over the age of 50 in states with laws will be more affected than workers in states without laws.

Equation (1) varies somewhat from the standard differences in differences equation which would be:

$$y_{it} = X_i\gamma_1 + \gamma_2(H_{st}) + \gamma_3(H_{st} * A_i^{\text{over50}}) + \theta_t + \varphi_s + \partial_a + \zeta_{st} + \varepsilon_{ist}$$

where γ_3 is the effect of the law on workers over the age of 50 compared to workers under the age of 50 in states with laws. This equation is equivalent to equation (1), in that $\beta_2 = \gamma_2 + \gamma_3$ and $\beta_3 = \gamma_2$. The reason for using equation (1), which compares workers over and under the age of 50 in states with laws to workers in states without laws, as the specification, is that one can more clearly see the effects of the law on the two different age groups in the sample. β_2 is the effect of having a law on workers over the age of 50 and β_3 is the effect of having a law on workers age 50 and under, relative to workers in states without laws. Age 50 was chosen as the age cutoff because white men over 50 are most likely to sue under the law.

A second possible way of identifying is through a Differences in Differences in Differences strategy using women as a second control group. These early cohorts of women are historically less litigious than older men or than women in later cohorts. Additionally, since women's attachment to the labor force is weaker than men's,

employers may figure that women will leave or retire on their own before they become a liability due to their age. Thus employers may not see older women as constituting as much of a threat due to age discrimination laws as they do men. My strategy is:

$$\begin{aligned}
y_{it} = & X_i \beta_1 + \beta_2 (M_i * H_{st} * A_i^{\text{over } 50}) + \beta_3 (M_i * H_{st} * A_i^{\text{under } 50}) + \beta_4 (M_i * A_i^{\text{over } 50}) + \\
& \beta_5 (M_i * A_i^{\text{under } 50}) + \beta_6 (M_i * A_i^{\text{over } 50}) + \beta_7 (H_{st} * A_i^{\text{over } 50}) + \beta_8 (H_{st} * A_i^{\text{under } 50}) + \quad (2) \\
& + \theta_t + \varphi_s + \partial_a + \zeta_{st} + \varepsilon_{ist}
\end{aligned}$$

where i denotes individuals, t denotes time; y_{it} is either weeks worked, a dummy indicating employed, a dummy indicating retirement, a dummy indicating hired this month, or a dummy indicating being separated from a job this month; X_i is a set of controls including a dummy for married and a dummy for high school graduate. M_i is an indicator which equals 1 if the individual is male. H is an indicator that is equal to one if the state s in which the individual resides has an age discrimination law in year t . $A_i^{\text{over } 50}$ is an indicator equal to one if the individual is over the age of 50, and $A_i^{\text{under } 50}$ is an indicator equal to one if the individual is age 50 or under. θ_t is a set of time dummies; φ_s is a set of state dummies; ∂_a is a full set of age dummies; and ζ_{st} is a linear state time trend. The assumptions behind this strategy are that it is easier for workers to sue, and thus to enforce age discrimination laws, in states that have their own age discrimination laws than in states which do not and that women are less likely to be affected by these laws than men. Thus men over the age of 50 in states with laws will be more affected than either workers in states without laws or than women.

Finally, I try a more stringent identification strategy in terms of possible state and time trends by allowing state times year effects:

$$y_{it} = \beta_1(H_{st} * A_i^{\text{over50}}) + \theta_t + \varphi_s + \partial_a + \varphi_s * \theta_t + \varepsilon_{ist} \quad (3)$$

with variables defined as before.

4 Data and Descriptive Statistics

The first sample I use to look at the impact of age discrimination laws is drawn from the 1968-1991 March CPS and is limited to white men aged 25 to 85. I break this set up into two smaller sets, one covering 1968-1977 and the other covering 1978-1991, because the Congressional committee reported on the ADEA in 1977¹³ (amendments followed in 1978 and enforcement by the EEOC in 1979), and because of changes in the CPS beginning in 1976. I limit to 1991 because the introduction of the ADA provides new protection to older workers.¹⁴ The impact of the ADEA on employment levels is evaluated by looking at data on weeks worked during the calendar year preceding the March income supplement. The impact on wages is measured using the average weekly earnings, computed using annual earnings data. After 1979, the CPS prompted respondents to be sure to include overtime pay, tips, bonuses, commissions, and money from employers other than the primary employer.¹⁵ The impact on retirement and labor force participation is measured using the self-reported retirement and labor force coding from the CPS employment status variable. The second sample I use is a matched monthly CPS. I follow the algorithm developed in Bleakley et al. (1999) to match job flow variables. These matched data allow me to measure the impact of the ADEA on hiring and job separation outcomes.

¹³ <http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=us&vol=472&invol=353>

¹⁴ Stock and Beegle (2004) examine the interactions of the ADA and the ADEA after 1991 and find different effects on employment for protected workers by age.

¹⁵ Results are robust to removing 1978 as a year from the wage regressions.

CPS questions about weeks worked and income refer to the previous year. The year reported in the tables and figures is the year in which the CPS was administered, not the year referred to in the questionnaire. Questions about labor force status and retirement refer to the respondent's main occupation in the previous week. From 1968 to 1976 in the early period, the CPS does not identify all states but groups some of them together. For state groups in which all states in the group have the same law status for the year, I code these as having or not having the law depending on status. If any state in the group does not have the same status as the others for the year, I drop these states for the years in which they disagree. The basis for state laws was taken from Neumark and Stock (1999) and checked against several secondary sources. When Neumark and Stock (1999) disagreed with the secondary sources, these laws were checked against primary sources from Westlaw and from microfiche and hard copies of compiled state laws. Additionally, the list was updated for years not in Neumark and Stock using Monthly Law Review updates and Westlaw.

