Proposals to Keep Older People in the Labor Force

Alicia H. Munnell Center for Retirement Research at Boston College

Abigail N. Walters

Center for Retirement Research at Boston College

This report is available online at: https://www.brookings.edu





Contents

| Statement of Independence ii |
|--|
| Change the Return to Work for Older Workers: Expand the EITC2 |
| Clarify the Picture about Working Longer |
| Establish a National Retirement Age of 705 |
| Report 401(k) Income Projections9 |
| Provide Materials for Employers and Others to Educate Their Workers 11 |
| Increase the Appeal of Older Workers to Employers12 |
| Restore Mandatory Retirement12 |
| The Business Case for Older Workers13 |
| Paths Not Taken14 |
| U.S. Shows Little Interest in Strengthening Labor Market for Older Workers14 |
| "Phased Retirement" Is a Diversion15 |
| Conclusion16 |
| References |
| Elevator Speech: Importance of Working Longer |
| PowerPoint Presentation on the Benefits of Working Longer24 |
| Social Security Claiming Guide |
| The Business Case for Older Workers |
| Older Workers Increasingly Look Like their Younger Counterparts |
| Health |
| Education |
| Comfort with Computers |
| Older Workers Bring a Lifetime of Experience to the Job |
| Older Workers Stay with Their Employer Longer52 |
| The Issue of Costs |
| Wages |
| Costs of Retirement Plans |
| Health care costs59 |
| Conclusion |
| References |
| Draft Brochure on the Value of Older Workers |

STATEMENT OF INDEPENDENCE

Alicia H. Munnell is a council member of the Massachusetts Governor's Council to Address Aging and the director of the Center for Retirement Research at Boston College. She is a board member of the Pension Research Council, the Pension Rights Center, the National Bureau of Economic Research, and The Century Foundation.

Abigail N. Walters is a staff member of the Employment Workgroup of the Massachusetts Governor's Council to Address Aging and is a research associate at the Center for Retirement Research at Boston College.

Other than the aforementioned, the authors are currently not an officer, director, or board member of any organization with an interest in this article.

Munnell has received grants from the Prudential Insurance Company and the Social Security Administration related to past research.

Other than the aforementioned, the authors did not receive any financial support from any firm or person for this article or from any firm or person with a financial or political interest in this article.

Older people need to work longer in order to ensure a secure retirement. Social Security, the backbone of the retirement system, will not replace as much preretirement income in the future as it does today. Employer-sponsored retirement plans also involve considerably more uncertainty, given the shift from defined benefit plans to 401(k) plans. With these institutional saving arrangements on the decline, people could decide to save more on their own. But personal saving outside employer plans is virtually nonexistent, with the exception of home equity—an asset that retirees are reluctant to tap. Combine the retirement income crunch with the dramatic increase in life expectancy and growing health care costs, and continued employment in later life is the best option for ensuring financial security. The challenge is to ensure that older Americans plan to keep working and that employers retain and hire them. Other papers prepared for this conference explore changes in Social Security and Medicare that would encourage more employment of older people. This paper explores policy options outside those programs.

Any policy options need to be calibrated to the nature of the problem. Keeping older people in the labor force requires more than bringing the matter to the public's attention. Many are already getting the message; the share of people planning to work past age 65 has tripled over the past three decades, from 16 to 48 percent.¹ However, such intentions often go awry, as nearly two in five workers end up retiring earlier than planned.² The reasons for premature retirement involve a variety of factors that affect the choices made by both employees and employers.

On the employee side, one disincentive to continued work is a high implicit tax on earnings due to Social Security and Medicare provisions.³ Another issue is a lack of knowledge about Social Security's financial gain for delaying claiming until age 70, when monthly benefits are at their peak. In addition, workers with 401(k) plans approaching retirement may think that a typical asset balance of \$100,000 for an individual is sufficient, failing to realize that it translates into only a modest supplement to retirement income.

On the employer side, one barrier to hiring and retaining older workers is the uncertainty about how long they will stay on the job and concern that their productivity may outweigh their costs well before they plan to retire. This uncertainty may lead employers to circumvent rules against age discrimination in hiring by devising policies that have the effect of shedding older workers. A more subtle barrier is the general misperceptions employers may have about older workers' abilities.

The discussion of the policy options to address these challenges proceeds as follows. The first section addresses the employee's side by changing the financial incentives to work through expanding the Earned Income Tax Credit (EITC) for individuals without dependent children. The second section explores three initiatives to help people make better-informed work and retirement decisions: (1) establishing that age 70 is the nation's full retirement age; (2) restating 401(k) balances as flows of retirement income; and (3) instituting workplace seminars for employees in their 50s about the advantages of working longer. The third section turns to the employer's side with two proposals: (1) reintroducing mandatory retirement in the expectation that employers would be more willing to retain or take on older workers if they could dismiss them at 70; and (2) undertaking a massive public education campaign to make the business case for older workers. The fourth section looks at two popular suggestions—job training and phased retirement—that are

^{1.} Employee Benefit Research Institute (2018).

^{2.} Authors' calculations from the *Health and Retirement Study*.

Once an individual has 35 years of work history, Social Security benefits from additional years of work rise more slowly than earnings and taxes. And Medicare's secondary payer provision requires employer-sponsored health insurance to continue to be the primary payer for workers age 65 and over. See Goda, Shoven, and Slavov (2018).

not included among the recommended options. The final section concludes that the types of changes described here are urgently needed to head off a looming retirement crisis in the United States.

Change the Return to Work for Older Workers: Expand the EITC

The EITC was introduced in 1975 as a modest temporary refundable income tax credit for low-paid workers to reduce the effects of a rising payroll tax. Congress made the credit permanent in 1978, expanded it significantly in 1986 and again in 1990, and in 1993 doubled its size to ensure that full-time minimum wage workers would not live in poverty. The EITC was designed primarily for workers with dependent children, who might otherwise turn to public programs for assistance. A small credit for workers age 25–64 without dependent children was added in 1993.⁴ In addition to the federal credit, 28 states and the District of Columbia have an EITC based on a percentage of the federal credit, and these state credits are generally refundable.⁵

While the EITC has significantly increased labor force participation among mothers with children, it does little for older workers for two reasons: (1) many older people do not have dependent children so their maximum benefit in 2018 would be about \$500—too small to be salient and affect behavior; and (2) the EITC excludes workers age 65–70. The proposal is to significantly increase the amount of the credit and extend eligibility to those age 65–70, helping older low-income workers earn a higher posttax wage, which could encourage them to remain in the labor force longer by offsetting the disincentives to work from Social Security and Medicare.

Table 1 shows the key EITC parameters in 2018 for individuals filing their taxes as either a single individual or a head of household with 0 to 3 or more dependent children.⁶ The amount of the credit first increases with earnings, reaches a plateau, and then falls as earnings increase. For example, in 2018 the credit for a single taxpayer with one child is equal to 34 percent on the first \$10,180 of income, reaching a maximum of \$3,461. The credit remains at this level for earnings between \$10,180 and \$18,660, at which point it is phased out at a rate of 15.98 percent and reaches zero at \$40,320.

•••

^{4.} Congress set the eligibility age at 25 to avoid providing the EITC to college and graduate students from middle-income families who may currently have low incomes but depend primarily on their parents for support. Although in 1993 the IRS had no way to identify tax filers who were students, today it does.

Minnesota's EITC is based on income, not the federal credit. For more detail on state EITCs, see Tax Policy Center (2018) and Center on Budget and Policy Priorities (2017).

^{6.} The parameters are the same for married individuals filing jointly, except that eligibility phases out at a higher income level—about \$5,700 more than for taxpayers filing as single or head of household. In addition, regardless of filing status, a household's annual investment income cannot exceed \$3,500.

| | | Minimum | | | Phase-ou | it range |
|--------------------|-------------|---------------------------------|-------------------|-------------------|---------------------|------------------|
| No. of children | Credit rate | for for maximum credit | Maximum credit | Phase-out rate | Beginning income | Ending income |
| 0 | 7.65% | \$6,780 | \$519 | 7.65% | \$8,490 | \$15,270 |
| 1 | 34.00 | 10,180 | 3,461 | 15.98 | 18,660 | 40,320 |
| 2 | 40.00 | 14,290 | 5,716 | 21.06 | 18,660 | 45,802 |
| 3 or more | 45.00 | 14,290 | 6,431 | 21.06 | 18,660 | 49,194 |

Table 1. Parameters of the Earned Income Tax Credit, 2018

Source: Center on Budget and Policy Priorities (2018).

For workers without dependent children, the EITC follows the same basic pattern, but the amount is considerably smaller and phases out much more quickly. Specifically, the maximum credit for childless taxpayers is \$519 and the credit reaches zero at \$15,270. Furthermore, unlike the EITC for individuals with dependent children, which has no age restriction, the credit for childless adults is available only to those age 25–64. Given its small size and the age restriction, the EITC for childless individuals is seldom used, and accounts for only 2 percent of total EITC benefits.⁷ In other words, the EITC does not serve as a meaningful work incentive for older Americans.

Policymakers from both parties have recognized the EITC's inadequacy for taxpayers without dependent children and have proposed expanding the childless credit. In 2014, President Barack Obama and House Speaker Paul Ryan each would have roughly doubled the amount of the credit. At about the same time, Representative Richard Neal (D-MA), Senator Sherrod Brown (D-OH), and Senator Richard Durbin (D-IL) proposed improving the EITC for childless taxpayers.⁸ These bills were reintroduced in 2015 and 2017. Also in 2017, Senator Brown and Representative Ro Khanna (D-CA) introduced the most ambitious proposal to date—doubling benefits for those with children and increasing benefits for childless individuals sixfold. Finally, Elaine Maag of the Tax Policy Center suggested doubling the phase-in and phase-out rates and the maximum benefit for childless taxpayers.

