but most jobs aren't professional jobs where one can obtain self-expression. Some men find freedom from "the bonds of earning a wage" in retirement while other men may feel incompetent because they are not working. Women evaluate their self-efficacy in terms of home life and work life, but women with strong work identities are more fearful and skeptical of retirement.

If employers want greater numbers of older workers, then they will have to make older workers feel welcomed; judge competency objectively, not by stereotypical age norms; and accommodate older workers' desires for flexibility and autonomy. From the workers' points of view, the most important determinant of work and retirement satisfaction is whether each activity is done by choice and not driven by severe income needs, an obvious but salient point that well-being is associated with a sense of control over one's life.

What Is to Be Done?

Possible policy options raised by various authors that may facilitate or encourage work at older ages include the following:

- Address the need of older workers to have meaningful training opportunities
- Expand the Americans with Disabilities Act to include accommodations for limitations caused by age
- Permit reduced work hours and partial pension payments
- Permit defined benefit plans to adjust to increased life expectancy with more flexibility
- Adjust Social Security early and normal retirement ages to take into account increased life expectancy and the improved health of some older workers
- Base full retirement benefits on the number of years worked, rather than age
- Have Medicare be the primary insurer for workers age 65 and older
- Address ways to reduce the costs of health benefits for older workers
- Mitigate the effect defined contribution plans have on making the wealth and income distribution more unequal by implementing saver's credits for lower income workers or mandating a defined contribution supplement to Social Security

Further Research

The contributions here suggest another look at an important policy idea—raising the Social Security early retirement age. The arguments mustered by op-

ponents are the disparate impacts resulting from race and socioeconomic class and the fact that 30 percent of all people age 60–64 cannot work because of physical or mental limitations. Raising the retirement age for the collection of full benefits may reduce the pressure on pension plans and keep them stronger, but such a move entails a large cut in benefits for those who still retire at "younger" ages. In a roundtable discussion among all the participants, many expressed concern for the individuals in poor health who can't work, especially those who started work early because they didn't attend college.

Wenger proposed a possible alternative to that controversial proposal—the Italian model! Instead of using age to establish eligibility for early retirement benefits, Social Security could use the number of covered quarters. College-educated workers tend to be in better health, have higher salaries, and find work later in life to be more rewarding. College-educated workers start work at much older ages than blue-collar and lower-income individuals do. One of the reasons educated workers want to work longer may be that eagerness to work at older ages is related to the number of years one has been working. Another fact that may support the idea that normal retirement ages be linked to total years of full-time work is that older women are increasing their labor-force participation rates faster than older men, and faster than younger women. Women may be adjusting their retirement ages to get forty years of work in.

The problem with basing the eligibility for retirement benefits on how long one has been working is that unemployment spells, child-rearing, and family care could be reasons people have fewer years in the workforce. The new rule could actually hurt low-income workers and women if they are likely the groups to be affected by these life events. However, the adverse distributional issues that this would cause could be taken care of by granting work credits for periods of dependent care and unemployment.

PART 1

LIVING LONGER, WORKING LONGER

CHAPTER ONE

Working Longer

A Potential Win-Win Proposition

ALICIA H. MUNNELL

If people continue to retire in their early 60s, they will not have enough money to comfortably support themselves in 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 pensions also involve considerably more uncertainty given the shift from defined benefit (DB) to defined contribution (DC) plans, such as 401(k)s. With institutional savings arrangements on the decline, one might have thought that people would be saving more on their own. But the personal saving rate remains very low. Combine the retirement income crunch with the dramatic increase in life expectancy, and continued employment in later life appears like a promising option for ensuring the financial security of older Americans.

At the same time, employers are likely to face a labor shortage going forward. Because of the decline in the fertility rate, they will no longer be able to tap into a rapidly growing pool of younger workers. Increased reliance on women, immigrants, and capital, as well as relocation to low-wage areas may relieve some of the pressure. But many employers will find these responses inadequate to make up for the shortfall.

Thus, continued employment of older workers could be a win-win situation for employers and employees. Staying in the labor force longer will ease the crunch on retirement income faced by older Americans, and the hiring of older workers will ease the labor shortage faced by employers. There are some signs of hope that things will work out. Older workers will be better educated and healthier than in the past, they will have a lifetime of experience, and they will be well suited to a job market that has become much less physically demanding. On the other hand, companies generally resist employing part-time workers, and most

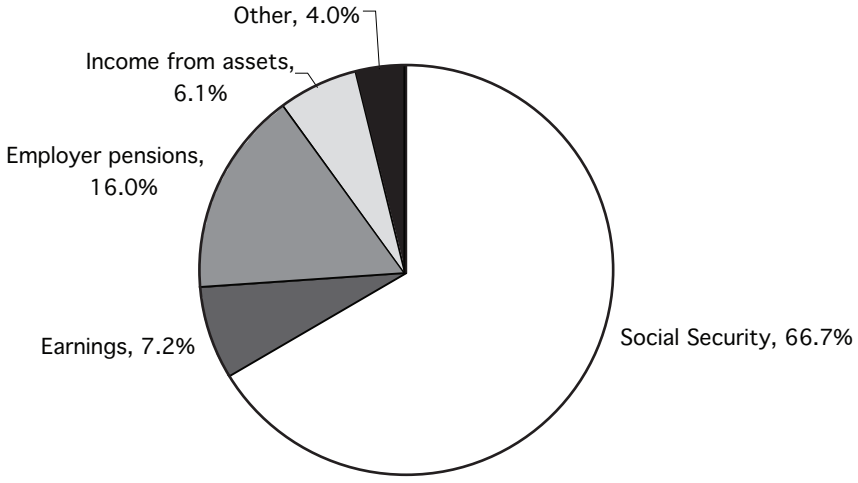
older people do not want to work full time. Older workers are also expensive in terms of health insurance and defined benefit–plan pension costs. And while employers value the reliability and experience of older workers, they generally view them as inflexible and not worth training. Increasing the employment of older workers, therefore, will require increased flexibility on the part of both employers and employees.

The first section of this chapter explores the declining prospects for traditional sources of retirement income and documents how continued employment could help. The second section identifies possible ways that employers could fill the upcoming labor market shortfall, and suggests reasons why older workers might be an attractive option. The third section explores impediments to employing older workers. The final section draws several conclusions.

Retirement Income Trends and the Need for Continued Employment

The relative importance of the various sources of retirement income for those aged 65 and over is shown in Figure 1. Social Security is dominant even for the household in the middle of the income distribution. Pensions are second, fol-

Figure 1. Retirement Income by Source, Households Aged 65 and Older, Middle Income Quintile



Source: U.S. Social Security Administration. 2006. *Income of the Population Aged 55 and Older, 2000.* Washington, DC, (February). http://www.ssa.gov/policy/docs/statcomps/income_pop55/2004/incpop04.pdf.

lowed by individual savings and earnings. The important issue is what these retirement income sources will look like going forward.

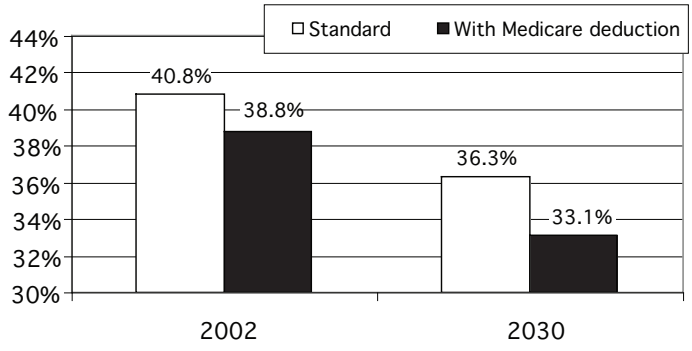
The Outlook for Social Security

Even under current law, Social Security will provide less retirement income relative to previous earnings than it does today. Combine the already legislated reductions with potential cuts to close the financing gap, and Social Security might no longer be the mainstay of the retirement system for many people.

Normal retirement age is rising. First, under current law, the normal retirement age (NRA) is scheduled to increase from 65, for those who reached 62 before 2000, to 67 for people reaching age 62 in or after 2022. The increase in the NRA is equivalent to an across-the-board benefit cut. For those who do retire at age 65, this cut takes the form of lower monthly benefits; for those who continue to work to the NRA, it takes the form of fewer years of benefits. The replacement rate for the medium earner who retires at age 65, for example, will drop from 40.8 percent in 2002 to 36.3 percent in 2030 (Figure 2).

