

DISCUSSION PAPER SERIES

IZA DP No. 12265

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and Age Discrimination Protections
at the 50th Anniversary of the Age
Discrimination in Employment Act**

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ABSTRACT

Population Aging, Age Discrimination, and Age Discrimination Protections at the 50th Anniversary of the Age Discrimination in Employment Act¹

This paper discusses population aging, increased participation of seniors in the labor force in the United States (and reasons for this), and how these trends are making the struggles of older workers in the labor market increasingly relevant. Evidence examining whether age discrimination is a barrier for seniors as they try to increase their work lives through the common practice of “bridge” jobs is also presented. After discussing the evidence that measures age discrimination, economics and legal research that seeks to determine to what extent the federal Age Discrimination in Employment Act and state-level age discrimination laws prevent age discrimination is discussed. In summary, current evidence indicates that age discrimination exists, but more so for older women. While evidence suggests that age discrimination laws may help, they cannot resolve the challenges imposed by population aging, especially for older women.

JEL Classification: J71, J78, J14, K31, J16, J26

Keywords: age discrimination, seniors, age discrimination in employment act, population aging, discrimination law, older women, sex-plus-age discrimination, intersectionality

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1 Introduction – Population Aging

At the 50th anniversary of the Age Discrimination in Employment Act (ADEA),² the United States is experiencing a rapidly aging population. The share of the population of age 65 and older was 9.0% in 1960 (20.3% for age 45 to 64), and this increased to 13.0% (26.4%) in 2010 (Howden & Meyer, 2011). This trend will continue, as the share of seniors (here defined as age 65 and older) in the U.S. working-age population is projected to rise sharply—from about 19% currently to 29% in the year 2060—approaching equality with the shares of those aged 25–44 and 45–64 (Neumark, Burn, & Button, 2017a). This aging population makes issues such as the employment and financial well-being of seniors increasingly important.

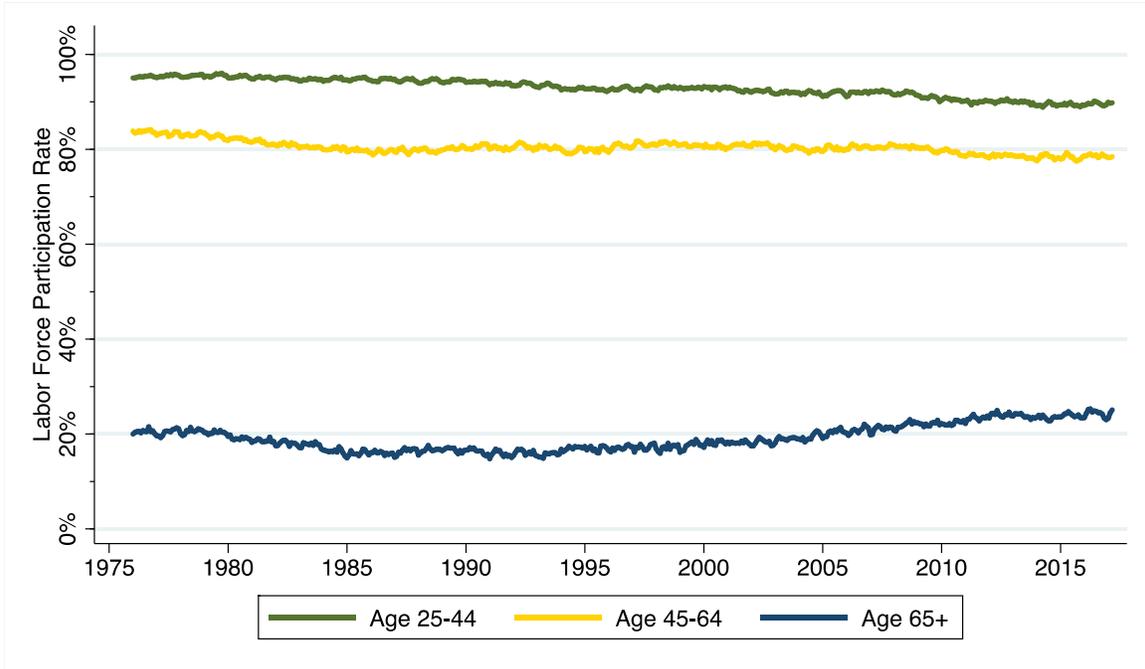
2 The Increased Labor Force Participation of Seniors

In addition to there being more seniors due to the aging population, seniors are increasingly choosing to work into older ages. Figure 1 presents the labor force participation rate of men in panel (a) and women in panel (b) for the same three age groups. Men younger than 65, have experienced slightly decreasing participation since 1975. For men age 65 and older, participation has increased from 16.5% in March 1985 to 20.2% in March 2017. The changes are more drastic for older women. While the participation rate of women younger than 65 increased until 1995 (age 25-44) or 2005 (age 45-64), it has since flat-lined. Meanwhile since about 2000 the participation rate for women aged 65 and older has been rapidly increasing, from 10.0% in March 2000 to 15.9% in March 2017.

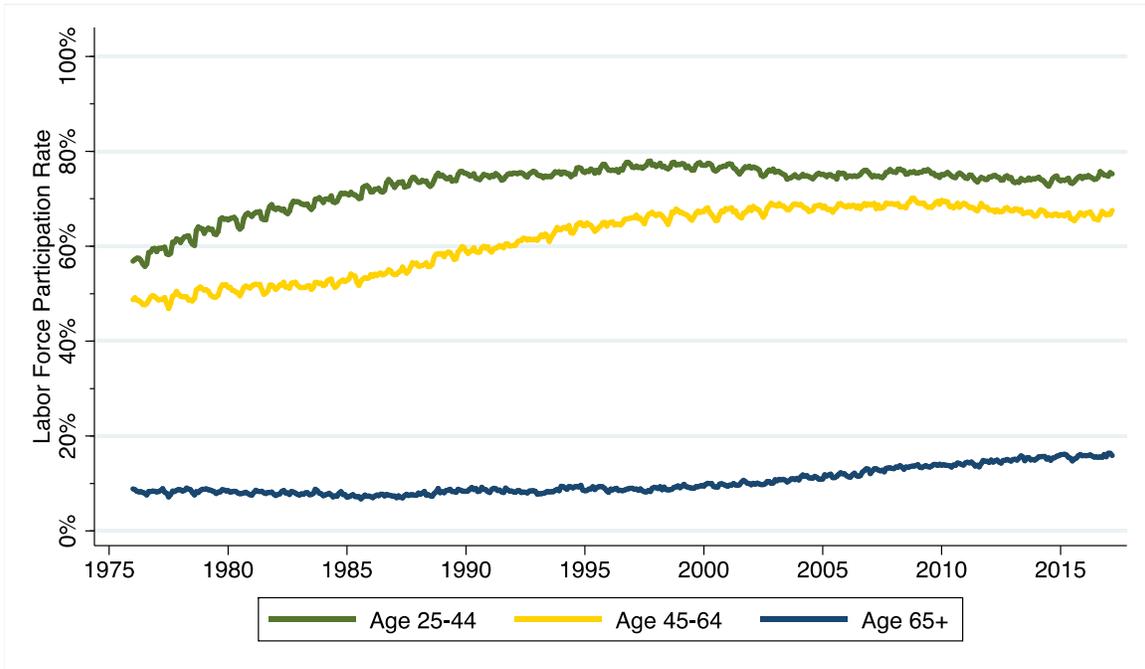
² For a discussion of the history of the ADEA at its 30th anniversary, see Eglit (1997).

Figure 1 Labor force participation rates by age group and sex

(a) Men



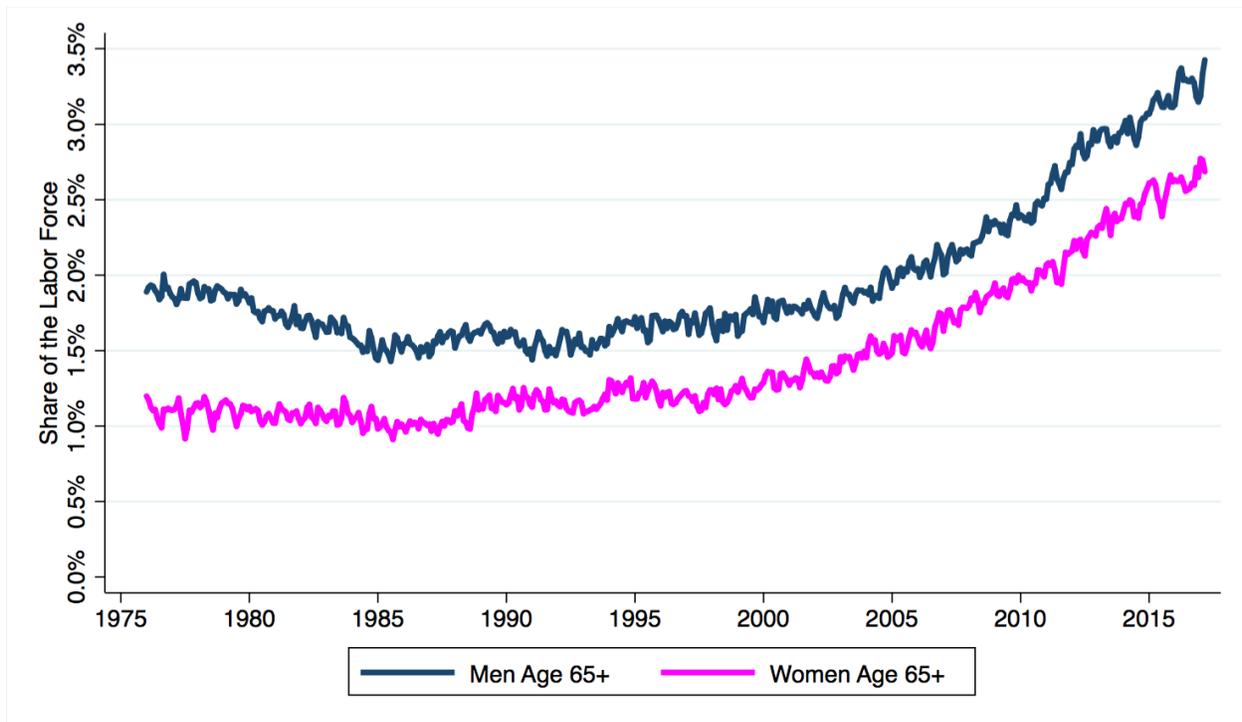
(b) Women



Source: Author's calculations using data from the Current Population Survey (monthly) from 1975 to March 2017, via IPUMS-CPS (Flood et al., 2015).