The benefit side of all these proposals is captured in figure 1, which shows that—even under the most ambitious proposal—the benefit for a single earner without a child still falls far short of that for an individual with a child. In terms of eligibility, only President Obama's proposal extends the upper end of the eligibility ages, specifically to those age 65 and 66.

^{7.} See Maag (2018).

^{8.} Representative Neal's bill was the "Earned Income Tax Credit Improvement and Simplification Act" and the Brown-Durbin bill was the "Working Families Tax Relief Act."



Figure 1. Proposals to Expand Childless Workers' Earned Income Tax Credit Amount

Note: Assumes all income comes from earnings. Amounts are for taxpayers filing as single or head of household.

Sources: Executive Office of the President and U.S. Treasury Department (2014); Neal (2017); Brown and Durbin (2017); Brown and Khanna (2017); Maag (2018); authors' calculations, based on IRS (2018).

The question is whether an increase in the amount of the EITC for childless low earners and an increase in the eligibility age to 70 would increase labor force participation. The evidence to date, which pertains primarily to the labor supply effects of the EITC on younger single mothers, generally concludes that it does increase participation.⁹

Moreover, the increase in labor force participation occurred with little or no effect on hours worked. Chetty, Friedman, and Saez (2013) find that workers with children increase their hours of work in the EITC phasein range, but do not substantially change their hours in the phase-out range. Among married women who are already working, the EITC appears to have little effect on participation in the phase-in range and a small negative effect on hours worked in the phase-out range.¹⁰

Because the current childless worker EITC is small and phases out at low incomes, researchers have not explored the impact of the work effort among this group in the United States.¹¹ But we were curious about

- 9. See Hotz and Scholz (2003); Eissa and Hoynes (2006a); and Meyer (2010).
- 10. Eissa and Hoynes (2006b); Heim (2010).

^{11.} A few international studies suggest that programs similar to the EITC increase the labor force participation of older workers. Estimates of the impact of an EITC in Germany show an increase in labor force participation for workers without dependent children age 40–65 (Haan and Prowse 2010). Among older workers in Australia, a recent paper found that a targeted \$500 EITC for older workers increased their labor force participation rate by 0.5 percentage point (Breunig and Carter 2018). In Sweden, an EITC and payroll tax credit for older workers increased the likelihood of working at age 66 (Laun 2017; Laun and Palme 2018).

whether older adults with children responded to the EITC similarly to their younger counterparts. To answer this question, our colleague Geoff Sanzenbacher did a preliminary analysis based on variance in statelevel EITC programs.¹² The results indicate that older Americans with children increased their labor force participation by virtually the same amount as younger claimants. This finding suggests expanding the EITC to childless older adults could increase their participation as well.¹³

To have an effect, however, the EITC benefit must be salient. A maximum benefit of \$519 is not enough to grab anyone's attention. It is unclear whether doubling the benefit will suffice or whether a maximum benefit in the \$2,000 range would be necessary. Moreover, workers age 65 to 70 need to work longer for a secure retirement, and so the eligibility age should be raised. The question is how much it would cost to raise the maximum benefit to \$2,000 for childless workers and expand the age to 21–24 for younger people and to age 65–70 for older people. Given that the cost of doubling the benefit and adding the younger years is estimated to be \$95 billion over 10 years, the cost of the more ambitious proposal might be about \$300 billion over 10 years.¹⁴ A recent study for the current EITC population suggests that much of the EITC cost is largely offset by increasing payroll and sales taxes and by decreasing unemployment and the use of public assistance programs.¹⁵ Some of those offsets would also be relevant to those without dependent children early in their careers and those approaching retirement.

Clarify the Picture about Working Longer

While changes both inside and outside Social Security and Medicare can improve the return to work, some relatively costless changes in framing the environment in which people make retirement decisions might also encourage employees to stay in the labor force. Three options are described here: (1) clarify that 70 is the nation's retirement age; (2) report 401(k) balances in terms of monthly income; and (3) encourage employees to conduct seminars for older employees about the advantages of working longer.

Establish a National Retirement Age of 70

For many years, 65 was thought to be the nation's retirement age—the age at which people were no longer expected to work. It was the age at which people got full benefits under the Social Security program, and it was the age used by many public and private employer retirement plans. But what is the national retirement

14. Maag (2018).

15. Bastian and Jones (2018).

^{•••}

^{12.} In this analysis, workers with and without dependent children in states with their own EITCs were compared with those with and without kids in states without their own EITCs—similar to a difference-in-differences analysis. If the EITC has an effect, one would expect that those with kids in EITC states would be more likely to work than otherwise similar individuals: (1) with kids in non-EITC states; and (2) without kids in EITC states. The analysis showed that this relationship existed and was similar for younger households age 25–34 and older households ages 55–64.

^{13.} See Berlin (2009); Scholz (2007); Edelman et al. (2009); and Miller et al. (2017). The only direct evidence comes from the United Kingdom, which introduced a working tax credit for workers without children. Researchers at the British Treasury estimated that the credit increased the labor force participation rate for childless adults in their middle to late 20s by 2–3 percentage points; see Mulheirn and Pisani (2006).

age today? Social Security's full retirement age—the age at which participants receive "full benefits"—is currently 66 and 2 months for people born in 1955. That age is not one that catches the national conscience. Moreover, the FRA keeps changing; it will rise gradually to 67 for those born in 1960 or later.

Clarifying the nation's retirement age would provide an anchor for retirement planning and help drive home the sacrifices of retiring earlier. It could well change behavior, because, when faced with a complex financial decision, many individuals default to an anchor. Experimental studies find that referencing higher ages is associated with a significant increase in the expected Social Security claim age and expected retirement age.¹⁶ Indeed, researchers have found that people have responded to an increase in the FRA and claimed their Social Security benefit later than previous cohorts.¹⁷ A strong case can be made that age 70 is the nation's real retirement age.¹⁸ It is the age that maintains the same ratio of retirement to working years as in 1940, the age at which Social Security provides solid replacement rates, and the age at which most people are assured of retirement security.

Retains ratio of retirement to working years. If 65 were the "correct" retirement age in 1940, what would be the comparable age today? The discussion here reports on two measures. The first measure is the age at which the expected number of years in retirement remains unchanged, using 1940 as the base year. The second measure identifies the age at which the ratio of the expected number of years spent in retirement to the expected number of years working—from age 20 to retirement—remains constant. This ratio seems like a better measure because it distributes gains in life expectancy into both working years and retirement years. Table 2 shows that the option that distributes gains between work and leisure suggests age 69 and 9 months—very close to 70. So, a national retirement age of 70 would still allow for a reasonable period of retirement.

^{16.} See Madrian (2014), Brown, Kapteyn, and Mitchell (2013); and Vermeer (2016).

^{17.} For more on how individuals responded to changes in the full retirement age, see Mastrobuoni (2006); Pingle (2006); Song and Manchester (2007); Kopczuck and Song (2008); Behagel and Blau (2010); Blau and Goodstein (2010); and Coe, Khan, and Rutledge (2013).

^{18.} The nation's real retirement age became 70 with the maturation of Social Security's delayed retirement credit. In the 1930s, the notion was that 65 was the age at which people could no longer work and needed benefits to support themselves. No benefits were paid before that age, and no increments were added for claiming later. In 1956, Congress gave women the option to retire as early as age 62 on a reduced monthly benefit. That is how things remained for about a decade; actuarially reduced benefits were available at 62 and the maximum benefit at 65. In 1972, Congress introduced a 1 percent Delayed Retirement Credit as a bonus for claiming beyond 65, but the credit did not come close to compensating for the fact that late claimers would get benefits over fewer years. In 1983, the credit was raised to 3 percent and scheduled to increase gradually to 8 percent for those turning 65 in 2008. At this point, the person with average life expectancy can claim at any time between 62 and 70 with the same lifetime benefits. The highest monthly benefits are paid at 70, with actuarial reductions for claiming early.

Table 2. Retirement Age Equivalent to Age-65 Retirement in 1940, Based on Rising Life Expectancy (in years: months)

| Age at which: | | | | | |
|---------------|---|---|--|--|--|
| Year | Expected retirement years remain constant | Ratio of expected retirement to working years remains constant | | | |
| 1940 | 65:00 | 65:00 | | | |
| 1960 | 66:07 | 66:01 | | | |
| 1980 | 68:01 | 67:01 | | | |
| 2000 | 70:02 | 68:07 | | | |
| 2020 | 71:10 | 69:09 | | | |
| 2040 | 73:01 | 70:07 | | | |

Note: For the ratio of expected retirement to working years, people are assumed to start work at age 20. **Source:** Calculations from U.S. Social Security Administration (2018).

Ensures adequate Social Security replacement rate. Another way to answer the question of whether age 70 is a sensible retirement age is to look at Social Security replacements rates in 2025 once the FRA reaches 67 for all cohorts. Social Security replacement rates for those with median earnings who claim at age 70 will stabilize at about 50 percent. But the reported replacement rates overstate the amounts that retirees will actually get in retirement, because premiums for Medicare Part B and Part D are automatically deducted from Social Security benefits.¹⁹ Furthermore, out-of-pocket medical expenses consume much more of retirees' Social Security benefit over their retirement as they use more health care and as health care costs rise faster than the Social Security cost-of-living adjustment.²⁰ Figure 2 shows gross and net replacement rates by claiming age in 2025. The net replacement rate at age 70 will equal 46 percent. It should also be noted, however, that the full benefit will be taxed under the personal income tax for the medium household beginning in about 2030.²¹ Nevertheless, the replacement rate at age 70 would provide a solid base on which to add 401(k) savings and home equity for a secure retirement.

