State Age Protection Laws and the Age Discrimination in Employment Act

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Abstract

This article exploits an unusual aspect of the policy for enforcement of the federal 1968 Age Discrimination in Employment Act (ADEA), which made filing an age discrimination claim less burdensome in some states. After the enforcement of the federal law, white male workers over age 50 in states where the federal government allows an easier filing procedure were .2 percentage points less likely to be hired than were workers in states without such laws. They also worked .8–1.3 fewer weeks per year and were .5–.7 percentage points more likely to report being retired, 1.6–1.8 percentage points more likely to report that they are not in the labor force, and 1.6– 3 percentage points more likely to report that they are not employed. 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.

1. Introduction

The 1968 Age Discrimination in Employment Act (ADEA) prohibits discrimination against older workers in hiring, laying off, firing, compensating, and other conditions of employment. The original motivation behind the ADEA was lawmakers' concern that employers incorrectly perceive older workers to be less productive or are unwilling to make modest adjustments to accommodate these workers. The U.S. Department of Labor (1965. p. 2) report that examines the need to protect older workers 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

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for these assumptions." Lawmakers today seek to encourage labor force participation to ease the projected Social Security budgetary shortfalls, and they worry that capable older workers are not granted job opportunities (Butrica, Smith, and Steuerle 2006). 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 (Chan and Stevens 1999, 2001, 2004; Diamond and Hausman 1984; Lahey 2008). When older workers do find new jobs, they are clustered into a smaller set of industries and occupations than are younger workers (Hutchens 1988).

The question this article addresses is whether age discrimination legislation itself, at both the federal and the state levels, has had negative consequences on employment options for older workers that were unintended by the original framers of the laws. There are three margins on which these laws can affect older workers' employment levels: firing, hiring, and retiring. Net employment outcomes 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 fire an older worker for fear of a lawsuit. However, it is difficult to prove or detect discrimination in hiring, and, thus, employers may choose not to hire older workers who will be difficult to fire, especially because class-action lawsuits were not allowed under the ADEA during the time period studied (Donohue and Siegelman 1991; O'Meara 1989). Firms that wish to avoid being sued may also increase retirement incentives for these workers. These effects should be the largest for white men, who are most likely to be affected by the laws.

This article uses state age discrimination laws matched by state and year to the monthly Current Population Survey (CPS) and March CPS (see King et al. 2004) to look at employment outcomes for protected workers. To investigate the impact of hiring and job separation outcomes for older workers, I construct measures of separations and accessions (hires) by matching CPS rotation groups as in Bleakley, Ferris, and Fuhrer (1999). I then examine the net effect of these flows on outcomes for older workers such as weeks worked last year, wages, retirement, not being in the labor force, and not being employed. My empirical strategy uses the assumption that, because of an unusual provision in the federal law, workers in states with their own age discrimination laws are more likely to be affected by the federal ADEA. Under this law, those workers have almost twice as long to file suits. In addition, in states with these laws, state Fair Employment Practices (FEP) offices may be able to process claims more quickly than the Equal Employment Opportunity Commission (EEOC) can, although faster processing is not guaranteed. Thus, I compare workers who are and are not affected by these laws in states with these laws to workers who are in states without these laws.

I find that age discrimination laws, including state laws, had no negative effects (per CPS March data) on general labor market outcomes before the 1968 federal law was enforced and given to the EEOC to enforce in the late 1970s, although I am unable to examine effects on hiring and firing owing to a lack of data for

this time period. After the 1979 enforcement, white male workers over the age of 50 in states with age discrimination laws were less likely to be hired or separated from their jobs, worked fewer weeks per year, and were more likely to report being retired.[1] These findings suggest that firms reduce firing and hiring of workers most affected by the laws and may remove older workers through retirement incentives in states where lawsuits are less of a hurdle for the worker. On net, it appears that these laws lead to lower employment for older white men. Even after enforcement, these laws had a smaller effect on older women and minorities, possibly because these groups had less to gain from age discrimination lawsuits.

Although the hope is that antidiscrimination laws will increase employment and wages for members of protected groups, a number of studies suggest that these laws may have side effects not intended by lawmakers. For example, Gruber (1994) finds that although mandates that stipulated that childbirth be covered comprehensively in health insurance plans did not change employment levels, they did cause a decrease in wages of women of childbearing age. Similarly, DeLeire (2000), Acemoglu and Angrist (2001), and Jolls and Prescott (2004), among others, find a negative effect on employment prospects for disabled workers following passage of the 1990 Americans with Disabilities Act (ADA). My findings suggest that the ADEA falls into this class of laws with unintended consequences.

The remainder of the article is organized as follows. Section 2 provides background information on the legal environment surrounding age discrimination laws, including a brief literature review. Section 3 explains my empirical strategy. Section 4 gives information on data and descriptive statistics. Section 5 presents results, including robustness checks. Section 6 concludes.

2. Background

2.1. Legal Environment

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 U.S. Civil Service Commission had 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 ADEA. The 1967 ADEA prohibited age-based discrimination for those ages 40–65 in firms with 20 or more workers. Under this act, employers were barred from using age in hiring, laying off, firing, compensating, or other conditions of employment. The act also prohibited employers from using age-

[1] I also look at wage outcomes but do not find any effect of the laws on wages.

[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 Section 5.4 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 have introduced and have not yet introduced laws.

specific language in advertising. Although Adams (2004) finds a small positive effect of the introduction of this law on employment, most researchers agree that the federal law had little effect until its 1978 amendment (Neumark and Stock 1999; O'Meara 1989).[3] 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 U.S. Civil Service Commission) gave administrative responsibility to the 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 for cases in which a safety issue related to age might be considered a bona fide occupational qualification, such as for pilots, or in which the existence of job tenure would impose an undue hardship on the employer, such as for professors. In 1990, the Older Workers Benefits Protection Act 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 FEP office within 300 days.[5] In states that do not have statutes, the claimant must file with the EEOC within 180 days.[6] The EEOC can

[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. In addition, O'Meara (1989) suggests that the 1978 Supreme Court ruling (codified in the 1978 amendment to the law) that those bringing lawsuits based on age should have the right to a jury trial may have had a stronger effect than did congressional changes to the law itself or its transfer of enforcement to the Equal Employment Opportunity Commission (EEOC), because juries are more likely than judges to find for the plaintiff in these cases (Hersch and Viscusi 2004). Hersch (2006) finds that civil litigation cases in which jury trials are demanded are 5.5 percentage points more likely to settle without a trial than are cases in which the right is waived.

[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 employers' reaction to age discrimination 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.

[5] In almost all cases after 1978, the state Fair Employment Practices (FEP) office came into being after the age discrimination law (according to each state's FEP office). Regressions that code the state law as taking effect when a state has both an FEP office and an age discrimination law have results very similar to those presented in this article. Chen (2005) gives information on the 26 states that had FEP offices prior to 1964.