Medicare will take bigger bite. The second development that will affect future replacement rates is the rising cost of Medicare. Premiums for Medicare Part B, which are automatically deducted from Social Security benefits, are scheduled to increase from 6.8 percent of benefits for someone who retired in 2000 to

Figure 2. Social Security Replacement Rate for Worker with a History of Average Earnings, 2002 and 2030



Source: U.S. Social Security Administration. 2006b. *The 2006 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds and Supplementary Medical Insurance Trust Fund.* http://www.ssa.gov/OACT/TR/TR06/tr06.pdf; http://cms.hhs.gov/ReportsTrustsFunds/downloads/tr2006.pdf.

10.2 percent for someone retiring in 2030. Since premiums tend to rise rapidly after retirement, they will account for an even larger share of Social Security benefits as recipients age, potentially consuming all cost-of-living adjustments provided along the way.

More benefits will be taxed. The third factor that will reduce Social Security benefits is the extent to which they are taxed under the personal income tax. Under current law, individuals with less than $25,000 and married couples with less than $32,000 of "combined income" do not have to pay taxes on their Social Security benefits.[1] Above those thresholds, recipients must pay taxes on a portion of their benefits.

Today most beneficiaries with a history of medium earnings—and thus about $14,000 in Social Security benefits—pay no tax. But the thresholds are not indexed for growth in average wages or even for inflation. By 2030, the nominal Social Security benefit for the worker with a history of medium earnings is projected to nearly triple to about $38,000. If other nominal income increases similarly, many medium earners will pay tax on half of their benefits. (Note that the full Social Security benefit is considered for tax purposes, even though the Medicare Part B premium is deducted before payment.) A 15 percent personal income tax on half of the benefits will reduce replacement rates by another 7.5 percent as compared to today.[2]

The financing gap creates further pressure. The final development, unlike those discussed above, is by necessity speculative. Eliminating the entire 75-year deficit by reducing benefits alone would require a 13 percent cut in benefits right now. But that figure makes no allowance for protecting the benefits of those 55 and over and the benefits of people who are disabled. Holding these groups harmless, which seems politically likely, requires a benefit cut of about 20 percent to restore balance. If Congress closes the funding gap by splitting the difference—so that benefits are cut 10 percent and the rest of the shortfall is eliminated through additional revenue—the replacement rate for the medium earner would be cut by an additional three percentage points. In short, as shown in Table 1, forces already in place are likely to lead to a markedly reduced role for Social Security. This reduced role will have a profound effect on future retirees.

The Outlook for Private Sector Employer-Provided Pensions

With a diminished role for Social Security, retirees will be increasingly dependent on employer-sponsored pensions. One problem is that at any moment in

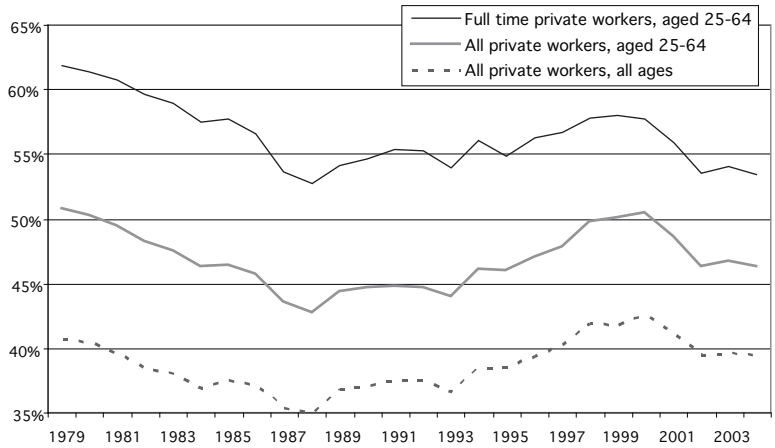
Table 1. Social Security Replacement Rate in 2030 for a Worker with a History of Average Earnings, Retiring at Age 65 and Age 62

	Percent of Earnings in 2030	
Development	*Age 65*	*Age 62*
Unadjusted	41.3	32.8
After extension of Normal Retirement Age	36.3	28.7
After Medicare Part B Premium	32.6	25.0*
After Personal Income Tax	29.9	22.8
After 10% benefit cut to eliminate financing gap	26.3	20.0

Source: U.S. Social Security Administration (2003a); (2003b); and author's estimate.
Note: For the individual retiring at age 62, the Medicare Part B premium will not begin until age 65.

time, less than half the private sector workforce aged 25–64 participates in an employer-sponsored plan of any type, and this fraction, which has remained virtually unchanged since the late-1970s, is unlikely to improve (Figure 3).[3] Since pension participation tends to increase with earnings, it is only middle- and upper-income individuals who will have an employer-provided pension to supplement their Social Security benefits.

Figure 3. Percent of the Private Workforce Participating in a Pension, 1979–2004



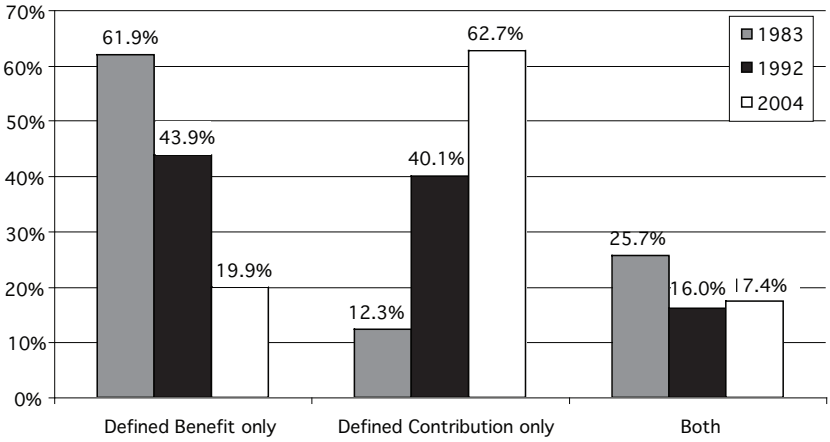
Source: Author's calculations using the March CPS, 1979–2004.

The other issue is that the nature of pension coverage has changed dramatically. Twenty years ago, most people with pension coverage had a traditional DB plan that paid a lifetime annuity at retirement.[4] Today the world looks very different. Most people with a pension have a DC plan—most often a 401(k) (see Figure 4). In contrast to DB plans, DC plans are like savings accounts. Generally the employee, and often the employer, contributes a specified percentage of earnings to the account. These contributions are invested, usually at the direction of the employee, mostly in mutual funds consisting of stocks and bonds. Upon retirement, the worker generally receives the balance in the account as a lump sum, albeit with the option to roll it over to an Individual Retirement Account (IRA).

The defining characteristics of 401(k) plans are that participation is voluntary and that the employee as well as the employer can make pre-tax contributions. These characteristics shift a substantial portion of the burden for providing for retirement to the employee; the employee decides whether or not to participate, how much to contribute, how to invest the assets, and how to use the assets at retirement. In addition, workers have some access to 401(k) plan funds before retirement, adding another element of individual responsibility.

Although 401(k) plans give individuals control of their investments and are much better than DB plans for the mobile employee, they come up short in a number of ways. *In theory,* workers could accumulate substantial pension wealth under 401(k) plans. But *in practice* they do not. For example, the average house-

Figure 4. Percent of Households with Pension Coverage by Type, 1983–2004



Source: Author's calculations from the Survey of Consumer Finances.

hold approaching retirement in 2001 had accumulated only $55,000—not much to support a couple for two decades (Aizcorbe, Kennickell, and Moore 2003). The reason for these relatively low balances appears to be that the entire burden is on employees, and many make mistakes at every step along the way. A quarter of those eligible to participate in a plan fail to do so; less than 10 percent of those that do participate contribute the maximum; more than half fail to diversify their investments; many overinvest in company stock; and almost none rebalance their portfolios in response to age or market returns. Most importantly, many cash out when they change jobs, and very few annuitize at retirement.

In addition to the shift in pension coverage from DB to 401(k) plans, many employers are converting their traditional DB plans to "cash balance" plans.[5] The key characteristic of these plans is that they define the benefit in terms of a lump sum rather than an annuity payment. Thus, many workers in these plans can cash out accumulations when they change jobs; and, at retirement, all workers face the daunting task of allocating fixed sums over their expected remaining lifetimes.