In addition to there being more seniors due to the aging population, seniors are increasingly choosing to work into older ages. Figure 2 presents the labor force participation rate of senior women and men. For senior men, participation increased from 15.9% in 1985 to 24.3% in 2016, a 52.9% increase. But this increase was much larger proportionately for senior women, whose labor force participation rate more than doubled from 7.3% to 15.8% during this period.³

Figure 2 Proportion of the labor force by age group and sex



Source: Author’s calculations using data from the Current Population Survey (monthly) from 1975 to March 2017, via IPUMS-CPS (Flood et al., 2015).

3 Working Longer Through “Bridge” Jobs

A common approach that seniors take to work longer is taking “bridge” jobs or “partial retirement” jobs (e.g., Johnson et al., 2009), which ease them into a complete retirement. “Unretirement” is also very common, where seniors leave retirement to take jobs before retiring again. Nearly 50% of retirees follow a non-traditional retirement path that involves transitioning to bridge jobs before retirement or involves “un-retirement.” This behavior is usually anticipated

³ These trends may differ by race and race-by-gender. See e.g., Lahey (2018).

and often is not due to some adverse economic event during retirement (Maestas, 2010). For these reasons, hiring in these “bridge” jobs remains important as seniors seek to work longer.

Figure 3 presents the hiring rate of men and women age 55-64 and age 65 and older, relative to the hiring rate of men age 25-34.⁴ Both of the older age groups have a lower hiring rate than that of young men, reflecting that young men move jobs more often and face fewer obstacles (e.g., age discrimination). Older women also, unsurprisingly, have lower hiring rates. However, it is notable that the hiring rates of those age 65 and older are higher than for those age 55 to 64, reflecting the importance of these “bridge” jobs. For both of the older age groups and for both genders, the hiring rate has been declining since about 2000, especially for seniors age 65 and older, perhaps reflecting increased difficulties faced by older workers in the labor market and the increased difficulties as seniors seek to extend their work lives.⁵

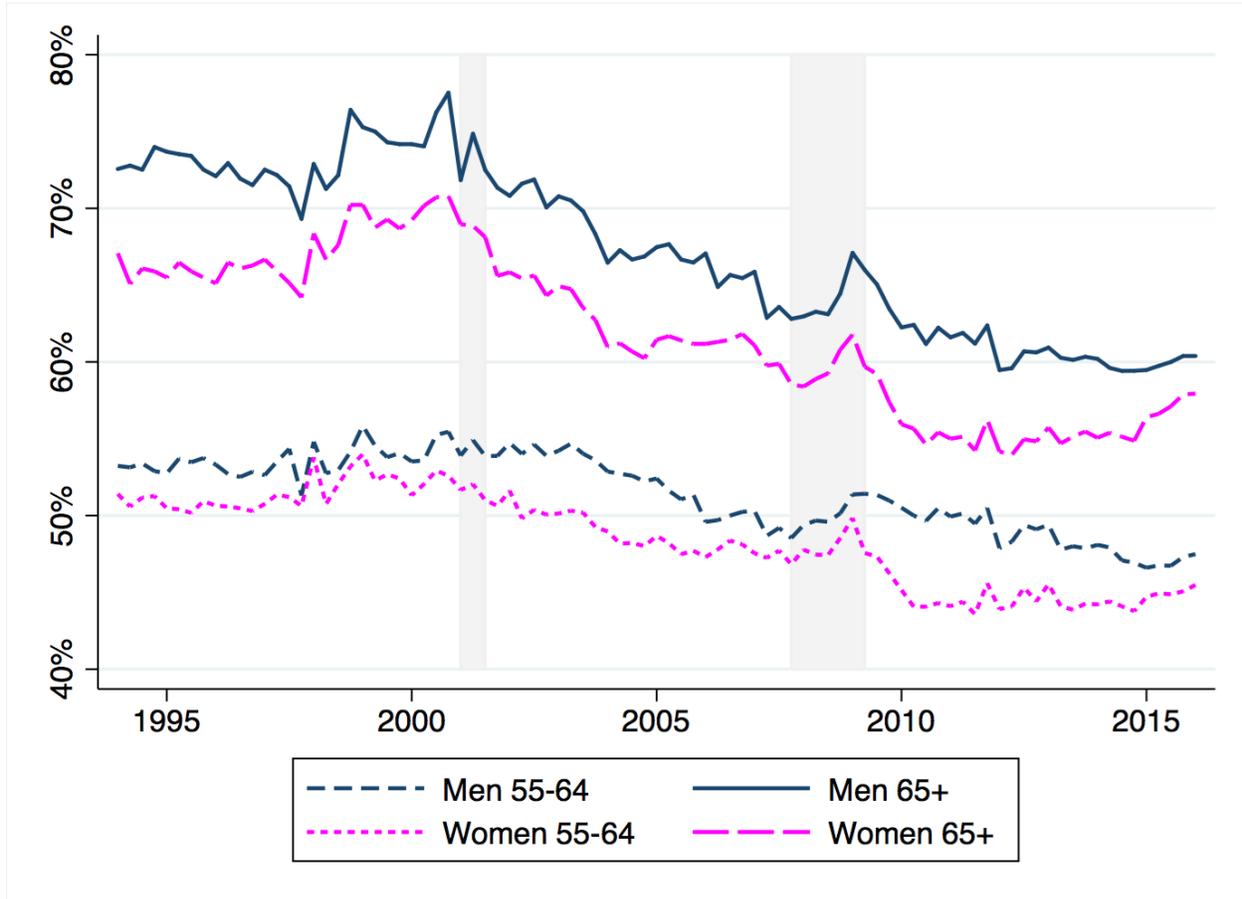
4 Why are Seniors Working Longer?

Seniors are working longer both due to “push” and “pull” factors. “Pull” include internal, personal reasons for why seniors prefer to work longer. With each generation being healthier and living longer, there is more capacity for seniors to work longer (Coile et al., 2017). While the physical challenges of work are a barrier to many, these barriers are shrinking as the health of seniors improves and as they identify ways to mitigate these barriers (McLaughlin & Neumark, 2017). This is especially the case for women, who live longer than men and often outlive their spouses (Maestas, 2018). While some cognitive and physical skills (McLaughlin & Neumark, 2017) decline near retirement age, most do not. This stability in many skills and abilities contributes to productivity in many common “bridge” jobs (e.g., retail sales, administrative assistants; see Neumark, Burn, & Button, 2019) being largely unaffected by aging (Belbase et al., 2015). Many seniors elect to work longer based on preferences, as this allows them to maintain their sense of identity (Riach & Loretto, 2009) and is associated with improved physical and mental well-being (Calvo, 2006).

⁴ The hiring rate is calculated from Quarterly Workforce Indicators (QWI) data as the number of hires divided by employment for that age group and gender. This is calculated as relative to the hiring rate for men age 25-34. A value of 50% means that this group has half the hiring rate of men age 25-34.

⁵ As supporting evidence, Figure 6 shows that mean unemployment durations were also generally increasing for older workers after 2000.

Figure 3 Hiring rates by age and gender, relative to men age 25-34



Source: Author’s calculations using data from the National Quarterly Workforce Indicators (NQWI) from 1994Q1 to 2006Q1 (release R2017Q1). Each series is seasonally adjusted by the author using X-13ARIMA-SEATS before being converted to relative rates. Shaded areas are recessions according to the NBER Business Cycle Dating Committee.

“Push” factors in working longer include the economic situation and government policies that push seniors into the labor force rather involuntarily. Even with seniors choosing to work longer voluntarily, they are increasingly pushed into the labor force because their financial situation demands it. This is because most seniors cannot fully rely on the combination of Social Security benefits (Retirement Benefits, Survivor Benefits, Supplemental Security Income), private pensions, and personal savings to get by after retiring. For this reason, poverty is highly concentrated among seniors, especially senior women who are single, separated, divorced, or widowed (Sandall & Iams, 1997). With recent reforms to the Social Security system, discussed below, the push to get seniors to work is only increasing. The economic benefits to working

longer are larger for married women, relative to married men, since older women typically have a shorter work history and less Social Security wealth, making the opportunity cost of earlier retirement higher for older women (Maestas, 2018).

Age discrimination becomes even more relevant with these increased “push” and “pull” factors. The ability for seniors to get hired in bridge jobs, and thus to delay retirement, depends on the extent to which they face age discrimination. Severe age discrimination leads seniors to become discouraged after being unable to find work, or taking jobs that are a worse match, earning less or staying at these jobs for less time. An inability for seniors to get bridge jobs makes poverty even more likely.

4.1 “Carrots” and “Sticks” from Recent Social Security Retirement Benefit Reforms

Recent reforms to the U.S. Social Security system have further pushed seniors into the labor market to make ends meet, which makes age discrimination even more relevant. Social Security is crucial for seniors, as it is their primary source of income. However, most do not receive many benefits relative to their previous earnings. As of 2007, the hypothetical “medium earner” retiring at 65 receives Social Security Retirement Benefits equal to about 41% of previous earnings (Munnell & Sass, 2007).