[6] "For ADEA charges, only state laws extend the filing limit to 300 days" (U.S. Equal Employment Opportunity Commission, Filing a Charge of Employment Discrimination [http://www.eeoc.gov/charge/overview_charge_filing.html]). This difference in time limits that favors those with state legislation, regardless of the number of days required to file by the state legislation itself, may seem strange to those more familiar with other protection laws. It is thought that the original intent of the legislation was to allow plaintiffs 180 days to file with their local state agency, in the hope that

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 percent of employment discrimination cases are brought by private attorneys, not the EEOC (Gregory 2001). Because 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 by the backlogged EEOC, claimants in states with age discrimination laws have less of a hurdle to suing than do claimants in states without those laws.[7]

Awards under the ADEA 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 pay; restoration of benefits; and lawyers' fees. Attorney's fees often make up the bulk of the payment by the firm. Unlike racial discrimination cases covered by the Civil Rights Act, additional damages are not awarded except in cases involving willful violation of the law, and these are limited to twice the amount of the 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 ADEA is the best option for older white men but may not be a viable option for groups with lower salaries on average.[9]

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the state agency would settle the matter within the remaining 120 days before involving the federal government. However, in practice, lags have been longer, and courts have interpreted the law literally, allowing the plaintiff the full 300 days to file with both the state and the federal agency. Unlike Title VII plaintiffs, ADEA plaintiffs do not have to wait between filing with the state and filing with the EEOC; there is no rule of *Mohasco* for ADEA claims. Thus, whereas a Title VII plaintiff could file with a state agency on day 240 at the latest in order to file on day 300 with the EEOC, an ADEA plaintiff could file with both on day 300. Today most FEP offices have work-sharing agreements with the EEOC so that only one application is needed to file with both offices (O'Meara 1989; Lindemann and Kadue 2003).

[7] Ideally, we would like to know whether the number of lawsuits and out-of-court settlements increased in states with laws and in those without laws. Unfortunately, during the time periods studied, the EEOC did not keep track of age discrimination lawsuits, and it is even more difficult to find information on out-of-court settlements. The published studies that examine trends in age discrimination lawsuits, such as Schuster and Miller (1984), pull random samples from LexisNexis searches. In addition, with protection laws, it is not clear that the number of lawsuits should increase in response to a change in the legal climate if, as I find, firms respond through diminished hiring of older workers when discrimination detection and prosecution is difficult and through limiting behaviors such as firing that could more easily result in lawsuits. All that would be needed to produce this change in firms' behavior is publicity about the laws, something that may be more prevalent in states with their own laws, not an increase in actual lawsuits.

[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 1990. Indeed, regardless of other lawsuit opportunities, the expected costs of bringing an age discrimination lawsuit do not outweigh the benefits unless the plaintiff has a reasonably large salary or has lost pension benefits. This cohort of older women did not in general file age discrimination lawsuits. Gregory (2001) argues that women did not sue under the ADEA in the earlier time period because with their lower wages and, unlike Title VII, no allowance for punitive or pain-and-suffering damages, women did not stand to gain much from an ADEA lawsuit. Joni Hersch (professor of law and economics at Vanderbilt University, personal interview, May 6, 2006) has also suggested that lawyers may be unwilling to take cases on

The majority of people who sue under the ADEA are white male middle managers or professionals over the age of 50.[10] 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 the beginning of EEOC enforcement, 14 percent of claimants were women. By 1995, this number had risen to only 30 percent (Donohue and Siegelman 1991; Gregory 2001; Schuster and Miller 1984). Women and minorities stood to gain less from bringing an age discrimination lawsuit than did white men because of their lower lost potential earnings and pensions. In some cases, they may have had greater protection under the Civil Rights Act, which also allows suing for punitive damages. Thus, my identification strategy focuses on white men over the age of 50, who are most likely to sue under the law.

2.2. Previous Literature

This article is the first to examine the impact of the ADEA from its early years through a significant time period after its enforcement. It also 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 in employment for those older than the protected ages. His identification strategy relies on the assumption that states with age discrimination laws prior to the introduction of the ADEA are not affected by its passage, an assumption that may or may not be valid because the 1968 ADEA had no enforcement mechanism. There is also some question about the validity of the early CPS data that Adams uses in his pre-ADEA period.[11] Neumark and Stock (1999) look at decennial U.S. Census data from 1940 to 1980 and thus have

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a contingency fee unless the expected winnings are reasonably large, and thus they will not take on low-paid female or minority clients for age discrimination cases. Although lawyers' fees can be charged on top of the regular in-court settlement, a contingency payment in an age discrimination case may be smaller for women and minority out-of-court settlements because the expected in-court winnings would be smaller. Although the decision of whether to file under the Civil Rights Act or the ADEA (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 than is age, or employers may believe that the propensity of older women and older minorities to sue is different than that of older white men. In addition, because women's attachment to the labor force is weaker than men's, employers may assume that women will leave or retire on their own before they become a liability because of age. Thus, employers may not see older women as constituting as much of a threat as men with regard to age discrimination laws.

[10] O'Meara (1989) has a literature review for the demographics of people who brought lawsuits under the ADEA that includes Schuster and Miller (1984).

[11] Current Population Survey data prior to 1968 are not supported by the U.S. Census Bureau, have small sample sizes, have little documentation, and are missing information (Unicon Research, Frequently Asked Questions about the CPS and Its Supplements [http://www.unicon.com]). In addition, some of the questions on earnings were changed or recorded differently in 1968.

only one data point after the enforcement of the ADEA.[12] The U.S. Census may not be the best source of data to examine the impact of these laws because it cannot follow year-to-year changes. I use the 1968–91 yearly CPS and the 1978–91 monthly CPS.

The end of mandatory retirement in 1986 and 1994 has been more extensively studied than have other aspects of the ADEA. Von Wachter (2002) looks at the shift of mandatory retirement to age 70 in 1978 and its end in 1986 using the imputed probability of being subject to mandated retirement and finds that the labor force participation of workers age 65 and older increased by 10–20 percent 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 while nonunion plans still rewarded delayed retirement. Ashenfelter and Card (2002) show that the abolition of retirement for college professors in 1994 reduced retirement for those ages 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 its consequences on older workers wishing to be hired or promoted and its effects on workers who are over the age of 50 (and thus "old") but too young for mandatory retirement to have affected them. This article fills these gaps in the literature.

This article also contributes to the broader literature on the effects of employment protection on job flows. Most of this literature (for example, Burgess, Lane, and Stevens 2000; Davis and Haltiwanger 1999; Gomez-Salvador, Messina, and Vallanti 2004; Joseph, Pierrard, and Sneessens 2004; Kugler and Saint-Paul 2004; Pissarides 2000) focuses on the general equilibrium effects of the difference in overall employment protection, especially between countries, and concludes that higher levels of employment protection decrease aggregate job flows. Other articles (for example, Gruber 1994; Acemoglu and Angrist 2001; DeLeire 2000; Jolls and Prescott 2004) focus on the addition of a particular group (pregnant women, the disabled) to the category of protected workers and measure the effects on wages and employment for that group. This article not only examines a law that added a particular group, those over age 50, to the category of protected workers but also examines the effects of that law on both labor demand and job flows for that group and substitute groups.

3. Empirical Strategy

3.1. Conceptual Model

Age discrimination laws should reduce the firing of older workers on average compared to that of other groups, because firms incur a positive probability of

[12] I update Neumark and Stock's (1999) list of state laws for use in this article. In some cases I make corrections, but these corrections to their list are for laws after 1980 and thus do not affect their results. The focus of Neumark and Stock is to test the effects of age discrimination laws on long-term Lazear contracts, confirming the hypothesis put forth in Jolls (1996) that the ADEA provides a commitment device for these contracts in the absence of perfect employee monitoring.

the cost of a lawsuit under the ADEA. However, since it is difficult to determine age discrimination at the hiring level, firms will also be more reluctant to hire older workers because it is more difficult for them to fire these workers. Gross flows (separations and accessions) for older workers should be reduced compared to those for other groups. If firms believe that older white men are most likely to bring lawsuits, then flows will be reduced more for them than for other groups.