In short, workers with employer-sponsored pension coverage face an array of challenges. First, the majority now rely on 401(k) and similar plans, and 401(k)s are coming up short. Second, within the DB world, many employers have transformed their traditional plan to a hybrid that generally provides lump-sum benefits rather than a stream of payments. Still, people with 401(k) plans and hybrids are the lucky ones. At any time, about half the workforce aged 25–64 has no pension coverage at all.

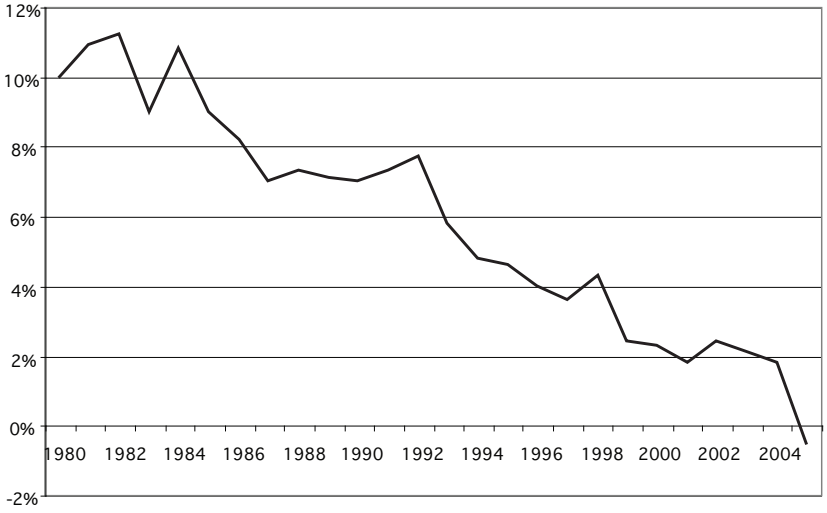
The Outlook for Individual Saving

The personal saving rate, as a percentage of disposable personal income, has fallen steadily from 10 percent in 1980 to below zero in 2005, with a slight interruption during the previous recession in 1991 (Figure 5). In fact, the personal saving rate of 2005 was at its lowest point since the Great Depression.

The precipitous drop in the U.S. saving rate during the 1990s can be attributed in part to the "wealth effect" and the way savings are measured. The stock market boom and hot economy convinced many Americans that their retirement would be secure as they saw their investments, such as 401(k)s and IRAs, grow in value. Capital gains, however, are not included in the measurement of national income since they do not reflect increases in output. The increase in wealth nevertheless spurred a mass increase in consumption (Perozek and Reinsdorf 2002). As consumption rose, savings fell. This pattern was mirrored in contributions to traditional DB plans.

Because of the "wealth effect" and pension accounting conventions, one would expect the personal savings rate to rise significantly after the market crash. Yet it

Figure 5. Personal Saving in the United States as a Percentage of Disposable Personal Income, 1980–2005



Source: Bureau of Economic Analysis. 2006. *National Income and Product Accounts (NIPA) Data.* U.S. Department of Commerce. http://www.bea.gov/bea/dn/nipaweb/SelectTable.asp?Selected=N#S2.

actually fell during the market rout of 2001, and rose just slightly to 2.4 percent in 2002. These numbers are a far cry from the average 8 to 10 percent savings rate the United States experienced between the Second World War and the 1980s.

This development does not bode well for the baby boomers about to retire. These soon-to-be retirees need some other form of income to ensure a good retirement—an assurance that Social Security and employer-sponsored pensions no longer provide. The future of personal savings remains uncertain, as Americans seem intent on continuing their high level of consumption. Lawmakers have enacted an array of tax incentives designed to spur saving, but these efforts have produced only limited results (Perozek and Reinsdorf 2002; Saxton 1999). In short, personal saving seems unlikely to compensate for the decline in Social Security and the increased uncertainty of pension income. Given the need for more income in retirement, working longer may be a good solution.

The Impact of Working Longer on Retirement Income

The financial implications of another year's work are striking. Table 2 shows how additional years of work can change the retirement finances of a typical married

Table 2. How Retirement Age Affects Assets Needed in Retirement, Married Couple Earning $62,000 before Taxes, $48,943 after Taxes (in 2003 Dollars)

Retirement Age	*Annual Social Security Payments**	*Additional Retirement Income Needed to Achieve 80 Percent of After-Tax Pre-retirement Income ($39,154)*	*Assets Needed at Retirement to Produce that Additional Income**
62	17,735	21,419	330,170
63	19,279	19,875	295,680
64	20,958	18,196	260,630
65	22,770	16,384	225,330
66	24,591	14,563	191,740
67	26,517	12,637	158,740
68	28,593	10,561	126,080
69	30,832	8,322	94,010
70	31,908	7,246	77,060

Source: Congressional Budget Office.
Note: The table assumes a married couple earning $62,000 (roughly the median annual income of married households aged 55 to 64) solely from wages, with one member of the couple earning twice as much as the other. The couple pays annual federal income taxes of $6,260 (filing jointly), state income taxes of $2,054, and Social Security taxes of $4,743, and has an after-tax income of $48,943. Taxes (including average state income taxes) are calculated using 2003 rates specified in the National Bureau of Economic Research's TAXSIM model (available at www.nber.org/~taxsim/taxsim-calc5/). For simplicity, the example assumes that retirement income is not taxed, that people have typical life expectancies, and that they die at predictable dates leaving no bequests.
* Taken from the Social Security Administration's "Social Security Quick Calculator" (available at www.ssa.gov/OACT/quickcalc/index.html).
** Assuming a real rate return of 3 percent.

couple. Each additional year in the workforce increases income directly through earnings, reduces the number of years over which retirement savings need to be spread, and increases Social Security benefits by 5 to 10 percent.

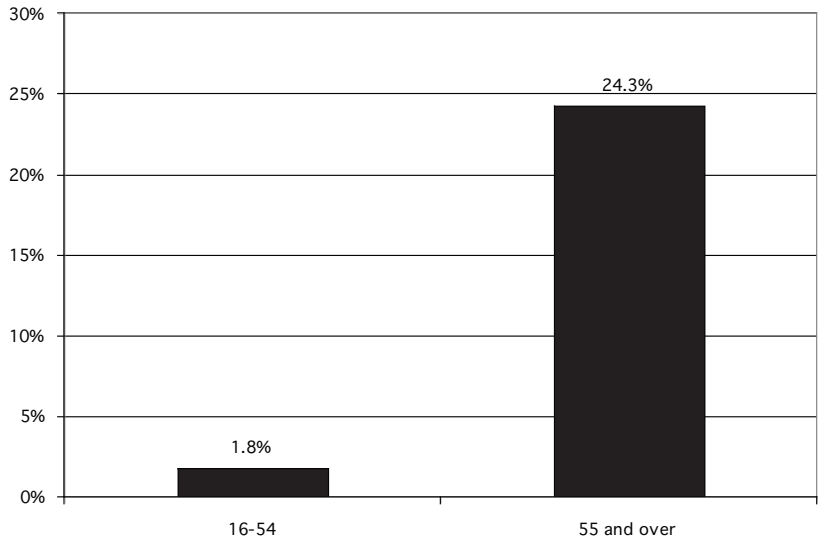
In the example, if the couple retires at age 62, the two people will receive $17,735 from Social Security and will need $21,419 from personal saving to achieve the 80 percent replacement rate. To produce that additional income requires assets of $330,170. However, if they work to age 65 they will receive a higher annual Social Security benefit, and they will need a smaller amount of supplementary income. Thus, they will require fewer assets for two reasons: (1) their required supplementary income is lower and (2) they will spread their accumulated resources over a shorter retirement. In the extreme, the couple that works until age 70 would need one-third of the additional retirement income of someone who retired at age 62, and thus less than one-fourth of the assets

at retirement. Clearly, continued employment is a powerful response to the projected decline in traditional sources of retirement income. The question is whether employers will want to retain or hire older workers.

Employers and the Coming Labor Shortage

The baby-boom generation is about to move from ages when most people work to ages when most people retire. The early baby boomers will turn 62 in 2008 and the late boomers, in 2026. With the retirement of the baby boomers, labor force growth will slow markedly, reflecting the drop in the fertility rate. Figure 6 shows the projected percentage change in the labor force between 2010 and 2025 for those aged 16–54 and those aged 55 and over. The number of younger workers will remain virtually constant over the fifteen-year period, while the number of older workers will grow by 24 percent. While older workers will still account for less than 20 percent of the labor force, total labor labor force growth will be determined by those under 55. The result is that total growth will average only 0.4 percent per year between 2010 and 2025—far below the 1.3 percent experienced between 1980 and 2000.

