

Employer perceptions of older workers - surveys from 2019 and 2006

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**EMPLOYER PERCEPTIONS OF OLDER WORKERS –
SURVEYS FROM 2019 AND 2006**

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Abstract

Many older Americans need to work longer in order to achieve a secure retirement. The question is whether employers will hire and retain them. This paper reports on a 2019 survey of employer perceptions of the productivity, costs, and net value of their older workers relative to their younger ones. This survey replicates a similar 2006 effort, so it also allows a comparison of employer perceptions over a period when technology has evolved and the older workforce has grown.

The key result of the 2019 survey is that older workers – in both professional and support positions – have reasonably good prospects for extending their careers. Although older workers are seen as more costly, they are also seen as more productive. Overall, the overwhelming majority of employers said older workers were “as attractive” or “more attractive” than younger workers. The main finding that emerges from a comparison of the 2019 and 2006 results is an improvement in employer perceptions of support workers.

It is always difficult to know how much weight to put on survey results. The question is the extent to which employer attitudes, which the survey measures, impact actual personnel decisions. Other surveys have recorded similar positive evaluations of older workers’ productivity, yet numerous studies have documented discrimination against older workers. Nevertheless, the 2019 survey paints a reasonably optimistic picture. It will not always be easy for older workers to extend their working careers. But these new results suggest that the potential exists.

Introduction

Today, men on average retire at 64 and women at 63, and they can expect to spend 20 years in retirement. But if Americans continue to retire as early as they do today, many will not have adequate income once they stop working. That is, many older people need to work longer in order to ensure a secure retirement. The question is whether employers will hire and retain them. This paper reports on a survey of employer perceptions of the productivity, costs, and net value of their older workers relative to their younger ones. Since the new survey replicates a similar 2006 effort, it also allows a comparison of employer perceptions over a period when technology has evolved and the older workforce has grown.

The reason for working longer is that retirement resources are declining just as the need for resources is increasing. Social Security, the backbone of the retirement system, will not replace as much pre-retirement 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)s. With these institutional saving arrangements on the decline, people could decide to save more on their own. But they rarely save outside employer plans, 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, growing health care costs, and low interest rates, and continued employment in later life is the best option for ensuring financial security.

American workers appear to have gotten the message. Over the past three decades, the share of people planning to work past age 65 has increased from 18 percent to 45 percent.¹ The problem is that nearly two in five workers end up retiring earlier than planned.² To the extent that these premature retirements reflect employer resistance to older workers, the prescription to work longer will be hard to achieve. Employer resistance could result from general misperceptions about older workers' abilities or concern that their costs may outweigh their productivity well before they plan to retire. Such uncertainty may lead employers to circumvent rules against age discrimination by devising policies that avoid and shed older workers. One way to identify the problem, to the extent one exists, is to ask employers about how they assess the capabilities and costs of older versus younger workers.

¹ Employee Benefit Research Institute (2019).

² Authors' calculations from the University of Michigan, *Health and Retirement Study*.

The discussion proceeds as follows. The first section summarizes what we know about older workers – basic characteristics, assessments of their productivity, their costs versus those of younger workers, evidence of employer discrimination against older workers, and what employers have said in previous surveys. The second section describes the 2019 survey and reports the results. The third section compares the 2019 results with those for 2006. The final section concludes that, overall, employers say they find older workers as attractive as younger ones despite their higher perceived costs, and the 2019 results – compared with those for 2006 – show a notable improvement in employer perceptions of support workers.

Background

Although relatively little is known directly about employer demand for older workers, relevant information is available on a number of fronts. First, the gaps between older workers and younger workers in education, health, and computer use have been shrinking. Second, empirical studies show that, contrary to negative stereotypes, most older workers are engaged and productive. Third, the data on wages, retirement plans, and health insurance indicate that older workers cost more than their younger counterparts. Fourth, a narrowing of employment options for older workers and findings from résumé audits document that older workers face some forms of discrimination. Finally, prior surveys of employer attitudes towards older workers reveal a nuanced assessment and generally do not address the productivity/cost tradeoff. Summarizing what is known about older workers and their employers provides context for interpreting the results of the 2019 survey presented in this paper.

Characteristics of Older Workers

The big news about older workers today is that they look a lot like younger workers. This pattern is consistent across health, education, and computer use (see Figure 1).

The improvements in longevity and health have been dramatic. At age 55, both men and women can expect to live for many years – 26 and 29, respectively, up substantially over the past several decades. These gains in life expectancy have been accompanied by gains in overall health. By 2018, 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.

On the cognition front, psychologists have also identified two types of cognitive abilities: one involving mastering new material quickly and one relating to accumulated knowledge, verbal meaning, and word skills. Laboratory and other evidence show a clear decline as people age in the first ability – mastering new material quickly – but no decline in the second. In fact, older workers have often accumulated substantial knowledge and have devised efficient ways to do their work (Warr 1994 and Skirbekk 2003).

In terms of education, over the twentieth century each generation of workers completed more years of schooling than the previous ones. As a result, for a long while, younger workers maintained a consistent educational advantage over older workers. However, increases among younger cohorts of males slowed dramatically after the mid-1970s. As a result, by the time male Baby Boomers entered their 60s, the educational advantage of the young had considerably narrowed. In 2018, the percentage of male workers with at least a 4-year college degree was 45 percent for those ages 30-35 and 39 percent for those ages 55-60.³ A slightly larger gap still exists for women (51 percent vs. 39 percent), because each generation of women continues to get more education. This gap, however, is also narrowing.

In terms of technology, the share of workers using computers at home is nearly identical for younger and older workers at 88 and 86 percent, respectively. And older workers are rapidly catching up to younger workers in terms of 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.⁴ Moreover, a study of computer programmer ratings in an online discussion forum, with ratings based on factors such as subject matter expertise and peer respect, showed a positive relationship between age and reputation extending well into a programmer's 50s.⁵

While older workers are roughly equal to their younger counterparts in terms of the human capital that they bring to a job, they also have decades of experience. This experience

³ The same overall pattern is evident no matter how college achievement is measured. The numbers cited above, which refer to a four-year bachelor's degree, imply overall achievement for men and women combined of 48 percent for those ages 30-35 and 39 percent for those ages 55-60. Expanding the definition to include an associate's degree, the relevant numbers are 60 percent for those 30-35 and 51 percent for those 55-60. Expanding further to include those with at least some college (which includes those who do not complete any degree) yields 76 percent for young workers and 68 percent for older workers. For more details on trends in education patterns for workers of different ages, see Burtless (2013).

⁴ See Jiang (2018). A similar pattern is documented by Aon Hewitt (2015).

⁵ Morrison and Murphy-Hill (2013).

can manifest itself in the form of specialized skills associated with craftspeople, musicians, or artists or in accumulated knowledge that allows salespeople to fully understand their products, analysts to recognize patterns within masses of data, and manufacturing workers to anticipate and avoid mistakes in the production process. Older workers also 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. The question is the extent to which these attributes make older workers as productive as their younger counterparts.

Evidence on the Productivity of Older Workers

The connections between job performance, cognitive aptitude, and physical ability – on the one hand – and age – on the other, have been topics of extensive research in psychology and medicine (Ng and Feldman 2008; Skirbekk 2008; Salthouse 2009; and McGee and Wegman 2004). While the evidence suggests that some cognitive abilities and physical functions decline on average with age, it is a matter of controversy whether these declines may be offset, fully or partially, with gains in wisdom or judgement. Interestingly, despite stereotypes that performance generally declines with age, the empirical studies provide little hard data to support that conclusion.

The challenge, of course, is how to measure productivity. In a simple manufacturing environment, number of widgets per hour would answer the question. But often output cannot be described in terms of unique units, so the effects on productivity of age-related changes are difficult to measure in many occupations. In these cases, researchers have looked at wages. For example, Burtless (2013) found that workers ages 60-74 earned 10-20 percent more, on average, than workers ages 25-59. To the extent that higher wages reflect higher productivity, the results suggest that older workers are more productive. The source of the greater productivity could come from increasing capabilities with age or from more productive older workers deciding to stay in the workforce longer than less productive ones.

Burtless' positive assessment of older workers is supported by Börsch-Supan and Weiss's (2016) study of a German Mercedes-Benz truck assembly plant. They found that the average productivity of workers increased steadily from age 25 to age 60 and that older workers offset characteristics that decline with age by experience and ability to work well in a team. As a

result, older workers made fewer severe errors on the assembly line. The authors argue that these findings are probably generalizable to many large-scale manufacturing facilities.

Considerable evidence suggests that firm productivity is enhanced by using mixed-age teams. An analysis of German data found that such collaboration effectively melds the disparate talents of older and younger workers (Zwick and Göbel 2013). Similarly, with respect to U.S. workers, the *Wall Street Journal* has highlighted how the pairing of older 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, often relies on more seasoned employees to nurture an innovation into a viable and profitable product (Wadhwa 2013).

More important than the individual studies, a series of meta-analyses produce a generally positive picture about the productivity of older workers. Waldman and Avolio (1986) looked at 40 studies that evaluated performance based on supervisory ratings, peer ratings, and individual productivity. The results showed increased productivity, as measured by productivity indices, at higher ages. On the other hand, supervisory ratings tended to be slightly lower for older employees, more so for nonprofessionals than for professionals. Ng and Feldman found, in a series of meta analyses, that across 350 empirical studies long-tenured employees had better job performance and were better colleagues (2010), that across 418 studies no evidence supported five of the six negative stereotypes of older workers (2012)⁶, and that across 98 studies older workers and longer-tenured workers are no less innovative than their younger and less-tenured counterparts.

Some studies emphasize the heterogeneity in the relationship between age and performance. Sturman (2003) uses a meta-analysis in an attempt to establish an inverted U-shaped relationship between experience, organizational tenure, and age. He finds that the relationship holds for low complexity jobs, but not for high-complexity jobs, where – over time – experience becomes more predictive of job performance. Belbase, Sanzenbacher, and Gillis (2015) argue that since some physical and cognitive abilities decline much earlier than others,

⁶ The six characteristics were: less motivated, less willing to participate in training and career development activities, resistant to change, less trusting, less healthy, and more susceptible to work-family imbalance. The only stereotype consistent with the evidence is that older workers are less willing to participate in training and career development.

workers in some occupations may be able to work effectively much longer than in other occupations.

The key takeaway from the productivity studies is the failure to produce strong evidence that productivity declines with age and the strong suggestion that it may increase. The next question is the extent to which the strengths of older workers offset any increase in costs.