These already low Social Security benefits are even lower now, after the Social Security Amendments of 1983, which raised at age at which seniors who were born after 1938 can retire with full Social Security retirement benefits. The full benefits retirement age increased from 65 to between 65 and 70 for cohorts born from 1938 to 1960 based on a graduated scale, with the full benefits retirement age staying at age 70 for cohorts born in 1960 onwards. This amendment made it such that retiring at the previous full benefits age of 65 meant a cut in benefits. Table 1 presents the changes in the full retirement year over time, and how benefits decreased for three possible retirement ages: age 62 (the earliest age for claiming benefits), the former full retirement age of 65, and the full retirement age that was in effect for each birth year. Figure 4 presents the proportion of full benefits that were available per year for different birth cohorts retiring at age 65. The cut in benefits from this reform were fairly steep. For example, those born in 1960 and later and retiring at age 65 receive only 86.7% of what those born in 1937 or earlier and retiring at age 65 receive annually. This cut in benefits makes it even harder for Social

Security benefits to make ends meet for seniors, leading seniors to recoup this income in the labor market if they can get bridge jobs without facing age discrimination.

Table 1 Social Security retirement benefit calculations by year of birth

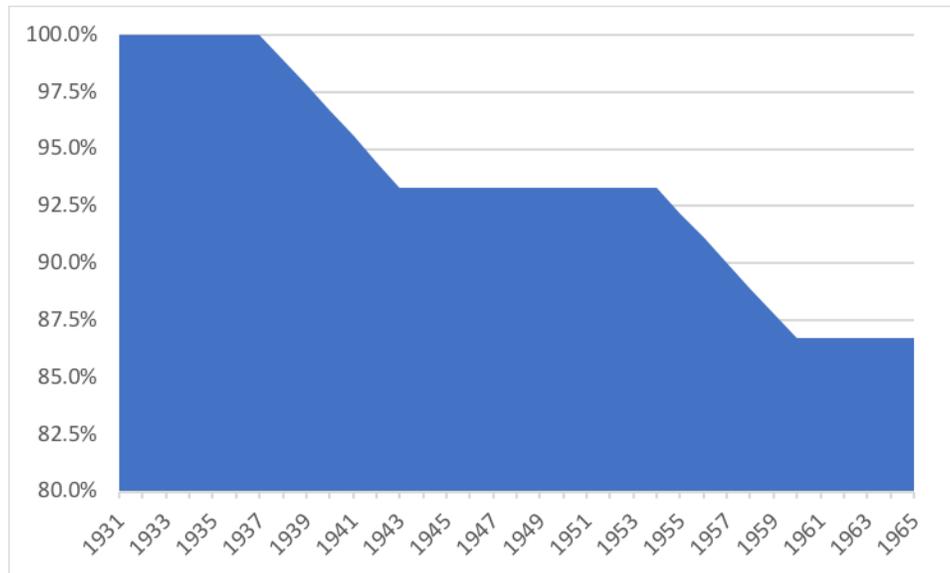
		Proportion of Benefits Received if Retiring at...					
		Full Retirement Age (FRA)		Age 65		Age 62	
		...and you are the...					
Year of Birth	Full Benefits Retirement Age	Wage Earner	Spouse	Wage Earner	Spouse	Wage Earner	Spouse
1937 and earlier	65	100%	50%	100.0%	50.0%	80.0%	37.5%
1938	65 + 2 months	100%	50%	98.9%	49.3%	79.2%	37.1%
1939	65 + 4 months	100%	50%	97.8%	48.6%	78.3%	36.7%
1940	65 + 6 months	100%	50%	96.7%	47.9%	77.5%	36.3%
1941	65 + 8 months	100%	50%	95.6%	47.2%	76.7%	35.8%
1942	65 + 10 months	100%	50%	94.4%	46.5%	75.8%	35.4%
1943-1954	66	100%	50%	93.3%	45.8%	75.0%	35.0%
1955	66 + 2 months	100%	50%	92.2%	45.1%	74.2%	34.6%
1956	66 + 4 months	100%	50%	91.1%	44.4%	73.3%	34.2%
1957	66 + 6 months	100%	50%	90.0%	43.8%	72.5%	33.8%
1958	66 + 8 months	100%	50%	88.9%	43.1%	71.7%	33.3%
1959	66 + 10 months	100%	50%	87.8%	42.4%	70.8%	32.9%
1960 and later	67	100%	50%	86.7%	41.7%	70.0%	32.5%

Source: Social Security’s Retirement Planner, at <https://www.ssa.gov/planners/retire/ageincrease.html>

This Social Security cut (a “stick”) was combined with another reform (a “carrot”) to increase the labor supply of seniors. The Senior Citizen’s Freedom to Work Act of 2000 changed Social Security’s retirement earnings test (RET) with the goal of reducing Social Security benefit reductions for those who claimed benefits, but also had earnings from work, from the ages of the full retirement age to age 69. The RET applied a cutoff where any earnings above this level were essentially taxed, leading to temporary reductions in Social Security benefits. These reduced benefits were withheld until later, so benefits were not lost but rather transferred to later in life. Prior to 2000, the RET applied to those who claimed Social Security benefits but also worked from the ages 62 to age 69. The RET earnings cutoff in 1999 was \$15,500 for seniors of age 65 to 69 (Figinski & Neumark, 2018). The RET imposed a larger benefits reduction for those who worked and claimed Social Security benefits before the full retirement age. Prior to 2000, this benefits reduction was \$1 for every \$2 earned above the cutoff during the period from age 62 to

the full retirement age (then age 65), and was \$1 for each \$3 earned from the full retirement age to age 69 (Baum, Hannah, & Ford, 2002; Figinski & Neumark, 2018).

Figure 4 Proportion of full benefits per year for retirement at age 65, by year of birth



Source: Social Security’s Retirement Planner, at <https://www.ssa.gov/planners/retire/ageincrease.html> (accessed March 31, 2018).

The Senior Citizen’s Freedom to Work Act of 2000 removed the RET above the full retirement age, so the \$1 for every \$3 in earnings benefits reduction was no longer in place for those collecting benefits and working from the full retirement age to age 69. Also, the act made the RET less stringent in the full retirement age year (Figinski & Neumark, 2018). Thus, this act led to an increase in earnings for those claiming but also working from the full retirement age to age 69. Since the RET was perceived as a tax (Liebmann & Luttmer, 2015) despite not really being one, this perceived “income tax cut” from the Act led to increased earnings, and perhaps increased labor supply, for seniors. For example, Song & Manchester (2007) found that this Act led to increased earnings, with some evidence of increased labor supply. Loughran & Haider (2007) found even larger responses in earnings and labor supply to the RET.

4.2 Employer-Sponsored Pensions

Many seniors cannot rely on private sector employer-sponsored pensions, as less than half of the private sector work force age 25 to 64 have an employer-sponsored plan of any type

(Munnell & Sass, 2007), and only 27.6% of those who stopped working to retire claimed a pension (Maestas, 2010). Since pension participation rises with earnings, the lack of coverage of private pensions hits lower income seniors even harder. Even for those with a pension, the typical pension does not provide much. The Federal Reserve's 2004 Survey of Consumer Finances shows that a typical individual approaching retirement had 401(k)/IRA balances of only \$60,000 (Munnell & Sass, 2007; Munnell & Sundén, 2006). Thus, pensions only have a small role in making ends meet for seniors, leading seniors to stay in or re-enter the labor market.

4.3 Personal Savings

Personal savings are even less likely to help seniors make ends meet during retirement. It is well established that individuals do not adequately save for retirement. Approximately 30% of U.S. households where the head of the household is close to retirement have done little or no retirement planning (Lusardi, 2003). Similarly, only a minority of U.S. households feel “confident” about the adequacy of their retirement savings (Lusardi & Mitchell, 2005). More concretely, a study of the U.S. National Income and Product Accounts (NIPA) personal saving rate found that almost all of the saving undertaken by the working-age population occurred in pension plans (Munnell et al., 2005). In many recent years, the saving outside of pensions has actually been negative (Munnell & Sass, 2007). Clearly there is little role for personal savings to help seniors make ends meet unless current personal savings behavior changes significantly.

4.4 Senior Women and Death of a Spouse

Another “push” factor that primarily affects women is the death of a spouse. Because women tend to live longer than men, more than half (53.0%) of women aged 65 or older are separated, divorced, widowed, or never married/single.⁶ These women cannot rely on supplementary income from a partner, who is or was often the primary earner. This is a major factor for why poverty among seniors is particularly concentrated among senior women and leads to increased pressure to work (Sandall & Iams, 1997), and partially explains the differential increase in labor force supply for senior women (Figure 1b).

⁶ Calculated by the author using 2015 data from the Current Population Survey, via IPUMS CPS (Flood et al., 2015).

5 Is Age Discrimination a Barrier to Working Longer?

Since much of the increased labor force participation of seniors comes from “bridge” or “partial retirement” jobs, increasing hiring is fundamental to increasing the employment and financial security of seniors. However, research demonstrates that age discrimination remains a large barrier for seniors seeking to get hired in these jobs, more so for senior women than for senior men.

5.1 Non-Experimental Evidence of Age Discrimination

There is ample evidence of age discrimination in hiring. One prominent piece of evidence is longer unemployment durations for older workers compared to younger workers (see Neumark & Button, 2014), which partly reflects the increased difficulty that older workers face in the labor market. There is also industrial psychology research that notes that older workers face negative stereotypes such as disinterest in building their skills (e.g., Fritzsche & Marcus, 2013), a lack of ambition (e.g., Bowen & Staudinger, 2013), physical and cognitive health challenges (e.g., Hummert et al., 1994; Ng & Feldman, 2012), inflexible or abnormal personalities (e.g., Fritzsche & Marcus, 2013), and less experience with technology (e.g., AARP, 1999).⁷ Some studies also examine worker self-reports of discrimination, which are correlated with adverse labor market outcomes (Adams, 2002; Johnson & Neumark, 1997).

5.2 Experimental Evidence of Age Discrimination

The most credible studies that quantify age discrimination in hiring are field experiments, more specifically, resume-correspondence studies (Bertrand & Duflo, 2017; Fix & Struyk, 1993; Neumark, 2018). These studies create fictitious-but-realistic job applicants (resumes and cover letters) that are on-average equal except for age, which is signaled through school graduation year(s). These fictitious job applicants then apply for real job openings. Employers then request interviews with the candidates by sending an email or leaving a voicemail. Researchers measure hiring discrimination by comparing interview request rates (“callbacks”) by age.