•••

20. See Cubanski, Neuman, and Smith (2018); and McInerney, Rutledge, and King (2017).

21. See Purcell (2015). Social Security benefits are taxed under the personal income tax. Individuals with more than \$25,000 and married couples with more than \$32,000 of "combined income" have to pay taxes on up to 85 percent of their Social Security benefits. Combined income is adjusted gross income as reported on tax forms plus nontaxable interest income plus one half of Social Security benefits. Because the thresholds are not indexed for growth in average wages or even for inflation, the percentage of recipients whose benefits are subject to tax increases over time.

Note that the full Social Security benefit is considered for tax purposes, even though the Medicare premiums are deducted before payment. See Centers for Medicare & Medicaid Services (2018) and U.S. Social Security Administration (2018).





Source: Calculations from U.S. Social Security Administration (2018) and Centers for Medicare & Medicaid Services (2018).

Ensures retirement security. Finally, the National Retirement Risk Index can be adapted to determine the age when most people would be financially secure. This index, which uses the Federal Reserve's Survey of Consumer Finances, compares today's working households' projected replacement rates with target replacement rates that smooth lifetime consumption and allow households to maintain their standard of living. The percentage that fall short by more than 10 percent are deemed to be at risk; in 2016, that number was 50 percent. The index can also be used to determine the age at which households can stop working and maintain their preretirement living standard—that is, the age at which the household's projected replacement rate equals its target. The results of this exercise indicate that the vast majority of households—more than 85 percent—would be prepared for retirement by age 70 (see figure 3).





So, if 70 is the age at which Social Security provides the highest benefits, the age which maintains the same ratio of retirement to working years as in 1940, and the age at which people are assured of retirement security, what does this mean for the existing FRA standard? Actually, the maturation of the delayed retirement credit has rendered it a largely meaningless concept.22 It does not describe the age when benefits are first available. That is age 62. It does not describe the age when monthly benefits are adequate. That is age 70. Age 70 is the nation's retirement age, and policymakers should announce it from the rooftops.23 People will respond.

Report 401(k) Income Projections

Shifting the focus from 401(k) balances to the monthly income these balances would provide at retirement gives participants a much better sense of the portion of required expenses that their 401(k) accumulations can cover once they stop working. The concern is that 401(k)/IRA balances of, say, \$135,000 (the median balance for households approaching retirement in 2016) may give many a false sense of security and encourage them to retire earlier than they should.24 Showing participants that \$135,000 provides only \$630

^{22.} A few specific provisions are linked to the FRA. An earnings test applies before age 66 (the FRA) but not thereafter. Widow and spousal benefits are reduced if claimed before the FRA and not thereafter.

^{23.} For a discussion of how to design an effective public education campaign to influence retirement behavior, see Gale and Harris (2013).

^{24.} IRA balances are included, because most of the money in IRAs is rolled over from 401(k)s.

per month can help them recognize that they do not have enough and convince them to either boost their savings rate or work longer.25

The Department of Labor (DOL) recognized the need for such information, and in 2013 it issued for comment an advanced notice of proposed rulemaking that would encourage the sponsors of 401(k) plans to project how much income a participant's 401(k) balances would provide at retirement.26 More recently, the Retirement Enhancement and Savings Act of 2018, a bundle of small changes aimed at increasing voluntary retirement savings, included a provision requiring disclosure at least once a year of the lifetime income stream equivalent to the total assets accrued by the participant.27 DOL would issue assumptions that plan administrators could use, without concern of liability under ERISA, to convert total accrued benefits into lifetime income stream equivalents.

In its 2013 request for comment, DOL asked for suggestions on how best to estimate a stream of lifetime income, and it also offered two suggestions. The first was the income that participants' current account balances would provide if they were now at the normal retirement age. The second was the income they would receive at retirement assuming their current balance would grow with future contributions and investment returns. The assumption is that contributions would increase by 3 percent a year and earn a nominal return of 7 percent. The projected balance would then be deflated by 3 percent a year to put it back into today's dollars. Eliminating inflation from the calculation is extremely important, or else everyone would look like projected millionaires. Social Security's online benefit statement calculations also present projected benefits in terms of today's dollars.

Income projections for 401(k) balances are more difficult than for Social Security. Social Security has a benefit formula that can be applied to the individual's 35 highest years of average indexed monthly earnings. In contrast, the projections for 401(k) balances require assumptions about how much that lump sum can produce. In 2013, DOL seemed to suggest that participants use their money to buy an actuarially fair annuity. This assumption may provide a somewhat optimistic estimate, for two reasons. First, people do not purchase annuities with their 401(k) balances, and any rule of thumb for drawing down assets, such as the "4-percent rule," would produce smaller monthly amounts. A less important consideration is that any annuity that individuals can actually purchase in the private sector will provide less income than an actuarially fair annuity.

Unfortunately, only bits and pieces of evidence are available regarding how changing the presentation of accumulation might affect outcomes. A couple of studies found that the provision of income information increased saving. A 2012 field experiment, which tested the effect of retirement income projections on saving decisions for 17,000 employees of the University of Minnesota, showed that providing individuals with retirement income projections, along with related material on retirement planning, modestly increased saving at a very low cost.28 Similarly, researchers exploring the impact of annual letters that include projected public pension benefits issued by the German pension authority found sizable and persistent increases in private retirement saving.29 On the other hand, the evidence on the impact of the Social Security Statement

29. See Dolls et al. (2016).

^{25.} The \$630 is the estimate reported by Immediateannuities.com for a joint-and-survivor annuity for a man age 65 and his wife age 63.

^{26.} A number of financial firms (Fidelity, TIAA, Blackrock, Vanguard, Voya, Bank of America Merrill Lynch, Principal Financial Group, T. Rowe Price, Empower, and perhaps many others) provide publicly available calculators that include retirement income as an output. But most participants do not take advantage of such options.

^{27.} This bill (H. R. 2055) would amend the Employee Retirement Income Security Act of 1974 (ERISA) to require these disclosures in participant benefit statements.

^{28.} See Goda, Manchester, and Sojourner (2014).

in the United States is mixed. One study found relatively little impact on workers' retirement behavior, whereas a recent study suggests that the Statement encouraged delayed claiming.30 Finally, the literature on resistance to annuitization indicates that people overvalue a lump sum relative to a stream of income.

Clearly, providing information about the projected income from 401(k) balances will not single-handedly encourage employees to work longer, but rather should be viewed as an inexpensive and feasible change that might nudge people in the right direction. Another, more controversial, change would be to increase the age at which participants can withdraw their 401(k) balance penalty free from $59^{1/2}$ to 62.

Provide Materials for Employers and Others to Educate Their Workers

In 2017, Massachusetts Governor Charlie Baker established the Governor's Council to Address Aging in Massachusetts, and one of the council's workgroups focused on keeping older people in the labor force in order to ensure a secure retirement. This workgroup—which consisted of business people, academics, and representatives from advocacy organizations—concluded that the necessary basic research has already been done and that the challenge is to get the word out to employees about the advantages of working longer and to employers about the value of older workers. One component of the educational effort would be a Power-Point presentation that human resources professionals could provide to employees while they are in their 50s, or even younger, to help them make more informed decisions about how much longer they should work.

The attached PowerPoint presentation is intended only as a starting point. The idea was to hire a professional designer to develop a suite of materials on the benefits of working longer, which would include a final version of the PowerPoint and any supporting items, such as new booklets or infographics. The products would be disseminated in three ways:

- by requesting that the governor host an event on the importance of working longer;
- by publishing the documents online at mass.gov (the state's website); and
- by distributing the presentation and accompanying materials through chambers of commerce, Associated Industries of Massachusetts, human resources groups, libraries, community organizations, and other relevant organizations.

In summary, much of the analytical work has been done in terms of the desirability of working longer; the remaining challenge is to educate employees about the importance and implications of their choice of retirement dates. This effort falls to government and employers. The most important initiative for policymakers is to clarify that age 70 is the national retirement age; it is the age that maintains the ratio of retirement to work years, it is the age that produces adequate replacement rates, and it is the age that assures households have a secure retirement. This framing helps clarify that choosing to retire before 70 involves sacrificing retirement income and security. Similarly, requiring 401(k) plans to report not only asset balances but also the income those balances will provide drives home for many the inadequacy of their retirement saving and the need to work longer. Finally, employers and other organizations can play an important role in getting younger employees to start thinking about how long they will want to work. Employees' decisions,

^{30.} See Mastrobuoni (2011) and Smith (2018).

however, are only half the equation; the other half is employers' willingness to retain and hire older workers. The next section explores two possible ways to increase the attractiveness of older workers to employers.

Increase the Appeal of Older Workers to Employers

Two options for increasing the appeal of older workers are (1) to make the employer comfortable with the decision to hire and retain; and (2) to eliminate misperceptions about older workers by producing a strong business case for hiring and retaining them.

Restore Mandatory Retirement

The shift to 401(k) plans and the elimination of mandatory retirement mean that retirement is a much messier process today than it was in the past. With mandatory retirement, both parties knew that as of a certain age, the relationship would end. Employers also used traditional defined benefit plans to structure an orderly departure, often before the mandatory retirement age. No such structure exists in a 401(k) environment. As a result, employers face the prospect of workers with stagnating productivity and inadequate 401(k) balances hanging on much longer than desirable.