Costs of Older Workers

The costs of workers include not only out-of-pocket expenditures for wages, retirement plans, and health benefits, but also reliability.

Financial Costs. The full cost of a worker includes wage, retirement, and health insurance expenses. Older workers are more expensive across each of these dimensions, although the shift from defined benefit plans to 401(k)s has dramatically reduced the cost differential.

In terms of wages, full-time male and female workers ages 55-60 cost about 25 percent more than those 30-35 across the educational spectrum (see Figure 2). Some contend that the reason wages continue to be higher for older workers is that they are doing harder jobs – that is, jobs that require more intensive social, verbal, and math skills (Wiczer 2015), which is related to the possibility that older workers may be more productive than younger ones.

In terms of retirement costs, the shift to 401(k)s 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. Nevertheless, to the extent that older workers earn slightly higher wages, any employer matching contributions to a 401(k) plan will also be slightly higher.

Health insurance for many employers is the most costly non-wage benefit and is often cited as an area where older workers cost significantly more than their younger counterparts. To the extent that the hypothesis is correct, firms with a larger share of older workers will see higher outlays if they self-insure or pay higher premiums if they purchase policies from insurance companies. The data on private insurance reimbursements of workers by age confirm that health costs rise with age (see Figure 3). For the period, 2015-2017, reimbursements averaged \$4,589

for workers 55-60 compared to \$2,504 for workers 30-35.⁷ However, this gap has been shrinking somewhat over time, as evidenced by the declining ratio of older to younger worker reimbursements shown in Figure 4.

The employer cannot shift the burden of these higher costs to the employee, because health insurance premiums do not vary by age and because the Age Discrimination in Employment Act prevents paying older workers lower wages to offset higher health insurance costs. The extent to which the \$2,085 difference in health costs would affect the hiring decision likely depends on the level of the wage. For a worker earning the average wage of roughly \$50,000, the difference in health insurance costs amounts to 4.2 percent; for a worker earning \$150,000 it amounts to only 1.4 percent.⁸

Turnover. Worker turnover can be anticipated or unanticipated. 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 (Boushey and Glynn 2012). On the assumption that departures within the worker's first two years at the firm are more likely to fall into the unanticipated category, older workers are more likely to remain with their employer and therefore less likely to leave abruptly than younger workers.⁹

Even with a reduction in turnover, older workers generally cost more than younger workers. The challenge for employers is to gauge whether they are worth the additional amount.¹⁰ The following discusses what we know about employer reaction to older workers

⁷ Insurance reimbursements of individuals do not include the cost to employers of supplying insurance to employees' eligible dependents. With respect to dependent coverage, employees may actually become cheaper when they grow older, as the number of their eligible dependents shrinks. On the other hand, the spouse's age and vulnerability to high health expenses usually rise in line with the employee's.

⁸ Costs for some subgroups may not rise monotonically with age. For women, in particular, costs may decline after their early 40s, when childbearing becomes much less common.

⁹ Calculations from the University of Michigan's *Panel Study on Income Dynamics* (PSID) (2015-2017) show that 84 percent of workers 55-60 remain with their employer after two years compared to 73 percent of workers 30-35.

¹⁰ For a discussion of this issue, see De Hek and van Vuuren (2011).

from studies that document bias against job seekers and from what employers have reported in earlier surveys.

Evidence of Discrimination

Two main models of discrimination are prevalent in economic thinking. The first is statistical discrimination, based on Arrow's (1973) theory that observable characteristics (such as age) may proxy for less easily measured characteristics that may be important for employers (such as productivity), and thus that employers may discriminate based on the observable traits. The second is taste-based discrimination, based on Becker's (1957) theory that employers may discriminate against certain groups because of a dislike of working with those groups, on their own part, the part of other workers, or the part of customers. Recent experimental work has found corroboration for the former theory in the case of age discrimination, documenting that age signals a lack of technological skill, flexibility, and trainability in a way that explains 41 percent of the effect of age on the probability of being invited to an interview (Van Borm, Burn, and Baert 2019).

Although discrimination is often difficult to identify, at least two forms – narrowing of occupations open to older job seekers and bias against older job applicants – have been documented.¹¹ These factors may explain why older workers spend much more time unemployed should they lose their jobs (Neumark and Button 2014 and Abrams, Swift, and Drury 2016). In addition, older workers may be frequently eased out by employers (Johnson and Gosselin 2018). It is unclear whether managers are more concerned about older workers' productivity or their costs. As discussed above, some may believe the negative stereotypes, such as disinterest in building skills (e.g., Fritzsche and Marcus 2013), a lack of ambition (e.g., Bowen and Staudinger 2013), health challenges (e.g., Hummert et al. 1994 and Ng and Feldman 2012), inflexible personalities (e.g., Fritzsche and Marcus 2013), and less familiarity with technology (e.g., AARP 1999).¹² That is, they assume that older job seekers will be less productive than younger applicants who have the same credentials. Alternatively, employers may think that fringe benefits make older workers more expensive to employ, even if they are paid the same wage and are just as productive as identically credentialed younger employees.

¹¹ Over one third of older worker voters report that they or someone they know has experienced age discrimination in the workplace (AARP 2012).

¹² This list of stereotypes and studies is from Button (2017).

In terms of job opportunities, early research on job-changing at older ages generally showed that workers ages 55 and over found employment in relatively few occupations (Hutchens 1986, 1988, 1991, 1993). These “old person” occupations included low-paying, low-status jobs, such as night watchmen, retail clerks, and crossing guards. This narrowing of job options reflected the decisions made by employers, not workers, since many older workers were already employed in occupations where few older workers were hired, indicating that older workers were willing and able to do the work. The occupations from which older job-seekers were excluded were generally associated with long tenures, traditional pension plans, seniority rights, and hiring from within. A later study confirmed that personnel policies in the 1990s created impediments to hiring job-seekers ages 50 and over (Hirsch, Macpherson, and Hardy 2000). An update of this literature, however, suggests that today’s older workers may have more options, possibly attributable to the shift from pensions to 401(k)s, the decline of traditional personnel policies, and the improvement in the educational attainment of older workers (Rutledge, Sass, and Ramos-Mercado 2015).

While job opportunities may have improved, employer bias in hiring is still evident in randomized trials involving older and younger job applicants. These trials involve creating fictitious résumés and cover letters that are roughly equal except for the age of the applicant (Button 2019; Bertrand and Duflo 2017; Fix and Struyk 1993; and Neumark 2018).¹³ These fictitious job applicants then apply for real job openings, and employers either do or do not request interviews with the candidates. Researchers measure hiring discrimination by comparing interview request rates by age, since according to studies of ethnic discrimination most of the discrimination occurs at the interview offer stage (Riach and Rich 2002 and Neumark, Burn, and Button 2019). These field experiments almost always point to substantial age discrimination in hiring (Baert et al. 2015; Bendick, Jackson, and Romero 1997; Bendick, Brown, and Wall 1999; Carlsson and Eriksson 2019; Lahey 2008; and Riach and Rich 2006, 2010).¹⁴ Among employers whose size could be determined, researchers found that large employers were more likely to discriminate against older applicants, perhaps because they are also more likely than smaller ones to offer generous benefit plans that cost more as workers age (Wiatrowski 2013).

¹³ Age is usually indicated by the year in which the applicant graduated from school.

¹⁴ Some employment ads include ageist language or have job requirements related to age stereotypes (see Burn et al. 2019), and some recruitment ads on Facebook clearly target younger workers (*Reuters* 2017 and *Wall Street Journal* 2019).

The most recent and largest experiment included two improvements over earlier studies (Neumark et al. 2019). First, it included workers ages 64-66, a group for whom continued employment is particularly salient. Second, to make the job applications of older people more realistic, it focused on “bridge jobs” that seniors often take, such as administrative assistant and retail sales for women, and retail sales, security, and janitor for men. The researchers sent over 40,000 applications for young (ages 29-31), middle-aged (ages 49-51), and senior (ages 64-66) workers to over 13,000 job positions. Across all occupations and genders, the senior applicants got fewer callbacks than the young applicants. The evidence is more mixed for middle-aged applicants. Female middle-aged applicants have a statistically significant lower callback rate, but no evidence of discrimination appeared against middle-aged men. In the cases where both senior women and men faced age discrimination, the magnitude of the discrimination against senior women was much larger.

The findings from résumé studies confirm that many employers prefer to interview younger rather than older job applicants. It is more difficult to determine whether they prefer to retain and promote younger workers already on their payrolls as opposed to equally or more qualified older workers. It is also hard to identify employers’ motives for favoring younger job applicants. Do they worry about older workers’ productivity or their costs? Surveys of employers are one way to address these questions.

Previous Surveys of Employers

Surveys of U.S. employers on the value of their older workforce are somewhat rare. The exceptions include a 2006 telephone survey of 400 private sector employers (Munnell, Sass, and Soto 2006), which is updated in the current study, and two recent surveys.¹⁵

In the 2006 survey, 56 percent of respondents characterized older professional workers as equally or more productive than younger workers, while only 6 percent characterized them as less productive. While the researchers found that employers viewed older workers as more expensive, the vast majority of respondents stated that older workers are “as attractive” or “more attractive” than younger workers, suggesting that employers generally perceive older workers as matching or exceeding younger workers in productivity.

¹⁵ For a survey in the Netherlands that focused on employers’ perceptions of older workers’ productivity (without focusing on costs), see Van Dalen, Henkens, and Schippers (2010). See also references to earlier surveys in Appendix A of Munnell, Sass, and Soto (2006).

The first of the recent surveys, conducted by the Society for Human Resource Management (SHRM) in 2014, had three parts: 1) the state of older workers in U.S. organizations; 2) recruiting and retaining older workers; and 3) basic and applied skills of older workers. The survey found that a sizable minority of employers thought that the aging of their workforces was a problem, but that few had developed a plan to address it. The survey also found that employers valued their older employees' writing ability, work ethic, and professionalism relative to younger workers. However, the survey did not seek to determine whether these positives were offset at all by higher costs. Therefore, while the survey was valuable in understanding how employers view the challenge of an aging workforce, it did not address whether they would be inclined to hire an older worker over a younger one.