How these two effects of reduced accessions and separations interact to determine net employment outcomes for older workers overall is an empirical question. If the decrease in hiring is greater than the decrease in separations, then employment outcomes such as the number of weeks worked, being employed, or being in the labor force will decrease; otherwise, they will increase. The wages for older workers conditional on employment could increase because firms often offer lower wages to new hires than to workers with long tenure. However, wages could also be unaffected or could even decrease if older workers can find employment only in lower paying positions not protected by the law (temporary jobs, those at smaller firms, and so forth).

The effect on attachment measures such as not being employed or not in the labor force (NILF) should be the opposite of that on being employed. However, self-defined retirement is another measure of this attachment. Firms may substitute away from firing toward strategies such as retirement packages (and, to some extent, reductions in force) that remove older workers but with less legal risk. Thus, age discrimination laws could increase the share of older people who describe themselves as retired or NILF. Alternatively, unemployed older workers who face decreased chances of reemployment may prefer to refer to themselves as retired rather than unemployed. Thus, self-defined retirement may increase or decrease depending on which effect predominates.

The assumption behind the article's main 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 that do not have these laws.[13] Thus, workers over the age of 50 in states with such laws will be more affected than will workers in states without them. Because white men are the most likely to utilize these laws,[14] the article also assumes that they will also be the most likely to bear the brunt of firms' reactions to these laws, and the effect will be stronger in states with age discrimination laws.

[13] Recall that people in states with age discrimination 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 postlaw period. Coding these states as not having a law does not appreciably change the results; for example, the coefficient for the number of weeks worked in Table 3 changes from -1.28 to -1.15 and is still significant at the 5 percent level.

[14] Recall that women have lower salaries and less to gain from a lawsuit; these early cohorts of women are historically less litigious than are older men or women in later cohorts.

Because older men are the most likely to sue and are a small group, the effects of age discrimination laws on labor market outcomes should be concentrated among them in observable ways. Effects on other covered groups (older women and minorities) and substitution toward groups that are not covered or are unlikely to sue should be smaller in magnitude. Hiring for older women should not decrease as much as it does for older men, and it may even increase slightly if firms use older women as substitutes for older men or if firms are encouraged to restructure in a way that eliminates positions historically taken by higher paid older men and replaces them with historically lower paid female positions. Therefore, if the laws matter, I should be able to find effects by contrasting the outcomes of older white men with the outcomes of other groups.

Although this article tests for effects of age discrimination laws on the assumption that older white men will be the most affected by the laws, it does not assume that they are the only group affected; there is no perfect control group for these laws. Since the entire labor market adjusts when the price of one input (older white men) increases, groups other than white men over the age of 50 may also be affected by age discrimination laws. On the one hand, protection laws may increase labor market inefficiency, thereby decreasing productivity and decreasing job opportunities for all. On the other hand, firms may be eager to substitute toward workers who do not utilize these laws, and hiring may increase for these groups.

It is particularly difficult to find an appropriate control group for the effect of age discrimination laws on self-defined retirement. Different groups describe being out of the labor market in different terms. For example, self-defined retirement is not as clearly defined for younger men as it is for older men. In addition, women should not be used as a control group for men in regressions measuring the effects on self-defined retirement outcomes because women's self-defined retirement status for these cohorts is often determined by their husbands' status (Choi 2002; Coile 2004). However, retirement is only one way to proxy for attachment to the labor force. Other possible outcome measures include NILF and not employed. Each of these may also be problematic. Older and younger men will have, on average, different reasons for being out of the labor force; younger men will be more likely to be NILF for schooling reasons, for example, and may respond on that margin depending on their beliefs about future opportunities. Older men will also be more likely than younger men to claim to be NILF when unemployed since it is more socially acceptable for them to do so (Choi 2002).

Because younger workers are an imperfect control group for older workers in measuring labor force attachment, in alternative specifications I limit my calculation to older workers and use women as a control group. Of course, women are not a perfect control group for these cohorts either because of their weaker labor force attachment and occupational segregation and because there may be some effect of age discrimination laws on hiring. However, the natural

experiment with women as a control group for men may still provide information.

3.2. Econometric Model

To study the effect of state age discrimination laws, I use an ordinary least squares (OLS) differences-in-differences specification:

$$y_{it} = \boldsymbol{X}_i\beta_1 + \beta_2(H_{st} \times A_i^{\text{over }50}) + \beta_3(H_{st} \times A_i^{\text{under }50}) + \boldsymbol{\theta}_t + \boldsymbol{\delta}_a + \boldsymbol{\varphi}_s + \boldsymbol{\delta}_a \times \boldsymbol{\theta}_t + \zeta_{st} + \varepsilon_{ist}, \quad (1)$$

where i denotes individuals; t denotes time; y_{it} is either weeks worked or a dummy indicating being hired or separated from a job this month or employed or retired; $\boldsymbol{X}_i$ is a set of controls including a dummy for being married and a dummy for being a 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; $A_i^{\text{under }50}$ is an indicator equal to one if the individual is age 50 or under; $\boldsymbol{\theta}_t$ is a set of year dummies; $\boldsymbol{\varphi}_s$ is a set of state dummies; $\boldsymbol{\delta}_a$ is a full set of age dummies; ζ_{st} is a state-specific linear time trend; and β_2 and β_3 are the coefficients of interest.

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

$$y_{it} = \boldsymbol{X}_i\gamma_1 + \gamma_2(H_{st}) + \gamma_3(H_{st} \times A_i^{\text{over }50}) + \boldsymbol{\theta}_t + \boldsymbol{\varphi}_s + \boldsymbol{\delta}_a + \boldsymbol{\delta}_a \times \boldsymbol{\theta}_t + \zeta_{st} + \varepsilon_{ist},$$

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 age discrimination 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. The coefficient β_2 is the effect of having a law on workers over the age of 50, and the coefficient 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.[15]

[15] Forty-year-old workers are generally not considered to be old. In fact, chief executive officers who were surveyed responded that on average age 43 represented the "peak productivity" year (Munk 1999). Employers may believe that the 30s and 40s may be ideal age periods for new workers: the worker has had a chance to develop general human capital and is ready to settle down and is thus worth training in firm-specific human capital. It is likely that age 40 rather than age 50 was chosen by lawmakers because if age 50 had been chosen, there would be an incentive for firms to fire 49-year-old workers en masse. By setting the minimum age at a point at which firms' valuation of the worker is much greater than the cost of a potential lawsuit, the law avoids this potential problem. In addition, because 40-year-old workers are generally employable, even if they have been discriminated against in terms of age, they are more likely to find a new job than to spend time and money

A second possible way of identifying the effect of the laws is through a strategy of differences-in-differences-in-differences using older men as the treatment group and not only younger men but also women as a second control group. My strategy is

$$\begin{aligned} y_{it} = {} & \mathbf{X}_i\beta_1 + \beta_2(M_i \times H_{st} \times A_i^{\text{over }50}) + \beta_3(M_i \times H_{st} \times A_i^{\text{under }50}) \\ & + \beta_4(M_i \times A_i^{\text{over }50}) + \beta_5(M_i \times A_i^{\text{under }50}) \\ & + \beta_6(H_{st} \times A_i^{\text{over }50}) + \beta_7(H_{st} \times A_i^{\text{under }50}) + \boldsymbol{\theta}_t + \boldsymbol{\varphi}_s \\ & + \boldsymbol{\delta}_a + \boldsymbol{\delta}_a \times \boldsymbol{\theta}_t + \boldsymbol{\delta}_a \times \boldsymbol{\theta}_t \times M_i + \zeta_{st} + \varepsilon_{ist}, \end{aligned} \tag{2}$$

where i denotes individuals; t denotes time; y_{it} is either weeks worked or a dummy indicating being hired, employed, separated from, or retired from a job this month; and M_i is an indicator that equals one if the individual is male.