While it would be ideal to track job offers in resume-correspondence studies, as that is an exact measure of hiring discrimination, this requires hiring actors and actresses. Not only is this

⁷ There are also some positive stereotypes, such as older workers being more dependable (e.g., Chiu et al., 2001), kind (e.g., Fritzsche & Marcus, 2013), and of course, more experienced (Bal et al., 2013).

costly but it opens up the study to “experimenter effects” (Heckman & Siegelman, 1993). While comparing interview request rates is only a proxy for hiring, most discrimination occurs at the interview offer stage (90%), according to studies of ethnic discrimination by the International Labor Organization (ILO), discussed in Riach & Rich (2002) and Neumark et al. (2019).

This experimental approach controls for all factors but age, which better isolates age discrimination. An alternative to quantify hiring discrimination is to use survey data to study hiring rate differences between older and younger workers. The difficulty with this approach is that it is not possible to make older and younger workers identical, even if regression control is used to set factors such as education, occupation, and geography constant. This problem is avoided by using an experimental method.

Previous resume-correspondence studies almost always point to substantial age discrimination in hiring (Baert et al., 2016; Bendick et al., 1997; Bendick et al., 1999; Carlsson & Eriksson, forthcoming; Lahey, 2008b; Riach & Rich, 2006, 2010). However, a difficulty in these studies comes from making older job applicants on-average identical to the younger job applicants. Older workers generally have much more experience, so if the resumes of older and younger workers are made to be the same, then this could overestimate age discrimination. Also, previous studies did not focus on those near traditional retirement ages, which is the group for which age discrimination matters most in terms of population aging and strain on the Social Security system.

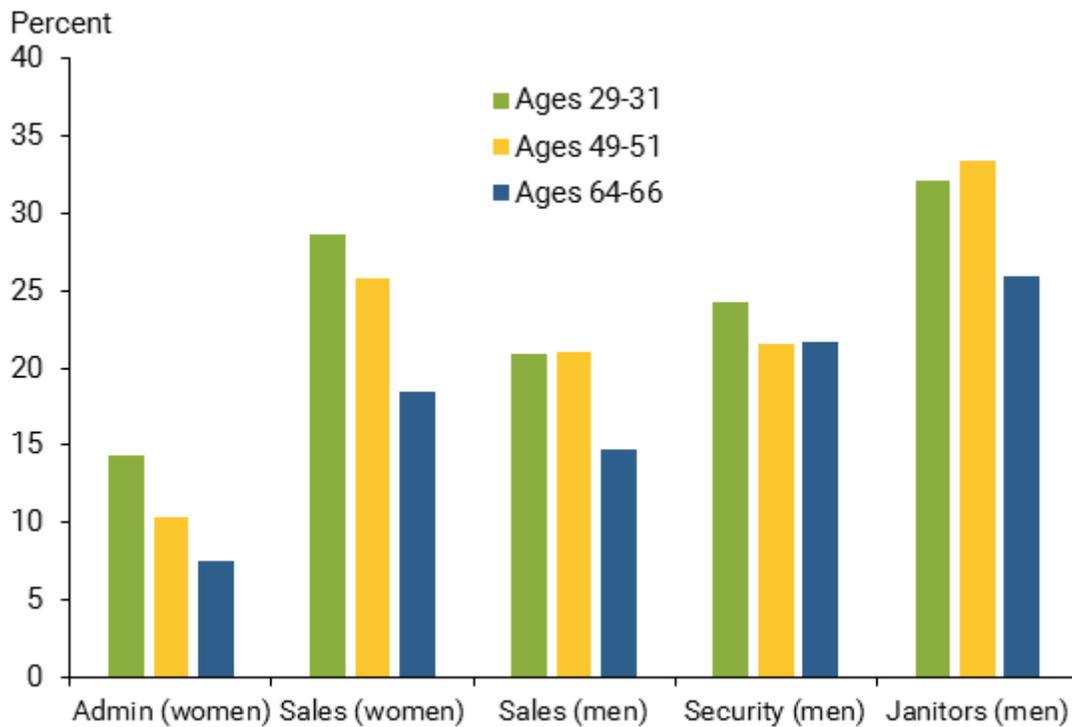
5.3 The Neumark, Burn, and Button (2019) Resume-Correspondence Study

Partly to better confront these issues, and to provide more detailed and accurate evidence of age discrimination, Neumark et al. (2019) conducted the largest and most comprehensive resume-correspondence study of age discrimination in hiring. They created realistic but fictitious resumes for young (aged 29-31), middle-aged (aged 49-51), and senior (aged 64-66) job applicants. Workers age 64-65 age group are new to the literature and is motivated by the common occurrence of “bridge” jobs for this age group.

In this experiment, they sent over 40,000 applications (resumes) to over 13,000 job positions in 12 cities spread across 11 states, by far the largest resume-correspondence study of hiring discrimination to date. They sent applications for positions that seniors often take as “bridge” jobs, according to Current Population Survey data: administrative assistant and retail

sales for women, and retail sales, security, and janitor for men. These positions are also common for younger workers. While their resumes were generally on-average identical to isolate the effect of age, they sent different types of senior resumes: some with the same experience on-average as the younger applicants, and many where the senior had a longer work experience commensurate with their age. As in other studies, they tracked callbacks – interview requests or other similar positive responses from employers – and compared the callback rates by age.

Figure 5 Comparisons of job applicant callback rates by age



Source: Neumark et al. (2017a), using data from Neumark et al. (2019).

Figure 5 presents the main results from Neumark et al. (2019). Across all occupations and genders, senior applicants (age 64-66) got fewer callbacks than younger applicants. These differences are statistically significant in all cases except for security jobs (men). The evidence is more mixed for middle-aged applicants (age 49-51), as female middle-aged applicants have a statistically significant lower callback rate, but there is no evidence of discrimination against middle-aged men.

Even in the cases where both senior women and men face age discrimination, the magnitude of the discrimination against senior women is much larger. For administrative

assistant positions, the callback rate is nearly half for senior women (7.58%) compared to younger women (14.41%). For retail sales, senior women get callbacks 18.43% of the time while younger women get callbacks 28.68% of the time. These differences are less pronounced for senior men. In retail sales, where they apply with both male and female applicants, the age penalty is larger for senior women (35.7% fewer callbacks) than it is for senior men (29.6%). Thus, while they find age discrimination against senior men, it is concentrated in those near traditional retirement ages and does not occur in every occupation. This evidence is also not robust to other checks of the data (Neumark et al., 2016). For senior women, the discrimination is more severe and starts much earlier than it does for senior men.

6 Can Stronger Age Discrimination Laws Help Reduce Age Discrimination?

Age discrimination laws are the key approaches used to reduce age discrimination in employment. There is, of course, the federal *Age Discrimination in Employment Act* (ADEA), but there are also state laws in all states (plus the District of Columbia) except Arkansas, Mississippi, and South Dakota. Some states even have features of their laws that make them broader or stronger than the federal law (Neumark et al., 2018; 2017b; Neumark & Song, 2013), which provide additional protections against age discrimination.

6.1 Evidence from Theory

At first blush, one would expect that laws forbidding discrimination would reduce discrimination, and thus improve labor market outcomes for protected individuals. However, theory suggests that this may not necessarily be the case. Discrimination laws should reduce terminations because terminating an employee, whether there is discriminatory intent or not, opens firms up to possible legal action. Because it is harder under discrimination laws to terminate older workers, it creates a disincentive to hire them in the first place (Bloch, 1994). This could lead to the unintended consequence of decreased hiring.

Of course, discrimination laws forbid discrimination in hiring, so they could still decrease hiring discrimination if employers follow this aspect of the law. Enforcement to curtail hiring discrimination is more difficult than other types of anti-discrimination enforcement, however, because it is harder to prove or identify a class of affected workers. For example, with most of the discrimination occurring at the interview offer phase (Riach & Rich, 2002), it is almost

impossible to prove that age discrimination is the reason for a lack of interview. Economic damages are generally much smaller in hiring discrimination cases relative to terminations, which leads to hiring cases being less attractive to plaintiffs and attorneys. This means that laws forbidding discrimination in hiring have little bite, which could mean that the negative hiring incentive dominates. But in net, it is difficult to know the effect of discrimination laws on hiring, and thus on employment.

6.2 Evidence from the Empirical Literature

Economists have long studied the effects of discrimination laws on the employment outcomes of protected workers. The most common approach that these studies employ is a statistical analysis strategy called a “difference-in-differences,” which tries to isolate the effect of the law on labor market outcomes. Most of these difference-in-differences studies compare older workers before and after a change in discrimination law (e.g., introduction of the ADEA or changes in state laws) compared to the same before and after change for some unaffected control group, such as younger workers or older workers in states without legal changes, or both. Most studies of age discrimination laws have found positive effects of the laws, while some have found no effects or negative effects.

Most of these “difference-in-differences” studies use the passage of state age discrimination laws before the passage of the ADEA to explore if the introduction of these laws affected employment for older workers. Neumark & Stock (1999) found that state-level age discrimination laws passed before the ADEA in addition to the passage of the ADEA in 1968 led to increased employment for protected older workers. Adams (2004) found a similar result using the state laws passed before the ADEA.

Other studies focus not just on the introduction of laws but rather on how features of the laws differ. Lahey (2008a) finds that some features of age discrimination laws are associated with decreased hiring of older workers. Lahey (2008a) explores how the employment effects stemming from the introduction of the ADEA were mediated by existing state-level age discrimination laws. Lahey (2008a) argues that the ADEA was stronger in states with an existing law, noting that the statute of limitations under the ADEA is 300 days if the state has a fair employment protection agency, whereas it is 180 days otherwise. Lahey (2008a) also argues that fair employment protection agencies in these states may be able to process claims more quickly

than the EEOC. Lahey (2008a) finds that these increased legal protections lead to a decrease in employment, hiring, and an increase in retirement. However, Neumark (2009) disputes these results for several reasons, and argues rather that the results show that the introduction of the federal ADEA boosted employment of older workers in states without existing age discrimination laws.