The second recent work was a series of three surveys conducted by Clark et al. (2019) that targeted: 1) HR managers; 2) risk managers; and 3) HR managers specifically at grocery manufacturers. The focus of these surveys was on how the various groups were planning for the aging of their workforces, with special consideration given to the perceived risk of talent loss and any measures being taken to reduce that risk. The findings suggest that HR managers have concerns about the cost of older workers and at the same time risk managers view talent loss due to aging as a major concern. Similar to the SHRM survey, these surveys did not ask the respondents to consider the relative productivity and costs of older to younger workers, and thus did not address the value of hiring older workers.¹⁶

To better understand the employment prospects of older workers, this study conducted a new survey of 400 private sector employers. These employers were asked to evaluate the relative productivity and cost of professional and support workers ages 55 and older and whether, on balance, older employees or job candidates were more or less attractive than their younger counterparts.

The 2019 Survey

The new survey was conducted by telephone by Matthew Greenwald and Associates in the fall of 2019. Private sector employers were asked to evaluate the relative productivity and costs of older workers and whether on balance older employees or job candidates were more or less attractive than their younger counterparts. The survey consisted of 25 questions, 15

¹⁶ Although one concern that did come up with respect to an aging workforce was rising benefit costs.

pertaining to the characteristics of the employer and 10 asking how they viewed younger workers versus older workers, defined as those age 55 and older. Questions were asked separately regarding professionals and “support staff and production workers.”

The process produced 400 responses, and the responses were weighted using information on the state of the employers’ main location, firm size, and industry of operation:

$$w_{i,s,f,j} = \frac{t_{s,f,j}}{r_{s,f,j}} \quad (1)$$

Where $t_{s,f,j}$ indicates the share for firms in state s , with firm size f , in industry j , that would have been present had all firms responded, and $r_{s,f,j}$ is the actual response rate.¹⁷ This type of non-response weighting addresses any bias among the type of firms responding along the dimensions of state, firm size, and industry (e.g., firms in manufacturing respond more often than firms in finance).

Descriptive Results

The results of the survey indicate that employers view older workers as “equally” or “more” productive than younger workers, but they also see them as expensive. It appears, however, that the higher costs and solid productivity assessment balance out, so that most employers view older workers as “equally” or “more” attractive than younger workers. Taken at face value, the survey suggests a relatively positive environment for older workers. The question, of course, is whether employers are providing their true opinions or whether they are simply offering “politically correct” responses. Looking more closely at employer answers to questions on productivity, costs, and overall attractiveness reveals reasonable patterns of preference, suggesting that the survey results may well be meaningful.

Productivity. The good news is that very few employers said workers ages 55 and over are “less productive” than their younger counterparts (see Figure 5).¹⁸ Slightly more than half see no clear differences in productivity between older and younger workers, both for professional and support workers. Of the responses indicating a preference for some age group, the vast majority suggest a preference for older workers, with 45 percent saying older professional

¹⁷ The population share of firms in state-size-industry cells is based on the U.S. Census Bureau’s *Statistics of U.S. Business* (U.S. Census Bureau 2020).

¹⁸ The question asked was “Overall, would you say that employees ages 55 or older in [professional / support and production] positions are more or less productive than younger workers doing similar jobs?”

workers are more productive versus 1 percent saying they are less productive, and with a similarly lopsided 42 to 7 percent split regarding support workers.

Table 1 presents, by five characteristics, the percentage of employers that characterize older workers as “more,” “equally,” and “less” productive – the percentages are reported separately for professional and support workers. The first characteristic is the age of the respondent – that is, whether the person answering the survey is age 55 or over. One would expect that older respondents would view older workers more favorably and indeed that was the finding in the 2006 survey. In this survey, however, respondents ages 55 and over do not have a more positive view of the productivity of workers in their own age group. This lack of enthusiasm by older respondents for older workers is particularly pronounced for support workers.

The second characteristic is the percentage of the employer’s labor force that is 55 and over. As one might expect, employers with an older workforce (more than 15 percent ages 55 or over) view older workers as “more productive” than younger workers. This pattern is consistent with either firms employing more older workers when these workers are particularly productive at the firm or with firms that are more familiar with older workers having a more positive opinion of their capabilities.

The third characteristic of the employer is industry. Here the results are consistent with expectations. Older workers are often cited for their ability to interact with customers, so their ranking is indeed higher for employers in services rather than goods-producing industries.

The fourth employer characteristic is firm size. The smaller firms (those with fewer than 100 employees) tend to give older employees the highest ratings. Larger firms are less enthusiastic, instead being much more likely to say older and younger workers are equally productive. Overall, fewer than 10 percent of firms of any size rate older workers as “less productive” than younger workers in either professional or support groups. This pattern may reflect larger firms being more cautious about reporting any preferences among workers of different ages.

On the other hand, firms providing a defined benefit plan – the final employer characteristic – tend to place a relatively high value on the productivity of older workers, particularly professional ones. This positive relationship is consistent with a situation where

only the firms most interested in retaining older workers continue to provide a defined benefit plan in 2019.

The survey also asked employers about the impact of various characteristics that could affect the productivity of older workers (see Figure 6). Specifically, employers were asked “Thinking only of “older” employees, would you say that the following factor has a positive or negative impact on the productivity of employees ages 55 or older?” They were not asked to compare older and younger workers on the basis of these characteristics, but rather simply assess whether the characteristic has a positive or negative impact. The characteristics most frequently cited as advantageous, for both professional and support workers, are “knowledge of procedures and other aspects of the job,” and “the ability to interact with customers,” precisely the strengths of older employees cited in the psychological literature.¹⁹ The least advantageous characteristics are concerns about “physical health and stamina” and “expectations of how much longer they will be working.”

Costs of Older Workers. While employers tend to see older workers as “equally” or “more” productive than younger workers, they also see them as expensive. Roughly one third said older workers are more expensive than someone younger, while only about 5 percent said they cost less. The pattern was much the same for professional and for support workers (see Figure 7).

Evaluations of the relative cost of older workers also varied by employer characteristics (see Table 2). Familiarity produced mixed results. While respondents ages 55 and over were less likely to say that workers their age are relatively expensive, a higher proportion of employers with an older workforce see older workers as more costly. Smaller employers are far more likely to see older workers – both professional and support – as relatively costly, although the assessment does not vary much across industry. Firms with defined benefit coverage, not surprisingly, view older workers as more costly.

Overall Attractiveness of Older Workers. The final question in the survey asked employers whether an “employee or prospect age 55 or older is generally more, the same, or less attractive compared with a younger person capable of the same job.” The assessment up to this

¹⁹ While employers were not asked to compare older and younger workers on the basis of these characteristics, Warr (1994) and Skirbekk (2003) nevertheless identified the first two characteristics as advantages of older workers as compared to younger workers.

point is that older workers are equally or more productive than younger workers, but that they are also more costly. The response to the “overall attractiveness” question suggests that the greater productivity justifies the higher costs. Over two thirds of the employers surveyed view older employees and younger employees as equally attractive (see Figure 8). This assessment is true for both professional and support workers.

The survey nevertheless suggests that professional workers have somewhat better prospects than support workers for extending their careers. One in five employers said older managers or professionals are “more attractive” than someone younger, and only five percent said they are “less attractive.” By contrast, the gap between “more” and “less attractive” for older support workers is much narrower. The stronger position of professional workers seems based on differences in evaluations of relative productivity. Somewhat more employers reported an age-based productivity differential that favors older professional workers. But the perceptions of relative costs actually favor support, relative to professional, older workers. Thus, the perceived advantages of older professional workers’ productivity seem to outweigh their disadvantage on costs.

As before, the relative attractiveness of older workers varies by the characteristics of the employer (see Table 3). In terms of the age of the respondent, those 55 and older have a slightly better assessment of older professional workers (a group to which they belong), but this perception does not carry over to support workers. In contrast, employers with an older workforce are more attracted to older workers for both professional and support workers. In terms of industry and size, assessments vary little between goods and services, but larger employers are less likely to negatively rate older workers, especially support workers. Finally, defined benefit coverage has a somewhat negative impact on the attractiveness of older workers.

Regression Results

To more thoroughly analyze what factors are associated with perceptions of older workers in 2019, Ordinary Least Squares regressions are estimated to control for different employer characteristics as well as to test for statistical significance of any differences. The dependent variables are defined as follows:

Attribute	Selected assessment for dependent variable	Excluded assessment
Productivity	Equally or more productive	Less
Cost	More costly	Equally or less
Overall attractiveness	Equally or more attractive	Less

That is, the regressions estimate the relationship between the employer characteristics and an assessment that older workers are equally or more productive than younger workers, more costly than younger workers, and equally or more attractive than younger workers. These outcomes are estimated separately for professional and support workers.

The regression results reveal four patterns, which are mostly consistent with the descriptive relationships described above. First, the age of the respondent tends to matter, with respondents ages 55 and older holding more positive views of older professional workers. They view them as equally or more productive, noticeably less costly, and equally or more attractive than younger workers. This favorable assessment, however, does not carry over to support workers.

Second, firms in which workers 55 and over comprise 15 percent or more of the workforce have a more positive view of older workers, particularly those in support positions. These views are driven by a perception that older support workers are more productive than their young counterparts, with no offsetting disadvantage in terms of higher cost. In contrast, older professional workers are viewed by such firms as even with younger workers in terms of productivity but significantly more costly, leading to an ambivalent view of their overall attractiveness.

Third, goods-producing firms display a preference for older professional, but not support, workers relative to service firms, a difference driven by positive views of older professional workers' productivity. Firm size has a non-linear relationship with respect to their view of older workers. Small and large firms view older workers as more attractive than younger workers, relative to medium-size firms, with the magnitude and statistical significance greater for support than for professional workers.

Finally, firms offering defined benefit plans tend to view older workers as significantly more costly. However, they also view older professional workers as more attractive. One interpretation is that firms' preferences for older professional workers lead them to offer defined

benefit plans that retain such workers, even at the cost of extending such plans to support workers (who are not viewed as being more attractive when older).²⁰

Thus, overall, most firm characteristics are associated in predictable ways with preferences for older versus younger workers. The question that remains is whether attitudes have changed since the 2006 survey.

Comparison of the 2006 and 2019 Results

Any comparison of a survey in 2006 with one in 2019 raises questions about how responses could be affected by changes in the nature of employers and older workers themselves and about the comparability of the data.

Changes in Employer Attitudes towards Older Workers, 2006 and 2019

Employer attitudes towards older workers could have changed for two major reasons: 1) a change in their concern about discriminating against older workers; and 2) an increase in the age of managers, which might lead to a more favorable assessment of older workers (at least those in professional positions, as suggested by the results above).