Because of the potential problem of using younger workers as a control group with respect to NILF and Not Employed, I also utilize an alternative differences-in-differences equation similar to equation (1) but in which I limit my groups to only those over 50 and use older women rather than younger men as a control group:

$$\begin{aligned} y_{it} = {} & \mathbf{X}_i\beta_1 + \beta_2(H_{st} \times M_i) + \beta_3[H_{st} \times (1 - M_i)] + \boldsymbol{\theta}_t \\ & + \boldsymbol{\delta}_a + \boldsymbol{\varphi}_s + \boldsymbol{\delta}_a \times \boldsymbol{\theta}_t + \zeta_{st} + \varepsilon_{ist}. \end{aligned}$$

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

$$\begin{aligned} y_{it} = {} & \beta_1(H_{st} \times A_i^{\text{over }50}) + \boldsymbol{\theta}_t + \boldsymbol{\varphi}_s \\ & + \boldsymbol{\delta}_a + \boldsymbol{\delta}_a \times \boldsymbol{\theta}_t + \boldsymbol{\varphi}_s \times \boldsymbol{\theta}_t + \varepsilon_{ist}. \end{aligned} \tag{3}$$

4. Data and Descriptive Statistics

The first sample I use to look at the impact of age discrimination laws is a matched monthly CPS for 1978–91 limited to white men ages 25–85. I limit the time to 1991 because the introduction of the ADA provided new protection for older workers.[16] I use matched CPS rotation groups for the entire year to investigate the effect of age discrimination laws on hiring and separation rates. I follow the algorithm developed in Bleakley, Ferris, and Fuhrer (1999) to create job flow variables for accessions and separations. An accession is recorded when

on a costly lawsuit. Age 50, the age at which AARP membership begins and 5 years before many people vest their defined-benefit pensions, seems to be a reasonable cutoff point defining an older worker in hiring situations.

[16] Stock and Beegle (2004) examine the interactions of the Americans with Disabilities Act and the ADEA after 1991 and find different effects on employment for protected workers by age.

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 or she is employed in any month m and not in month $m + 1$ (individuals whose status changes from December to 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 part of the separated group 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.[17]

The second sample I use is drawn from the 1968–91 March CPS. I break this set into two smaller sets, one covering 1968–77 and the other covering 1978–91, because the congressional committee reported on the ADEA in 1977 (see *Johnson v. Mayor of Baltimore,* 472 U.S. 353 [1985]) (amendments to the ADEA followed in 1978 and enforcement by the EEOC began in 1979) and because of changes in the CPS beginning in 1976. The impact of the ADEA on employment levels is evaluated by looking at data on the number of weeks worked during the calendar year preceding the March income supplement. The impact on wages is measured through a computation of the average weekly earnings from 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.[18]

The impact on retirement and labor force participation is measured through self-reported retirement and labor force coding from the Integrated Public Use Microdata Series (IPUMS) CPS employment status variables Whynwlyr, Labforce, and Empstat (see King et al. 2004). The IPUMS CPS variable Whynwly asks only people who did not work why they were not working last year and thus does not count people who are underemployed or working part-time. However, it is consistent over the time period studied and gives some idea of retirement status.[19]

The CPS questions about weeks worked, income, and retirement refer to the previous year. The year reported in the tables and figures is the year in which

[17] Because older workers may be more likely to be unemployed before finding a new job (Diamond and Hausman 1984), this definition may overestimate older hires and separations and underestimate younger hires and separations.

[18] The results are robust to removing 1978 and/or 1979 as years from the wage regressions.

[19] The CPS Integrated Public Use Microdata Series variable Majact asks everybody in the CPS universe about their major activity last year and should be a good measurement of self-defined retirement. The retirement variable created from Majact has the benefit that it should include some people who have been retired from career jobs but are now working in bridge jobs. Unfortunately, Majact was asked only in post-1976 surveys, and the surveyors were instructed to ask nonrespondents leading questions based on demographic characteristics—so some groups would be more likely to be asked if they were working versus keeping house versus being in school. Thus, it is not a very reliable variable for use between demographic groups (see Minnesota Population Center, IPUMS CPS, MAJORACT: Major Activity Preceding Week [http://cps.ipums.org/cps-action/variableDescription.do?mnemonic=MAJORACT]; King et al. 2004). The results are similar but not significant for Havelaw × Over50 for a retirement variable created from Majact rather than Whynwly.

the CPS was administered, not the year referred to in the questionnaire. Questions about labor force status refer to the respondent's main occupation in the previous week. From 1968 to 1976, the CPS does not identify all states but instead groups some of them together. I use population weights interpolated from the U.S. Census to construct a population-weighted average of these laws for these state groups.[20] Data on state laws were taken from Neumark and Stock (1999) and checked against several secondary sources. When Neumark and Stock (1999) disagree with the secondary sources, the existence of these laws was checked against primary sources from Westlaw and from microfiche and hard copies of compiled state laws. In addition, *Monthly Labor Review* (1977–91) updates and Westlaw were used to update the list for years not included in the Neumark and Stock study.

Descriptive statistics can be found in Table 1. As I 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. Average employment rate, weekly wage, and total income increase with age until age 45 in the early sample and until age 50 in the later sample, after which they begin to decline. Men in the set are more likely to be married as they get older until their mid-50s in the early sample and until their 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 age discrimination laws. The average number of weeks worked is greater 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.[21] Figure 1 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.[22]

5. Results

5.1. The Impact of Age Discrimination Laws on Hiring and Separations

As theory would predict, I find that older white men in states with age discrimination laws are less likely to be hired than are men in states without such laws. I also find that these men are less likely to be separated from their jobs, although these results are not statistically significant. Results of a probit regression using equation (1) with Hired and Separated as outcome variables can be found in Table 2. Workers over the age of 50 in states with discrimination laws are .2 percentage points less likely to be hired than are workers in states without such laws.[23] There is also a small but not statistically significant (without the inclusion

[20] The results are substantively the same when state groups with different laws are dropped.

[21] All of the aforementioned differences between states with and without laws are significant at the 5 percent level with a *t*-test.

[22] The results in the article are robust when the universe is limited to pre-1986 data.

[23] The overall base for Hired is 1.7 percentage points, and it is 1.8 and 1.6 for younger and older workers, respectively.