Employers will need tools to manage an older workforce, where the cost of compensation—particularly health insurance—tends to outpace productivity as age rises. A recent study found that health insurance tends to cost about \$1,500 more a year for older workers than for younger ones, which may not be significant for higher earners but constitutes a major portion of compensation for low-wage workers.31 Without tools to ensure that compensation does not exceed productivity, employers will avoid older workers. Indeed, studies show that older workers are less likely to be called back for an interview, even when they are as qualified as younger workers.32 And they typically experience longer spells of unemployment than younger workers.33 A small body of literature suggests that older workers are less likely to be hired in states with stricter age discrimination laws, although the results are marginal and ambiguous across gender.34 Not only do older workers face discrimination in the hiring process, they also can be pushed out of their existing jobs, despite antidiscrimination protections.35

One tool could be the restoration of some form of mandatory retirement at age 70 (which is substantially higher than mandatory retirement ages in the past), indexed to the age at which Social Security provides the maximum benefit. While employers can dismiss older workers who can no longer do their job, the process is unpleasant and employers worry about age discrimination lawsuits. But employers cannot legally dismiss older workers whose health insurance premiums have risen too high or who have come down with very expensive medical problems. Mandatory retirement would limit the employer's exposure to the problem of compensation outpacing productivity that typically emerges as workers age. This limit could be key

33. See Monge-Naranjo and Sohail (2015).

^{31.} See Burtless (2018).

^{32.} See Neumark et al. (2016).

^{34.} For age discrimination in hiring across states, see Adams (2004); Lahey (2008); Neumark and Button (2014); and Neumark, Song, and Button (2017).

^{35.} Gosselin and Tobin (2018) spotlight practices used by IBM to shrink its workforce that disproportionately affected older workers.

as, given the decline in career employment, hiring decisions have become more important. Putting a lid on tenure could make hiring workers in their 50s and early 60s more attractive, especially for low- and average-wage workers with employers that offer health insurance.

A proposal to reinstate mandatory retirement would certainly be controversial. One option would be to create a default mandatory retirement age of 70 and allow firms to opt out or set a higher age.36 Those firms that opt out would carry on as they do currently. Those employers that stick with the default would be required to notify employees six months before the mandatory retirement age and consider employees' requests to work beyond the mandatory retirement age.37

A default retirement age would have benefits for both retirement planning and workforce management. On the employee side, it would provide a more formal process to enable workers to plan to work longer, begin partial retirement, or enter into full retirement at age 70. On the employer side, a default retirement age would give employers a way to separate from an employee whose compensation outpaces his or her productivity, increasing the attractiveness of hiring older workers.

The Business Case for Older Workers

Another approach is to convince employers of the value of older workers by presenting a hard-nosed business case for hiring and retaining them. Several organizations have published materials that advocate for older workers, but the discussion tends to be anecdotal and personal rather than grounded in broad-based evidence. If employers' reluctance to hire older workers is based on statistical, as opposed to taste-based, discrimination, then information should help.

Older workers today are healthier, better educated, and more computer savvy than in the past and, in terms of these basic characteristics, they look very much like younger workers. In addition, they bring more to the job in skills, experience, and professional contacts. Finally, they are more likely to remain with their employer longer, and longer tenure can enhance productivity and increase profitability for the employer. These benefits can help offset any remaining cost differentials between older and younger workers. In short, the business case for older workers seems compelling.

The workgroup on employment of the Governor's Council on Aging in Massachusetts prepared "The Business Case for Older Workers," which is attached. It also prepared a brochure based on this document (also attached). The proposal was for the state to hire a professional designer to develop a suite of materials to be shared with employers. These materials would include a final version of the brochure and any supporting items, such as infographics. They would be developed using framing strategies designed to expand the way that employers think about older workers. Testimonials from leading Massachusetts employers about the value of older workers might also be included in the materials.

The key to the workgroup's vision, however, was the involvement of the governor. The thought was that he would use his bully pulpit both to inform employees about the merits of working longer and to educate employers about the advantages of older workers. The campaign could begin with the governor hosting

^{36.} For a short time, the United Kingdom had a default retirement age; see Sykes, Coleman, and Groom (2010).

^{37.} Employees would also have an opportunity to appeal the employer's decision. Employees would still be protected under antidiscrimination laws, and would be able to file suit if their employer discriminates or does not follow the correct process for separating at the default retirement age.

business leaders to share "The Business Case for Older Workers" and encourage them to share the information with their peers, creating a ripple effect. If employers are indeed incorrectly stereotyping older workers, then a massive public relations campaign is needed to correct these misperceptions.

At the national level, DOL could support such an effort by launching a pilot program—to, say, five states—to provide funding and to undertake an assessment to determine whether an educational campaign makes a difference in the hiring and retention of older workers. Interested governors committed to supporting older workers would partner with DOL to distribute an array of materials in a variety of ways to employers in their state. Governors would thus have a relatively low-cost way to support their older workforce, and DOL would be able to assess the program's effectiveness for a potential rollout on a national scale.

Paths Not Taken

The proposals discussed above do not include two popular suggestions for older workers—training and flexibility. The reasons for leaving out these options are uncertainty about the success of training programs in the United States and concern that flexibility may be self-defeating.

U.S. Shows Little Interest in Strengthening Labor Market for Older Workers

Many studies that review the prospects of older workers stress the importance of expanded training opportunities.38 In the United States, older workers who lose their job can access American Job Centers (also known as One-Stop Centers). These centers, established under the Workforce Investment Act, and reauthorized in the Workforce Innovation and Opportunities Act of 2014, offer training referrals, career counseling, job listings, and similar employment-related services. Customers can visit a center in person or connect to the center's information online or through kiosk remote access. The publicly funded programs, however, primarily focus on helping low-wage and disadvantaged groups enter the labor force. The American Job Centers also tend to direct older low-wage job-seekers to the Senior Community Service Employment Program, which offers graceful exits from the labor force via placements in subsidized minimum-wage community service jobs.

This concentration on disadvantaged and low-wage workers is due to budget constraints and the need to direct limited training funds to this high-priority need. A recent United Nations study found that the United States spends a much smaller share of GDP on training than any of the 20 European and North American countries surveyed (see Figure 4). The effectiveness of U.S. public training programs is also unclear, although the general impression is that success has been quite modest.39 So as desirable as expanded and effective training for older job-seekers might be, it seems unlikely to emerge any time soon.

^{38.} For example, see OECD (2006).

^{39.} See GAO (2011) for the uncertainty surrounding the effectiveness of U.S. public sector training programs; LaLonde (1995) for the consensus view that success has been limited; and Osterman (2006) for a somewhat more optimistic appraisal.



Figure 4. Public Expenditures on Labor Market Programs as a Percentage of GDP, 2016

Source: OECD (2016).

"Phased Retirement" Is a Diversion

Much of the discussion about working longer has focused on expanding opportunities for phased retirement or part-time employment.⁴⁰ Indeed, the majority of older workers say they would like to retire gradually, cutting back their hours rather than retiring "cold turkey." ⁴¹ This preference is understandable. These workers have spent thirty or more years in the labor force and retirement represents a sharp social, physiological, and economic break with life as they know it. So expanding opportunities for such workers to reduce their hours has seemed a reasonable way for them to extend their careers. Policymakers have embraced the idea, and Congress included a provision in the Pension Protection Act of 2006 that would allow workers to access a portion of their defined benefit pension at 62 and defer the rest until full retirement.

The problem is that, to ensure a secure retirement, most workers will need to remain in regular full-time employment well into their sixties. And to be attractive as potential hires, workers need to assure employers that they have enough of a "future" in the labor force that it makes sense to invest in skills and relationships that will keep them productive.

While workers claim they want to retire gradually, phased retirement does not appear to improve workers' happiness in retirement. A study using the Health and Retirement Study showed that the nature of the transition—gradual or abrupt—had no effect on happiness.⁴² Other factors—such as health, the loss of a

^{40.} The term "phased retirement" is sometimes limited to full-time workers reducing their hours in their current job. For example, see Hutchens and Papps (2005) and Hutchens (2007). Our focus here is the broader concept of retirement in stages, not necessarily with the same employer.

^{41.} In the Health and Retirement Study, older workers are asked the following question: "As I get older, I would prefer to gradually reduce the hours I work on this job, keeping my pay per hour the same. Do you agree or disagree?" Almost 60 percent of workers "strongly agree" or "agree," and this percentage has remained steady over time.

^{42.} See Calvo, Haverstick, and Sass (2009).

spouse, and the individual's control over the retirement decision—influence happiness, but the results provided no evidence that those who retired gradually were any happier in the interview after retirement than those who retired cold turkey.

Moreover, initiatives to expand part-time employment at the end of a worker's career might not be especially fruitful. Relatively few types of production seem suited to part-time work. Most economic activity seems far more efficient when done by teams of full-time workers who are continually present at the same location.⁴³ Part-time employment is also expensive, in the sense that the employer must spread the costs of recruiting, training, scheduling, supervising, and evaluating workers over fewer hours of labor. The last thing that policymakers should want is to make older workers more expensive than their younger counterparts.

Most importantly, a 2007 study by Gustman and Steinmeier finds that expanding part-time opportunities might not result in increased employment. Yes, some workers would delay retirement and increase employment at older ages, but others would move to part-time work at younger ages, in lieu of full-time employment. The net result would be little change in either "full-time equivalent" employment or retirement income security.