Employers could have become more or less sensitive to lawsuits related to age discrimination over the period 2006-2019. However, the trends in charges related to the Age Discrimination in Employment Act suggest employers should not be any more or less concerned about lawsuits today than in 2006. In 2006, 2,029 cases of age discrimination were either settled with payment to the plaintiff or resulted in a finding of “reasonable cause” against the employer. That number was actually somewhat lower, at 1,773, in 2017, despite a slight increase in the actual number of cases filed against employers. In other words, firms may be slightly more likely to face a charge, but simultaneously less likely to have to pay out money due to that charge.²¹ While the exact effect of this trend on employer responses is unclear, the data do not suggest a sea change in how employers should view the risk of age discrimination charges.

What may be more salient to employers is any statement of preference for some types of workers versus others, particularly when the preference is based on a protected category such as

²⁰ A generous health insurance plan is only weakly associated with more positive views of older workers, and only for support workers.

²¹ One reason may be the 2009 decision in *Gross v. FBL Financial Services*, which shifted the burden of proof of age discrimination away from employers by determining that workers had to show that age was the main cause for their dismissal, instead of being one of many factors.

age. Respondents' greater caution might result in an increased prevalence of declining to say whether older workers are preferred or not, either through saying they are equal to younger workers, or simply refusing to answer the question.

The second issue that could affect the views of employers is their age. With the aging of the workforce, managers too have gotten older. The results of the early survey showed that older managers were more likely to value older workers, particularly professional workers. The results in 2019 qualify this pattern somewhat, but still find that it holds with respect to the professional worker group, of which respondents were members.

Finally, since the 2006 survey was conducted, the relative attractiveness of older workers should have increased. They increasingly look like younger workers in terms of health status, education level, and fluency with technology. Moreover, cost differences between older and younger workers should have declined as fewer and fewer workers are covered by defined benefit plans.

Comparability of the Data

The goal of the 2019 survey was to replicate the original 2006 survey as closely as possible – including using the same survey firm, asking the same questions, and making only small adjustments to the sampling frame to gather more information. One difference between the two surveys is the data available for re-weighting. While state, industry, and firm size are available for 2019, only industry and firm size were available for the 2006 survey. Thus, while state information is used for weighting the reported 2019 results, only industry and firm size are employed for the comparison of the two surveys. The results differ a bit depending on the weights employed, but using the most information available for 2019 provides the best picture of the current views of employers and using the more limited weights provides the best basis for a comparison. Therefore, the following results are weighted by firm size and industry, but not state.

Comparison of Surveys

Three interesting points of comparison emerge from the 2006 and 2019 surveys. First, a straightforward accounting of the results shows a much higher prevalence of ambiguous answers and generally a more favorable assessment of older workers than the 2006 survey. Second, an

examination of the coefficients on the key variables shows some have changed in mostly predictable ways. Third, a regression including both the 2006 and 2019 survey confirms the major differences between the two surveys.

Overall Results. The most straightforward way of comparing the results is simply to look at how employers classify older workers in terms of productivity, costs, and attractiveness. Two strong patterns emerge. The first is the higher incidence of ambiguous answers. That is, the percentage of employers characterizing older workers as equal to younger workers in terms of attractiveness and productivity increased substantially between 2006 and 2019 (see Figure 9). The percentages for cost remained relatively unchanged. The second pattern is the improved assessment of older workers. Employers in the 2019 survey found older workers equally or more attractive and productive than younger workers, despite viewing them as somewhat more costly (see Figure 10). The improved assessment of both productivity and overall attractiveness was particularly notable for support workers.

Coefficients of Specific Variables. Looking at how the different characteristics of respondents and firms correlate with views of older workers helps explain the changing views of older workers (see Figure 11).²²

Familiarity with older workers remains beneficial for perceptions of older workers, although the specifics have changed over the two surveys. In particular, respondents ages 55 and over tended to have more positive views of older workers in 2006, particularly in the case of professional workers (the respondents themselves are professional workers, of course). However, the importance of this factor seems to have declined over time (by 15 percentage points for professional workers), and become significantly positive for support workers. In contrast, familiarity through a preponderance of older workers in the firm's workforce was not associated with views of older workers in 2006, but has become strongly predictive of positive views of older workers in 2019.

In terms of firm size, in 2006 small firms had the least positive views of older workers descriptively (albeit not statistically significantly). By 2019 this relationship had shifted, so that small firms rated older workers as relatively more attractive, particularly regarding support workers. At the same time, the rating of older workers by the largest firms improved from

²² Full results of these regression outputs are in Tables 4 and 5. Note that the estimates in Figure 11 are "controlled;" i.e., they are the result of holding all the other characteristics estimated in Tables 4 and 5 constant.

mildly more likely to be positive (relative to mid-size firms) to much more likely to be positive, particularly with regards to support workers.

Finally, with respect to defined benefit pensions, the firms offering such benefits have changed from viewing older professional workers negatively to positively (with no particular association for support workers in either survey wave). This relatively negative view in 2006 was driven by the high costs associated with such pensions for older workers; however, by 2019 it is likely that only firms that strongly value their older workers retain this form of retirement benefit, which has largely been replaced by defined contribution plans.

Regression Results. The final way of comparing the two samples is using a regression framework. The composition of the sample of employers and respondents will naturally differ between the two surveys. While perhaps random, these differences have the potential to affect the time-trend analysis – for example, the early survey found that older respondents found older workers more valuable, so if the new sample is older or younger, it would affect the result. A regression framework can standardize for such variability in order to isolate the time trend:

$$R_i = \beta_0 + \beta_1 I(\text{Survey} = 2019) + X'_i \beta + \varepsilon_i \quad (2)$$

Where the dependent variable R_i is a binary response (e.g., older workers in professional positions are on balance equally or more attractive than younger ones), $I(\text{Survey} = 2019)$ would indicate the respondent was participating in the 2019 survey, and X'_i would be a vector of characteristics of employer/respondent such as age and industry. The interpretation of β_1 is then simply the difference between the original survey and the current one for an otherwise similar employer/respondent.

Figure 12 reports the results for the survey-year variable. The full regression results are presented in Table 5, but the coefficients are not particularly illuminating. If the impact of a characteristic flips from significantly positive in 2006 to significantly negative in 2019, the pooled regression would indicate that it is not related to the views of employers, whereas in both years it had substantial explanatory power. Therefore the focus here is the first row of Table 5, the impact of being a respondent in 2019.

As indicated by the evidence above, the main differences across the two waves of the survey are primarily with respect to views of support workers. Employer assessments of the productivity of these workers increased substantially and more than offset their perceived cost, resulting in a large improvement in the attractiveness of support workers overall. For

professional workers, firms reported a perceived increase in cost and no significant increase in productivity, yet the overall attractiveness improved – albeit by substantially less than for support workers.

It is worth noting that the improvement in views of support workers is driven mostly by a decline in negative views of productivity. Two interpretations of this pattern suggest themselves. The first is that the pattern is consistent with the anecdotal increase in “political correctness” and caution about stating any age-based preference. A more optimistic read of these results takes them at face value, and suggests that older and younger workers are truly viewed as more equal than they were 13 years ago. This change would be consistent with the objectively more similar qualifications of older and younger workers.

Also on a positive note, the pooled regression shows that older decision makers are more likely to find older workers as attractive or more attractive than younger workers or prospects. An aging workforce should produce more older managers and therefore a more receptive environment for older workers.

Conclusion

The key result of the 2019 survey of 400 employers is that older workers have reasonably good prospects for extending their working careers. Although older workers are seen as more costly, they are also seen as more productive. The overwhelming majority of employers said older workers were “as attractive” or “more attractive” than a younger employee or prospect. The big news that emerges when comparing the 2019 results with those for 2006 is the improvement in employer perceptions of support workers.

It is always difficult to know how much weight to put on survey results. The key question is the extent to which employer attitudes, which the survey measures, impact actual personnel decisions. Other employer surveys have recorded similar positive evaluations of the productivity of older workers, yet numerous studies have documented discrimination against older workers not only in the hiring process but also in terms of retention.

Nevertheless, the survey paints a reasonably optimistic picture. The overwhelming majority of employers said older workers were at least as attractive as younger employees. It will not always be easy for older workers to extend their working careers. But the survey suggests that the potential exists.

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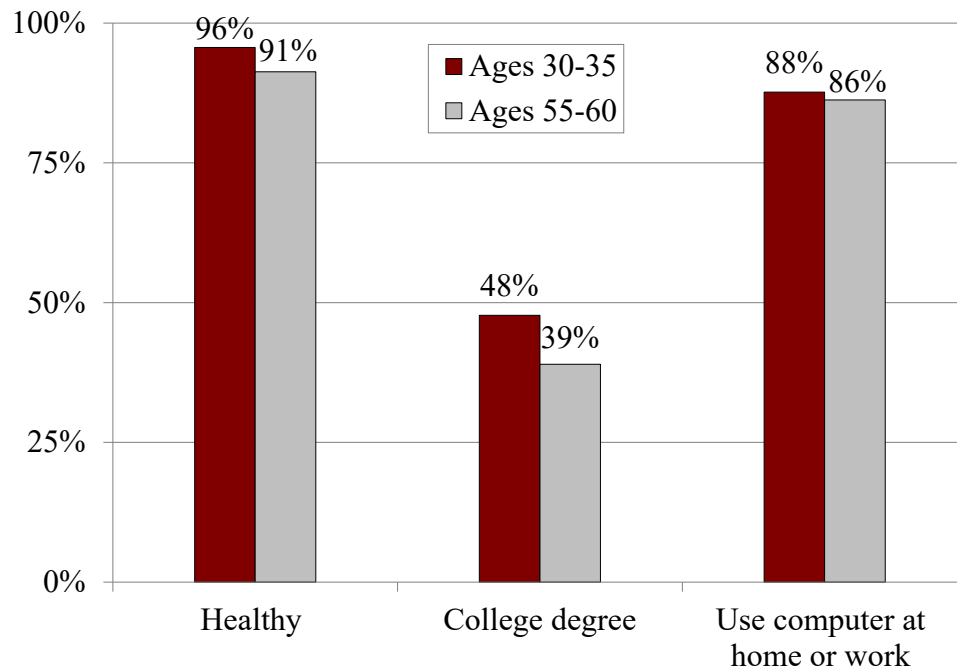
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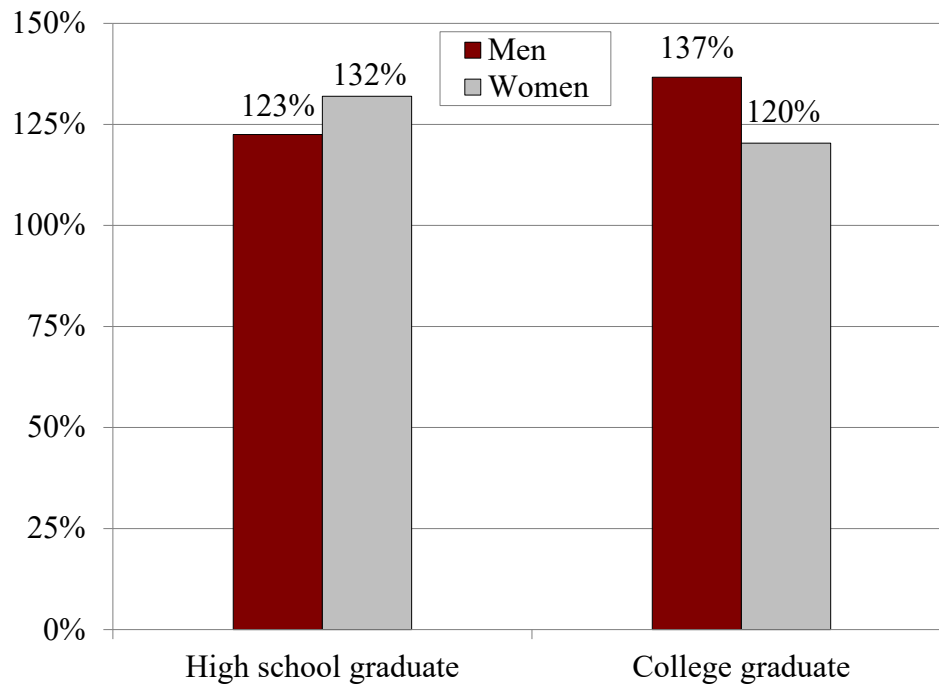
Figure 1. *Percentage of Workers Healthy, College-Educated, and Computer Savvy for Young (30-35) and Older (55-60) Workers, 2018*