Table 1

Descriptive Statistics for White Men by Age

	25–34	35–44	45–54	45–49	50–54	55–64	65–74	75–84	Law	No Law
1968–77:										
Age	29.22	39.54	49.43	47.00	51.97	59.21	68.96	78.52	47.24	47.68
Not Employed	.08	.06	.09	.08	.10	.23	.71	.88	.21	.22
Unemployed	.04	.03	.03	.03	.03	.03	.01	.00	.03	.02
NILF	.04	.03	.06	.05	.07	.20	.69	.88	.18	.20
Married	.79	.87	.88	.87	.89	.86	.81	.71	.83	.86
Weeks Worked	44.64	46.36	45.90	46.41	45.36	40.35	16.63	7.19	45.30	45.60
High School Graduate	.81	.71	.62	.64	.60	.49	.35	.26	.63	.58
Wage Income ($)	19,161	22,416	21,130	21,839	20,393	16,138	3,582	864	18,187	14,960
Weekly Wage ($)	415.12	470.15	456.49	465.41	447.03	398.53	225.50	123.54	445.45	366.01
ln(Weekly Wage)	5.95	6.11	6.09	6.10	6.07	5.95	5.24	4.78	6.03	5.85
Retired	.00	.00	.01	.00	.01	.05	.48	.69	.09	.09
Observations	80,877	68,747	70,003	35,595	34,408	55,595	34,721	15,553	228,024	97,472
1978–91:										
Age	29.42	39.18	49.38	46.94	51.98	59.37	69.01	78.50	46.37	46.66
Not Employed	.11	.09	.12	.10	.14	.33	.78	.91	.26	.23
Unemployed	.06	.05	.04	.04	.04	.03	.01	.00	.04	.03
NILF	.05	.05	.08	.06	.10	.30	.77	.91	.22	.21
Hired	.022	.015	.014	.014	.014	.016	.019	.010	.017	.017
Separated	.023	.016	.016	.015	.016	.021	.024	.013	.020	.019
Married	.62	.78	.83	.82	.84	.85	.82	.74	.75	.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 Graduate	.87	.85	.77	.79	.74	.68	.56	.43	.77	.70
Wage Income ($)	16,587	21,653	21,510	22,144	20,831	15,329	2,929	753	16,247	15,038
Weekly Wage ($)	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	.000	.001	.010	.005	.015	.130	.601	.775	.13	.11
Observations	150,194	119,063	95,009	57,414	48,748	80,812	57,522	25,208	501,941	55,740

Note. The years refer to the survey years. Current Population Survey (CPS) person weights were used to weight the statistics. The Consumer Price Index was used to adjust income to 1982–84 dollars. The summary statistics for Hired and Separated are calculated from a matched monthly CPS; other statistics are from the Integrated Public Use Microdata Service CPS (King et al. 2004). The early statistics for states having and states not having an age discrimination law are weighted by state population for groups with pooled state identifiers; states considered to have a law are those in which 50 percent or more of the population is subject to a state law, and states considered to not have a law are those in which less than 50 percent of the population is subject to a state law. NILF = not in the labor force.

Figure 1. Implementation of state laws

of state trends) positive effect on hiring for workers under the age of 50 in these states. Results for 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, but these results are not statistically significant at the 5 percent level. Because separations include retirements, which, as I show later, may be more likely for older workers in states with age discrimination laws, I should be picking up two separate effects: increased retirement incentives and decreased firings and layoffs.[24] I find that older workers in states with laws are .1 percentage point less likely to be separated than are workers in states without laws, and this effect is probably a lower bound on firing rates.[25]

5.2. Employment, Wage, and Labor Force Participation Effects

Table 3 reports OLS estimates of equation (1). The universe is white men ages 25–85. The results suggest a substantial and statistically significant decline in the number of weeks worked per year for people over the age of 50 after it was announced in 1978 that the ADEA would be enforced.[26] For example, columns 3 and 4 show a decrease of between −.8 and −1.3 weeks worked for white men over age 50 in states with age discrimination laws and essentially no effect on

[24] Simply limiting the data to people who do not say they are retired will not fix this effect because many people who are actually unemployed would call themselves retired for status reasons (Choi 2002).

[25] The base for Separated is ~1.9 percentage points for the universe regardless of age category.

[26] Weeks Worked includes zeros for people who did not work any weeks and thus includes the combined effect of being not employed and working fewer weeks per year. This variable is preferred by Acemoglu and Angrist (2001). Using Employed as an outcome variable gives similar results. (Note that results for Not Employed are the inverse of the results for Employed.)

Table 2
Results for Hiring and Separation Margins, 1978–91

Outcome	(1)		(2)	
Hired:				
Havelaw × Over50	−.0022**	(.0009)	−.0024*	(.0010)
Havelaw × Under50	.0019	(.0012)	.0017*	(.0009)
Separated:				
Havelaw × Over50	−.001	(.0009)	−.0007	(.0012)
Havelaw × Under50	.0033*	(.0016)	.0035	(.0021)
State-specific trend	No		Yes	

Note. Standard errors are reported in parentheses and are clustered on the state. The data are the marginal coefficients of Havelaw × Over50 interactions in probit regressions that include controls for being married, being a high school graduate, age dummies, year dummies, state dummies, and age × year fixed effects. Marginal effects are reported (ordinary least squares regressions look very similar). The universe includes all white men ages 25–85. N = 4,360,683.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

white men under age 50 in those states. In the early period, there is no effect on the number of weeks worked for either older or younger workers, although this lack of finding may be due to measurement errors in the number of weeks worked per year, because prior to 1976 these data were reported only in intervals, and data for some states were pooled together.[27]

Estimates of the log weekly wages are also reported in Table 3. Once state trends are added, there is no evidence of an effect on either older or younger workers in the early period, although, again, because data for ln(Weekly Wage) are manufactured from Weeks Worked, this lack of a finding may be, in part, due to measurement errors. In addition, without state trends, there is a statistically 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 statistically significant. Thus, age discrimination laws may have increased the wages of older workers prior to federal enforcement, but this wage effect is not statistically significant once state trends are added.

Table 3 also reports estimates of self-reported retirement. In the early period, the effect on retirement is small and statistically insignificant for older workers and negative and statistically significant for younger workers. In the later period, older workers in states with laws are .2–.3 percentage points more likely to say they are retired than are men in states without laws; this effect is statistically significant at conventional levels without state trends and is marginally statis-

[27] There is also no statistically significant result if Employed rather than Weeks Worked is used as the outcome variable in the pre-1978 period.

Table 3

Results for Theoretically Ambiguous Outcomes

	1968–77		1978–91	
Outcome	(1)	(2)	(3)	(4)
Weeks Worked (per year):				
Havelaw × Over50	−.350 (.528)	−.110 (.596)	−1.278* (.512)	−.868 (.531)
Havelaw × Under50	.117 (.571)	.360 (.401)	−.274 (.430)	.126 (.497)
Observations	326,139	326,139	558,873	558,873
ln(Weekly Wage):				
Havelaw × Over50	.076* (.036)	.044 (.031)	.010 (.021)	.060 (.037)
Havelaw × Under50	−.005 (.031)	−.036 (.029)	−.008 (.017)	.041 (.024)
Observations	240,632	240,632	396,442	396,442
Retired:				
Havelaw × Over50	−.002 (.003)	.002 (.005)	.007** (.002)	.005 (.003)
Havelaw × Under50	−.024** (.008)	−.020** (.008)	−.012 (.009)	−.014 (.009)
Observations	217,203	217,203	405,577	405,577
State-specific trend	No	Yes	No	Yes

Note. Standard errors are reported in parentheses and are clustered on the state. The data are the results of Havelaw × Over50 interactions in regressions that include controls for being married, being a high school graduate, age dummies, year dummies, state dummies, and age × year fixed effects. Ordinary least squares results are reported for Weeks Worked and ln(Weekly Wage) and refer to the previous year, thus 1967–76 and 1977–90. The marginal of the probit coefficient is reported for Retired. The universe includes all white men ages 25–85. The years refer to the survey years. Havelaw data for 1968–77 are weighted by state population.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