Of course, not everyone can work full time well into their sixties. Many of those who need most to work longer—low-wage workers dependent on Social Security—will not be able to work. For example, disability-free life expectancy at age 50 for men in the lowest quartile is only 15 years.⁴⁴ It is difficult to argue that an individual in this position should be expected to work full-time until age 67. Thus, the prescription to work longer must be administered with care. But the vast majority of older Americans will be able to work longer, and efforts should be focused on extending full-time work for the majority.

Conclusion

The single best way to ensure that today's workers can enjoy a secure retirement is to persuade them to stay in the labor force longer and convince employers to hire and retain them. Beyond program changes to Social Security and Medicare, policymakers have several potential options for encouraging longer working lives.

To persuade workers, policymakers can start by improving their financial incentives through changes to the Earned Income Tax Credit. Next, and more important, they can transform the conversation about when to retire by launching a concerted educational campaign to establish 70 as the national retirement age. In addition to direct outreach by government, the goals of this campaign would be supported by requiring 401(k) plans to report how asset balances translate into retirement income and by providing educational materials for workers to be delivered through third parties, such as employers, advocacy groups, and community organizations.

To persuade employers, policymakers should consider restoring mandatory retirement—at age 70—while retaining the flexibility for firms to employ people longer if desirable. By setting clear guidelines for when

^{43.} Discrete, routine, and self-contained tasks are most amenable to part-time employment; industries that must accommodate uneven demand across the workday, such as retailing, restaurants, and mass transit and those that deliver services directly to people, can benefit by employing part-time workers. See Blank (1998); Nollen et al., (1977); Friedberg (1999); and Hutchens (2001).

^{44.} Authors' calculations for 2017 using data from the Centers for Disease Control's National Health Interview Survey, the Social Security Administration's Period Mortality Tables, and the Census Bureau's American Community Survey.

to anticipate the transition to retirement, such a policy would help workers engage in more deliberate planning and assist employers in their workforce management policies. Another alternative is to make a clear and compelling case to employers of the value that older workers bring, a value that may currently be obscured by misperceptions about the abilities and commitment of such workers.

The bottom line is that more research is not needed to understand the problem and potential solutions. We already know what needs to be done. The next step is to convince policymakers to actively and energetically support these types of initiatives. The payoff from success will be enormous: transforming the workforce, the economy, and the culture in a way that will ensure retirement security for today's workers and future generations.

REFERENCES

- Adams, Scott J. 2004. "Age Discrimination Legislation and the Employment of Older Workers." *Labour Economics* 11, no. 2: 219–41.
- Bastian, Jacob, and Maggie R. Jones. 2018. "Does the EITC Pay for Itself?" Paper presented at APPAM Fall Research Conference, Washington, November 9.
- Behagel, Luc, and David M. Blau. 2010. *Framing Social Security Reform: Behavioral Responses to Changes in the Full Retirement Age*. IZA Discussion Paper 5310. Bonn: Institute of Labor Economics.
- Berlin, Gordon. 2009. "Transforming the EITC to Reduce Poverty and Inequality." *Pathways*, Winter. <u>http://inequality.stanford.edu/sites/default/files/media/media/pdf/pathways/winter_2009/Berlin.pdf</u>.
- Blank, Rebecca M. 1998. "Labor Market Dynamics and Part-time Work." *Research in Labor Economics* 17: 57–93.
- Blau, David M., and Ryan M. Goodstein. 2010. "Can Social Security Explain Trends in Labor Force Participation of Older Men in the United States?" *Journal of Human Resources* 45, no. 2: 328–63.
- Breunig, Robert V., and Andrew Carter. 2018. Do Earned Income Tax Credits for Older Workers Prolong Labor Market Participation and Boost Earned Income? Evidence from Australia's Mature Age Worker Tax Offset. Working Paper 2018-15. Canberra: Tax and Transfer Policy Institute.
- Brown, Jeffrey R., Arie Kapteyn, and Olivia S. Mitchell. 2013. "Framing and Claiming: How Information-Framing Affects Expected Social Security Claiming Behavior." *Symposium on the Methodologies of Behavioral Insurance* 83, no. 1: 139–62.
- Burtless, Gary. 2017. "Age Related Health Costs and Job Prospects of Older Workers." Paper presented at Stanford Institute for Economic Policy Research, Working Longer Retirement Conference, Stanford, CA, November 2–3.
- Calvo, Esteban, Kelly Haverstick, and Steven A. Sass. 2009. "Gradual Retirement, Sense of Control, and Retirees' Happiness." *Research on Aging* 31, no. 1: 112–35.
- Center on Budget and Policy Priorities. 2017. "State Earned Income Tax Credits." Policy Basics Series. Washington.
- ----. 2018. "The Earned Income Tax Credit." Policy Basics Series. Washington.
- Centers for Medicare & Medicaid Services. 2018. 2018 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. Washington.
- Coe, Norma B., Mashfiqur R. Khan, and Matthew S. Rutledge. 2013. *How Important Is Medicare Eligibility in the Timing of Retirement?* Issue in Brief 13-7. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Cubanski, Juliette, Tricia Neuman, and Karen E. Smith. 2018. "Medicare Beneficiaries' Out-of-Pocket Health Care Spending as a Share of Income Now and Projections for the Future. Menlo Park, CA: Henry J. Kaiser Family Foundation.

- Dolls, Mathias, Philipp Doerrenberg, Andreas Peichl, and Holger Stichnoth. 2016. *Do Savings Increase in Response to Salient Information About Retirement and Expected Pensions?* Working Paper 22684. Cambridge, MA: National Bureau of Economic Research.
- Edelman, Peter, Mark Greenberg, Steve Holt, and Harry Holzer. 2009. *Expanding the EITC to Help More Low-Wage Workers*. Washington: Georgetown Center for Poverty, Inequality, and Public Policy.
- Eissa, Nada, and Hilary W. Hoynes. 2006a. "Behavioral Responses to Taxes: Lessons from the EITC and Labor Supply." In *Tax Policy and the Economy, Volume 20*, edited by James M. Poterba. Cambridge, MA: MIT Press.
- Employee Benefit Research Institute. 2018. "Expectations about Retirement." RCS Fact Sheet 2. Washington.
- Friedberg, Leora. 1999. "The Trend toward Part-Time Work among Older Workers." Paper prepared for NBER Summer Institute, Cambridge, MA, July 17.
- Gale, William G., and Benjamin H. Harris. 2013. "Developing and Disseminating Financial Guidelines for Retirement Planning." *Journal of Retirement* 1, no. 2: 113–27.
- Goda, Gopi Shah, Colleen Flaherty Manchester, and Aaron Sojourner. 2014. "What Will My Account Really Be Worth? Experimental Evidence on How Retirement Income Projections Affect Saving." *Journal of Public Economics* 119: 80–92.
- Goda, Gopi Shah, John B. Shoven, and Sita N. Slavov. 2018. *Implicit Taxes on Work at Older Ages*. Cambridge, MA: National Bureau of Economic Research.
- Gosselin, Peter, and Ariana Tobin. "Cutting 'Old Heads' at IBM." Pro Publica, March 22.
- Haan, Peter, and Victoria Prowse. 2010. "A Structural Approach to Estimating the Effect of Taxation on the Labour Market Dynamics of Older Workers" *Econometrics Journal* 13, no. 3: 99–125.
- Heim, Bradley T. 2010. *The Impact of the Earned Income Tax Credit on the Labor Supply of Married Couples: A Structural Estimation*. Working Paper. Bloomington: Indiana University.
- Hotz, V. Joseph, and John Karl Scholz. 2003. "The Earned Income Tax Credit." *In Means-Tested Transfer Programs in the U.S.*, edited by Robert Moffitt. Chicago: University of Chicago Press.
- Hutchens, Robert. 2001. "Employer Surveys, Employer Policies, and Future Demand for Older Workers." Paper presented at Retirement Research Consortium forum on Demand for Older Workers, Brookings Institution, Washington.
- Hutchens, Robert, and Kerry L. Paaps. 2005. "Development in Phased Retirement" In *Reinventing the Retirement Paradigm*, edited by Robert L. Clark and Olivia S. Mitchell. Oxford: Oxford University Press.
- Kopczuck, Wojciech, and Jae Song. 2008. *Stylized Facts and Incentive Effects Related to Claiming of Retirement Benefits Based on Social Security Administration Data*. Working Paper 2008-200. Ann Arbor: Michigan Retirement Research Center.