Note: Computer use data are from 2012.

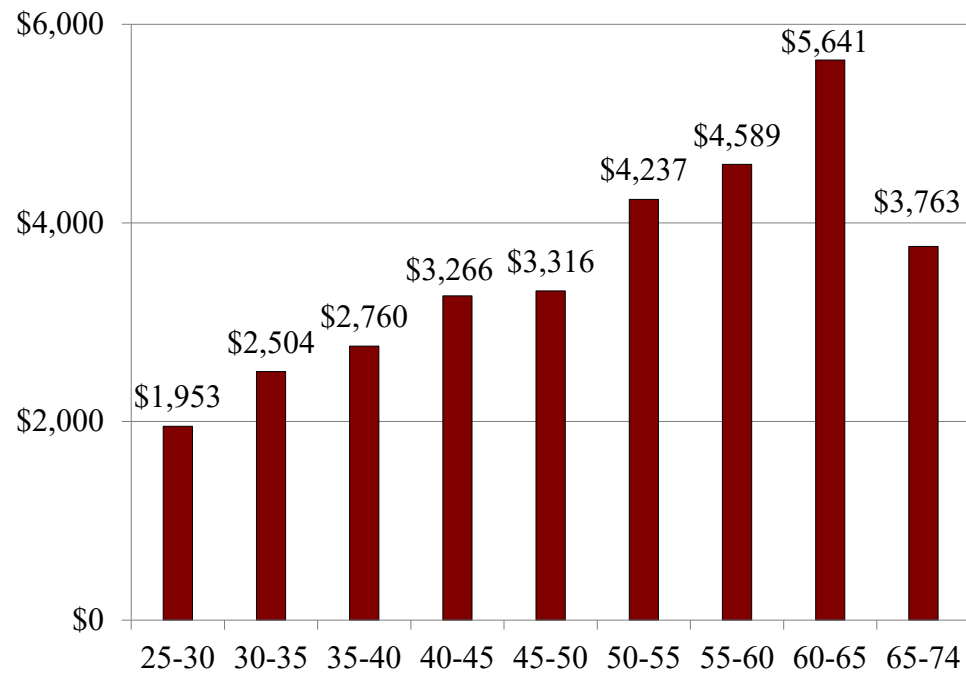
Sources: Authors' calculations from U.S. Census Bureau, *Current Population Survey* (2012, 2018).

Figure 2. *Ratio of Wage of Full-Time Workers Ages 55-60 Relative to Full-Time Workers Ages 30-35, by Gender and Education, 2017*



Note: The ratio above is the median wage for workers ages 55-60 to the median wage of workers ages 30-35.
Source: Authors' calculations from U.S. Census Bureau, *Current Population Survey* (2018).

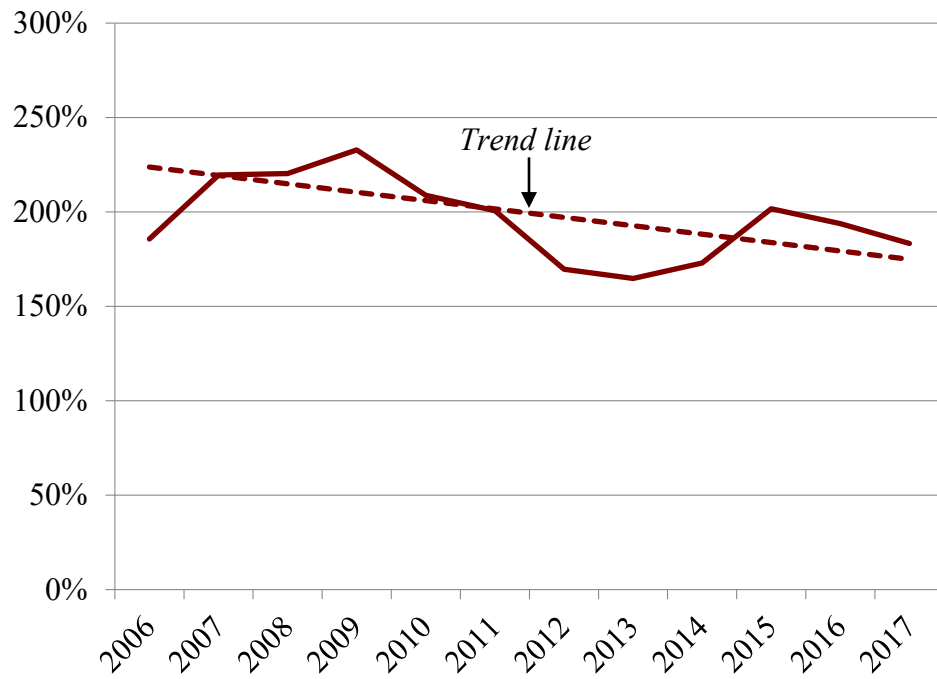
Figure 3. *Average Private Insurance Reimbursements of Workers, by Age, 2015-2017*



Note: Reimbursements are three-year averages and in 2018 dollars.

Sources: Authors' calculations from U.S. Department of Health and Human Services, *Medical Expenditure Panel Survey* (2015-2017); and Burtless (2017).

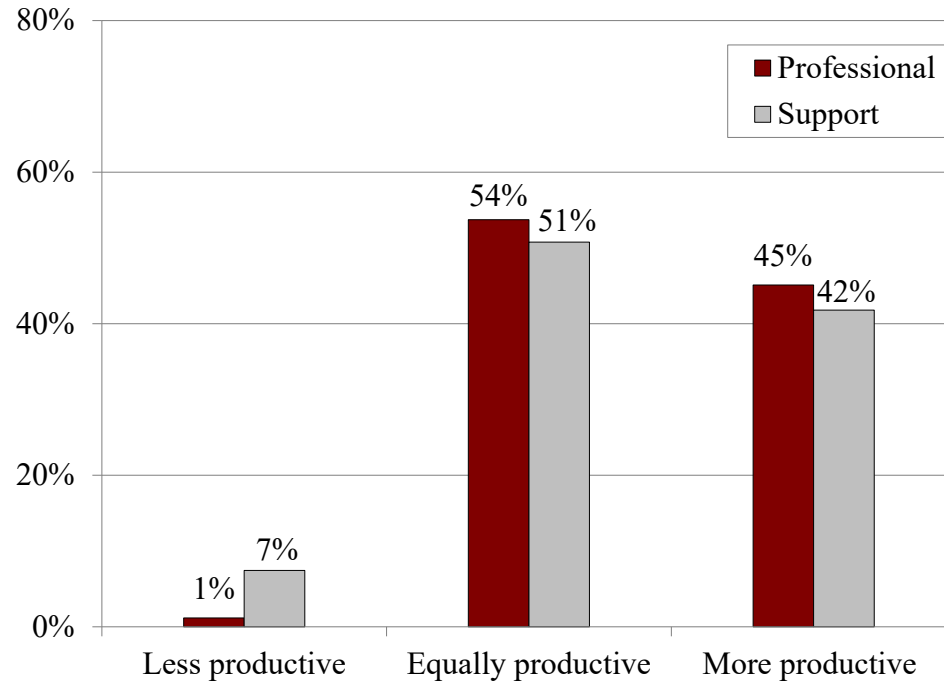
Figure 4. *Ratio of Average Private Insurance Reimbursement of Workers Ages 55-60 Relative to Workers Ages 30-35, by Age, 2006-2017*



Note: Ratios are three-year averages.