Descriptive statistics can be found in Table 1. As mentioned before, the universe is restricted to white males. As workers get older, they are less likely to be unemployed and more likely to be out of the labor force. The employment rate, weekly wage, and total income increase by age until age 45 in the early sample and age 50 in the later sample, after which they begin to drop. Men in the set are more likely to be married as they get older until their mid-50s in the early sample and mid-60s in the later sample. Older cohorts are also less likely to be high school graduates. Wage income and education levels are higher on average for workers in states with laws. Average weeks worked is larger for workers in states with laws in the early period but not in the later

period. Men are more likely to claim to be retired in states with laws in the later period. Figure 2 shows the dates that states implemented their age protection laws. States without laws in the later period are more likely to be in the South.¹⁶

5 Results

5.1 *Employment, Wage, and Retirement Effects*

Figure 1 plots average weeks worked by white men age 25-50 and those age 51-85 who worked in states with and without laws for those who worked a positive number of hours. The number of weeks worked in Figure 1 is taken as the average of the midpoint of intervalled weeks worked per year. The number of weeks worked by older men has been declining during this time period, although this decrease has leveled out in the 1980s. Older men in states with laws work more weeks per year than older men in states without laws until the late 1970s, when the two lines begin to look more similar while those corresponding for the younger men retain the same trend. This convergence suggests that the possibility of a new enforcement mechanism may have had an effect before the enforcement actually came in place in 1979 in states which were more aware of age discrimination legislation. Weeks worked by younger men dropped as well from 1979 to 1982 and then increased through the rest of the 1980s. In general younger men in states without laws worked more weeks per year than those in states with laws.

Table 2 reports ordinary least squares (OLS) estimates of equation (1). The universe is white men between the ages of 25 and 85, inclusive. The dependent variables are weeks worked, log weekly earnings and retired.¹⁷ The controls in these regressions are dummies for married and high school graduate, and a set of age dummies, state

¹⁶ Results in paper are robust when universe is limited to pre-1986 data.

¹⁷ The coefficient reported for retired is the marginal effect of the probit.

dummies and year dummies.¹⁸ Regressions are clustered on state. The coefficients of interest are `havelaw*over50`, which is the interaction of the observation being over age 50 and being in a state with a law, and `havelaw*under50`, which is the interaction of the observation being the age of 50 or under and being in a state with a law.¹⁹ The table also reports estimates from specifications including a linear time trend interacted with state.

The results in Table 2 suggest a substantial and statistically significant decline in weeks worked per year for people over the age of 50 after it was announced that the ADEA would begin to be enforced in 1978.²⁰ For example, in Table 2A, columns 3 and 4 show a drop of between -1.1 and -1.5 weeks worked for older white men, those over 50, in states with age discrimination laws and essentially no effect on white men under 50 in those states. In the early period, there is no effect on weeks worked for either older or younger workers, though this lack of finding may be due to measurement error in weeks worked per year, since prior to 1976, they were only reported in intervals.

Panel 2B reports estimates on log weekly wages of white men 25-50 and 51-85 in states with and without laws. Once state trends are added, there is no evidence of any effect on either older or younger workers in the early period, although again, since the variable, weekly wages, is manufactured from weeks worked and not all states are

¹⁸ Adding college graduate instead of high school graduate as a control changes the coefficient on `over50*havelaw` to range between -1.045 without a state year trend to -1.37 with a state trend, compared to -1.5 and -1.16 respectively.

¹⁹ Recall that people in states with laws have more time to file a claim and can work with the state FEP agency rather than directly with the EEOC; thus they have less of a hurdle to file a lawsuit. Even though the law covers workers over 40, in practice white men over the age of 50 are the most likely to sue. Some states with laws also protect workers in firms with fewer than 20 workers. Neumark and Stock (1999) code three states, Colorado, Georgia, and North Dakota as having “weak” laws in the post period. Coding these states as not having a law does not appreciably change the results; for example, the coefficient on weeks worked in Table 2A(3) changes from -1.5 to -1.2 and is still significant at the 5% level.

²⁰ Weeks Worked variable includes zeros for people who did not work any weeks.

included in the early period, this may be an artifact of the data.²¹ Additionally, without state trends, there is a significant positive effect on wages of older workers in states with laws and the point estimate remains positive once trends are added. In the later period, there is a positive effect on wages of older workers in states with laws, but this effect is not significant. Thus age discrimination laws may increase wages of older workers, but this wage effect is not significant once state trends are added.²²

Panel 2C reports estimates on self-reported retirement of white men over and under 50 in states with and without laws. Note that unlike the weeks worked and income questions, the retirement question is asked about the previous week, rather than the previous year. In the early period, the effect on retirement is small and insignificant for older workers, and negative and significant for younger workers. In the later period, older workers are .2 to .3 percentage points more likely to say they are retired in states with laws than men in states without laws though this effect is only marginally significant once state trends are added.²³ This provides suggestive evidence that age discrimination laws encourage retirement in older workers. This effect could be through two different channels. It could be that companies prefer to offer retirement packages to older workers rather than laying them off or firing them, thus decreasing the chance of a lawsuit. Alternatively, it could be that unemployed older workers who face decreased chances of re-employment prefer to refer to themselves as retired rather than unemployed.