Figure 6. U.S. Labor Force, Percentage Change 2010–2025



Source: Bureau of Labor Statistics. 2003. "Labor Force Data." ftp://ftp.bls.gov/pub/special.requests/ep/labor.force.

Possible Employer Responses to the Coming Labor Shortage

In theory, the nation could respond to the upcoming shortage of prime-age workers (defined as workers between the ages of 25 and 54) by supplying the existing workers with more capital, by tapping unconventional sources of labor, such as immigrants and women, by relocating, or by employing more older workers.

Use more capital. Increasing the amount of capital per worker to raise the productivity of the labor force seems unlikely to solve the problem. The same demographic trends that lead to the aging of the population and slowing of labor force growth are likely to reduce both personal and government saving. Lower saving means lower investment and relatively less capital than would have occurred without the demographic shift.

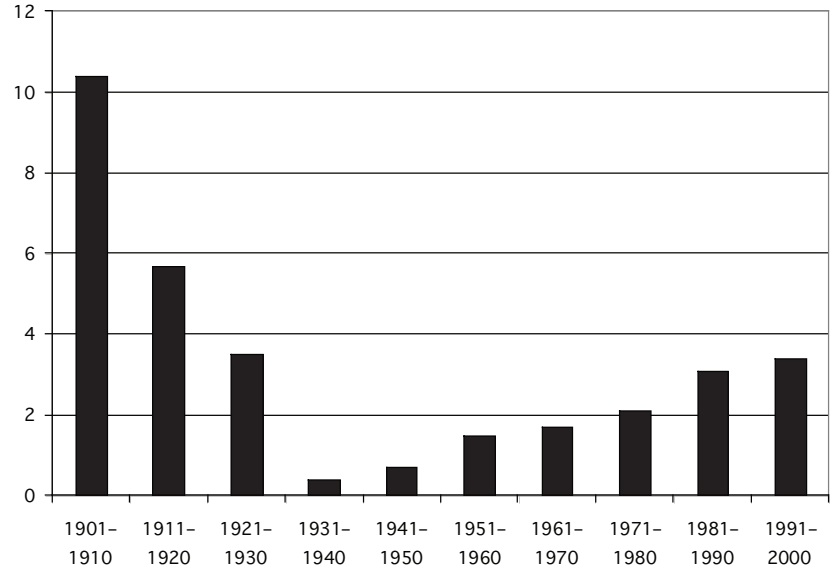
According to the conventional economic model of life-cycle saving, people save when they are young and then draw down their accumulated assets when they reach retirement. The implication of this theory is that as the baby boomers leave the labor force, they will draw down their 401(k) plans and other assets to replace their foregone income from earnings. This dissaving will swamp the saving undertaken by incoming younger cohorts. Although economists have not been able to document a strong relationship between demographics and aggregate personal saving, less personal saving would be the expected outcome.

Government saving—the difference between revenues and expenditures—will also be under pressure in the face of an aging population. The large programs that support older Americans—Social Security and Medicare—are financed primarily on a pay-as-you-go basis. Currently, both programs have commitments far in excess of scheduled revenues. As retiring workers claim their Social Security and Medicare benefits, these programs will put increased strain on the rest of the budget. This strain is likely to reduce government saving.

With lower levels of personal and government saving, investment should also decline. The only way to avoid such a decline is to borrow from abroad. In the 1980s, also a period of large government deficits, such borrowing allowed the United States to avoid a major decline in investment spending. But the United States's current account deficit is now so large relative to GDP that further borrowing seems unlikely to offset the projected decline in national saving. As a result, lower national saving should produce less investment and limit the extent to which employers can substitute capital for the decline in the prime-age labor force.

Employers' alternative to adding more capital is to increase the labor force by turning to untapped sources. The two most often mentioned are immigrants and women.

Figure 7. Immigration to the United States, 1900–2000

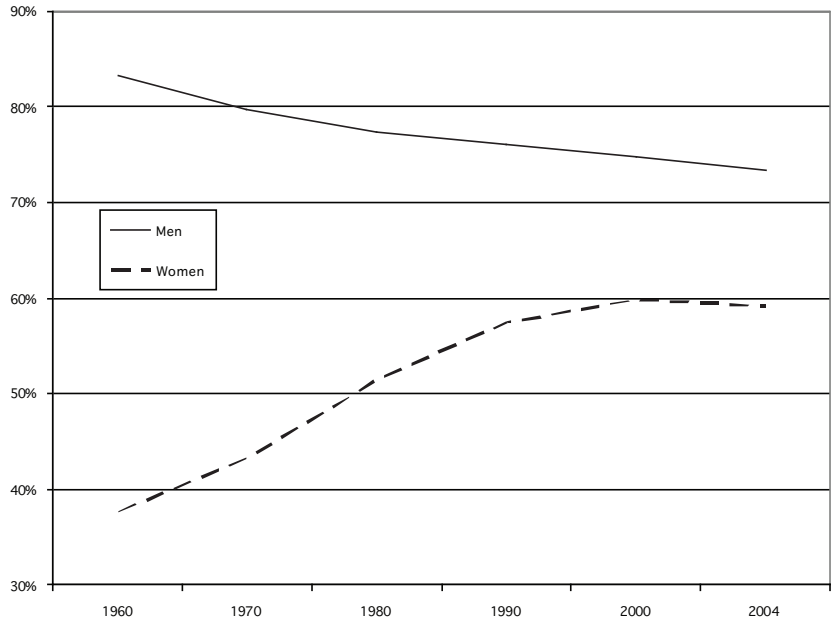


Source: Kyle N. Brown and Sylvester Schieber. 2003. "Structural Impediments to Phased Retirement." Watson Wyatt Worldwide. Mimeo, (March 27).

Hire more immigrants. In considering the role that immigrants might play in alleviating the future labor shortage, it is important to keep the numbers in mind. First, current levels of immigration have been high from a historical perspective. As shown in Figure 7, the United States went from very high immigration rates in the early part of the century to extremely low rates during the Depression and World War II. Immigration then gradually picked up, and the rate in the 1990s returned to that of the 1920s.

Second, current labor force projections already assume that substantial numbers of new workers will continue to enter the country. The Census Bureau's middle assumption, which underlies the labor force projections reported in Figure 6, is net immigration of about 900,000 per year including both legal and those classified as "other than legal." This level would be in keeping with the pattern of the 1990s. Higher levels of immigration seem unlikely for the foreseeable future in the wake of September 11, 2001. Given today's much more restrictive environment, immigration is unlikely to solve the problems created by the projected national shortage of prime-age workers.

Figure 8. Labor Force Participation Rates for Men and Women, 1960–2004



Source: U.S. Bureau of the Census. 2006. "Section 12: Labor Force, Employment, and Earnings." Statistical Abstract of the United States: 2006, Table 578. http://www.census.gov/compendia/statab/labor_force_employment_earnings/labor.pdf; U.S. Bureau of the Census. 1996. "Section 13: Labor Force, Employment, and Earnings." Statistical Abstract of the United States: 1995, Table 628. http://www.census.gov/prod/1/gen/95statab/labor.pdf.

Employ more women. Women have contributed enormously to the growth in the labor force since 1960. Nationally, their labor force participation has increased from 37.7 percent in 1960 to 59.2 percent today (Figure 8). The question is whether further increases in labor force participation by women can close the gap.

Women born in 1940 and thereafter came into the labor force at ever increasing rates, and they stayed in the labor force at higher levels than those born before them. This pattern came to a halt, however, with those born around 1965, when labor force participation reached a plateau (Nyce and Schieber 2002). By the 1990s, the continued increase in female labor labor force participation reflected the retirement of older women, who had relatively low lifetime participation, and their replacement by younger women with higher labor force activity. The current gap in participation between men and women aged 35–44 has

narrowed to 15 percentage points (92.6 percent versus 77.2 percent), and that discrepancy comes from the significant difference in participation between married men and married women (Figure 7). Given that women remain primarily responsible for the care of home and children, they are likely to need higher pay and/or substantial improvement in childcare facilities to enter the labor force in greater numbers.