- Lahey, Joanna. 2008. "State Age Protection Laws and the Age Discrimination in Employment Act." *Journal of Law & Economics* 51, no. 3: 433–60.
- LaLonde, Robert J. 1995. "The Promise of Public Sector-Sponsored Training Programs." Journal of Economic Perspectives 9, no. 2: 149–68.
- Laun, Lisa. 2017. "The Effect of Age-Targeted Tax Credits on Labor Force Participation of Older Workers." *Journal of Public Economics* 152: 102–18.
- Laun, Lisa, and Mårten Palme. 2018. *The Recent Rise of Labor Force Participation of Older Workers in Sweden*. Working Paper 24593. Cambridge, MA: National Bureau of Economic Research.
- Maag, Elaine. 2018. "Tax Reform 2.0 Should Expand Childless EITC to Reduce Poverty." Tax Policy Center. <u>https://www.taxpolicycenter.org/taxvox/tax-reform-20-</u> <u>should-expand-childless-eitc-reduce-poverty</u>.
- Madrian, Brigitte C. 2014. *Applying Insights from Behavioral Economics to Policy Design*. Working Paper 20318. Cambridge, MA: National Bureau of Economic Research.
- Mastrobuoni, Giovanni. 2006. "Labor Supply Effects of the Recent Social Security Benefit Cuts: Empirical Estimates Using Cohort Discontinuities." *Journal of Public Economics* 93, nos. 11–12: 1224–33.
- McInerney, Melissa, Matthew S. Rutledge, and Sara Ellen King. 2017. *How Much Does Out-of-Pocket Medical Spending Eat Away at Retirement Income?* Working Paper 2017-13. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Meyer, Bruce D. 2010. "The Effects of the Earned Income Tax Credit and Recent Reform." In *Tax Policy and the Economy, Volume 24*, edited by Jeffrey R. Brown. Chicago: University of Chicago Press.
- Miller, Cynthia, Lawrence F. Katz, Gilda Azurdia, Adam Isen, and Caroline Schultz. 2017. Expanding the Earned Income Tax Credit for Workers without Dependent Children. New York: MDRC.
- Monge-Naranjo, Alexander, and Faisal Sohai. 2015. "The Composition of Long-Term Unemployment Is Changing Toward Older Workers." *Regional Economist* (Federal Reserve Bank of Saint Louis).
- Mulheirn, Ian, and Mario Pisani. 2006. "The Labour Supply Effect of the Working Tax Credit: A Quasi-Experimental Evaluation." <u>https://www.researchgate.net/publication/255595948 The Labour Supply Effect of the Work-</u> ing Tax Credit A Quasi-experimental Evaluation.
- Munnell, Alicia H., Mauricio Soto, and Alex Golub-Sass. 2008. *Will People Be Healthy Enough to Work Longer?* Working Paper 2008-11. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Munnell, Alicia H., Anthony Webb, Luke Delorme, and Francesca Golub-Sass. 2012. *National Retirement Risk Index: How Much Longer Do We Need To Work?* Issue in Brief 12-12. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Neumark, David, Ian Burn, Patrick Button, and Nanneh Chehras. 2016. Do State Laws Protecting Older Workers from Discrimination Laws Reduce Age Discrimination in Hiring? Experimental (and Nonexperimental) Evidence. Working Paper 2016-349. Ann Arbor: Michigan Retirement Research Center.

- Neumark, David and Patrick Button. 2014. "Did Age Discrimination Protections Help Older Workers Weather the Great Recession?" *Journal of Policy Analysis and Management* 33, no. 3: 566–601.
- Neumark, David, Joanne Song, and Patrick Button. 2017. "Does Protecting Older Workers from Discrimination Make it Harder to Get Hired? Evidence from Disability Discrimination Laws." *Research on Aging* 39, no. 1: 26–63.
- Nollen, Stanley D., Brenda B. Eddy, and Virginia H. Martin. 1977. "Permanent Part Time Employment: The Manager's Perspective." Report DLMA-21-11-75-16. Washington.
- OECD (Organization for Economic Cooperation and Development). 2006. "Older Workers: Living Longer, Working Longer." *DELSA Newsletter*, Issue 2. Paris: OECD Directorate for Employment and Labor and Social Affairs.
- ----. 2016. "Public Spending on Labor Markets." https://data.oecd.org/chart/5nCL.
- Osterman, Paul. 2006. "Employment and Training Policies: New Directions for Less Skilled Adults." In *Workforce Policies for a Changing Economy*, edited by Harry Holzer and Demetra Nightingale. Washington: Urban Institute Press.
- Pingle, Jonathan F. 2006. *Social Security's Delayed Retirement Credit and the Labor Supply of Older Men.* FEDS Working Paper 2006-37. Washington: Division of Research & Statistics and Monetary Affairs, Federal Reserve Board.
- Purcell, Patrick J. 2015. *Income Taxes on Social Security Benefits*. Issue Paper 2015-02. Washington: Social Security Administration.
- Scholz, John Karl. 2007. *Employment-Based Tax Credits for Low-Skilled Workers*. Discussion Paper 2007-14. Washington: Brookings Institution.
- Smith, Barbara A. 2018. "Can Informational Interventions be Effective Policy Tools? The Example of the Social Security Statement." Paper presented at APPAM Fall Research Conference, Washington, November 9.
- Song, Jae, and Joyce Manchester. 2007. "Have People Delayed Claiming Retirement Benefits? Responses to Changes in Social Security Rules." *Social Security Bulletin* 67, no. 2.
- Sykes, Wendy, Nick Coleman, and Carola Groom. 2010. *Review of the Default Retirement Age: Summary of the Stakeholder Evidence*. Research Report 675. London: UK Department for Work and Pensions.
- Tax Policy Center. 2018. "State EITC as Percentage of the Federal EITC." <u>https://www.taxpolicycenter.org/statistics/state-eitc-percentage-federal-eitc.</u>
- U.S. Government Accountability Office. 2011. Multiple Employment and Training Programs: Providing Information on Colocating Services and Consolidating Administrative Structures Could Promote Efficiencies. Report GAO-11-92. Washington.
- U.S. Social Security Administration. 2018. *The 2018 Annual report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, table V.A5. Washington.
- Vermeer, Niels. 2016. "Age Anchors and the Expected Retirement Age: An Experimental Study." *De Economist* 164, no. 3: 255–79.

Elevator Speech: Importance of Working Longer

Many of today's workers face a serious income shortfall in retirement. They will need additional income due to rising life expectancy and soaring out-of-pocket health costs. At the same time, they will get less income from traditional sources as Social Security replacement rates are declining and traditional pensions have largely been replaced by 401(k)s. In addition, many workers do not even have a 401(k) plan and few people save much for retirement on their own.

In this environment, a few additional years in the labor force can make a big difference. Extending our work life produces additional earnings; it can lead to a large increase in monthly Social Security benefits; it allows us to contribute more to our 401(k) and for our balances to earn additional investment income; and it shortens the length of retirement, reducing the savings we will need to maintain our standard of living (see Figure 1). Those who continue to work beyond their mid-sixties will be more likely to have a reasonably comfortable retirement.



Figure 1. Working Longer Helps Retirement Security in Three Ways

Source: Authors' calculations, and Charles D. Ellis, Alicia H. Munnell, and Andrew D. Eschtruth. 2014. *Falling Short: The Coming Retirement Crisis and What to Do About It.* Oxford University Press.

With respect to Social Security, participants can claim at any age from 62 to 70. But, to maintain fairness, benefits claimed before 70 are actuarially reduced so that expected *life-time* benefits are roughly equal for both early and late claimers. These adjustments are very significant. *Monthly* benefits for those who start claiming at 70 are 76 percent higher

than the amount they would have received at age 62. Claiming later is particularly attractive for married couples because the survivor's benefit depends on when the higher earner claims. Widows get the higher of their own or their spouse's monthly benefit. So the later the higher earner claims, the higher the benefit their spouse will receive if they die first.

PowerPoint Presentation on the Benefits of Working Longer

The PowerPoint Presentation provides an overview of the financial benefits of working longer and outlines next steps for determining your retirement age.







The age at which you retire is your most important financial decision.



The first step in deciding when to retire is to figure out how much you need.

Typically, you need about 75 percent of your earnings because:

- you will pay less in taxes;
- you won't need to save for retirement;
- your mortgage may be paid off; and
- your kids will be on their own.



Social Security is your best source of retirement income.

- It's inflation proof.
- It keeps coming as long as you live.
- It also supports your spouse.
- To find out how much you'll get, log on: ssa.gov/myaccount



Other retirement income can provide a supplement.

- 401(k)/IRA assets provide a portable and flexible nest egg.
- But balances go down as well as up and may run out.



Monthly Social Security benefits keep lifetime benefits about equal no matter when you claim.

The later you claim, the more \$ you will get each month.







Yes, you might get less over your lifetime if you claim later.

- But even many unhealthy people still outlive the average.
- And it's costly to get stuck with low monthly benefits forever.
- If you outlive your other assets, having a large Social Security benefit will be even more crucial.





And working longer doesn't just help your finances.

It also can improve your:

- physical health;
- life expectancy; and
- psychological well-being.







Next steps

- Figure out how much you need.
- Estimate your target retirement age.
- Make a plan to work longer.
 - Learn new skills.
 - Be prepared to take on a new role at work.
 - Signal to your employer that you want to stick around.



Social Security Claiming Guide

The *Social Security Claiming Guide* is a useful resource for helping older adults decide when to claim their benefits and, in particular, it stresses the advantages of delaying claiming and working longer. The Guide sorts through all of the options, spells out how much you can get, and answers frequently asked questions.




























The Business Case for Older Workers

Employers are always in need of experienced, well-trained, and productive workers. And this need is particularly acute today, when the economy is booming and many jobs are going unfilled due to labor shortages. One solution for firms is to increase their reliance on the large and growing pool of workers ages 55 and over (see Figure 1), many of whom are seeking to lengthen their careers both because they enjoy working and they need to shore up their retirement security. Of course, the abundance of older workers is not an argument for retaining and hiring them. If they were sickly, uneducated, disengaged, and wary of computers, they would not make good employees in many settings. Fortunately, the business case for older workers is compelling.

Older workers today are healthier, better educated, and more computer savvy than in the past and, in terms of these basic characteristics, look very much like younger workers. In addition, they bring more to the job in terms of skills, experience, and professional contacts. Finally, they are more likely to remain with their employer longer, and longer tenure enhances productivity and increases profitability for the employer. All of these benefits more than offset any remaining cost differentials between older and younger workers. The following discussion takes a closer look at each of these features of older workers.







Older Workers Increasingly Look Like their Younger Counterparts

The percentages of workers in good health, with a college degree or more, and who use computers at home are very similar for workers ages 30-35 and those 55-60 (see Figure 2).