Robustness Checks

²¹ No evidence is found for an effect in the early period using annual wages either, suggesting that the lack of an effect on weeks worked may be real and not just an artifact of the interval data and missing states.

²² If there is a genuine positive effect on wages, it may be because, as is shown later, firms are both less likely to either hire or fire older workers. Since firms often offer lower wages to new hires than to workers with long tenure, the average wage in this sample may go up.

²³ The base rate of retirement for all white men is .125, and .325 for those over the age of 50.

Although Figure 1 suggests that the possibility of the enforcement of the federal age discrimination law may have affected employment of older workers in states with laws as early as 1977, when committees reported on the ADEA, an argument can be made for using the year 1978, when the enforcement was announced, or 1979, when the enforcement actually took place as the start year for the later period. Results using these later cut-off dates can be found in Table 3. Again, the age range refers to the dates the CPS was administered, and thus refers to the earlier year for questions on weeks worked and income. These results are substantively the same as those from 1978-1991, although in general the magnitude of the coefficients is somewhat smaller. Additionally, the results for weeks worked per year lose significance at the 5% level once state trends are included in the regression.

The age 85 was chosen as the top age in order to allow a generous top age specification while still eliminating possible outliers. The typical person who sues under the ADEA, however, is a white male between the ages of 50 and 59. To test for sensitivity to the top age used, I run separate regressions using topcodes of 75, 65, and 59. These results can be found in Table 4. Again, there is no evidence of an age discrimination law effect on relative wages for these smaller age universes. The magnitude of the coefficient of *havelaw * over 50* drops for both weeks worked per year and retirement as the age universe is trimmed, suggesting there might be a stronger effect on older workers. Weeks worked per year is no longer significant when state time trends are added once 75-84 year olds are removed and loses significance entirely once the universe is restricted below 65, although this result is not unexpected since the universe is smaller. Retirement remains positive and significant for the 25-74 year olds without state

trends but drops when the range is restricted to those under 65. Coefficient magnitudes are larger with older top age tails, suggesting that much of the effect of these laws is concentrated at later ages.

Similar regressions shown in Table 5, looking at women and minority groups, found no effect of age discrimination laws on weeks worked. Protected minority groups are afforded greater protection under the Civil Rights Act (CRA) and can be awarded punitive damages in addition to “make whole” damages from the CRA, but not the ADEA and older women from these cohorts are not litigious. Thus employers may not worry about age for these groups as they are more likely to be sued under the CRA and would have to pay out a larger settlement under the CRA. Additionally, I may be finding no effect because employers may believe that, since women have weaker labor force attachment, they may leave before a lawsuit becomes an issue. Sample sizes for blacks are small and are even smaller for other minority groups and thus may not be big enough to pick up an effect of age laws. I do find a positive effect on weekly wages for black men of all ages in states with laws once state time trends are added in, but that may be a spurious result. I also no effect on retirement for these groups.

Older white men in middle-management positions are most likely to sue. Therefore it may be of interest to break up the set by college education, since managers are more likely to be college educated. Columns 5-8 of Table 5 report results for white men by college graduation. In table 5A, results on weeks worked for both of these groups are very similar to those of the whole sample, with the coefficient of $havelaw^{*}over50$ decreasing in magnitude and significance with state specific trends for the group of non-college graduates but increasing in magnitude and significance for those

with a college education. If there is a state specific time trend to weeks worked that varies by education, then this would suggest that age discrimination laws do hurt those in demographic groups that are more likely to sue. Table 5C shows similar results for claiming retirement as an outcome; older non-college graduates are significantly more likely to claim retirement without a state specific time trend but older college graduates are significantly more likely when a state specific time trend is included.

Table 6A reports OLS estimates of equation (2). The universe is all white men and women between the ages of 25 and 85. The dependent variable is weeks worked. The controls in these regressions are dummies for married and high school graduate, and a set of age dummies, state dummies and year dummies. Regressions are clustered on state. The coefficients of interest are $\text{male*over50*havelaw}$, which is the interaction of the observation being male, age 50 or over and being in a state with a law, and $\text{male*under50*havelaw}$, which is the interaction of the observation being male, under the age of 50 and being in a state with a law. Women are less likely to sue under age discrimination laws than men, and as explained above, men in states with laws have less of a hurdle to suing than men in states without laws.

The results in Table 6A agree substantially with the Differences in Differences results for older men using having a law as identification in Table 2. There is still no significant effect of laws for either group prior to the discussion of federal enforcement of the law. In the later period, the magnitude for older men is somewhat larger than the largest estimate in Table 2, with men in states with laws working almost 1.7 fewer weeks using women and not having a law as controls. The triple difference for men under the

age of 50 is negative here whereas in the earlier calculation its sign depended on the inclusion of state trends, though again it is not significant.

Table 6B reports OLS estimates of equation (3). The universe is white men between the ages of 25 and 85. The dependent variable is weeks worked. The controls in these regressions are dummies for married and high school graduate, and a set of age dummies, state dummies and year dummies. Regressions are clustered on state. The coefficient of interest is havelaw*over50 , which is the interaction of the observation being age 50 or over and being in a state with a law. These results also find a negative effect on weeks worked for older workers, with older workers working about 1.5 fewer weeks in states with laws. These results are within the bounds of those found by equation (1) presented in Table 2, Panel A.

On average, there is little clear evidence of an age discrimination law effect on the relative wages of older workers. Therefore the rest of this paper focuses on a further investigation of the employment and labor force participation effects, and the analysis is limited to the demographic groups for which the evidence for employment effects is strongest—white men between the ages of 25 and 85.