Neumark & Song (2013) explore the effect of state age discrimination laws that had features that made them stronger or broader than the ADEA. They study older men “caught” by the increase in Social Security’s full retirement age, which meant that the men had to work longer before they could retire with full Social Security benefits. They compared “caught” older men to older men who were not caught, in states with and without these stronger law features. They classified states as having stronger laws if (1) the state law allows for compensatory or punitive damages (“larger damages”), which provides for larger damages than the ADEA,⁸ (2) the federal ADEA applies to employers with at least 20 employees, but some state laws apply to employers with fewer employees (“lower firm size”), and (3) if the state law has a longer statute of limitations than the ADEA.⁹ They found that larger damages and lower firm size both increased hiring of older workers, with the statute of limitations having little effect.

Neumark et al. (2018) use a unique approach to examine how these state law features (“larger damages” and “lower firm size”) affect hiring of older workers. They follow the resume-correspondence approach of Neumark et al. (2019), creating on-average identical resumes for older (age 65) and younger (age 30) workers of both genders in retail sales. They then send these resumes (older men, older women, younger men, younger women) to job openings in all 50 states and compare callback rates between older and younger workers in states with stronger laws compared to in states with weaker laws. This approach provides direct evidence of discrimination in hiring and helps control for other factors, such as older and younger workers being different. They find evidence that some features of stronger discrimination laws (namely “larger damages”, meaning plaintiffs can sue for more damages) reduce age discrimination.

⁸ To be more specific, compensatory and punitive damages are not allowed under the ADEA, but “liquidated damages” are those which are available up to the amount of back pay for a willful violation of the ADEA. A violation is willful when an employer either knew it engaged in illegal conduct under the ADEA or the employer showed “reckless disregard” for whether it was prohibited. See https://www.americanbar.org/content/dam/aba/administrative/labor_law/meetings/2011/annualmeeting/004.authc heckdam.pdf. Neumark & Song (2013) classify states as having larger damages than the ADEA if they allow compensatory or punitive damages, regardless of if they require proof of intent or willful violation.

⁹ The filing period for the ADEA for states without a law is 180 days, but is 300 days for states with a state law and enforcement agency.

Otherwise they find no effects of the laws, and no find no evidence that stronger or broader laws reduce hiring. It is important to note that while their study only sometimes finds that broader or stronger state laws reduce age discrimination in hiring, their study may not capture other possible positive effects of these laws, such as increased labor market participation of older workers.

7 Challenges to Age Discrimination Laws

While the research suggests – but is not definitive – that age discrimination protections may help improve labor market outcomes for seniors, the ability for age discrimination protections to be effective at this is challenged by recessions, where the laws may become less effective, by recent court decisions, and by legal quirks that lead the ADEA to inadequately cover older women and older people of color.

7.1 Age Discrimination Laws and the Great Recession

One consideration for discrimination laws is how they operate over the business cycle. Research indicates that discrimination tends to increase during a recession (Baert et al., 2013; Johnston & Lordan, 2015; Kroft et al., 2013). Therefore, it is important to know if age discrimination laws are still effective during recessions, when they are likely needed the most, compared to during economic expansions. This is a timely question, given the recent Great Recession from December 2007 to June 2009,¹⁰ which was especially devastating for older workers, who faced decreased income (Davis & von Wachter, 2011), wealth, and significantly more job loss (Munnell & Rutledge, 2013), and thus increased Social Security benefit claiming (Mueller et al., 2016; Munnell & Rutledge, 2013; Rutledge, 2012; Rutledge & Coe, 2012). There was significant anecdotal evidence, especially in the media, of age discrimination both during the Great Recession and during the long recovery,¹¹ and ADEA claims filed with the EEOC increased significantly during this period, rising from about 16,000 in 2006 to about 23,000 in each year from 2008 to 2012 (Neumark & Button, 2014).

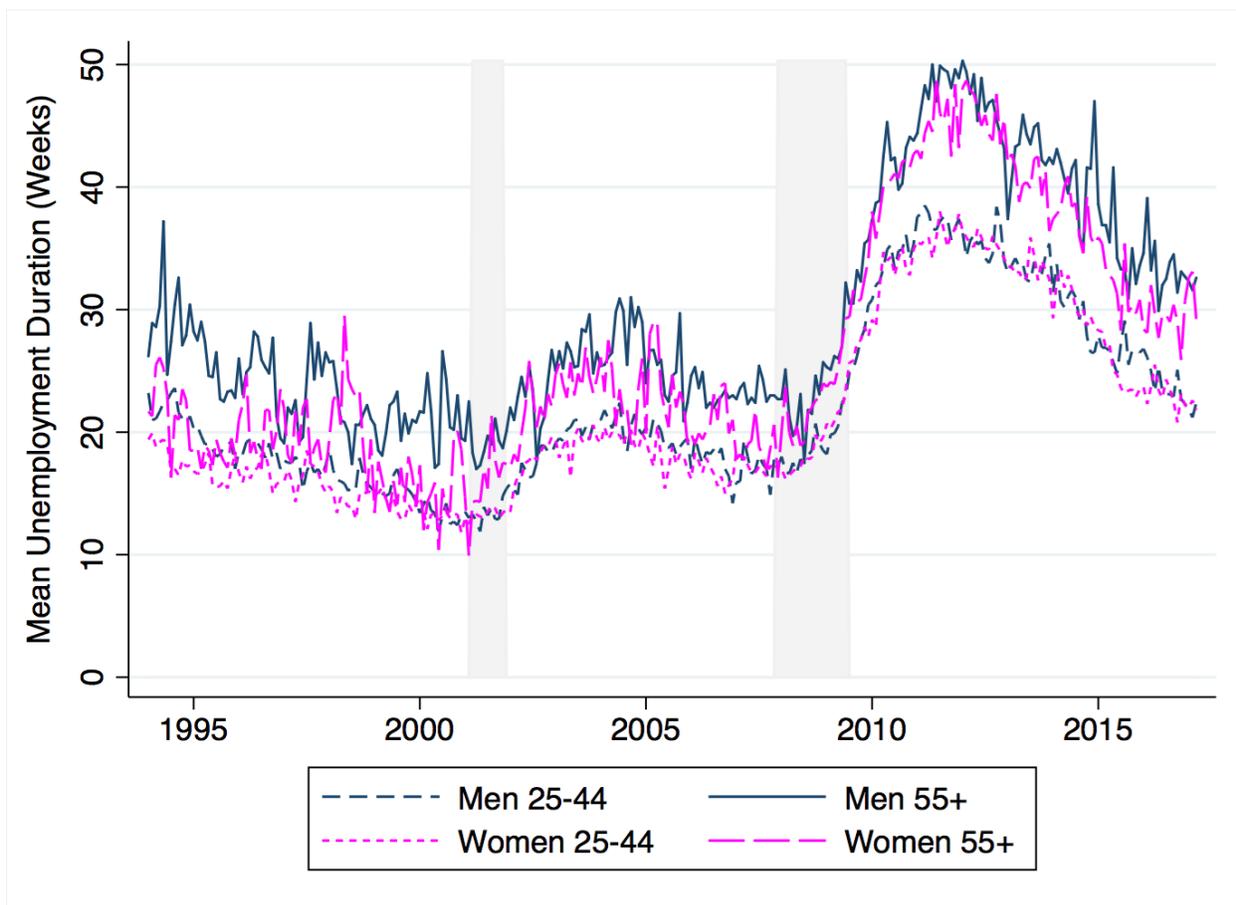
This impact is mirrored in the dramatic increase in unemployment durations for older workers during and after the Great Recession. Figure 6 shows the mean unemployment duration

¹⁰ These are the dates of the Great Recession as determined by the National Bureau of Economic Research (NBER) Business Cycle Dating Committee. See <http://www.nber.org/cycles.html>

¹¹ See, e.g., <http://www.pbs.org/newshour/bb/women-over-50-help-not-wanted/>, <http://www.npr.org/2017/03/24/521266749/too-much-experience-to-be-hired-some-older-americans-face-age-bias>, and <http://www.cbsnews.com/news/age-discrimination-is-alive-and-well/>

(in weeks) since 1994 by age and gender. Older workers consistently have higher unemployment durations, which reflects both age discrimination but also the fact that older workers are pickier about jobs. The gap in average unemployment durations by age increased significantly after the Great Recession. The gap was the smallest in the year before the Great Recession (2007), about 6.2 weeks longer for older men and 1.4 weeks longer for older women, peaking in 2012 at 11.7 weeks and 10.7 weeks longer for older men and older women, respectively.¹²

Figure 6 Effects of the Great Recession on mean unemployment duration, in weeks



Source: Author's calculations using data from the Current Population Survey (monthly) from 1994 to March 2017, via IPUMS-CPS (Flood et al., 2015). Each series is seasonally adjusted by the author using X-13ARIMA-SEATS. Shaded areas are recessions according to the NBER Business Cycle Dating Committee.

Motivated by the severity of the Great Recession, Neumark & Button (2014) explored whether age discrimination laws helped protect older workers during this difficult time. They

¹² The author's calculations for this, using Current Population Survey data, are available upon request. Note that the effect of recessions on unemployment durations typically take a few years to materialize, hence the 2012 peak.

focused on whether state age discrimination laws that were stronger or broader than the federal ADEA helped older workers. The focus was on “larger damages” and “lower firm size” as defined in Neumark & Song (2013). The findings provide mixed evidence suggesting that the effect of age discrimination laws may vary over the business cycle, with them possibly being more helpful in non-recessionary periods but of mixed and often negative impact during and after the recent Great Recession.