Table 4
Economic Significance of Results

Outcome	Base Rate		Havelaw × Over50	Lower Bound
	Older	All		
Hired	.016	.017	.2	.33
Separated	N.S.	N.S.	N.S.	N.S.
Weeks Worked	26.7	38.3	.9–1.3	.025
Retired	32	12.6	.7	.016
NILF	46	21	1. 6–1.8	.009
Not Employed	49	25	1. 6–3	.003

Note. The data show how much of the gap between older and younger outcomes can be explained by age discrimination laws. The base rate is the average for each of the outcomes for older and all workers. Havelaw × Over50 describes the range of coefficients (the percentage point change) for each outcome as described previously. The lower bound is the minimum percentage change of the gap between outcomes for older and younger workers that is explained by the introduction of these laws. NILF = not in the labor force; N.S. = not significant.

tically significant with state trends.[28] This finding provides suggestive evidence that age discrimination laws encourage retirement among older workers.[29]

5.3. Economic Significance

The main results and lower bounds on economic significance are summarized in Table 4. Hiring decreased significantly for older men in states where it is easier to sue; older men are .2 percentage points less likely to be hired in states with age discrimination laws. Because the base rate of hires for older men is 1.6 percent and for all men is 1.7 percent, the 95 percent confidence interval of the ease of bringing an age discrimination lawsuit explains at least 33 percent of the gap between the hiring data for older men in states with laws and that for the general population. Separations also declined, although the effect is not statistically significant at conventional levels.

Employment of workers over the age of 50 decreased since the ADEA was first enforced in 1979. This decline is greater for men in states where lawsuits are less of a hurdle for older workers, that is, states with their own age discrimination laws. Men over the age of 50 in states with laws work between .9 and 1.3 fewer weeks per year than do men in states without laws. Because, on average, older men work 26.7 weeks per year and all men work 38.3 weeks per year, the 95 percent confidence interval on the ease of bringing an age discrimination lawsuit explains at least 2.5 percent and as much as 21 percent of the gap between the number of working weeks for older men in states with laws and that for the general population. This decline in the number of weeks worked may seem high, but it is comparable to the effect that Acemoglu and Angrist (2001) find for the

[28] The base rate of retirement for all white men is .125, and it is .32 for those over the age of 50.
[29] The results for NILF and Not Employed that include different control groups are available from the author.

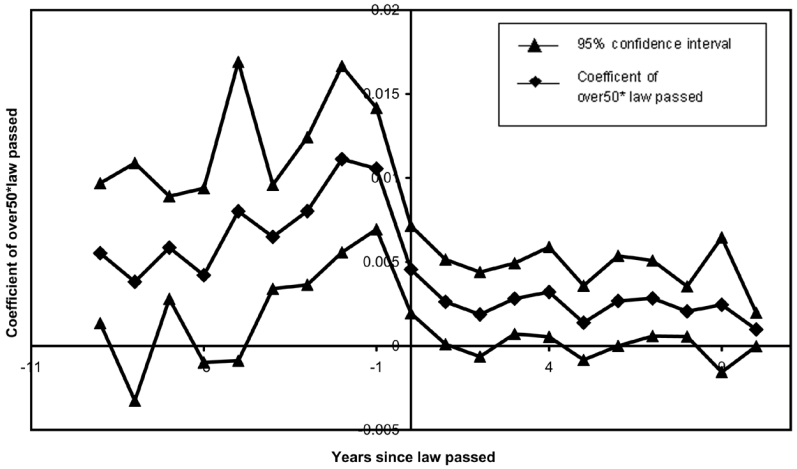

Figure 2. Effect of state laws on hirings

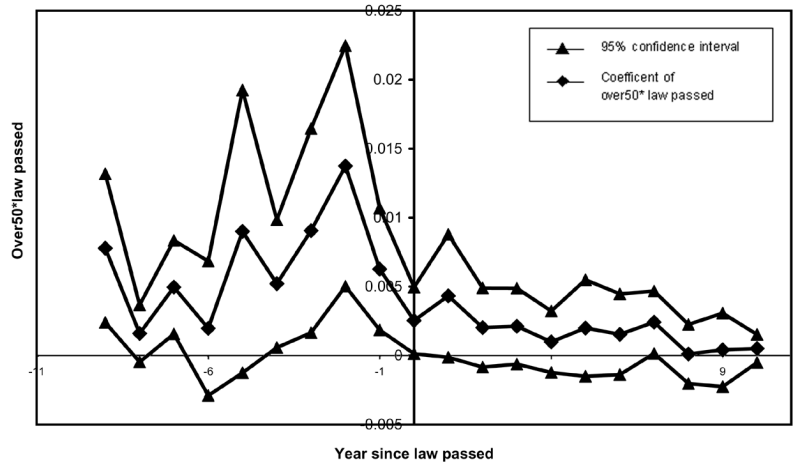

Figure 3. Effect of state laws on separations

disabled after the enactment of the ADA in 1992: the number of weeks worked for disabled men declined 1.4 weeks in 1993 and another 1.5 weeks between 1993 and 1995.

Labor force attachment has also declined for these men. Older men in states with discrimination laws are .7 percentage points more likely to consider themselves retired than are workers in states without such laws. This change explains between 1.6 and 6 percent of gap between the retirement data for older men

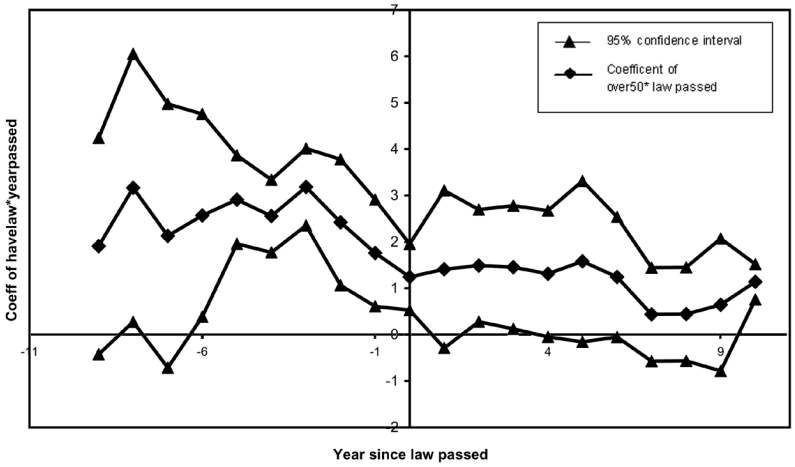

Figure 4. Effect of state laws on weeks worked

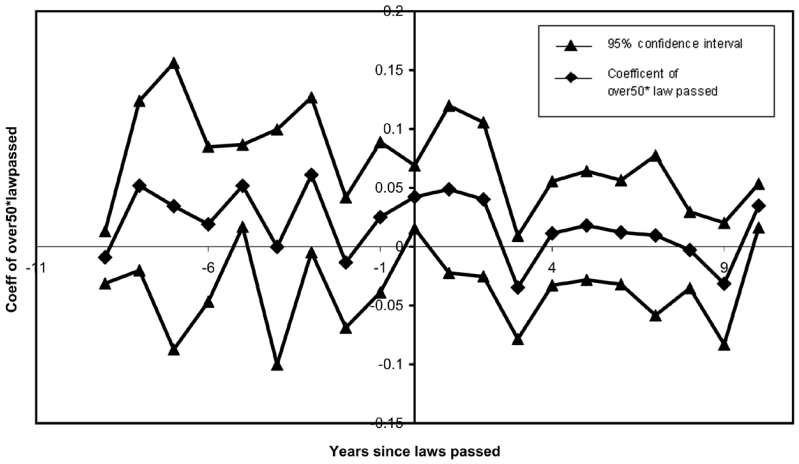

Figure 5. Effect of state laws on ln(Weekly Wage)

(the base rate is 32) and that for all men (the base rate is 12.6) with a 95 percent confidence interval. These workers are also 1.6–1.8 percentage points more likely to be NILF and between 1.6 and 3 percentage points more likely to be not employed. These figures explain between .9 and 13.6 percent of the gap in the NILF data (the base rates are 46 for older men and 21 for all) and .3 and 23 percent of the gap in the Not Employed data (the base rates are 49 for older men and 25 for all).