Figure 2. Percentage of Workers Healthy, Educated, and Computer Savvy Virtually the Same for Young (30-35) and Older (55-60) Workers, 2017



Notes: College degree includes 2-year associate's degree. Computer use data are from 2010. **Source**: U.S. Census Bureau, *Current Population Survey* (CPS) (2010 and 2017).

Health

The improvements in longevity and health have been dramatic. As shown in Figure 3, at 55 both men and women can expect to live for many years – 27 years for men and 30 years for women. Men have gained 4.7 years in life expectancy over the last four decades, while women have gained 3.4 years. These gains in life expectancy have been accompanied by gains in overall health. By 2017, 91 percent of workers ages 55-60 reported that their health was "good," "very good" or "excellent," only slightly below the 96 percent for workers ages 30-35 (as shown in Figure 2).⁴⁵

^{45.} For other studies that have found similar results see, Irving et al. (2018).



Figure 3. Life Expectancy Increases Reflect the Improved Health of Older Workers

Source: U.S. Social Security Administration (2017a, b).

Education

Over the twentieth century, each generation of workers received more education than the previous one. As a result, younger workers have maintained a consistent educational advantage over older workers. However, increases in schooling among younger cohorts of males slowed dramatically after the mid-1970s. As a result, when male Baby Boomers entered the ranks of the aged, the educational advantage of the young nearly vanished. In 2017, the percentage of male workers with a college degree was 48 percent for those ages 30-35 and 45 percent for those ages 55-60. Some gap still exists for women (60 percent versus 49 percent), because each generation of women continues to get more education. This gap, however, is narrowing and will also eventually disappear.⁴⁶ Overall, 53 percent of those ages 30-35 have a degree compared to 47 percent of those ages 55-60 (as shown in Figure 2).⁴⁷

^{46.} For more details on trends in education patterns for workers of different ages, see Burtless (2013).

^{47.} The same overall pattern is evident no matter how college achievement is measured. The numbers cited above refer to having completed either a two-year associate's degree at a community college or a four-year bachelor's degree. Limiting the definition to a bachelor's degree, the relevant numbers are 42 percent for those ages 30-35 and 35 percent for those ages 55-60. Expanding the definition to at least some college (which includes those who do not complete any degree) yields 69 percent for young workers and 63 percent for older workers. As above, the remaining gap reflects the increasing percentages of young women going to college.

Comfort with Computers

The time has long passed when older workers were cowed by computers. The share of workers using computers at home is now identical for older and younger workers at 84 percent (see Figure 2). And older workers are rapidly catching up to younger workers on several other key measures of technology usage, including ownership of smartphones and tablets and use of social media. For example, between 2011 and 2018, the percentage of Baby Boomers with a smartphone surged from 25 percent to 67 percent.⁴⁸ Another indication of the technology skills of older workers comes from a study of computer programmer ratings in an online discussion forum, with ratings based on factors such as subject matter and expertise and peer respect. The results showed a positive relationship between age and reputation extending well into a programmer's 50s.⁴⁹

Older Workers Bring a Lifetime of Experience to the Job

While older workers are roughly equal to their younger counterparts in terms of the human capital that they bring to a job, their performance matches and often exceeds younger workers due to their accumulated job-specific skills and experience.

Many work-related abilities require years to fully develop and hone. These include specialized skills associated with craftspeople, musicians, or artists who create high-quality goods or experiences. Similarly, accumulated knowledge allows salespeople to amass an encyclopedic command of their products, analysts to recognize patterns within masses of data, and manufacturing workers to anticipate and avoid mistakes in the production process. Older workers have networks and contacts that allow them to quickly reach out to the people needed to get a job done, secure funding for a new venture, or deliver a product to a target market through established distribution channels.⁵⁰

Older workers are also known for having a strong work ethic that includes reliability, concentration, and motivation. A small business owner in New York feels that "older workers take the job more seriously."⁵¹ Older workers often provide superior service to customers, more easily develop a rapport with co-workers of all ages, and engender trust among their supervisors. Of particular value to a company is the ability of older workers – with their storehouse of knowledge and people skills – to train younger employees, transferring their wisdom of how to succeed on the job.

^{48.} Jiang (2018). A similar pattern is documented in Aon Hewitt (2015).

^{49.} Morrison and Murphy-Hill (2013).

Finkelstein and Block (2015) provide examples of many skills discussed here from interviews with small employers in New York City. Aon Hewitt (2015) offers survey evidence from large firms and broader studies.

^{51.} Finkelstein and Block (2015).

Despite stereotypes that performance generally declines with age as employees slow down or burn out, hard data provide no evidence for such concerns. In fact, some extensive metastudies of employee productivity by age show a small, but statistically significant, positive correlation between age and performance using objective measures of production output.⁵²

Even in areas, like manufacturing, where the natural physical toll of aging might suggest a decline in job performance, older workers can maintain their productivity. For example, a study of a Mercedes Benz assembly facility suggests that workers can continue to perform well by improving on key metrics as they age. Specifically, the study finds that older workers make fewer severe errors on the assembly line (see Figure 4). While this study was conducted at one plant in Germany, the authors note that Mercedes Benz has assembly plants around the world (including the United States), and they believe that the results are generalizable to these plants as well as other similar large-scale manufacturing facilities.⁵³





Note: Error severity is defined on a scale, with more costly errors assigned a higher score.

Source: Borsch-Supan and Weiss (2013).

Finally, considerable evidence suggests that firm productivity is enhanced by using mixedage teams. An analysis of German data found that such collaboration effectively melds the

⁵² See Waldman and Avolio (1986) and Ng and Feldman (2008). Two other meta studies - McEovy and Casio (1989) and Sturman (2003) - also found a positive correlation between age and productivity, but there correlation was not statistically significant.

Borsch-Supan and Weiss (2013). 53.

disparate talents of older and younger workers.⁵⁴ Similarly, with respect to U.S. workers, the *Wall Street Journal* has highlighted how the pairing of older workers and younger workers helps drive innovation by combining fresh ideas with the necessary know-how to bring the idea to fruition. For example, the software industry, long known for lionizing the whiz-kid inventor, relies on more seasoned employees to nurture an innovation into a viable and profitable product.⁵⁵

Older Workers Stay with Their Employer Longer

Two aspects of turnover are important – avoiding unanticipated turnover and retaining experienced personnel.

All employers experience turnover. Anticipated turnover often comes in the form of retirement. Retiring employees tend to give at least three-to-six-months' notice, which allows the employer time to decide who will take on the role, bring the new person on board, and have the retiring employee transfer knowledge to the new employee. Anticipated turnover is simply part of running a business. Unanticipated turnover, in contrast, can create significant difficulties. If the employee resigns with little notice, the employer is left scrambling to find a replacement and train the new employee. Studies show that for positions earning \$75,000 or less, which covers 9 in 10 U.S. workers, the typical turnover cost is equivalent to about one-fifth of a workers' annual salary.⁵⁶

On the assumption that departures within the worker's first two years at the firm are more likely to fall into the unanticipated category, Figure 5 suggests that older workers are more likely to remain with their employer and therefore less likely to leave abruptly than younger workers.

^{54.} Zwick and Göbel (2013).

^{55.} Wadhwa (2013).

^{56.} For more on the costs associated with turnover, see Boushey and Glyn (2012).



Figure 5. A Higher Percentage of Older Hires Remain with Employer in the Next Two Years

Source: Authors' calculations from University of Michigan, *Panel Study on Income Dynamics* (PSID) (2005-2007).

The other aspect of tenure is retaining workers. Greater tenure produces a number of significant benefits to customers and therefore to employers. Workers tend to improve performance over time – a learning-by-doing effect. In addition, the longer a staff stays together, the better they work as a team. As indicated above, employees develop a better understanding of the needs of their customers and have greater knowledge about the resources available to meet these needs. At the same time, customers are more willing to ask questions and seek the assistance of employees they know and trust. Recent data from a large office supply retailer confirm the value of tenure: stores with more long-tenured employees have more satisfied customers and stores with more satisfied customers have higher rates of profit growth (see Figures 6a and 6b).



Figure 6a. Stores with Low Turnover Produce Higher Customer Satisfaction



Source: John Larson and Company, Analysis of Survey Data from a Large Office Supply Retailer (2018).

It is well-known that older workers have higher average tenure than their younger counterparts. Figure 7 shows that the average 30-35 year old has been with his employer for 4.4 years, while the comparable number for the average 55-60 year old is 12.7 years.



Figure 7. Older Workers Have Much Longer Average Tenure than Younger Workers, 2015

Source: PSID (2015).

In part, this pattern of longer tenure for older workers reflects the outcome of labor market dynamics, whereby workers just out of school move from job to job trying to find the best fit before they settle in. Thus, the average tenure for the 30-35 year old, which incorporates this early career exploration, says little about how long a newly hired 30-35 year old is likely to stay. A survey that follows the same people over time for the period 2005-2015, however, shows that the probability of a worker being on the job after four years is higher for the older than younger worker and the same as younger workers after ten years (see Figure 8).

Figure 8. Older Hires at Least as Likely as Younger Workers to Be on the Job over the Next 10 Years, 2005-2015



Source: Authors' calculations from the PSID (2005-2015).

In short, older workers not only bring more to the job than younger workers but also come out strong on the stability front. The final question is the extent to which the strengths of older workers offset any increase in costs.

The Issue of Costs

Contrary to common perceptions, today's older workers do not cost significantly more than younger workers. This convergence reflects a number of trends, including a move among large employers to performance-based – rather than tenure-based – compensation, the shift from traditional defined benefit pensions to 401(k)s, and a narrowing of the difference in health care costs between older workers and younger workers.