Endogeneity of state laws

To test for the possible endogeneity of state laws, in addition to adding state and year effects and trends, I run a specification check looking at the weeks worked outcome at a point 5 years before each state law was passed. The assumption is that employers do not know that a law will be passed prohibiting age discrimination 5 years prior to the law. No evidence is found that having a law 5 years in the future affects employment or hiring of either older or younger workers in the current period. The coefficient for weeks

worked per year for older workers ranges from -0.091 (with no controls) with a standard error (SE) of 0.836 to -0.529 (with controls and a state trend) with an SE of 0.714. Coefficients for younger workers range from -0.330 with an SE of (0.570) to 0.310 with an SE of (0.824). Thus there is no evidence that the introduction of state laws is related to something that directly affects the differential employment of older and younger workers using this test.

5.2 The Impact of Age Discrimination Laws on Hiring and Separations

Workers may also be working fewer weeks per year not just because they are more likely to retire but also because they are having difficulty finding work once they have separated from a previous job. Additionally, the law may be helping workers by decreasing fires and layoffs for older workers, since employers do not want to be sued. I used matched CPS rotations groups for the entire year to investigate the effect of age discrimination laws on hiring and separation rates (see Bleakley et al. (1999) for a detailed description of the match). An accession (hire) is recorded when someone who was not employed in month m is employed in month $m+1$. Similarly, an individual is coded as having experienced a separation in month m if he is employed in any month m and not in month $m+1$ (individuals employed in December and not in January are coded as hired or separated in the January year). This definition includes people who move from being employed to no longer being in the labor force as separated, and thus captures those who have voluntarily retired in addition to those subject to layoffs, fires, and other quits. Neither hires nor separations include people who change jobs without leaving

employment.²⁴ These measures of accessions and separations are the same as those used by Bleakley et al.(1999).

As theory would predict, I find that older workers in states with laws are less likely to be hired than workers in states without laws. I also find that workers are less likely to be separated from their jobs, though these results are not significant. Results of a probit using equation (2) with Hired and Separated as outcome variables can be found in Table 7. Workers over the age of 50 in states with laws are .2 to .3 percentage points less likely to be hired than workers in states without laws.²⁵ There is also a small but not significant (once controls are added) positive effect on hiring for workers under the age of 50 in these states. Results on job separations are not as clear. There is a trend of reduced job separations for workers over the age of 50 in states with laws and increased job separations for workers under the age of 50, but these results are not significant at the 5% level. Since separations include retirements, which are more likely for older workers in states with laws, I should be picking up two separate effects: increased retirement incentives and decreased firing and layoffs.²⁶ Still, I find that older workers in states with laws are .1 percentage points less likely to be separated than workers in states without, and this effect is probably a lower bound.²⁷

6 Concluding Comments

Employment of workers over the age of 50 has dropped since the ADEA was enforced in 1979. This drop is greater for workers in states where lawsuits are less of a

²⁴ Since older workers may be more likely to be unemployed before finding a new job (Diamond and Houseman 1984), this definition may overestimate older “hires” and “separations” and underestimate younger “hires” and “separations.”

²⁵ The base for hired is 1.7 percentage points, and 1.8 and 1.5 for younger and older workers respectively.

²⁶ Simply limiting to people who do not say they are retired will not fix this effect since many people who are actually unemployed would call themselves retired for status reasons (Choi 2002).

²⁷ The base for separated is 1.9 percentage points for the universe regardless of age category.

hurdle for older workers, i.e. those states with their own age discrimination laws. Workers over the age of 50 in states with laws work between 1 and 1.5 fewer weeks per year than workers in states without laws. Because, on average, older workers work 26.7 weeks per year and all workers work 45.5 weeks per year, ease of age discrimination lawsuit explains 5-8% of the gap in working weeks between older workers in states with laws and the general population. This drop in weeks worked may seem high, but it is comparable to the effect that Acemoglu and Angrist (2001) find for the disabled after the introduction of the Americans with Disabilities Act (ADA) in 1991, where weeks worked for disabled men fall 1.4 weeks in 1993 and another 1.5 weeks between 1993 and 1995.

Retirement has also increased for these older workers. Older workers in states with laws are .3 percentage points more likely to consider themselves retired than workers in states without. Hiring has decreased significantly for older workers in states where it is easier to sue; older workers are .2 percentage points less likely to be hired in states with laws. Finally, separations have dropped, though not at a significant level.

I find no significant decline in the employment or retirement for younger workers, non-white workers and female workers based on state time variation in ease of age discrimination lawsuit. A possible explanation for the difference in findings by race and gender is that before the advent of the ADEA, female and minority workers were already protected by the Civil Rights Act (CRA), which allows for more damages; white men over the age of 50 are the most likely to sue under the ADEA. Additionally, since these groups are not as strongly attached to the labor market, employers may think that they will leave their jobs before possible productivity declines due to age become an issue.

Since the ADEA provides a form of employment protection, it should lead to a lower separation rate for older workers. There does seem to be a protection benefit of this sort, although the results are not conclusive. However, there is also a large effect on increased retirements for these older workers. Employers appear to be reacting to age discrimination legislation and threats of lawsuits by failing to hire older workers, being less likely to fire or lay-off older workers but trying to remove older workers through retirement incentives. In general, it appears that these age protection laws have had very little effect on workers under the age of 50.