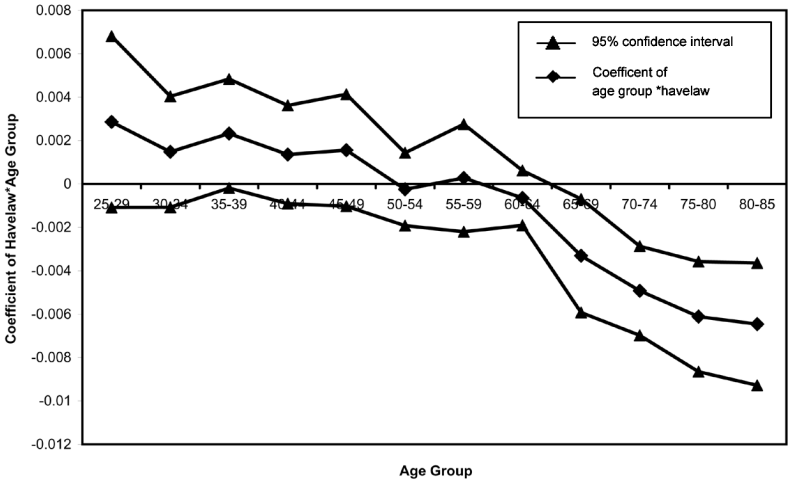

Figure 6. Effect of age on hirings

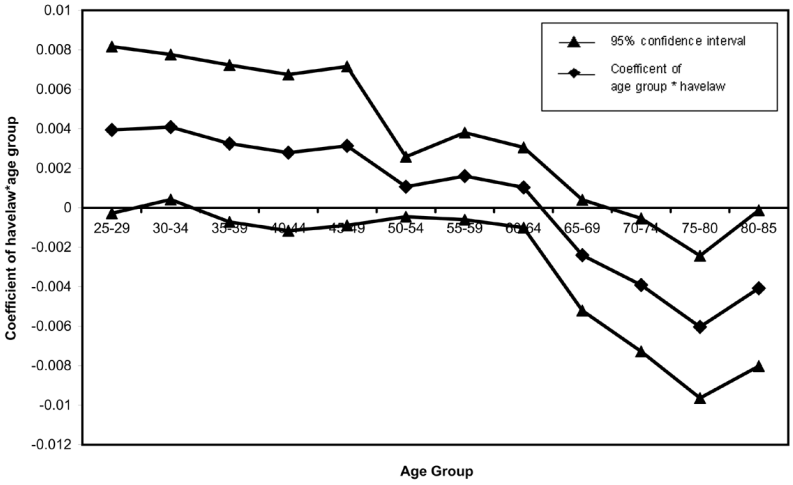

Figure 7. Effect of age on separations

5.4. Robustness Checks

A law may affect firms' behavior before the law is passed (an anticipatory effect from possible publicity), the year the law is passed, or after the law is passed (and presumably enforced and publicized). Figures 2–5 show the effect in the 1978–91 period of a state law on older workers relative to the year that

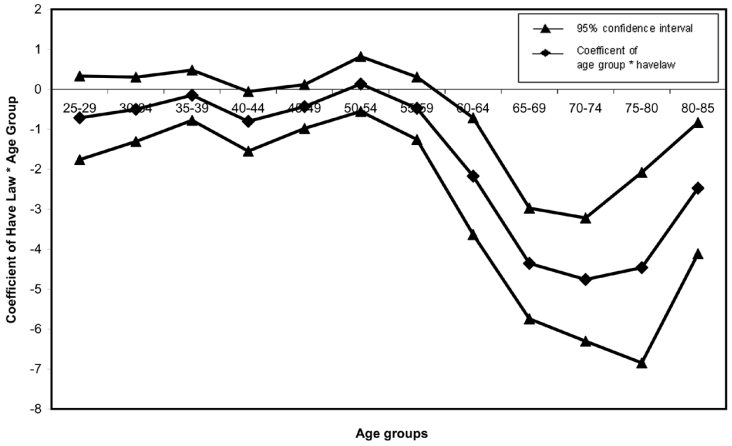

Figure 8. Effect of age on weeks worked

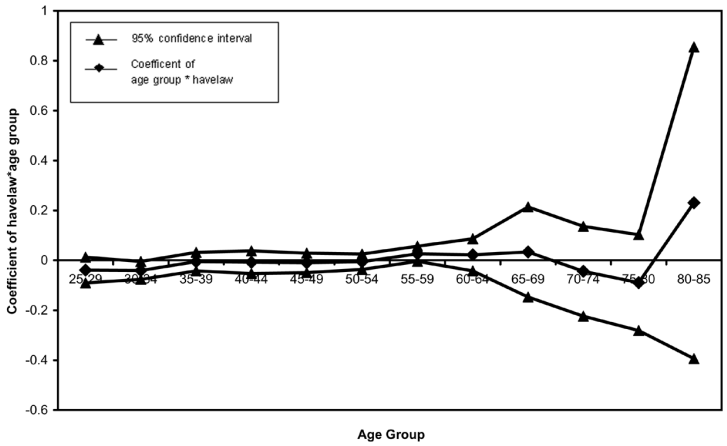

Figure 9. Effect of age on ln(Weekly Wage)

the law was passed.[30] Specifically, they plot the coefficient of Over50 times a distributed lag/lead variable on having a law in the state against that lag.[31] Figures

[30] The fact that the prelaw coefficients are significantly positive relative to the baseline, instead of the postlaw β being negative, raises concern that there may be legislative endogeneity. Later in the article I test for this possibility.

[31] For Figures 2–5, years since the law passed are bottom and top coded at -10 and 10, respectively. Each point represents the coefficient from a regression with controls for age, year, age × year, education, and married dummies. The omitted variable is having a law passed 10 or more years ago. Standard errors are clustered on the state. Weekly wages have been adjusted by the Consumer Price Index inflator. The years in the universe are 1978–91.

2 and 3 show that hiring and job separations decrease for white males over the age of 50 once the state law is passed, and there may be an anticipatory effect. In Figure 4, although the relationship between the state law and the number of weeks worked is not as sharp, these values did decrease for workers most affected by a change in law. Figure 5 is also ambiguous, which suggests that (conditional on employment) there is not much effect on wages.