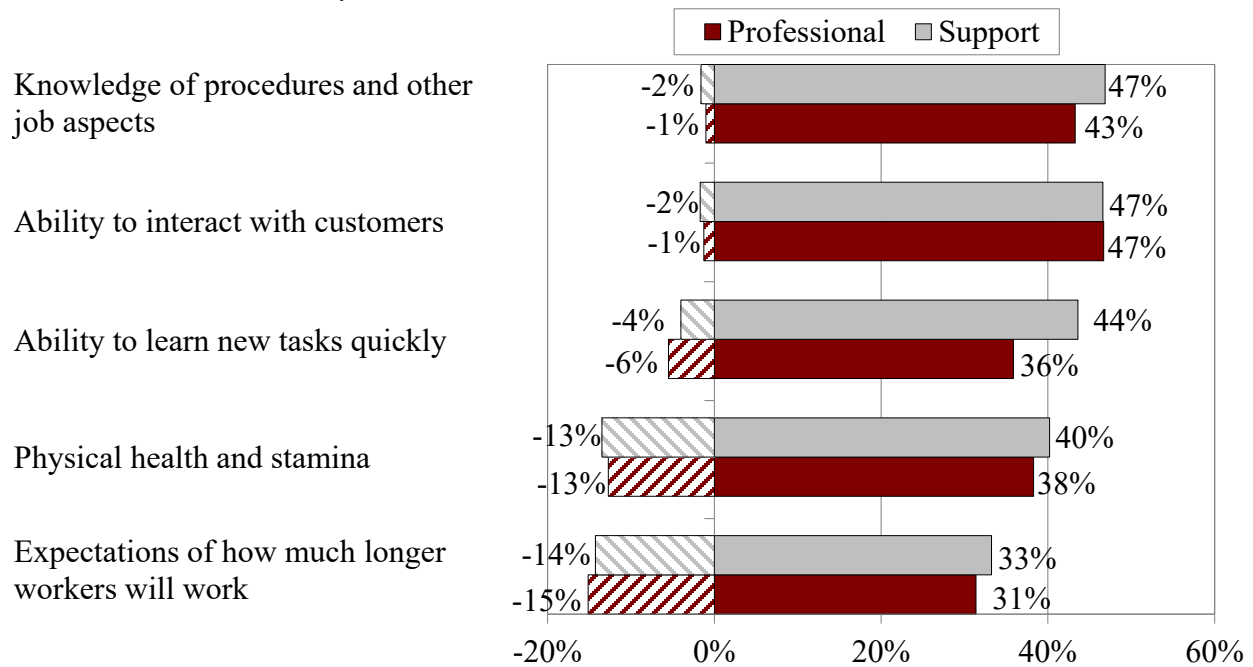
Sources: Authors' calculations from U.S. Department of Health and Human Services, *Medical Expenditure Panel Survey* (2004-2017).

Figure 5. *Employer Evaluations of the Relative Productivity of Older Workers, 2019*



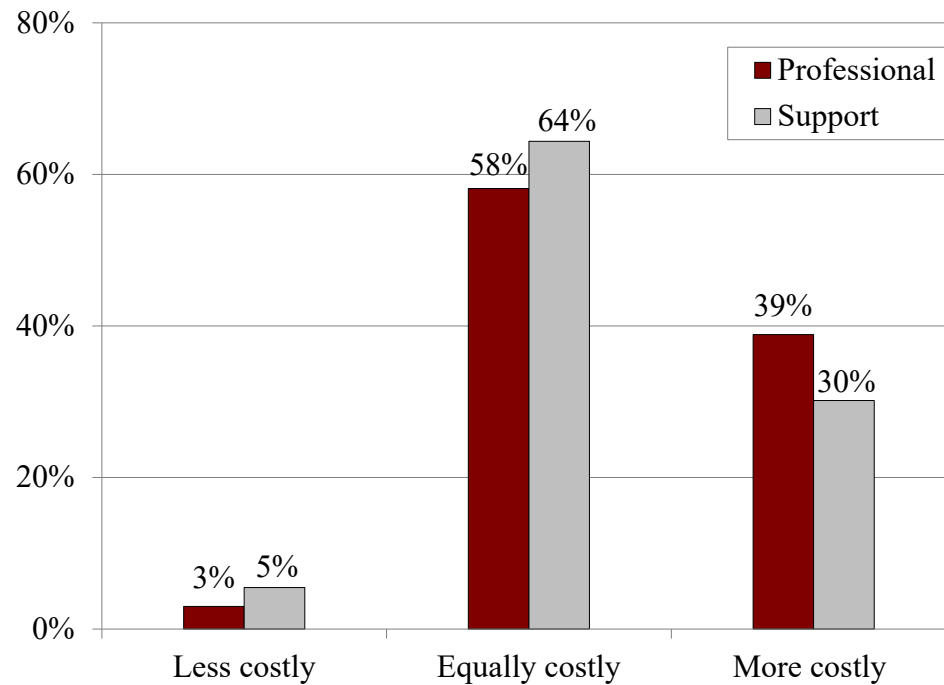
Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Figure 6. *Percentage of Employers Citing Positive or Negative Impact of Various Factors on Older Worker Productivity, 2019*



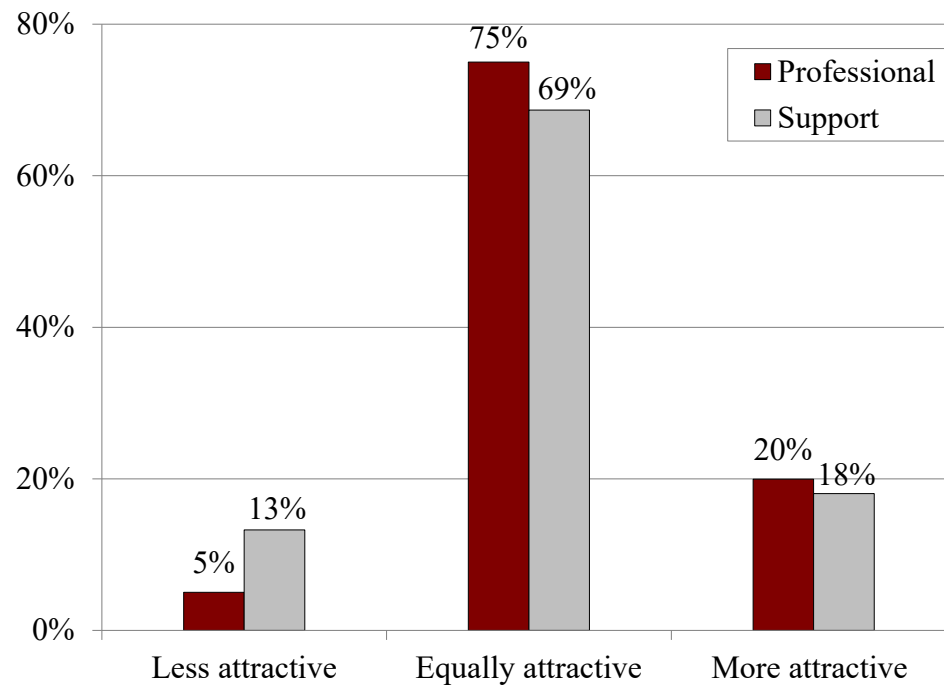
Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Figure 7. *Employer Evaluations of the Relative Cost of Older Workers, 2019*



Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

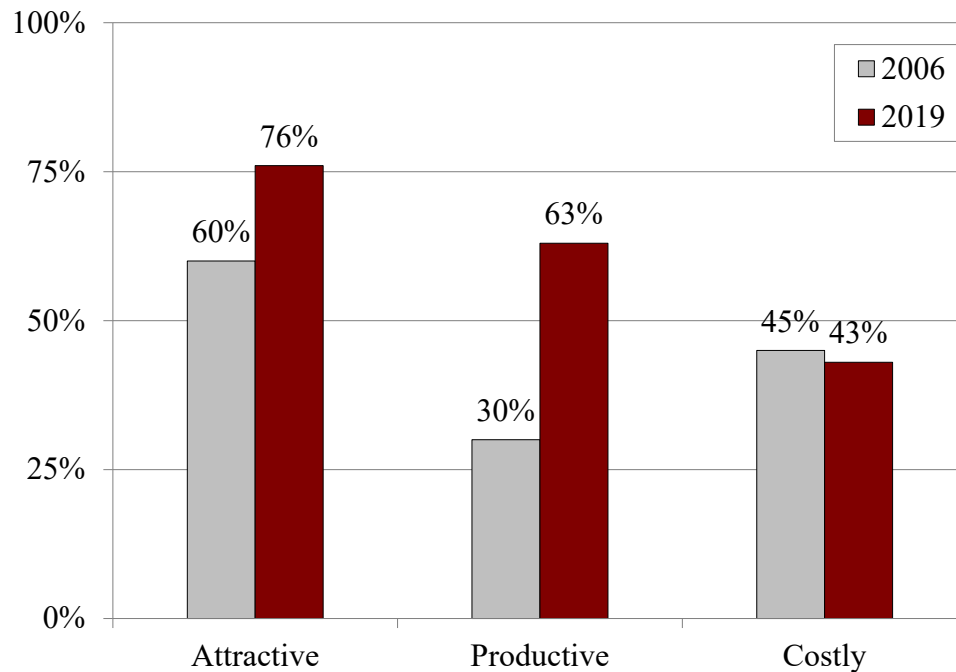
Figure 8. *Employer Evaluations of the Relative Attractiveness of Older Workers, 2019*



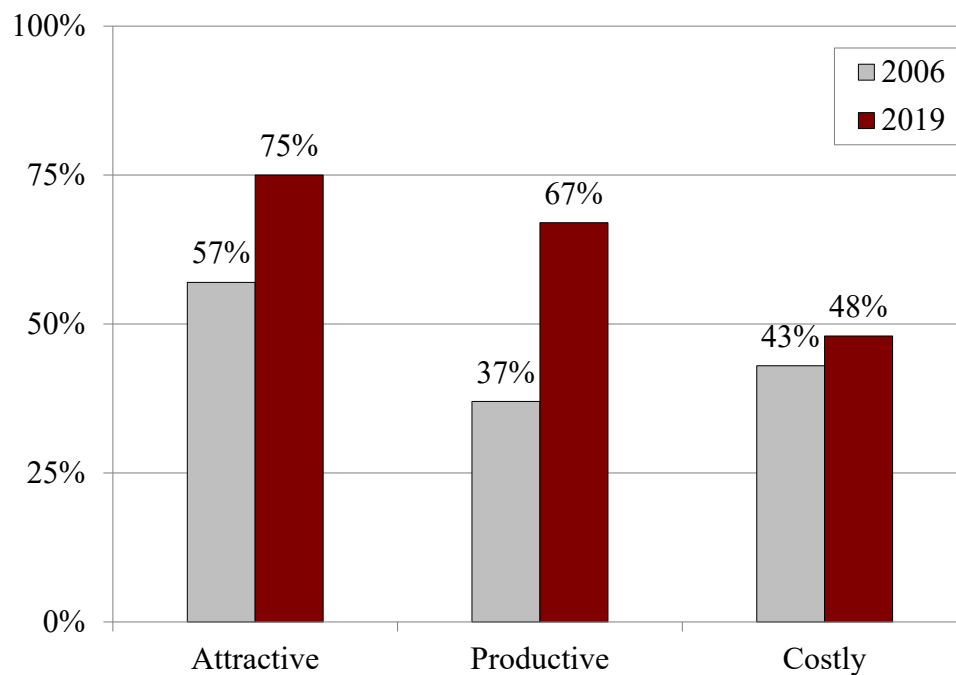
Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Figure 9. *Percentage of Firms Classifying Older Workers as Equally Attractive, Productive, and Costly as Younger Workers, 2006 and 2019, Professional and Support*