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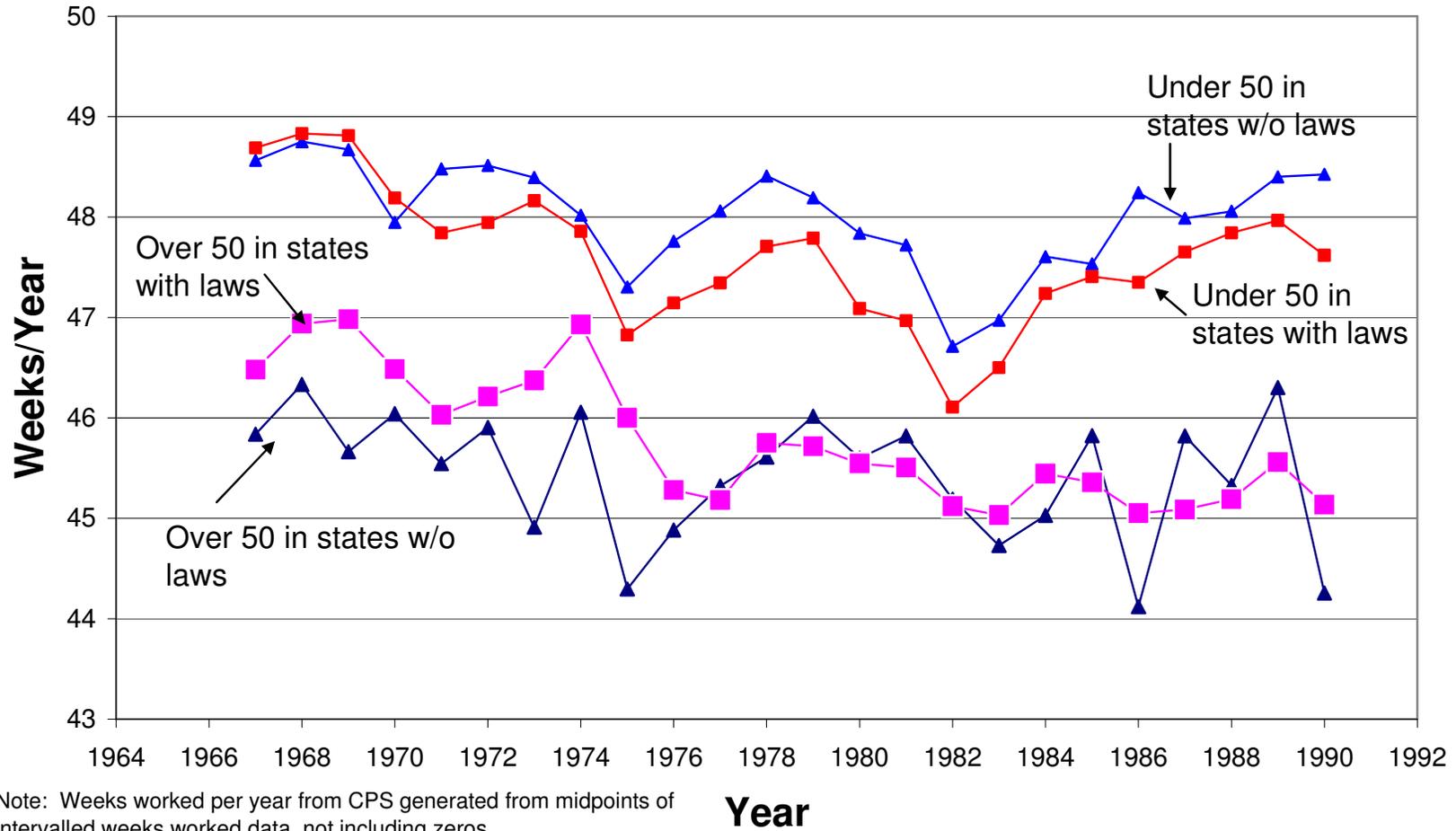
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TABLE 1
Descriptive Statistics for White Men by Age Group and Law Status

	25-34 (1)	35-44 (2)	45-54 (3)	45-49 (4)	50-54 (5)	55-64 (6)	65-74 (7)	75-84 (8)	Have Law (9)	No Law (10)
A. 1968-1977										
age	29.22	39.54	49.43	47.00	51.97	59.21	68.96	78.52	47.35	47.83
employed	0.92	0.94	0.91	0.92	0.90	0.77	0.29	0.12	0.79	0.78
unemployed	0.04	0.03	0.03	0.03	0.03	0.03	0.01	0.00	0.03	0.02
married	0.79	0.87	0.88	0.87	0.89	0.86	0.81	0.71	0.82	0.86
weeks worked	10.29	9.20	9.06	8.92	9.21	8.05	2.92	1.09	10.06	8.92
high school grad	0.81	0.71	0.62	0.64	0.60	0.49	0.35	0.26	0.64	0.58
wage income	19,160.54	22,415.62	21,130.20	21,839.40	20,392.89	16,138.39	3,581.64	864.10	18,487.63	15,097.51
weekly wage	415.12	470.15	456.49	465.41	447.03	398.53	225.50	123.54	453.72	374.46
ln(weekly wage)	5.95	6.11	6.09	6.10	6.07	5.95	5.24	4.78	6.05	5.86
retired	0.00	0.00	0.01	0.00	0.01	0.05	0.48	0.69	0.09	0.09
Observations	80,877	68,747	70,003	35,595	34,408	55,595	34,721	15,553	164,904	50,549
B. 1978-1991										
age	29.42	39.18	49.38	46.94	51.98	59.37	69.01	78.50	46.37	46.66
employed	0.89	0.91	0.88	0.89	0.86	0.67	0.22	0.09	0.74	0.77
unemployed	0.06	0.05	0.04	0.04	0.04	0.03	0.01	0.00	0.04	0.03
married	0.62	0.78	0.83	0.82	0.84	0.85	0.82	0.74	0.75	0.81
weeks worked	44.77	46.24	45.30	46.01	44.54	35.81	11.85	4.82	38.23	38.80
high school grad	0.87	0.85	0.77	0.79	0.74	0.68	0.56	0.43	0.77	0.70
wage income	16,586.65	21,652.52	21,509.51	22,144.00	20,831.13	15,329.23	2,928.75	752.65	16,246.72	15,037.89
weekly wage	358.33	455.66	467.73	473.73	461.12	427.48	249.05	153.54	413.97	373.69
ln(weekly wage)	5.77	6.03	6.08	6.09	6.07	5.96	5.20	4.75	5.91	5.84
retired	0.000	0.001	0.010	0.005	0.015	0.130	0.601	0.775	0.13	0.11
Observations	150,194	119,063	95,009	57,414	48,748	80,812	57,522	25,208	501,941	55,740