7.2 Recent Court Cases Weakening the ADEA

Recent legal changes have significantly weakened the coverage and strength of the ADEA. In 2009, the Supreme Court Case *Gross vs. FBL Financial Services Inc.*¹³ significantly weakened the ADEA (Lazarus, 2012). The case removed one way that plaintiffs would previously prove their age discrimination case. Since *Gross*, plaintiffs in age discrimination cases must prove, by preponderance of evidence, that age was the “but for” cause for the adverse employment action.¹⁴ That is, discrimination must have been the determining reason for the adverse employment action, not just one reason among others (the “mixed-motive” framework,¹⁵ now no longer allowed; Van Ostrand, 2010). This change increased the burden on the plaintiff to make a prima facie case of discrimination, meaning that they could not establish that age discrimination might have occurred, which meant that cases could not proceed. Many argue that *Gross* radically weakened the ADEA (e.g., Harper, 2010; Lazarus, 2012; Noonan, 2010; Van Ostrand, 2009), and under *Gross*, the ADEA is significantly weaker than other similar discrimination laws, such as Title VII of the Civil Rights Act (McCann, 2018).

Another concerning case was from the U.S. Court of Appeals for the 7th circuit (*Kleber v. CareFusion Corp.*, No. 17-1206 (7th Cir. 2019)), decided January 23, 2019. In *Kleber*, the plaintiff sued for age discrimination in hiring after being passed up in favor of a less-experienced younger worker for a senior in-house position at CareFusion Corporation’s law department. It appears that the employer was intentionally trying to screen out older or more experienced applicants by including the request “3 to 7 years (no more than 7 years) of relevant legal

¹³ 557 U.S. 167 (2009), Decided June 18, 2009.

¹⁴ “But for” the discrimination, the adverse employment action would not have happened. See <http://www.constangy.com/communications-247.html> (accessed June 5, 2017) for useful discussion.

¹⁵ Under “mixed-motive” the jury is instructed to rule for the plaintiff if they determine that the protected class was a motivating factor, even if other (legal) factors were also present. See *Price Waterhouse v. Hopkins*, [490 U.S.](#) 228 (1989).

experience” in the job advertisement. The court ruled that Section 4(a)(2) of the ADEA did not authorize job applicants to bring a disparate impact claim against a prospective employer. This was based on the belief that the “plain language” of the ADEA showed that Congress intended that law to cover current employees, not job applicants.

This decision could have big implications. If disparate impact claims are not allowed for job candidates, then employers are legally able to discriminate in hiring by filtering older workers out of the applicant pool. Employers could do this (and have done this) by posting job advertisements with ageist language to discourage older applicants,¹⁶ putting experience or time-since-graduation restrictions on job applicants,¹⁷ posting job ads only in ways where the job ad is more likely to be seen by younger people,¹⁸ or using job candidate evaluation methods that favor younger applicants. Since this was a decision of a circuit court, it may be more contained to Illinois, Indiana, and Wisconsin. However, this decision could be appealed to the Supreme Court, although the current make-up of the court may not be favorable to keeping discrimination laws intact.

7.3 Intersectional “Sex-Plus-Age” Discrimination

Given that age discrimination is stronger against women than men (Neumark et al., 2019), intersectional discrimination – that is discrimination at the intersection of age and gender – may be relevant. If age discrimination against older women is primarily intersectional, that is,

¹⁶ Employers could use language that is suggestive that they want younger workers. This could be leveraging age-related stereotypes, requesting a candidate who is more flexible, able to learn, energetic, or better with technology, which are stereotypes associated with younger workers (relative to older workers) in the industrial psychology literature (e.g., Posthuma & Campion, 2007; Burn et al., 2019). While these requests could be well-intentioned, as they are related to productivity on the job, employers could also use this strategy to intentionally filter out older workers. More aggressive examples are phrases such as “digital native”, which suggests that the ideal candidate “grew up” with technology. See, e.g., <http://fortune.com/2015/05/04/digital-native-employers-bias/> (accessed March 29, 2019).

¹⁷ In addition to this happening in *Kleber* it seems common, especially in the tech industry. Other ways this is phrased in job advertisements includes “Class of 2007 or 2008 preferred” (from a Facebook job advertisement), or numerous tech companies specifically requesting a “new grad”. See, e.g., <http://fortune.com/2015/05/04/digital-native-employers-bias/> (accessed March 29, 2019).

¹⁸ This could include searching for candidates only through job fairs hosted by educational institutions or posting the job ad only in venues that younger people use, such as social media websites, or using the tools of social media websites to only advertise job postings to younger candidates, either directly or indirectly. Many social media websites and tech companies allowed targeting based on age. See <https://www.reuters.com/article/us-facebook-lawsuit-discrimination/facebook-ads-that-let-employers-target-younger-workers-focus-of-u-s-lawsuit-idUSKBN1EF09B> (accessed March 29, 2019). This appears to be changing, as Facebook no longer allows age, gender, or ZIP Code targeting for housing, employment and credit-related advertisements. See <https://www.wsj.com/articles/facebook-axes-age-gender-and-other-targeting-for-some-sensitive-ads-11553018450> (accessed March 20, 2019).

they are not discriminated against for just being female or just being old but by being old *and* female, then the ADEA provides limited protection for this “sex-plus-age” discrimination (Day, 2014).

For older women to be protected from this intersectional discrimination, they must use both the ADEA and Title VII of the Civil Rights Act, recognizing older women as a subgroup of two protected classes. However, in practice, courts generally do not allow this joint use of legal precedence (Crocette, 1998; Day, 2014; Porter, 2003; McLaughlin, 2018)¹⁹ although some have allowed it.²⁰ Meanwhile, intersectional claims that fall under the same statute (e.g., race and gender, both under Title VII) are generally accepted by courts (Day, 2014).²¹ This odd quirk seems to stem from the mere fact that the ADEA is a separate statute.

Moreover, sex-plus-age claims are more difficult to make since the *Gross v. FBL Financial Services, Inc.* Supreme Court decision. Day (2014) argues that the *Gross* decision will likely create a “chilling effect” as to the initiation of sex-plus-age claims, and older women would be dissuaded from bringing the claim under the ADEA because they cannot use the mixed-motives framework.

Given all this, an open question is the extent to which age discrimination laws protect older women from discrimination. All the studies of age discrimination laws discussed above estimated the effect on men only, except Neumark & Button (2014) and Neumark et al. (2018) who analyzed men and women separately. Based on these two studies, there are mixed effects of the laws. Larger damages under state law are associated with shorter unemployment durations for older workers before the Great Recession, but decreased hiring during and after (Neumark &

¹⁹ Case law showing that this is not allowed includes *Thompson v. Mississippi State Personnel Board*, 674 F. Supp. 198 (N.D. Miss 1987), *Murdock v. B.F. Goodrich*, 1992 Ohio App. LEXIS 6611, and *Sherman v. American Cyanamid Company*, 1999 U.S. App. LEXIS 21086. See McLaughlin (2018) for a discussion of these cases. Ventrell-Monsees (2014) also lists *Johnson v. Napolitano*, 2013 WL 1285164 *8 (S.D.N.Y., 2013) which cited “*Cartee v. Wilbur Smith Associates, Inc.*, No. 3:08-4132-JFAPJG, 2010 WL 1052082, at *4 (D.S.C. Mar 22, 2010); *Block-Victor v. CITG Promotions, L.L.C.*, 665 F. Supp. 2d 797, 808 (E.D. Mich. Oct 13, 2009); *Smith v. Board of County Com'rs of Johnson County, Kan.*, 96 F. Supp. 2d 1177, 1187 (D. Kan.,2000) (collecting cases); *Luce v. Dalton*, 166 F.R.D. 457, 461 (S.D. Cal. 1996); see also *Kelly v. Drexel University*, 907 F. Supp. 864, 875 n. 8 (E.D. Pa. 1995).”

²⁰ Some courts have recognized intersectional discrimination, such as *Arnett v. Aspin*, 846 F. Supp. 1234, 1241 (E.D. Pa. 1994), *Grozynski v. JetBlue Airways Corp.*, 596 F.3d 93, 109 (2d Cir. 2010), *Barnett v. PA Consulting Group*, 715 F.3d 354 (D.C. Cir. 2013), *DeAngelo v. Dental EZ, Inc.*, 738 F. Supp. 2d 572-578-79 (E.D. Pa. 2010), *Good v. U.S. West Communications*, 1995 WL 67672 (D. Or. 1995), *Sogg v. American Airlines*, 603 N.Y.S.2d 21 (NY App. 1993), and *Foley v. Eckhart Richard-Allan Med. Inbus.*, 1995 U.S. Dist. LEXIS 20663 (C.D. Cal., Nov. 14, 1995), all discussed by Ventrell-Monsees (2014).

²¹ For the first notable case (black women), see *Jefferies v. Harris Cnty. Cmty. Action Ass'n*, 615 F.2d 1025, 1034 (5th Cir. 1980). For Asian women, see *Lam v. Univ. of Haw.*, 40 F.3d 1551, 1562 (9th Cir. 1994).

Button, 2014). A lower firm-size minimum under state law is associated somewhat with lower employment of older women after the Great Recession (Neumark & Button, 2014) but with no difference in hiring in their recent resume-correspondence experiment (Neumark et al., 2018).

Luckily, a study by McLaughlin (2018) fills this gap by estimating the effect of state age discrimination laws passed before the ADEA, and the passage of the ADEA on employment outcomes for older women (similar to Adams, 2004, and Neumark & Stock, 1999). McLaughlin (2018) finds that while both state-level age discrimination laws and the ADEA helped older men, they either had a smaller positive effect for older women or no effect at all. This suggests that the ADEA and similar laws are less effective at protecting older women, likely because of the intersectionality issue.

Moreover, sex-plus-age claims are more difficult to make since the *Gross v. FBL Financial Services, Inc.* Supreme Court decision. Day (2014) argues that the *Gross* decision will likely create a “chilling effect” as to the initiation of sex-plus-age claims, and older women would be dissuaded from bringing the claim under the ADEA because they cannot use the mixed-motives framework.

7.4 Other Intersectional Age Discrimination

It is also likely that current discrimination laws do not adequately cover other types of intersectional age discrimination. Little is known about age discrimination that intersects with other factors, namely race and ethnicity.²² This is largely because previous work either does not study intersectionality, studying older individuals as a whole without doing an analysis by sub-groups or because researchers look specifically at Whites in order to isolate (non-intersectional) age discrimination (e.g., Lahey, 2008a). To my knowledge, all the resume-correspondence studies of age discrimination also used names that were likely to be assumed to be White (or at least did not signal race or ethnicity) meaning these studies cannot speak to if age discrimination differs by race or ethnicity.