Relocate overseas. Firms might find the answer to the shortage of prime-age workers by relocating overseas. Such a move may benefit the employer in a number of ways, especially by providing a larger crop of younger workers as well as labor that is less expensive. Relocation internationally may also avoid increasing costs at home, such as the higher salaries and benefits that may be necessary to attract work in a tight labor market. While moving overseas has its benefits, one must also consider the potentially substantial costs it brings as well. Such a move would almost certainly require new training that would perhaps be more costly than the training of domestic employees. Further, beginning an overseas operation may require the transportation of goods over great distances. For these reasons, it is hard to envision international relocation as the solution to the shortage of prime-age labor at home.

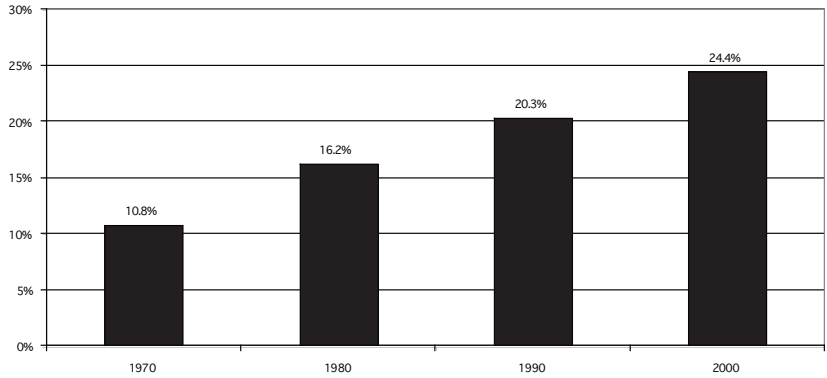
If increased capital, more immigrants, a surge of female workers, or relocation are unlikely to fill the gap left by the lack of growth of the under-55 work force, will employers turn to older workers? In many ways, employing older workers seems like the logical response to the coming drop in labor force growth.

The Potential Demand for Older Workers

The population over age 55 will soon increase sharply and permanently, and a much larger portion of this population will likely be seeking to remain employed as the traditional sources of retirement income recede. Moreover, tomorrow's older workers will be well educated, they will have a lifetime of experience, they will be healthier than older workers in the past, and the jobs employers need filled have become much less physically demanding.

Older workers are well educated. The U.S. population has become more educated over time. As shown in Figure 9, the share of the national adult population with at least a bachelor's degree has increased from 11 percent in 1970 to 24 percent in 2000. This overall gain in education should make older workers more desirable.

Figure 9. Percent of Persons 25 and Over with a Bachelor's Degree or More, 1970–2000



Source: Author's calculations using the Census one-percent file, 1970, 1980, 1990; U.S. Bureau of the Census. 2003. *United States: 2000—Summary Social, Economic, and Housing Characteristics.* PHC-2-1. Washington, DC. (July). http://www.census.gov/prod/cen2000.

Also, the educational discrepancy between older and younger workers is now a thing of the past. Individuals 65 and over have substantially less education than their younger counterparts (Table 3). But educational levels for men aged 45 to 64, which includes the bulk of the baby boomers, are better than levels for younger men. The picture for women is more complicated, given the enormous social change that has occurred in post–World War II America. The educational attainment of each succeeding cohort of women surpasses that of earlier cohorts. But even here, the gap between women aged 45 to 64 and younger groups is much less than with women 65 and over. In short, older workers will look much like younger workers in terms of their educational attainment.[6]

Table 3. Percent of U.S. Population with a Bachelor's Degree or More, 2004

Age	*Men*	*Women*
25–34	28.0	32.4
35–44	29.3	29.8
45–64	32.0	27.3
65 and over	25.4	13.7

Source: U.S. Bureau of the Census. 2004. "Educational Attainment of the Population 15 Years and Over, by Age, Sex, Race, and Hispanic Origin: 2004." *Current Population Survey.* http://www.census.gov/population/www/socdemo/education/cps2004.html.

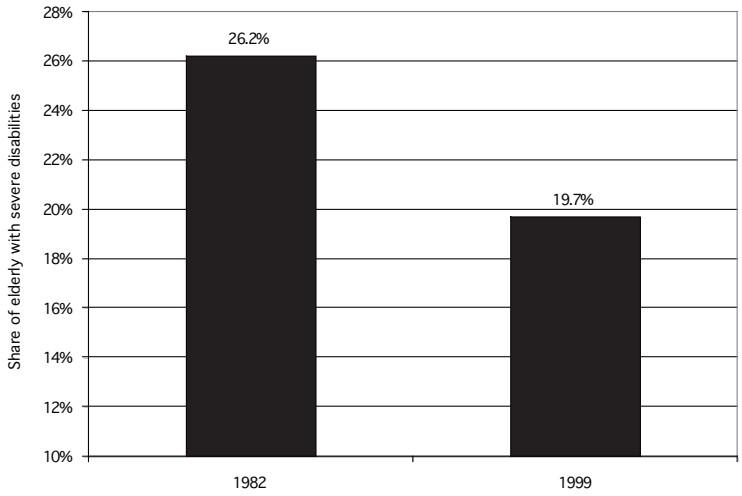
Older workers have a lifetime of experience. Older workers have logged a great many years in the labor force and have generally acquired valuable skills in the process. These skills are not just useful to their current employer. Most older workers have a diverse work history and experience with many different employers, as the U.S. workforce is extremely mobile.[7] The median job tenure is currently 4.7 years for all wage and salary workers and about 10 years for workers aged 55 to 64; fewer than one in five wage and salary workers aged 60 to 64 has more than 25 years of tenure (Copeland 2003). Today's older workers are generally efficient, versatile, able to display good judgment, and capable of adjusting to workplace changes.

Older people are healthier than in the past. The conclusion that the health of older workers is improving is a relatively new finding (Freedman, Martin, and Schoeni 2002). Demographers who examined the issue in the 1970s concluded that the elderly were increasingly less healthy (Cutler 2002). But these early conclusions may have been based on less than ideal data that allowed multiple interpretations. A new survey of those 65 and older, designed in part to solve these data problems—the National Long-Term Care Survey—was first conducted in 1982 and now challenges this view. It asks detailed questions about disability in a consistent manner over time and now provides almost twenty years of information.[8]

Between 1982 and 1999, the share of the elderly with severe disabilities, measured roughly in terms of lack of ability to function independently with ease, declined from 26.2 percent to 19.7 percent (Figure 10) (Manton and Gu 2001). This is a 25 percent cumulative reduction in the disability rate, or 1.7 percent per year. Moreover, the rate of reduction is increasing over time. Between 1982 and 1989, disability rates fell by 1.0 percent per year; between 1989 and 1994, by 1.6 percent per year; and between 1994 and 1999, by 2.6 percent per year. The elderly are increasingly healthy, and getting healthier at a faster rate. The dramatic improvement in the health status of those 65 and over suggests that those in their late 50s and early 60s must also be healthier.

The outlook for the future depends on the cause of these health improvements (Cutler 2002). If largely due to public-health changes at the beginning of the twentieth century, they will fade over time as people born well after these improvements were instituted enter old age. If primarily due to new medical treatments, such as drugs for arthritis or cataract surgery for eye problems, they are likely to persist over time. Similarly, if people are healthier mainly because of behavioral changes, such as a reduction in smoking or fat consumption, or improved education and thus better access to medical care and greater understanding about appropriate behavior, the trend of continued improvement is likely to persist.

Figure 10. Share of the Elderly with Chronic Disabilities



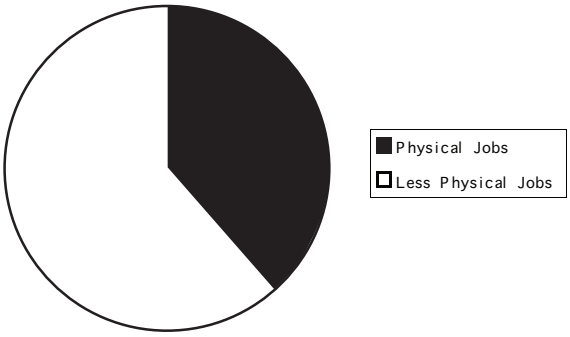
Source: K.G. Manton and X. Gu. 2001. "Changes in the Prevalence of Chronic Disability in the United States: Black and Non-Black Population above Age 65 from 1982 to 1999." *Proceedings of the National Academy of Sciences of the United States of America 98*, no. 12 (June): 6354–6359.