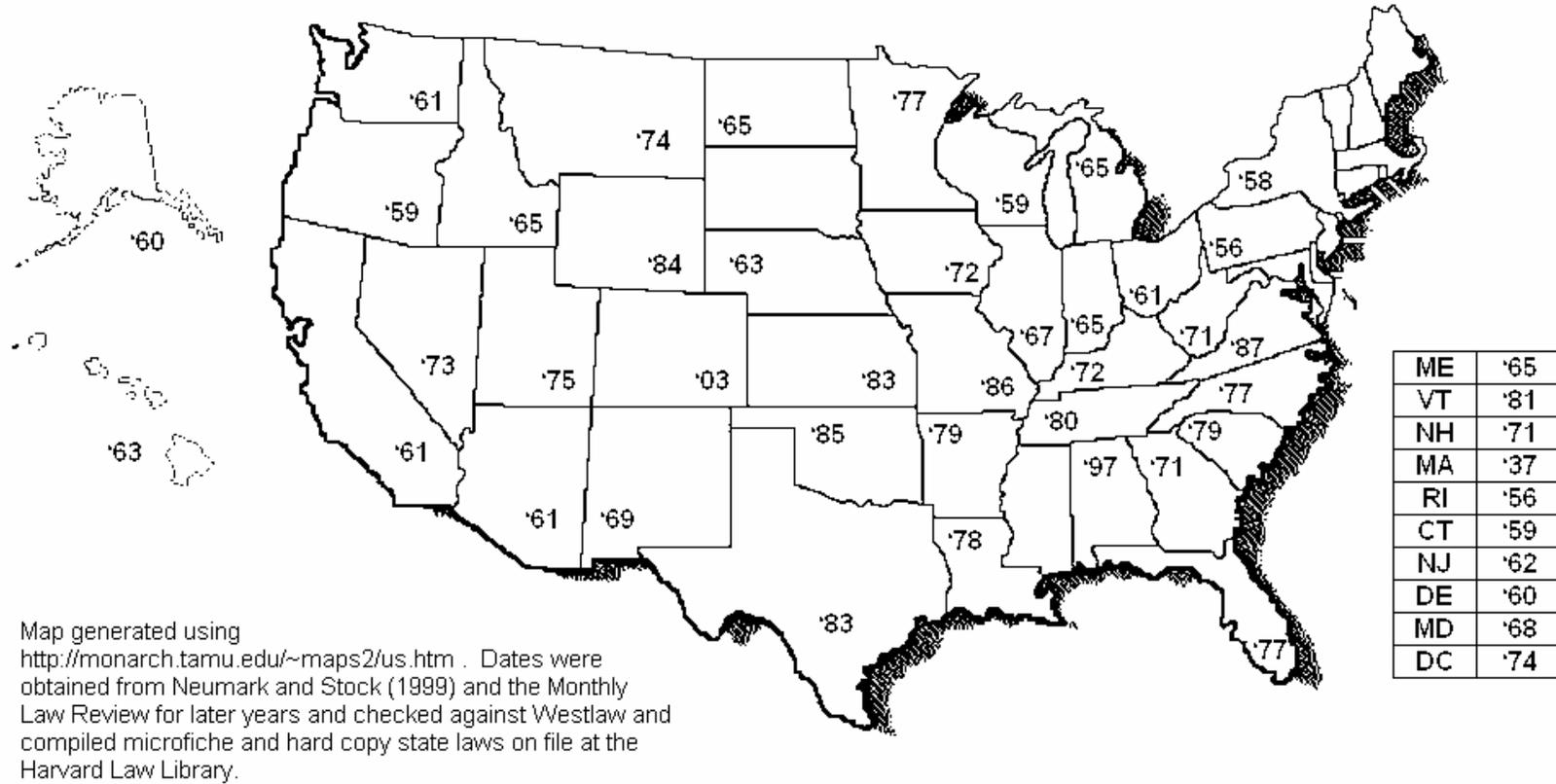
NOTE: Years refer to survey years. Statistics are weighted using CPS person weights. Income is inflated/deflated to 1982-1984 dollars using the CPI. Summary statistics are taken from the IPUMS CPS, except for data on retirement which is from the Unicon

Figure 1: Weeks Worked Per Year



Note: Weeks worked per year from CPS generated from midpoints of intervalled weeks worked data, not including zeros.