Lahey & Oxley (2018) is one of the first studies to study this intersectionality. Lahey & Oxley (2018) conducted a lab experiment to quantify discrimination at the intersection of age, gender, and race. They had students in business and related fields rate resumes and select

²² There is, however, a growing literature on how disability discrimination laws protect older workers (Stock and Beegle, 2004; Neumark, Song, & Button 2017; Neumark et al. 2018; Button & Khan, 2019).

candidates for interviews, all while being monitored with a non-intrusive eye-tracker. The eye-tracker allowed the researchers to see the mechanisms behind discrimination and learn more how individuals treat resumes. Lahey & Oxley (2018) find weak evidence of discrimination in favor of middle-aged Black workers, relative to middle-aged White workers. However, they find intersectional discrimination *against* Black seniors, relative to White seniors, mirroring the evidence of intersectional discrimination against older women. This additional age discrimination against Blacks is a further barrier to extending work lives, further exacerbating racial economic disparities in old age (Emmons & Noeth, 2014).

This intersectional discrimination could similarly fall between the cracks of the ADEA and Title VII of the Civil Rights Act, an issue discussed in-depth in Delaney & Lahey (2019). Delaney & Lahey (2019) also note that the implications of *Gross* apply here, making intersectional age-by-race claims even more difficult to make. This issue is even more dire for Black older women who may experience intersectional discrimination on the basis of the combination of age, race, and gender.

8 Conclusion

The United States is experiencing an aging population that is increasingly trying to work longer into what would be normally considered typical retirement ages, leading to a more than a doubling of the proportion of the labor force that are seniors in the last 20 years (2.9% to 6.1%). Working longer is important to many seniors and is fundamental as they seek to support themselves financially, especially given recent Social Security reforms. Given this, a key policy question is to what extent seniors face age discrimination, and if age discrimination laws help remedy this.

The research summarized in this paper suggests that age discrimination against seniors, especially, is still common, even under the federal Age Discrimination in Employment Act and similar state laws. Age discrimination was much higher during and after the Great Recession, as evidenced by increased EEOC claims, huge increases in unemployment durations for older workers and a flurry of media discussions of age discrimination (Neumark & Button, 2014). Research on the impacts of age discrimination laws on employment of older workers generally suggests that these laws are helpful (Adams, 2004; Neumark & Song, 2013; Neumark & Stock, 1999), although they could be harmful (Lahey, 2008a) and are likely less effective during

economic downturns such as the Great Recession (Neumark & Button, 2014). Regardless, the ADEA's coverage was restricted in 2009 in the *Gross v. FBL Financial Services* Supreme Court decision.

There is a major gender element to age discrimination and age discrimination protections. Age discrimination hits older women at younger ages (at least age 50), and for seniors, age discrimination against women is much more severe (Neumark et al., 2019). Thus, "sex-plus-age" intersectional discrimination is a verified problem. Meanwhile, "sex-plus-age" discrimination cases are generally not being allowed under the ADEA and Title VII of the Civil Rights Act (Crocette, 1998; Day, 2014; Porter, 2003; McLaughlin, 2018), while other intersectional cases are allowed (e.g., race and gender) simply because they both fall under the same statute. The lack of discriminatory protections for older women may be behind the more severe age discrimination that they face, and may also explain the fact that the laws seem less likely to help them (McLaughlin, 2018).

At the 50th anniversary of the ADEA, it is clear that age discrimination persists in spite of the law, and that the challenges of population remain. Thus, policy responses are necessary to address this issue, which are becoming increasingly relevant. Policy responses should consider how policies and laws affect senior women specifically, as the gendered nature of age discrimination and age discrimination law cannot be ignored.

Future research can help us determine which policies or laws can better allow seniors to keep working by reducing discriminatory barriers to seniors taking bridge jobs. For example, which features of age discrimination laws best reduce hiring discrimination? Are age discrimination laws becoming more or less effective in an age of online and social media-based job posting and recruitment, computerized evaluation of job candidates, and technological growth? Another impactful avenue for future research is if age discrimination occurs even before the hiring stage. This could be in where the job ad is posted (e.g., on social media rather than common job search websites), how the job is described (e.g., using language that may suggest an age preference), or in the application process itself (e.g., the online job application system requires that applicants enter high school and college graduation years.) Despite it being the 50th anniversary of the ADEA, there is still much more to know about age discrimination and the effectiveness of age discrimination laws. Future research on age discrimination is crucial in our endeavor to support seniors and the Social Security system as our population ages.

References

- AARP. (1999). *American business and older employees*. AARP: Washington, DC.
- Adams, S. J. (2004). Age discrimination legislation and the employment of older workers.” *Labour Economics*, *11*(2), 219-241. doi:10.1016/j.labeco.2003.06.001
- Adams, S. J. (2002). Passed over for promotion because of age: An empirical analysis of the consequences. *Journal of Labor Research*, *23*(3), 447-461. doi:10.1007/s12122-002-1046-y
- Baert, S, Cockx, B., Gheyle, N., & Vandamme, C. (2013, January). *Do employers discriminate less if vacancies are difficult to fill? Evidence from a field experiment*. IZA Discussion Paper No. 7145. Retrieved from <http://ftp.iza.org/dp7145.pdf>
- Baert, S., Norga, J., Thuy, Y., & Van Hecke, M. (2016). Getting grey hairs in the labour market. An alternative experiment on age discrimination. *Journal of Economic Psychology*, *77*, 86–101. doi:10.1016/j.joep.2016.10.002
- Bal, P. M., de Lange, A. H., Van der Heijden, B. I. M., Zacher, H., Oderkerk, F. A., & Otten, S. (2015). Young at heart, old at work? Relations between age, (meta-)stereotypes, self-categorization, and retirement attitudes. *Journal of Vocational Behavior*, *91*, 35–45. doi:10.1016/j.jvb.2015.09.002
- Bendick Jr., M., Brown, L. E., & Wall, K. (1999). No foot in the door: An experimental study of employment discrimination against older workers. *Journal of Aging & Social Policy*, *10*(4), 5-23. doi:10.1300/j031v10n04_02
- Bendick Jr., M., Jackson, C. W., & Romero, J. H. (1997). Employment discrimination against older workers: An experimental study of hiring practices. *Journal of Aging & Social Policy*, *8*(4), 25-46. doi:10.1300/j031v08n04_03
- Belbase, A., Sanzenbacher, G. T., & Gillis, C. M. (2015, September). Does age-related decline in ability correspond with retirement age? Boston College Center for Retirement Research Working Paper #2015-24.
- Bertrand, M., & Duflo, E. (2017). Field experiments on discrimination. In A. V. Banerjee & E. Duflo (Eds.), *Handbook of economic field experiments* (Vol. 1, pp. 309-393). Amsterdam: North-Holland.
- Bloch, F. (1994). *Antidiscrimination law and minority employment: Recruitment practices and regulatory constraints*. Chicago: University of Chicago Press.
- Bowen, C. E., & Staudinger, U. M. (2013). Relationship between age and promotion orientation depends on perceived older worker stereotypes. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *68*(1), 59–63. doi:10.1093/geronb/gbs060
- Burn, I., Button, P., Munguia Corella, L., & Neumark, D. (2019). Ageist Language in Job Ads and Age Discrimination in Hiring: Evidence from a Field Experiments. Working Paper
- Button, P., & Khan, M. R. (2018). Do Stronger Employment Discrimination Protections Decrease Reliance on Social Security Disability Insurance? Evidence from the Social Security Reforms. *Working Paper*.

- Calvo, E. (2006). *Does working longer make people healthier and happier? Work Opportunities Brief #2*. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Carlsson, M., & Eriksson, S. (forthcoming). Age Discrimination in Hiring Decisions: Evidence from a Field Experiment in the Labor Market. Forthcoming in *Labour Economics*
- Chiu, W. C. K., Chan, A. W., Snape, E., & Redman. (2001). Age stereotypes and discriminatory attitudes towards older workers: An East-West comparison. *Human Relations*, 54(5), 629-661. doi:10.1177/0018726701545004
- Coile, C., Milligan, K., & Wise, D. A. (2017). Health capacity to work at older ages: Evidence from the United States.” In D. A. Wise (Ed.), *Social security programs and retirement around the world: The capacity to work at older ages*. Chicago, IL: The University of Chicago Press.
- Crocette, S. F. (1998). Considering hybrid sex and age discrimination claims by women: Examining approaches to pleading and analysis – A pragmatic model. *Golden Gate University Law Review*, 28(2), 115-175.
- Davis, S. J., & von Wachter, T. (2011). Recessions and the costs of job loss. *Brookings Papers on Economic Activity*, 2011(2), 1–72. doi:10.1353/eca.2011.0016
- Day, J. (2014). Closing the loophole – Why intersectional claims are needed to address discrimination against older women.” *Ohio State Law Journal*, 75(2), 447-476.
- Eglit, H. (1997). The Age of Discrimination in Employment Act at Thirty: Where it’s Been, Where it is Today, Where it’s Going. *University of Richmond Law Review*, 31(3), 579–756.
- Emmons, W. R. & Noeth, B. J. (2014). The Economic and Financial Status of Older Americans: Trends and Prospects, Center for Household Financial Stability Working Paper.
- Figginski, T., & Neumark, D. (2016). Does eliminating the earnings test increase the incidence of low income among older women?” *Research on Aging*. doi:10.3386/w21601
- Fix, M., and Struyk, R. J. (Eds.). (1993). *Clear and convincing evidence: Measurement of discrimination in America*. Washington, D.C.: The Urban Institute Press.
- Flood, S., King, M., Ruggles, S., & Warren, J. R. (2015). *Integrated public use microdata series, current population survey: Version 4.0* [Dataset]. Minneapolis, MN: University of Minnesota.
- Foreman, M. (2009). Gross v. FBL Financial Services - Oh so gross! *University of Memphis Law Review*, 40(4), 681–703.
- Fritzsche, B., & Marcus, J. (2013). The senior discount: Biases against older career changes. *Journal of Applied Social Psychology*, 43(2), 350-62. doi:10.1111/j.1559-1816.2012.01004.x
- Harper, M. C. (2010). The causation standard in federal employment law: Gross v. FBL Financial Services, Inc., and the unfilled promise of the Civil Rights Act of 1991. *Buffalo Law Review*, 58, 69–145.