The ADEA covers people over the age of 40; however, the typical person who sues under the ADEA is a white male between the ages of 50 and 59. It is reasonable to wonder about the sensitivity of the results to age cutoffs. Figures 6–9 plot the coefficient of 5-year age groups times a dummy indicating that the state has a law against the 5-year age groups.[32] Figures 6 and 7 show that the effect of these laws on hiring and separations becomes more salient with age. Figure 8 shows a decrease in the number of weeks worked at around age 50 that increases with age until older ages (when the confidence interval is larger because of a smaller sample size). Figure 9 shows that the estimated effect on wages is almost flat, and this finding suggests that these laws have little impact on wages.

Theory predicts that the effects of these laws should be the strongest for older white males. Similar regressions looking at older women and older minority groups, available in a working paper (Lahey 2006), find smaller effects of age discrimination laws on hiring for these groups than for white men. Unlike the case for older white men, no statistically significant effect is found on these groups for the theoretically ambiguous outcome of the number of weeks worked. I also find no effect on retirement for these groups.

Table 5 reports OLS estimates of equation (2).[33] The universe is all white men and women ages 25–85. The coefficient on Male × Over50 × Havelaw for the dependent variable Hired, although not statistically significant at conventional levels, is similar in sign and magnitude to the results for the differences-in-differences calculations shown in Table 2. The results for the dependent variable Weeks Worked in Table 4 agree substantially with the differences-in-differences results for older men when Havelaw is used as an identifier in Table 3. There is still no statistically significant effect of laws Hired or Weeks Worked for older men prior to the discussion of federal enforcement of the law.

Table 5 also reports OLS estimates of equation (3) for Hired and Weeks Worked. These results also find a statistically significant and negative effect on being hired and a marginally statistically significant negative effect on the number of weeks worked for older workers, with older men .3 percentage points less

[32] For Figures 6–9, each point represents coefficients from a regression with controls for age, year, age × year, education, and married dummies. The omitted variable is having a law in the state. Standard errors are clustered on the state. Weekly wages have been adjusted by the Consumer Price Index inflator. The years in the universe are 1978–91.

[33] Because of computing constraints, ordinary least squares results rather than probit results are presented for Hired.

Table 5
Alternative Identification Strategies

	Hired				Weeks Worked							
Outcome	1978–91				1968–77				1978–91			
Differences-in-differences-in-differences, Women and Havelaw:												
Male × Over50 × Havelaw	−.001	(.001)	−.001	(.001)	−.266	(.343)	−.265	(.343)	−1.095**	(.325)	−1.099**	(.327)
Male × Under50 × Havelaw	.003	(.001)	.003	(.001)	1.994*	(.850)	1.994*	(.850)	.656	(.858)	.664	(.858)
Male × Over50	.003**	(.001)	.003**	(.001)	6.038**	(.911)	6.034**	(.909)	5.358**	(.682)	5.321**	(.683)
Male × Under50	−.015**	(.003)	−.015**	(.003)	24.617**	(1.045)	24.610**	(1.044)	17.976**	(1.183)	18.010**	(1.186)
Havelaw × Over50	−.001	(.001)	−.000	(.001)	.476	(.411)	.566	(.366)	−.315	(.411)	.272	(.371)
Havelaw × Under50	−.000	(.001)	.000	(.001)	−1.220	(.638)	−1.125	(.632)	−.718	(.367)	−.138	(.645)
Observations	769,418		769,418		692,690		692,690		1,179,758		1,179,758	
Havelaw × Over50 with State × Time:												
Havelaw × Over50	−.003**	(.001)			−.467	(.693)			−.989	(.579)		
Observations	769,418				326,139				558,873			
State-specific trend	No		Yes		No		Yes		No		Yes	

Note. The results reported are ordinary least squares coefficients. Standard errors are reported in parentheses and are clustered on the state. All regressions include controls for being married, being a high school graduate, age dummies, year dummies, and state dummies. The data for the differences-in-differences-in-differences regressions are for all white men and women ages 25–85 and include age × year × male dummies. Data for the final Havelaw × Over50 interactions are for all white men ages 25–85 and include age × year dummies and state × year dummies. Years refer to survey years. Weeks Worked refers to the previous year, thus 1967–76 and 1977–90.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

likely to be hired and working about 1 fewer week in states with laws.[34] These results are within the bounds of those found by equation (1) and presented in Table 3.

5.5. *Endogeneity of State Laws*

There may be a secular increase in age discrimination prior to the implementation of these state laws, as is shown in Figures 2–5, and this suggests that there may have been legislative endogeneity. To test for the possible endogeneity of state laws and preexisting trends, in addition to adding state and year effects and trends, I run a specification check looking at Weeks Worked at a point 5 years before each state law was passed. The assumption is that employers do not know that a law prohibiting age discrimination will be passed in 5 years. No evidence is found that being subject to a law 5 years in the future affects employment or hiring of either older or younger workers in the current period. The coefficient for the number of weeks worked per year for older workers ranges from −.008 (with no controls; with a standard error [SE] of .822) to −.314 (with controls and a state trend; SE = .639). Coefficients for younger workers range from −.047 (SE = .841) to .269 with (SE = .755). Thus, there is no evidence, as is shown by this test, that the introduction of state laws is related to something that directly affects the differential employment of older and younger workers.[35]

6. Concluding Comments

I find no statistically significant decline in the number of weeks worked or in the numbers of those reporting being retired for older nonwhite men or white women on the basis of state-time variation in the ease of bringing an age discrimination lawsuit. A possible explanation for the difference in findings by race and gender is that with their lower wages on average, ADEA lawsuits are not as profitable for these groups. In addition, before the advent of the ADEA, female and minority workers were already protected by the Civil Rights Act, which allows for more damages; white men over the age of 50 are the most likely to sue under the ADEA. Finally, 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. Older white women

[34] Without age × year fixed effects, this result is significant and has a larger magnitude of 1.5 fewer weeks.

[35] Some may worry that since states in the South are later adopters and migrant retirees often retire to the South, my results may be biased toward finding no result. However, the states with the largest in-migration of older people are not the same as the states that are late adopters. Specifically, according to the U.S. Census, the top 10 states receiving in-migrants are Florida, California, Arizona, New Jersey, Texas, New York, Ohio, Illinois, Pennsylvania, and Missouri in 1970; Florida, California, Arizona, Texas, New York, Pennsylvania, North Carolina, Washington, Illinois, and New York in 1980; and Florida, California, Arizona, Texas, North Carolina, Pennsylvania, New Jersey, Washington, Virginia, and Georgia in 1990 (Flynn et al. 1985; Longino 1995). As can be seen in Figure 1, these states have a wide range of dates for introduction of age discrimination laws.

may be less likely to be hired in states with age discrimination laws, but, as was predicted, this effect is smaller than that for men.

I also find no significant negative effects on older workers in the period prior to enforcement. Although my results for this period are for the most part not statistically significant, my findings are not inconsistent with those in earlier work such as Adams (2004) or Neumark and Stock (1999). It may be that before the publicity surrounding the enforcement of the federal law, firms did not put the probability of lawsuits into their hiring calculations, so older white male job applicants were not harmed. In general, it appears that these age protection laws have had very little effect on workers under the age of 50.

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 benefit of this sort, although the results are not conclusive, perhaps because even though it has become difficult for employers to fire older workers, firms may increase retirement incentives. Employers then react to these laws by failing to hire older men who will be difficult to fire. If I combine these effects, I find that employment outcomes decrease for older workers. Employers may 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, and trying to remove older workers through retirement incentives.

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