For the purpose of assessing employers' willingness to hire older workers, the improved health of older people is definitely positive. Healthy older workers are more productive than those with infirmities and will appear more similar to younger workers in terms of physical and mental capabilities than in the past.

Jobs are no longer physically demanding. The nature of employment has changed dramatically since 1980. As manufacturing declined, the service sector exploded. This has reduced the number of workers in jobs requiring physical work (Figure 11). This expansion reflects the growth in jobs at places such as universities, hospitals, software development companies, and management consulting firms. Even within manufacturing the nature of jobs has changed, as firms have automated or outsourced production and now employ more managers, engineers, and technicians (Massachusetts Office of the Governor 2001). This has led to an overall shift to more knowledge-based activities. Employers looking to fill less physically demanding, knowledge-based jobs should be more willing to hire older workers who offer a wealth of skills and experience.

In summary, employers will need to find another input since they will no longer have an influx of young workers. Increasing the amount of capital and greater reliance on women and immigrants may help, but such answers are unlikely to fill the gap. Hiring older workers seems like a natural solution.

Figure 11. Job Status of Workers in the U.S., 2000



Source: U.S. Bureau of the Census. 2003. http://www.census.gov/prod/cen2000/phc-2-1-pt1.pdf.

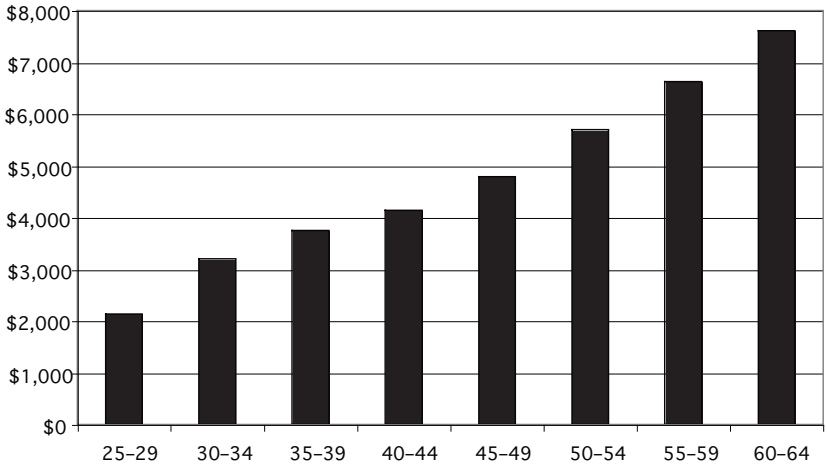
Impediments to Hiring Older Workers

Although the stage appears set for hiring older workers—alleviating the problems of workers and employers alike—a number of impediments stand in the way. First, older workers are expensive. Second, employers resist part-time employment, which older workers disproportionately favor. Third, personnel considerations and legal impediments preclude employers from offering phased retirement. Finally, age discrimination, while illegal, probably continues to exist at least to some extent.

Older Workers Are Expensive

Older workers are expensive for a number of reasons. First, their earnings tend to be higher than those of comparable younger workers. One would expect rising salaries as workers become more productive with increased experience. But the issue here is increases in salary that exceed what can be attributed to productivity gains. Economists explain this phenomenon in terms of implicit contracts between employers and workers whereby younger workers are underpaid and older workers are overpaid (Lazear 1979). The idea is that the promise of future high salaries encourages the worker with firm-specific skills to remain with the company, and that compensation reflects the value of the workers' contributions over their lifetimes. This pattern may be less prevalent than in the past with the onset of tight labor markets, the pressure of global competition, and the flattening of corporate personnel systems. Nevertheless, older workers tend to be paid somewhat more than younger workers on a quality-adjusted basis.

Figure 12. Annual Aggregate Medical Claim Costs for Employees and Dependents, by Age of Employee

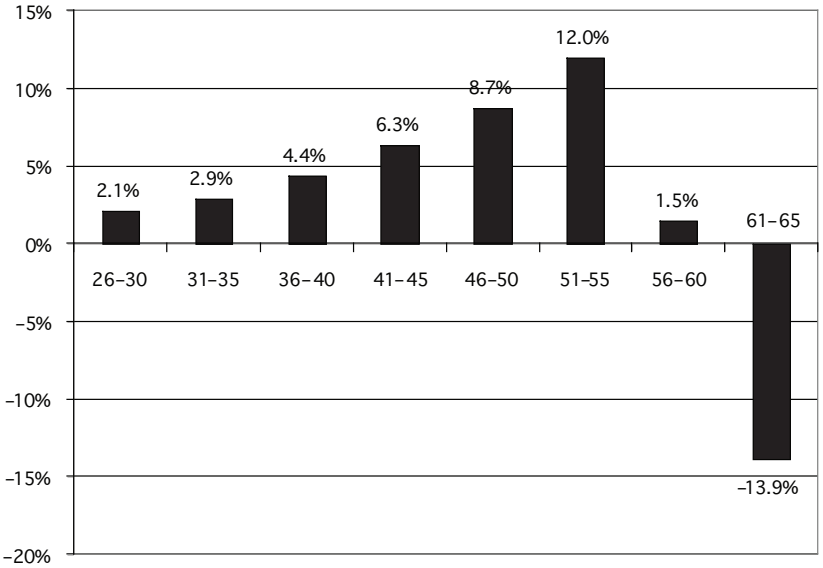


Source: "The Business Case for Workers Age 50+: Planning for Tomorrow's Talent Needs in Today's Competitive Environment." A Report for AARP Prepared by Towers Perrin. December 2005.

In addition to cash earnings, the cost of fringe benefits—health insurance and pensions—also rises with age. Health insurance costs increase for two reasons. First, the percentage of workers covered rises with age, suggesting that older workers demand such coverage as part of their compensation package. Thus, 82 percent of full-time workers aged 55 to 64 have employer-provided health insurance, compared to 55 percent of 16 to 24 year olds and 76 percent of 25 to 44 year olds (Committee for Economic Development 1999).[9] Second, the cost of fringe benefits increases with age. Private health insurance costs for full-time year-round workers and their covered dependents are between $2,000 and $3,800 for those aged 25 to 39, compared to more than $5,000 for workers 50 to 54, and to $6,000 for workers 55 to 64 (see Figure 12). If the employer self-insures, hiring an older worker—all else equal—will drive up healthcare costs. If the employer purchases insurance from a carrier, hiring older workers will raise the cost of the policy.

In the case of pension costs, the impact of hiring older workers depends on the type of plan provided. With 401(k)s, the employer's contribution is generally a fixed percentage of salary and therefore rises in line with pay increases. If the older worker's salary simply reflects greater productivity, then 401(k) contributions raise no cost issue. To the extent that older workers' salaries are higher because of implicit contracts, the 401(k) contribution adds to the extra expense.

Figure 13. Average Accruals in Private-Sector Defined Benefit Plans, for Workers Starting at Age 25

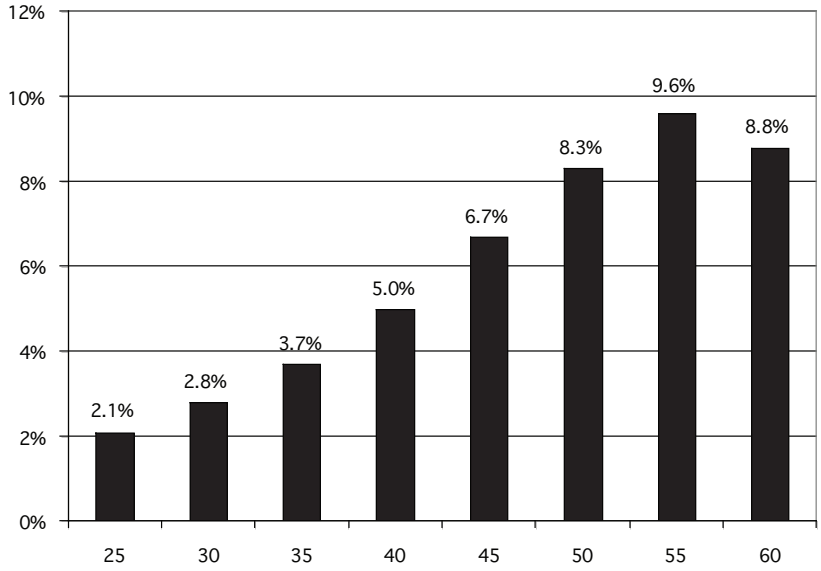


Source: Rudolph G. Penner, Pamela Perun, and Eugene Steuerle. 2002. "Legal and Institutional Impediments to Partial Retirement and Part-Time Work by Older Workers." The Urban Institute, (November 20). http://www.urban.org/UploadedPDF/410587_SloanFinal.pdf.
Note: The analysis is based on a sample of 340 salary-based DB plans in the private sector. Accrual estimates assume that workers join the firm at age 25 and leave at the age that maximizes the present discounted value of pension benefits (or age 70). The analysis assumes that wages grow at the average age-specific rate for college-educated male workers with DB plans. The real interest rate is set at 3 percent and the inflation rate at 3.3 percent. Estimates are weighted by firm size.