- Heckman, J., & Siegelman, P. (1993). The Urban Institute Audit Studies: Their methods and findings. In M. Fix & R. J. Struyk (Eds.) *Clear and convincing evidence: Measurement of discrimination in America* (pp. 187-258). Washington, D.C.: The Urban Institute Press.
- Howden, L. M., & Meyer, J. A. (2011). *Age and sex composition: 2010*. 2010 Census Briefs (May 2011, C2010BR-03). Washington D.C.: U.S. Census Bureau.
- Hummert, M. L., Garstka, T. A., Shaner, J. L., & Strahm, S. (1994). Stereotypes of the elderly held by young, middle-aged, and elderly adults. *Journal of Gerontology*, 49(5), P240–P249. doi:10.1093/geronj/49.5.p240
- Johnson, R. W., & Neumark, D. Age discrimination, job separations, and employment status of older workers: Evidence from self-reports. *Journal of Human Resources*, 32(4), 779-811. doi:10.2307/146428
- Johnson, R. W., Kawachi, J., & Lewis, E. K. (2009). *Older workers on the move: Recareering in later life*. Washington, DC: AARP Public Policy Institute.
- Johnston, D. W., & Lordan, G. (2015). Racial prejudice and labour market penalties during economic downturns. *European Economic Review*, 84, 57-75. doi:10.1016/j.eurocorev.2015.07.011
- Kroft, K., Notowidigdo, M. J., & Lange, F. (2013). Duration dependence and labor market conditions: Evidence from a field experiment. *Quarterly Journal of Economics*, 128(3), 1123–1167. doi:10.1093/qje/qjt015
- Lahey, J. (2008a). State age protection laws and the Age Discrimination in Employment Act. *Journal of Law and Economics*, 51(3), 433-460. doi:10.1086/589670
- Lahey, J. (2008b). Age, women, and hiring: An experimental study. *Journal of Human Resources*, 43(1), 30-56. doi:10.1353/jhr.2008.0026
- Lahey, J. (2018). Understanding why black women are not working longer. In C. Goldin & L. Katz (Eds.) *Women Working Longer*, Chicago, IL: The University of Chicago Press.
- Lahey, J. N., & Oxley, D. R. (2018). Discrimination at the Intersection of Age, Race, and Gender: Evidence from a Lab-in-the-Field Experiment. *NBER Working Paper 25357*.
- Lazarus, S. (2012). Hertz or Avis? Progressives' quest to reclaim the Constitution and the courts. *Ohio State Law Journal*, 72(6), 1201-1249.
- Liebman, J. B., & Luttmer, E. F. P. (2015). Would people behave differently if they better understood social security? Evidence from a field experiment. *American Economic Journal: Economic Policy*, 7(1), 275–299. doi:10.3386/w17287
- Loughran, D. S., & Haider, S. (2007). *Do elderly men respond to taxes on earnings ? Evidence from the Social Security Retirement Earnings Test*. RAND Labor and Population Working Paper WR-223-1.
- Lusardi, A. (2003). *Planning and saving for retirement*. Working paper. Dartmouth College.
- Lusardi, A., & Mitchell, O. (2005). *Implications for retirement wellbeing*. Michigan Retirement Research Center Working Paper #2005-108.
- McCann, L. A. (2018). The Age

- Discrimination in Employment Act at 50: When Will It Become a “Real” Civil Rights Statute? *ABA Journal of Labor & Employment Law*, 33, 89–104.
- McLaughlin, J. S. (2018). *Falling between the cracks: Discrimination laws and older women*. Unpublished paper. Buffalo, NY: SUNY Buffalo.
- McLaughlin, J. S., & Neumark, D. (2017). Barriers to Later Retirement for Men: Physical Challenges of Work and Increases in the Full Retirement Age. *Research on Aging*, 40(3), 232–256.
- Maestas, N. (2010). Back to work: Expectations and realizations of work after retirement. *Journal of Human Resources*, 45(3), 718-748. doi:10.1353/jhr.2010.0011
- Maestas, N. (2018). The Return to Work and Women’s Employment Decisions. National Bureau of Economic Research Working Paper 24429.
- Mueller, A., Rothstein, J., & von Wachter, T. (2016). Unemployment insurance and disability insurance in the Great Recession. *Journal of Labor Economics*, 34(1), 445–475.
- Munnell, A. H., & Sundén, A. (2006). *401(k) plans are still coming up short. Issue Brief No. 44*. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Munnell, A. H., Golub-Sass, F., & Varani, A. (2005). *How much are workers saving? Issue in Brief #34*. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Munnell, A. H., & Rutledge, M. (2013). The effects of the Great Recession on the retirement security of older workers. *The ANNALS of the American Academy of Political and Social Science*, 650(1), 124–142. doi:10.1177/0002716213499535
- Munnell, A. H., & Sass, S. A. (2007). *The labor supply of older Americans. Boston College Center for Retirement Research Working Paper 2007-12*. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Neumark, D. (2009). The Age Discrimination in Employment Act and the Challenge of Population Aging. *Research on Aging*, 31(1), 41–68.
<https://doi.org/10.1177/0164027508324640>
- Neumark, D. (2018). Experimental research on labor market discrimination. *Journal of Economic Literature*, 56(3), 799-866.
- Neumark, D., Burn, I., & Button, P. (2019). Is it harder for older workers to find jobs? New and improved evidence from a field experiment. *Journal of Political Economy*, 127(2), doi: 10.1086/701029
- Neumark, D., Burn, I., & Button, P. (2017a). Age discrimination and hiring of older workers. *Federal Reserve Board of San Francisco Economic Letter # 2017-06*.
- Neumark, D., Burn, I., Button, P., & Chehras, N. (2018). Do state laws protecting older workers from discrimination reduce age discrimination in hiring? Evidence from a field experiment. National Bureau of Economic Research Working Paper 25369.

- Neumark, D., Song, J., & Button, P. (2017b). Does protecting older workers from discrimination make it harder to get hired? Evidence from disability discrimination laws. *Research on Aging*, 39(1), 29-63. doi:10.1177/0164027516656142
- Neumark, D., & Button, P. (2014). Did age discrimination protections help older workers weather the Great Recession? *Journal of Policy Analysis and Management*, 33(3), 566-601. doi:10.1002/pam.21762
- Neumark, D., & Song, J. (2013). Do stronger age discrimination laws make social security reforms more effective? *Journal of Public Economics*, 108, 1-16. doi:10.3386/w17467
- Ng, T. W. H., & Feldman, D. C. (2012). Evaluating six common stereotypes about older workers with meta-analytical data. *Personnel Psychology*, 65(4), 821–858. doi:10.1111/peps.12003
- Noonan, B. (2010). The impact of *Gross v. FBL Financial Services, Inc.* and the meaning of the but-for requirement. *Suffolk University Law Review*, 43, 921–935.
- Porter, N. B. (2003). Sex plus age discrimination: Protecting older women workers. *Denver University Law Review*, 81, 79-111. Posthuma, R. A., & Campion, M. A. (2007). Age Stereotypes in the Workplace: Common Stereotypes, Moderators, and Future Research Directions. *Journal of Management*, 35, 158–188. <https://doi.org/10.1177/0149206308318617>
- Riach, K., & Loretto, W. (2009). Identity work and the “unemployed” worker: Age, disability and the lived experience of older unemployed. *Work, Employment and Society*, 23(1), 102-119. doi:10.1177/0950017008099780
- Riach, P. A., & Rich, J. (2010). An experimental investigation of age discrimination in the English labor market. *Annals of Economics and Statistics*, 99/100, 169-85. doi:10.2307/41219164
- Riach, P. A., & Rich, J. (2006). *An experimental investigation of age discrimination in the French labour market*. IZA Discussion Paper No. 2522. Retrieved from <http://ftp.iza.org/dp2522.pdf>
- Rutledge, M. S. (2012). *Holding out of opting out? Deciding between retirement and disability applications in recessions*. Center for Retirement Research at Boston College Working Paper No. 2012-26. Boston, MA: Center for Retirement Research.
- Rutledge, M. S., & Coe, N. B. (2012). *Great Recession-induced early claimers: Who are they? How much do they lose?* Center for Retirement Research at Boston College Working Paper No. 2012-12. Boston, MA: Center for Retirement Research.
- Sandell, S. H., & Iams, H. M. (1997). Reducing women’s poverty by shifting Social Security benefits from retired couples to widows. *Journal of Policy Analysis and Management*, 16(2), 279-297. doi: 10.1002/(SICI)1520-6688(199721)16:2<279::AID-PAM5>3.0.CO;2-F
- Stark, E. (2009). Lost in a time warp: How age stereotypes impact older baby boomers who still want to work. Unpublished paper. Bellevue, Nebraska: Bellevue University.

Stock, W. A., & Beegle, K. (2004). Employment protections for older workers: Do disability discrimination laws matter? *Contemporary Economic Policy*, 22(1), 111–126.
<https://doi.org/10.1093/cep/byh009>

U.S. Census Bureau. 2014. 2014 national population projections: Summary tables, Table 3.
Retrieved from
<https://www.census.gov/population/projections/data/national/2014/summarytables.html>

Van Ostrand, L. A. (2009). A close look at ADEA mixed-motives claims and *Gross v. FBL Financial Services, Inc.* *Fordham Law Review*, 78, 399-451.

Ventrell-Monsees, C. (2014, November 8). An aging workforce – Cutting edge issues under the ADEA. National Conference on Equal Employment Opportunity Law