a. *Professional*



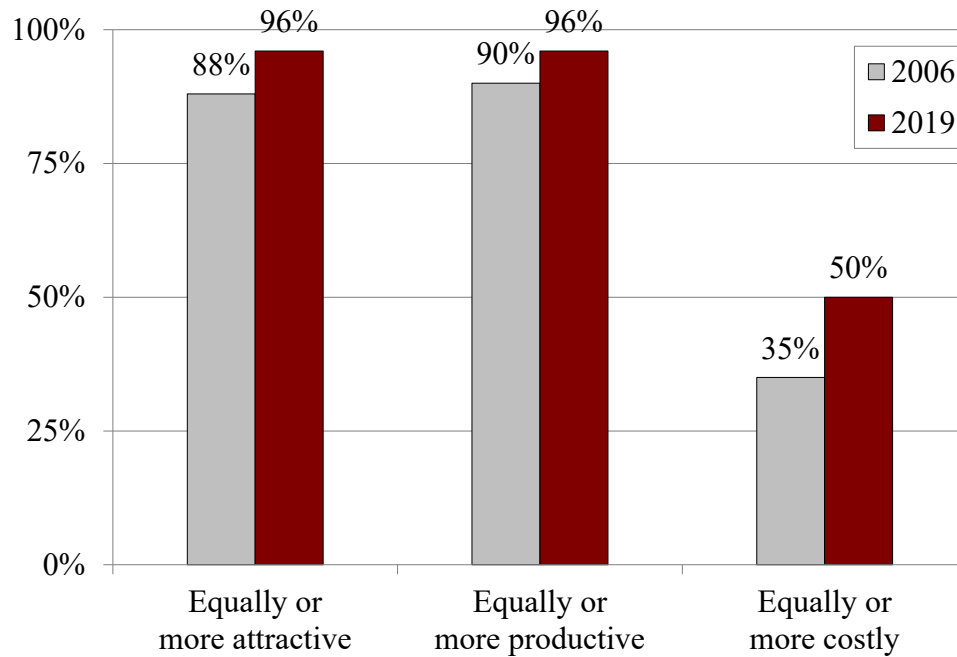
b. *Support*



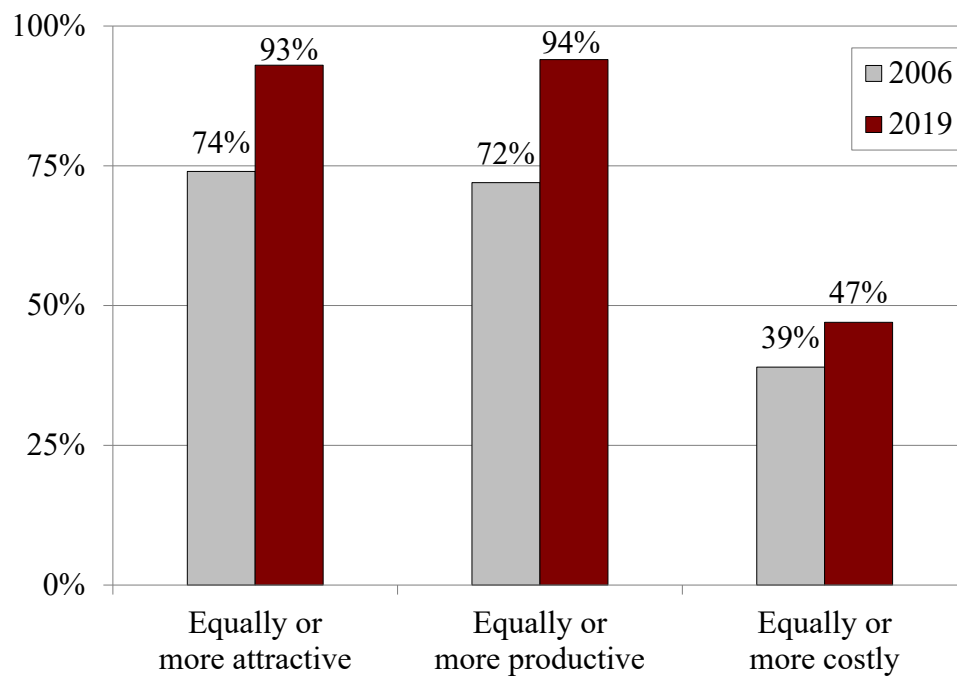
Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Figure 10. *Percentage of Firms Classifying Older Workers as Equally or More Attractive, Productive, and Costly than Younger Workers, 2006 and 2019, Professional and Support*

a. *Professional*



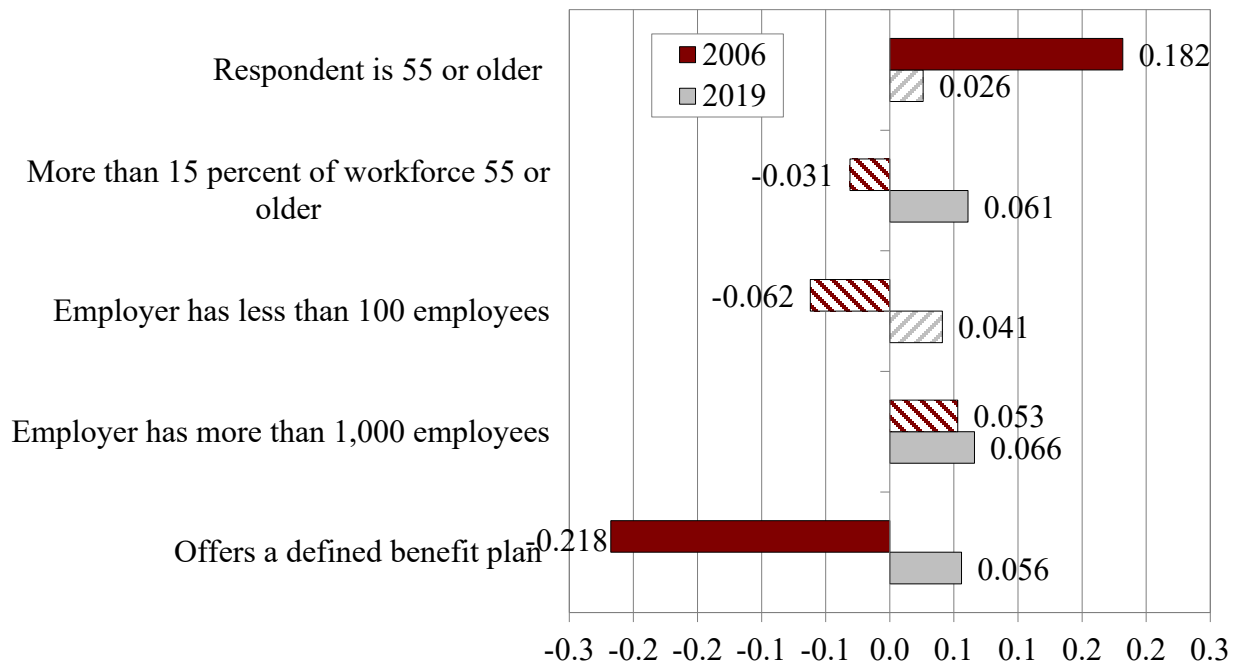
b. *Support*



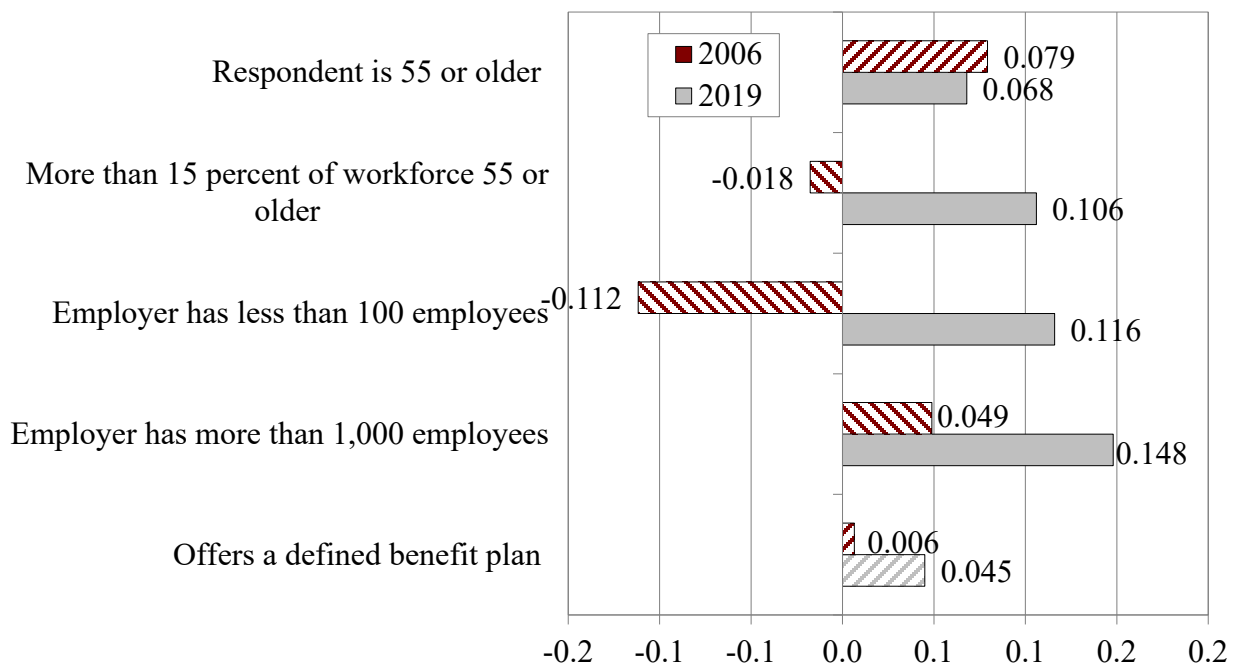
Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Figure 11. *Comparison of Employer Evaluations of the Relative Attractiveness of Older Workers, 2006 and 2019*