On the whole, however, 401(k) plans are not a major factor in the hiring of older workers. Neither are the new cash balance plans that some employers have adopted to replace their traditional DB plans.

The real pension issue with regard to older workers arises in traditional DB plans. Figure 13 shows the average accrual rate in a sample of traditional private-sector DB plans by age—that is, the increase in the present discounted value of pension benefits as a percent of earnings for each age group. The accrual rate rises sharply from 2.1 percent for those aged 26–30 to 12 percent for those aged 51–55. The reason for this increase is the multiplier effect inherent in the traditional DB formula. 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.

Figure 14. Average Pension Accruals in Private-Sector Defined Benefit Plans during the First Five Years of Service, by Start Age



Source: Rudolph G. Penner, Pamela Perun, and Eugene Steuerle. 2002. "Legal and Institutional Impediments to Partial Retirement and Part-Time Work by Older Workers." The Urban Institute, (November 20). http://www.urban.org/UploadedPDF/410587_SloanFinal.pdf.
Note: The analysis is based on a sample of 340 salary-based DB plans in the private sector. Accrual estimates assume that workers leave the firm at the age that maximizes the present discounted value of pension benefits, or age 70, whichever comes first. The analysis also assumes that all workers receive a starting annual salary of $35,000 that grows at 5 percent per year. The real interest rate is set at 3 percent and the inflation rate at 3.3 percent. Estimates are weighted by firm size.

In addition, the entire 31.5 percent will apply to the salary earned in that twenty-first year of service, increasing the value of all the previously earned pension credits. For this reason, DB pension accruals rise much faster than salaries, making the retention of older workers very expensive.

DB plans also make *hiring* older workers costly. Figure 14 shows the present discounted value of pensions earned during the first 5 years for workers starting at different ages. A person who starts with a plan at age 25 accrues very little—2.1 percent of pay; whereas someone who starts at age 55 accrues benefits equal to 9.6 percent of pay. Again, suppose the plan provides 1.5 percent of final salary and that the employee earns $35,000 during the first year of employment. Both the older and younger worker will be entitled to benefits of $525 per year (1.5 percent of $35,000) when they retire. The older worker, however, can retire in five years

at age 60 and claim the benefit, while the younger worker has to wait 35 years. That means in terms of calculating the present value of the accrued pension benefit at age 60, the $525 for the older worker is discounted by 5 years while the $525 for the younger worker is discounted by 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 DB plans very expensive.

Several other items make older workers more expensive to retain or hire (Committee for Economic Development 1999). One is paid leave. Both vacation days and sick leave tend to increase with tenure, so older workers are generally entitled to more days off than younger ones. The second is life insurance costs. Many employers provide term life insurance for their employees, and the cost of these policies is directly related to the age of the workforce. Finally, the cost associated with work injury and disability tends to be higher for older workers.

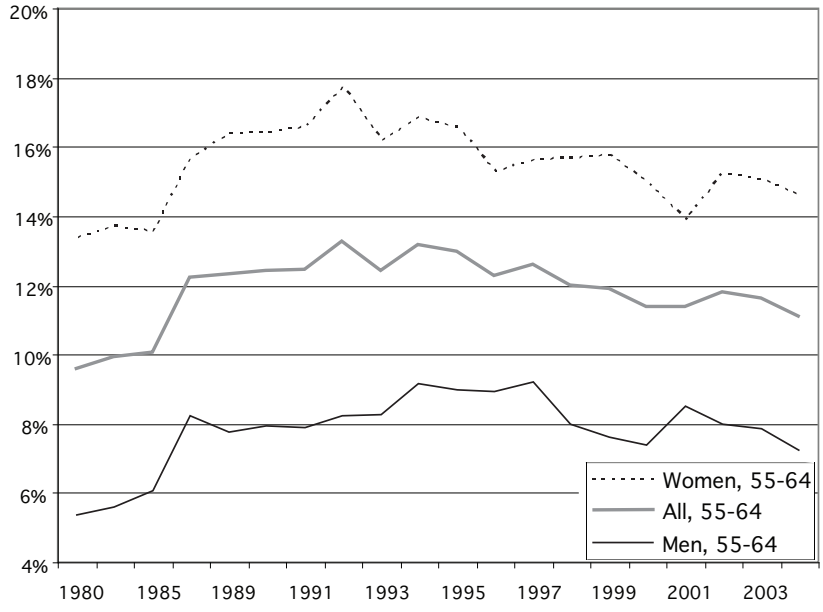
In short, the current compensation structure tends to make older workers expensive. To the extent that they are more productive because they have spent years on the job, some of the disadvantage to retaining older workers disappears. But for workers in jobs that require little training, the cost disadvantage of older workers is a serious problem. Similarly, the compensation structure discourages the hiring of older workers since their healthcare and benefit costs are higher; and they cost firms with traditional DB plans significantly more, yet they do not have the past experience on the job to mitigate these costs.

More flexible compensation structures would benefit older workers. For example, the movement to 401(k) and cash balance plans in the pension area will make older workers more attractive to employers (though these plans, as discussed earlier, raise a number of other issues). In terms of health insurance, eliminating the requirement that Medicare serve as the secondary payer would reduce costs for workers over 65, but would further burden a program already facing enormous long-term deficits (Penner, Perun, and Steuerle 2002; Committee on Ways and Means 2000). In summary, the cost of older workers remains a major hurdle to their retention and hiring.

Employers Resist Part-Time Employment

Another hurdle is that older people tend to want to work part-time. For example, a study based on the Health and Retirement Study reports that 56 percent of respondents aged 55 to 65 in 1996 said they would prefer to gradually reduce their hours as they age (U.S. General Accounting Office 2001). And older self-employed people tend to reduce hours worked as they approach retirement.

Figure 15. Percent of Workers Employed Part Time, 1980–2004



Source: Author's calculations of the Current Population Survey, 1980–2004.

The problem is that the percent of workers employed part-time appears to have been on the decline since the early 1990s (Figure 15). Some of that decline may have been due to the strong economy of the 1990s, which pulled some part-time workers into full-time employment. It could also be attributable to the fact that the large cohort of baby boomers was in its prime earning years, during which both men and women tend to work full time. In any event, part-time employment appears to be less, rather than more, prevalent.

The question is whether employers will increase part-time job opportunities.[10] Economic theory suggests that employers will hire more part-time workers only when their cost relative to other inputs (including full-time workers) declines. Currently, part-time employment is concentrated in small establishments and in establishments in the service sector (Montgomery 1988). This is true even after controlling for other factors that would affect demand, such as wages, fringe benefits, seasonal fluctuations in demand, and hiring costs. It is not exactly clear why this is the case. Large firms might avoid part-time workers because they tend to have higher turnover rates than full-time employees (Tilly 1991). Part-time work might be more common in the service sector because it

is labor intensive and faces fluctuations in demand, and because employers find it is easier to meet these fluctuations with part-time workers. Employers in general might resist part-time employment because a number of costs, such as supervising and record keeping, hiring and training new workers, and fringe benefits like health insurance, are unrelated to hours worked and make two part-time people more expensive than one full time person. While all these theories are plausible, they have not been supported by rigorous empirical studies (Hutchens 2001).

Not only do large firms tend to shun part-time employment, but the demand for part-time work could increase in the future for one of two reasons. First, the price of part-time workers could decline. This should happen if large numbers of older workers wanted to work on a part-time basis and were willing to accept lower wages in order to attain a part-time slot. Economists do not have a good idea, however, how much compensation would have to decrease relative to full-time workers to spur demand. That is, it is unclear whether part-time compensation would have to fall by 5 percent or 20 percent relative to full-time to persuade employers to hire more part-time workers.