Figure 2: Year of implementation of State Law (1900s)



Map generated using <http://monarch.tamu.edu/~maps2/us.htm> . Dates were obtained from Neumark and Stock (1999) and the Monthly Law Review for later years and checked against Westlaw and compiled microfiche and hard copy state laws on file at the Harvard Law Library.

TABLE 2
Initial Results

	A. Weeks Worked per Year			
	1968-1977		1978-1991	
	(1)	(2)	(3)	(4)
havelaw*over50	-0.123 (0.575)	0.180 (0.657)	-1.500 (0.535)**	-1.157 (0.527)*
havelaw*under50	-0.083 (0.744)	0.219 (0.474)	-0.010 (0.441)	0.326 (0.510)
Observations	215,912	215,912	558,873	558,873
	B. Log of Weekly Wages			
havelaw*over50	0.081 (0.039)*	0.052 (0.036)	0.026 (0.024)	0.074 (0.038)
havelaw*under50	0.001 (0.032)	-0.029 (0.032)	-0.007 (0.018)	0.040 (0.022)
Observations	160,986	160,986	396,442	396,442
	C. Retirement			
havelaw*over50	-0.001 (0.001)	0.000 (0.002)	0.003 (0.001)**	0.002 (0.001)
havelaw*under50	-0.006 (0.003)*	-0.005 (0.002)*	-0.006 (0.004)	-0.007 (0.004)
Observations	201,146	201,146	558,947	558,947
State-specific trend?	no	yes	no	yes

NOTES. -- Standard errors are reported in parentheses and clustered on state. The table reports OLS havelaw * over 50 interactions in regressions that include married, high school graduate, age dummies, year dummies, and state dummies. The marginal of the Probit coefficient is reported in panel C. Universe includes all white men age 25 to 85. Years in charts refer to survey year. Weeks worked and wage information refer to the previous year, thus Weeks 1967-1976 and 1977-1990.

TABLE 3
Results by Varying Enforcement Year

	A. Weeks Worked per Year			
	1979-1991		1980-1991	
	(1)	(2)	(3)	(4)
havelaw*over50	-1.396 (0.564)*	-0.874 (0.519)	-1.399 (0.619)*	-0.817 (0.541)
havelaw*under50	-0.036 (0.462)	0.484 (0.468)	-0.111 (0.525)	0.474 (0.425)
Observations	521,946	521,946	485,330	485,330
	B. Log of Weekly Wages			
havelaw*over50	0.021 (0.024)	0.077 (0.042)	0.010 (0.024)	0.064 (0.042)
havelaw*under50	-0.015 (0.021)	0.041 (0.024)	-0.019 (0.025)	0.034 (0.028)
Observations	369,888	369,888	343,676	343,676
	C. Retirement			
havelaw*over50	0.003 (0.001)**	0.001 (0.001)	0.003 (0.001)*	0.001 (0.001)
havelaw*under50	-0.007 (0.004)	-0.008 (0.005)	-0.007 (0.004)	-0.008 (0.005)
Observations	522,020	522,020	485,371	485,371
State-specific trend?	no	yes	no	yes

NOTES. -- Standard errors are reported in parentheses and clustered on state. The table reports OLS havelaw * over 50 interactions in regressions that include married, high school graduate, age dummies, year dummies, and state dummies. The marginal of the Probit coefficient is reported in panel C. Universe includes all white men age 25 to 85. Years in charts refer to survey year. Weeks worked and wage information refer to the previous year, thus 1978-1990 and 1979-1990.

TABLE 4
Results by Varying Top Age Tail: 1978-1991

	A. Weeks Worked per Year					
	25-59		25-64		25-74	
	(1)	(2)	(3)	(4)	(5)	(6)
havelaw*over50	-0.429	-0.374	-0.788	-0.540	-1.458	-1.102
	(0.459)	(0.462)	(0.545)	(0.544)	(0.542)**	(0.571)
havelaw*under50	-0.303	-0.240	-0.151	0.097	-0.051	0.301
	(0.427)	(0.376)	(0.442)	(0.432)	(0.434)	(0.519)
Observations	427,774	427,774	469,308	469,308	530,760	530,760
	B. Log of Weekly Wages					
havelaw*over50	0.013	0.063	0.024	0.074	0.025	0.075
	(0.026)	(0.030)*	(0.023)	(0.033)*	(0.024)	(0.038)
havelaw*under50	-0.009	0.040	-0.007	0.043	-0.005	0.044
	(0.018)	(0.015)*	(0.019)	(0.019)*	(0.018)	(0.021)*
Observations	356,807	356,807	380,009	380,009	394,207	394,207
	C. Retirement					
havelaw*over50	-0.0000	0.0001	0.0002	-0.0002	0.0019	0.0008
	(0.0003)	(0.0004)	(0.0003)	(0.0005)	(0.0006)**	(0.0011)
havelaw*under50	-0.0008	-0.0006	-0.0017	-0.0022	-0.0040	-0.0050
	(0.0008)	(0.0008)	(0.0013)	(0.0012)	(0.0029)	(0.0030)
Observations	427,830	427,830	469,374	469,374	530,829	530,829
State-specific trend?	no	yes	no	yes	no	yes

NOTES. -- Standard errors are reported in parentheses and clustered on state. The table reports OLS havelaw * over 50 interactions in regressions that include married, high school graduate, age dummies, year dummies, and state dummies. The marginal of the Probit coefficient is reported in panel C. Universe includes all white men. Years in charts refer to survey year. Weeks worked and wage information refer to the previous year, thus 1977-1990.