a. *Professional*

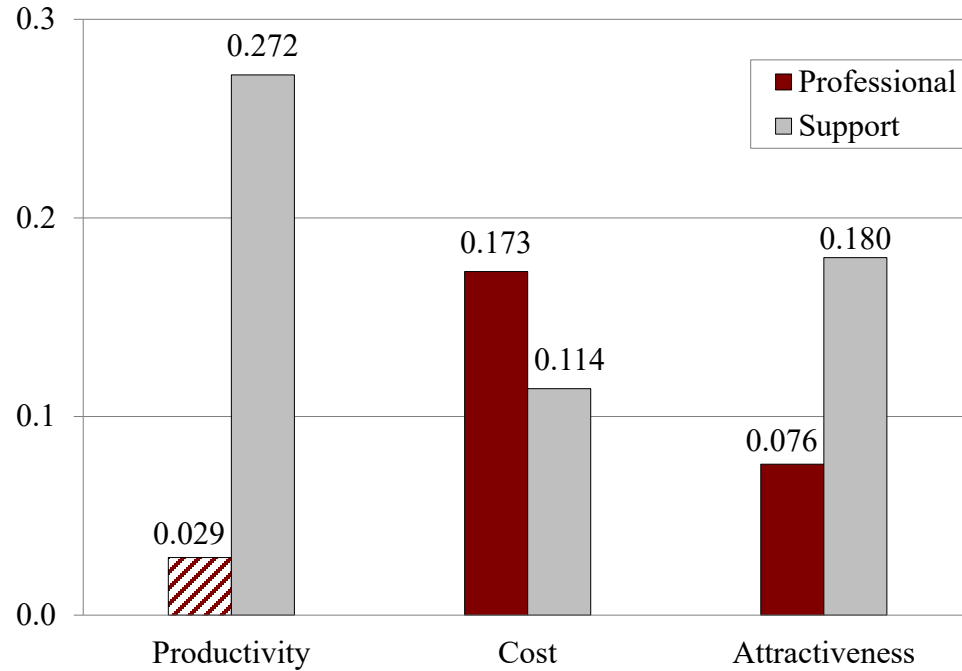


b. *Support*



Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Figure 12. *Change in Perceptions of Older versus Younger Workers by Group, 2006 to 2019*



Note: The bars display average changes between the two surveys controlling for the firm and respondent characteristics included in Table 5, weighted to be representative of the population of U.S. firms.

Sources: Authors' calculations based on Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2006, 2019).

Table 1. *Percentage of Employers Characterizing Older Workers as “More,” “Equally,” or “Less” Productive by Characteristic*

Assessment	Respondents 55 and over		Percentage of workforce 55 and over		Industry		Number of employees			Defined benefit coverage		ALL
	No	Yes	<15%	15%+	Goods	Services	<100	100-1,000	1,000+	No	Yes	
<i>Professional</i>												
More productive	48	38	21	59	39	46	54	29	30	39	58	45
Equally	50	61	78	40	61	52	45	70	68	60	41	54
Less productive	1	1	1	1	0	1	1	2	2	1	1	1
<i>Support</i>												
More productive	47	31	21	54	30	44	52	21	26	35	56	42
Equally	50	53	61	44	64	48	39	72	71	61	32	51
Less productive	3	17	19	2	5	8	8	7	4	5	13	7
Percentage of employers	68	32	31	69	81	19	65	23	12	64	36	100

Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Table 2. *Percentage of Employers Characterizing Older Workers as “More,” “Equally,” or “Less” Costly by Characteristic*

Assessment	Respondents 55 and over		Percentage of workforce 55 and over		Industry		Number of employees			Defined benefit coverage		ALL
	No	Yes	<15%	15%+	Goods	Services	<100	100-1,000	1,000+	No	Yes	
<i>Professional</i>												
More costly	43	30	26	45	37	39	43	36	25	30	56	39
Equally	54	66	72	51	59	58	54	60	75	66	43	58
Less costly	3	4	2	3	5	3	3	4	0	5	0	3
<i>Support</i>												
More costly	34	23	25	36	34	29	34	25	21	23	44	30
Equally	62	70	74	55	65	64	59	70	79	70	53	64
Less costly	5	7	1	9	1	7	7	4	0	7	4	6
Percentage of employers	68	32	31	69	81	19	65	23	12	64	36	100

Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Table 3. *Percentage of Employers Characterizing Older Workers as “More,” “Equally,” or “Less” Attractive by Characteristic*

Assessment	Respondents 55 and over		Percentage of workforce 55 and over		Industry		Number of employees			Defined benefit coverage		ALL
	No	Yes	<15%	15%+	Goods	Services	<100	100-1,000	1,000+	No	Yes	
<i>Professional</i>												
More attractive	19	22	16	25	22	20	24	13	12	25	12	20
Equally	74	78	80	73	78	74	70	82	88	71	81	75
Less attractive	7	0	4	2	0	6	6	5	1	4	7	5
<i>Support</i>												
More attractive	17	21	10	25	22	17	24	6	10	19	17	18
Equally	72	61	64	70	61	70	61	78	89	71	63	69
Less attractive	11	18	26	5	17	12	14	17	1	10	20	13
Percent of employers	68	32	31	69	81	19	65	23	12	64	36	100

Source: Center for Retirement Research at Boston College, *Survey of Employer Attitudes towards Older Workers* (2019).

Table 4. *OLS Regression of Employers Attitudes on Older Workers' Productivity, Cost, and Overall Attractiveness Relative to Younger Workers, by Employment Type, 2019*

Variables	Productivity		Cost		Attractiveness	
	Professional	Support	Professional	Support	Professional	Support
Respondent is 55 or over	0.0105 (0.0110)	-0.115* (0.0669)	-0.202* (0.108)	-0.246** (0.106)	0.035** (0.0152)	-0.0679 (0.0707)
15% or more of workforce is 55 and over	-0.00431 (0.0141)	0.136* (0.0816)	0.231** (0.117)	0.101 (0.107)	0.0325 (0.0362)	0.211** (0.0926)
Employer is in goods-producing sector	0.023* (0.0124)	0.0174 (0.0445)	0.0386 (0.110)	0.122 (0.110)	0.033* (0.0182)	-0.110 (0.0732)
Employer has less than 100 employees	0.0147 (0.0206)	0.080* (0.0415)	0.0230 (0.0930)	0.0561 (0.0818)	0.0439 (0.0367)	0.146** (0.0622)
Employer has more than 1,000 employees	6.91e-06 (0.0308)	0.0657 (0.0482)	-0.107 (0.0932)	-0.0348 (0.0898)	0.074** (0.0339)	0.236*** (0.0593)
Offers a defined benefit plan	0.000143 (0.0166)	-0.107 (0.0764)	0.233* (0.121)	0.246** (0.122)	0.043** (0.0195)	-0.0427 (0.0773)
Offers a generous health insurance plan	0.00113 (0.0160)	0.0508 (0.0527)	-0.0823 (0.100)	-0.144 (0.0960)	0.0278 (0.0223)	0.103* (0.0581)
Share of workforce that is professional	0.000228 (0.000183)	0.002* (0.000919)	-0.004** (0.00170)	-0.00217 (0.00153)	-0.000163 (0.000442)	0.00131 (0.00110)
Employer is a for-profit firm	-0.018* (0.00952)	-0.0664 (0.0403)	0.0418 (0.107)	0.0399 (0.0979)	0.0538 (0.0574)	0.00220 (0.0727)
Constant	0.976*** (0.0320)	0.803*** (0.101)	0.381** (0.171)	0.348** (0.156)	0.827*** (0.0780)	0.554*** (0.132)
Observations	310	310	310	310	310	310
R-squared	0.015	0.250	0.183	0.185	0.069	0.218

Notes: Standard errors in parentheses. Significance of coefficients: *** at 99 percent, ** at 95 percent, * at 90 percent.

Source: Center for Retirement Research at Boston College, *Employers and Older Workers: CRR Survey Data* (2019).

Table 5. *Time Trend of Employers Attitudes on Older Workers' Productivity, Cost, and Overall Attractiveness Relative to Younger Workers by Employment Type, 2006, 2019*

Variable	Older workers are equally or more productive		Older workers are more costly		Older workers are equally or more attractive	
	Professional	Support	Professional	Support	Professional	Support
Survey 2019	0.029 (0.022)	0.272*** (0.030)	0.173*** (0.042)	0.114*** (0.041)	0.076*** (0.023)	0.180*** (0.032)
Respondent is 55 or over	0.035 (0.024)	0.123*** (0.033)	-0.117** (0.046)	-0.157*** (0.045)	0.115*** (0.026)	0.077** (0.035)
15% or more of workforce is 55 and over	0.013 (0.023)	-0.057* (0.031)	-0.011 (0.044)	-0.012 (0.043)	0.014 (0.024)	0.018 (0.033)
Employer is in goods-producing sector	0.008 (0.027)	-0.161*** (0.036)	-0.040 (0.050)	-0.014 (0.050)	0.026 (0.028)	-0.171*** (0.038)
Employer has less than 100 employees	-0.011 (0.038)	-0.058 (0.051)	0.105 (0.072)	0.140** (0.071)	0.003 (0.040)	0.019 (0.054)
Employer has more than 1,000 employees	0.022 (0.061)	-0.058 (0.082)	-0.076 (0.115)	-0.041 (0.114)	0.055 (0.064)	0.067 (0.087)
Offers a defined benefit plan	-0.024 (0.028)	-0.084** (0.037)	0.068 (0.052)	0.175*** (0.051)	-0.079*** (0.029)	0.011 (0.039)
Offers a generous health insurance plan	0.084*** (0.022)	0.001 (0.029)	0.101** (0.041)	0.129*** (0.040)	0.080*** (0.023)	0.032 (0.031)
Share of workforce that is professional	0.001** (0.000)	0.001 (0.001)	-0.002*** (0.001)	-0.003*** (0.001)	-0.001 (0.000)	0.001** (0.001)
Employer is a for-profit firm	-0.059** (0.027)	-0.019 (0.036)	0.106** (0.051)	0.074 (0.050)	-0.068** (0.028)	-0.011 (0.038)
Constant	0.884*** (0.051)	0.781*** (0.068)	0.230** (0.096)	0.248*** (0.095)	0.879*** (0.053)	0.677*** (0.072)
Observations	625	625	625	625	625	625
R-squared	0.062	0.188	0.082	0.109	0.096	0.127

Notes: Standard errors are in parentheses. Significance of coefficients: *** at 99 percent, ** at 95 percent, * at 90 percent.

Sources: Center for Retirement Research at Boston College, *Employer Attitudes towards Older Workers* (2006, 2019).

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