Wages

For male workers with college degrees, the ratio of wages for those ages 55-60 relative to those ages 30-35 has narrowed substantially over the last 40 years (see Figure 9). Part of the narrowing between older and younger workers is due to an increasing number of large employers shifting to compensation structures based at least in part on performance. In 1992, 61 percent of large employers surveyed offered such performance-based pay; by 2012

the share had jumped to 90 percent.⁵⁷ These programs, which are designed to reward employers who meet set goals or measures, level the playing field for workers of all ages.

Figure 9. The Wages of Men Ages 55-60 Relative to Men Ages 30-35 with College Degrees Has Declined, 1980-2017



Note: The ratio above is the median wage for men ages 55-60 to the median wage for men ages 30-35, conditional on having a college degree. **Source**: Authors' calculations from CPS (1980-2017).

The extent to which wages continue to be higher for older workers can be explained by the fact that older workers are doing harder jobs. A study from the St. Louis Federal Reserve shows that, as workers age, they take on jobs that require more intensive social, verbal, and math skills (see Figure 10). 58

57. Aon Hewitt (2015).

^{58.} Wiczer (2015).



Figure 10. Older Workers Take on Jobs with Higher Skill Requirements

Note: The skill measures are based on a ranking system by occupation in which an occupation requiring the median skill level is assigned a score of 0.5. For more details on this procedure, see Guvenen et al. (2018). **Source**: Wiczer (2015).

Costs of Retirement Plans

The shift from defined benefit plans to 401(k)s - as shown in Figure 12 – has reduced an element of compensation in which costs rose sharply with age and service to one where the employer's cost remains a fixed percentage of wages across the age spectrum. The reason is that, in defined benefit plans, the average accrual rate – i.e., the increase in the present discounted value of pension benefits as a percentage of earnings – rises sharply with age. The increase is due to the multiplier effect inherent in the traditional defined benefit formula.

For example, assume that the formula provides 1.5 percent of final salary for each year of service and a 54-year-old with 20 years of service works for another year. That worker's replacement rate will increase from 30 to 31.5 percent, increasing the value of all the previously earned pension credits. For this reason, defined benefit pension accruals rise much faster than salary, making the retention of older workers very expensive. Defined benefit plans also make *hiring* older workers costly. While both the older and younger new hires will be entitled to the same benefits when they retire, the older worker can retire in five years at age 60 while the younger worker has to wait 35 years. The fewer years of discounting means a much larger required contribution to the pension plan for the older worker,

making the hiring of older workers in firms with traditional defined benefit plans very expensive. In contrast, with 401(k) plans, employer costs remain constant as a share of wages at the level of the employer matching contribution, regardless of age.





Source: Authors' calculations based on U.S. Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (1983, 1998, and 2016).

Health care costs

Health care costs are rising and, therefore, employer-provided health insurance is becoming an even more expensive component of total compensation. While older workers do cost more than younger ones, a 2015 study of large employers found this cost gap to be shrinking. Between 2003 and 2011, the average rate of growth in health care costs – including dependents – was 5.7 percent for older employees compared to 8.0 percent for younger employees (see Table 1).

Table 1. Average Cost of Health Care Claims Paid by Large Employers, PerHousehold by Age of Covered Employee, 2003-2011

| | 2003 | 2011 | Average annual increase |
|------------|---------|---------|-------------------------|
| Ages 30-34 | \$3,202 | \$5,926 | 8.0% |
| Ages 55-59 | 6,593 | 10,273 | 5.7 |

Source: Aon Hewitt (2015).

The slowdown in health cost growth for older workers reflects the sharp decline in deaths due to heart disease as well to some improvement on the cancer and stroke fronts (See Figure 13). The control of heart disease through statins and other preventative measures significantly lower the health risks – and thereby the insurance costs – of older workers.





Source: Tejada et al. (2017).

Conclusion

In summary, hiring older workers makes strong economic sense. This view came through clearly in a decade old survey on "Employer Attitudes Towards Older Workers" by the Center for Retirement Research at Boston College.⁵⁹ In the survey, 56 percent of respondents characterized older white-collar workers as more productive, while only 6 percent characterized them as less productive than younger workers. While the research found perceived added costs of older workers in the workplace, the vast majority of respondents stated that older workers are "as attractive" or "more attractive" than younger workers, acknowledging that employers generally perceive older workers as matching or exceeding younger workers in productivity.

Since that survey was conducted, the case for older workers has only grown stronger. They increasingly look like younger workers in terms of health status, education level,

^{59.} Munnell, Sass, and Soto (2006).

and fluency with technology. Their job performance matches and often exceeds that of younger workers. They tend to stay on the job a bit longer than younger workers, making them a reliable option for employers. This greater stability and accumulated experience translates into better service delivery to customers and, ultimately, higher customer satisfaction. This results in higher levels of sales and profit growth. And older workers do not cost significantly more than younger workers due to changes in employer pay practices, the shift to 401(k) plans, and a shrinking gap in health costs between older and younger workers. As the U.S. population continues to age, employers are fortunately finding that an older workforce is a vital ingredient to the success and growth of their own firms and the economy as a whole.

References

- Aon Hewitt. 2015. "A Business Case for Older Workers Age 50+: A Look at the Value of Experience. Washington, DC: AARP.
- Belbase, Anek and Geoffrey T. Sanzenbacher. 2016. "Cognitive Aging and the Ability to Work." *Issue in Brief* 16-18. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Borsch-Supan, Axel and Matthias Weiss. "Productivity and Age: Evidence from Work Teams at the Assembly Line." Munich, Germany: Munich Center for the Economics of Aging.
- Boushey, Heather and Sarah Jane Glynn. 2012. "There Are Significant Business Costs to Replacing Employees." *Issue in Brief.* Washington, DC: Center for American Progress.
- Burtless, Gary. 2013. "Can Educational Attainment Explain the Rise in Labor Force Participation at Older Ages?" *Issue in Brief* 13-13. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Finkelstein, Ruth and Dorian Block. 2015. "10 Advantages of Retaining and Hiring Older Workers." New York, NY: Columbia University, The Robert N. Butler Aging Center and the Mailman School of Public Health.
- Guvenen, <u>Fatih, Burhanettin Kuruscu</u>, Satoshi Tanaka, and <u>David Wiczer</u>. 2018 (revised). "Multidimensional Skill Mismatch." Working Paper No. 21376. Cambridge, MA: National Bureau of Economic Research.
- Irving, Paul, Rita Beamish, and Arielle Burstein. 2018. "Silver to Gold: The Business of Aging." Santa Montica, CA: Milken Institute Center for the Future of Aging.
- Jiang, JingJing. 2018. "Millennials Stand Out for Their Technology Use, but Older Generations also Embrace Digital Life." Washington, DC: Pew Research Center.
- John Larson and Company. 2018. "Analysis of Survey Data from a Large Office Supply Retailer." Pasadena, CA.
- McEvoy, Glenn M. and Wayne F. Cascio. 1989. "Cumulative Evidence of the Relationship Between Employee Age and Job Performance." *Journal of Applied Psychology* 74(1): 11-17.
- Morrison, Patrick and Emerson Murphy-Hill. 2013. "Is Programming Knowledge Related to Age?" Raleigh, NC: North Carolina State University.
- Munnell, Alicia H., Steven A. Sass, and Mauricio Soto. 2006. *Employer Attitudes Towards Older Workers Survey*. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Ng, Thomas W. H. and Daniel C. Feldman. 2008. "The Relationship of Age to Ten Dimensions of Job Performance." *Journal of Applied Psychology* 93(2): 392-423.

- Sturman, Michael C. 2003. "Searching for the Inverted U-Shaped Relationship Between Time and Performance: Meta-Analyses of the Experience/Performance, Tenure/Performance, and Age/Performance Relationships." *Journal of Management* 29(5): 609-640.
- Tejada, Vera B., B. Bastian, and E. Arias, et al. 2017. "Mortality Trends in the United States, 1980–2015." Atlanta, GA: CDC, National Center for Health Statistics.
- University of Michigan. *Panel Study of Income Dynamics*, 2005-2015. Public Use Dataset. Ann Arbor, MI.
- U.S. Board of Governors of the Federal Reserve System. *Survey of Consumer Finances*, 1983, 1998, and 2016. Washington, DC.
- U.S. Census Bureau. Current Population Survey, 1980-2017. Washington, DC.
- U.S. Census Bureau, Population Division. *Main Projections Series for the United States*, 2017. Washington, DC.
- U.S. Social Security Administration. 2017a. *The Annual Reports of the Trustees of the Old-Age and Survivors Insurance and Disability Insurance Trust Funds*. Washington, DC.
- U.S. Social Security Administration, Office of the Chief Actuary. 2017b. "Unpublished Data on Historical and Projected Death Rates." Baltimore, MD.
- Wadhwa, Vivek. 2013. "There's No Age Requirement for Innovation." (October 28). New York, NY: *The Wall Street Journal*.
- Waldman, David A. and Bruce J. Avolio. 1986. "A Meta-analysis of Age Differences in Job Performance." *Journal of Applied Psychology* 71(1): 33-38
- Wiczer, David. 2015. "It's the Older Workers Who Have the Job Skills." *On the Economy* series. St. Louis, MO: Federal Reserve Bank of St. Louis.
- Zwick, T. and C. Göbel. 2013. "Are Personnel Measures Effective in Increasing Productivity of Old Workers?" *Labour Economics* 22(C): 80-93.

Draft Brochure on the Value of Older Workers

The attached draft brochure summarizes *The Business Case for Older Workers* and would be distributed to employers.









Questions about the research? Email communications@brookings.edu. Be sure to include the title of this paper in your inquiry.