* significant at 5%; ** significant at 1%

TABLE 5
Results by Varying Gender, Race, and Education of Universe, 1978-1991

	A. Weeks Worked per Year							
	White Women		Black Men		Not College Grad		College Grad	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
havelaw*over50	-0.881 (0.556)	-0.130 (0.389)	-0.547 (0.927)	-0.040 (0.738)	-1.495 (0.490)**	-0.949 (0.548)	-1.068 (0.806)	-1.583 (0.723)*
havelaw*under50	-0.068 (0.216)	0.691 (0.493)	-0.359 (0.788)	0.061 (0.608)	-0.167 (0.386)	0.367 (0.564)	0.459 (0.626)	-0.067 (0.617)
Observations	620,885	620,885	67,596	67,596	427,817	427,817	131,056	131,056
	B. Log of Weekly Wages							
havelaw*over50	0.004 (0.019)	0.028 (0.027)	0.099 (0.063)	0.210 (0.055)**	0.02 (0.021)	0.058 (0.031)	0.02 (0.036)	0.096 (0.070)
havelaw*under50	-0.012 (0.014)	0.010 (0.021)	-0.043 (0.051)	0.064 (0.028)*	-0.018 (0.019)	0.020 (0.016)	0.004 (0.021)	0.081 (0.052)
Observations	327,164	327,164	47,468	47,468	290,414	290,414	106,028	106,028
	C. Retirement							
havelaw*over50	0.001 (0.001)	0.001 (0.001)	0.002 (0.002)	0.001 (0.003)	0.003 (0.001)**	0.002 (0.002)	0.002 (0.001)	0.003 (0.002)*
havelaw*under50	-0.008 (0.002)**	-0.008 (0.002)**	-0.010 (0.005)*	-0.011 (0.006)	-0.011 (0.006)	-0.012 (0.006)*	0.001 (0.002)	0.002 (0.002)
Observations	605,027	605,027	62,963	62,963	429,678	429,678	109,059	109,059
State-specific trend?	no	yes	no	yes	no	yes	no	yes

NOTES. -- Standard errors are reported in parentheses and clustered on state. The table reports OLS havelaw * over 50 interactions in regressions that include married, high school graduate, age dummies, year dummies, and state dummies. The marginal of the Probit coefficient is reported in panel C. Years in charts refer to survey year. Weeks worked and wage information refer to the previous year, thus 1977-1990. Universe includes people between the ages of 25 and 85 inclusive. Not College Grad and Collge Grad columns are white men only.

* significant at 5%; ** significant at 1%

TABLE 6
Alternative Identification Strategies
Weeks Worked

	A. D-D-D Women and Havelaw			
	1968-1977		1978-1991	
	(1)	(2)	(3)	(4)
male*over50*havelaw	0.366 (0.673)	0.366 (0.674)	-1.710 (0.557)**	-1.708 (0.555)**
male*under50*havelaw	1.347 (0.911)	1.348 (0.912)	-1.569 (0.913)	-1.566 (0.912)
male*over50	15.820 (0.671)**	15.818 (0.671)**	12.476 (0.553)**	12.474 (0.550)**
male*under50	21.468 (0.655)**	21.467 (0.655)**	14.356 (0.831)**	14.353 (0.830)**
havelaw*over50	0.250 (0.425)	0.248 (0.388)	-0.359 (0.379)	0.147 (0.399)
havelaw*under50	-1.058 (0.831)	-1.057 (0.754)	0.752 (0.423)	1.258 (0.787)
Observations	460,122	460,122	1,179,758	1,179,758
	B. Havelaw * Over50 with State*Time			
havelaw*over50	-0.036 (0.875)		-1.483 (0.637)*	
Observations	215,912		558,873	
State-specific trend?	no	yes	no	yes

NOTES. -- Standard errors are reported in parentheses and clustered on state. Panel A reports OLS male * havelaw * over 50 interactions in regressions that include married, high school graduate, age dummies, year dummies, and state dummies. Panel A includes all white men and women age 25-85. Panel B reports OLS havelaw * over 50 interactions in regressions that include married, high school graduate, age dummies, year dummies, and state dummies. Panel B includes all white men age 25-85. Years in charts refer to survey year. Weeks worked refers to the previous year, thus 1967-1976 and 1977-1990.

* significant at 5%; ** significant at 1%

TABLE 7
Results on Hiring/Separation Margins: 1978-1991

	A. Hired			
	(1)	(2)	(3)	(4)
havelaw*over50	-0.0027 (0.0008)**	-0.0022 (0.0008)**	-0.0029 (0.0009)**	-0.0023 (0.0010)*
havelaw*under50	0.002 (0.0013)	0.0018 (0.0012)	0.0019 (0.0009)*	0.0017 (0.0009)
Observations	4351023	4351023	4351023	4351023
	B. Separated			
havelaw*over50	-0.0015 (0.0010)	-0.0009 (0.0009)	-0.0012 (0.0012)	-0.0006 (0.0012)
havelaw*under50	0.0034 (0.0016)*	0.0031 (0.0016)*	0.0036 (0.0022)	0.0034 (0.0021)
Observations	4351023	4351023	4351023	4351023
Controls?	no	yes	no	yes
State-specific trend?	no	no	yes	yes

NOTES. -- Standard errors are reported in parentheses and clustered on state. The table reports the marginal coefficient of havelaw * over 50 interactions in probits that include married, high school graduate, age dummies, year dummies, and state dummies. Marginal effects are reported. (OLS regressions look very similar). Universe includes all white men age 25 to 85.

* significant at 5%; ** significant at 1%