The other way that the demand for part-time work could increase is if some of the impediments declined over time. For example, if the quasi-fixed costs discussed above could be reduced, part-time employees would look more attractive. However, it is difficult to conceive of how hiring and training costs will decrease; they simply do not vary with hours worked. Similarly, health insurance tends to be an all-or-nothing proposition that does not depend on whether the employee is full- or part-time. Some advocate that health insurance costs for older workers could be reduced if Medicare became the primary payer. But as discussed above, such a change seems unlikely given the extraordinary shortfalls facing the Medicare program.

In short, older workers consistently report that they would like to reduce their hours as they age, and this preference is clearly evident in the behavior of the self-employed, who cut back gradually as they approach retirement. But employers outside of the service sector and small firms appear reluctant to hire part-time workers. Unless structural changes make the hiring of part-time workers more attractive, employer demand for older workers will fall short of the supply, except at very low wages.

Legal Impediments to Flexible Retirement Provisions

One way to reduce the cost to employers of part-time work at older ages is phased retirement, with employees supplementing their reduced earnings by drawing on their pensions. Phased retirement offers employers a way to keep employees

who have specialized skills and institutional knowledge and to avoid the costs of hiring and training new employees.

Despite the apparent appeal of phased retirement, few private-sector firms offer such an option. Watson Wyatt Worldwide undertook a survey of nearly 600 employers in 1999: although more than 60 percent responded that they were currently having problems attracting workers, only 16 percent offered any form of phased retirement (Graig and Paganelli 2000). Most of these firms said that they rehired workers after they retired on either a part-time or temporary basis. Slightly less than half said that they contracted with retired workers as consultants.

The question is why so few firms offer phased retirement. One answer may be personnel considerations. For instance, it is difficult to think how a manager could function effectively coming in three days a week. Similarly, activities requiring teamwork would not lend themselves to one person working part-time. That the two most popular phased retirement arrangements require the employee to separate from the firm (rehiring retired employees on a part-time or temporary basis and hiring retirees as contractors) also suggests that personnel policies play a role. The rehiring approach allows employers to pick and choose those older workers with whom they want a continuing relationship—something otherwise difficult to accomplish.

More than personnel considerations are at play, however. Allowing employees to remain with their employer and reduce their work effort as they approach retirement also faces a number of legal impediments. First, benefits in DB plans are generally based on final earnings, so cutting back on hours could reduce the base for benefit computation. Although current law explicitly precludes pension reduction due to increased age or service, no law specifically prohibits a reduction due to a decline in final average pay. The Internal Revenue Service has asserted that pensions cannot be reduced because final pay goes down, but others report that benefits have been reduced and that the courts have upheld these reductions (ERISA Advisory Council 2000). The uncertainty surrounding the treatment of retirement benefits thus is one factor that inhibits phased retirement.

A second factor is that employees covered by a DB plan cannot receive any pension benefits as they move to part-time employment until they have reached the plan's normal retirement age. A plan that pays benefits to an active employee before the normal retirement age could lose its tax-qualified status since it is permitted to pay benefits only in the event of death, disability, termination of employment, or at the normal retirement age. To the extent that workers who reduce their hours need to supplement their earnings with pension benefits, existing regulations regarding DB plans make continued employment with the same firm difficult.

The rules for in-service distributions from 401(k) plans are different. Participants who reach age 59.5 can continue to work for their employer and receive distributions from their account. Before age 59.5, any distribution—in service or not—is subject to a 10 percent excise tax in addition to ordinary income taxes. The law provides two exceptions. First, distributions may begin as early as 55 if the employee separates from his employer under an early retirement plan. Second, if benefits are paid as a lifelong annuity, they can begin at any age. Thus, these plans do not preclude part-time work and pension receipt. To the extent that coverage has shifted in the private sector, the pension issue will become less important.

The above discussion highlights only a few of the legal impediments to phased retirement and innovative retirement provisions. In 2000, the ERISA Advisory Council identified a host of other ERISA and Internal Revenue Code restrictions that constrain employers in implementing flexible employment arrangements. The Council, for example, recommended relaxing rules on in-service distributions and the rules governing nondiscrimination. These are complicated issues, and none of the Council's recommendations have been adopted to date. If these regulatory issues are not addressed, however, they will remain an impediment to workers staying in the workforce longer.

Age Discrimination

Age discrimination is one barrier that should have been removed with the passage of the Age Discrimination in Employment Act. But evidence suggests that age discrimination still exists, at least to some extent, and it will become an increasingly important barrier as the population ages by influencing hiring practices and shaping workplace culture. Secondary effects are also likely since workers' perceptions of employers' practices are likely to influence their workforce decisions.

One problem in gauging the importance of age discrimination is the lack of definitive measures. Age discrimination is, thus, difficult to detect. Studies on race and gender discrimination proceed on the assumption that, all else equal, minorities and women are as productive as white and male workers, respectively. Any remaining differences in earnings can therefore be attributed to discrimination. This approach is not suitable to age discrimination since the very process of aging affects productivity, both positively and negatively.

Furthermore, as noted earlier, firms may have legitimate concerns about the cost of employing older workers. As earnings increase over a worker's lifetime, they can reach a point where they exceed productivity. Health and life insurance, often provided by the employer, are more costly for older than younger workers.

Other benefits whose cost is related to tenure, such as paid leave, may also be higher for older workers. In addition, older workers are more likely than younger workers to experience an extended injury or disability. Each of these factors provides employers with a legitimate reason to view older and younger workers differently (Committee for Economic Development 1999).

Because of the difficulty of testing for discrimination with conventional techniques, researchers rely primarily on self-reported information. The findings suggest that managers value older workers. Managers indicate that older workers often work harder and are more reliable and motivated than their younger counterparts. They also state that older workers display good judgment, quality control, and attendance, and have lower turnover (Sterns and McDaniel 1994). On the other hand, employers express concern that older workers are less willing to adapt to changing technologies or workplace practices and are more likely to have difficulty learning new skills.

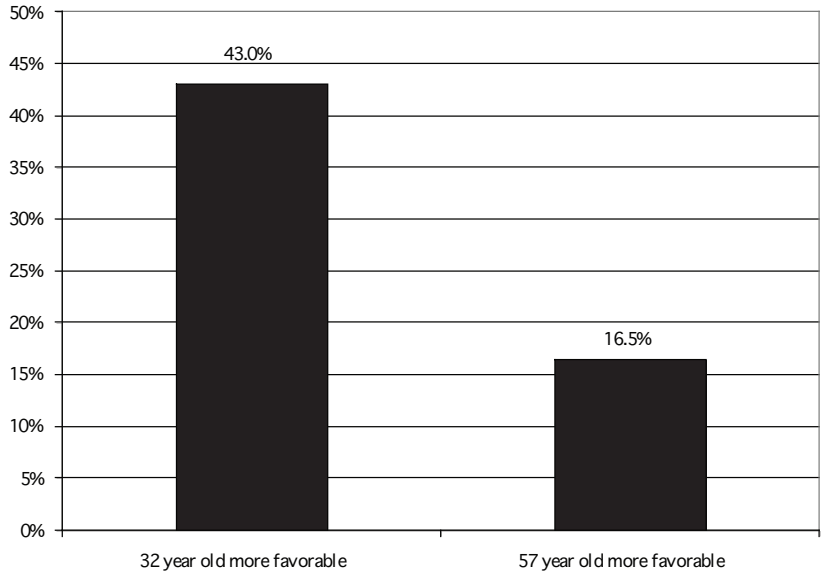
These negative perceptions of older workers appear to be reflected in hiring and training decisions. In one study, résumés for an older and younger worker with equal qualifications were mailed to nearly 800 firms in the United States. When a position appeared vacant, the older worker received a less favorable response about 25 percent of the time (Figure 16) (Bendick, Jackson, and Romero 1996). Another study based on a nationally representative sample of nearly 1,500 employers with 50 or more employees found that about 70 percent of younger employees received formal training in the previous year, compared to only about 50 percent of employees aged 55 years and older. Of those who were trained, older employees also had many fewer hours of training compared to employees aged 25 to 54 (Figure 17) (Frazis et al. 1998).

Beyond the direct effects of age discrimination by employers on recruitment and training, age discrimination creates an additional, more subtle, barrier to work through the perceptions of older workers. According to data from the Health and Retirement Study, between 10 and 20 percent of older workers indicate that younger workers are given preference over older workers and that their employers exert pressure on them to retire. This perception of discrimination on the part of workers significantly increases the likelihood that they will leave their jobs and the workforce.

Conclusion

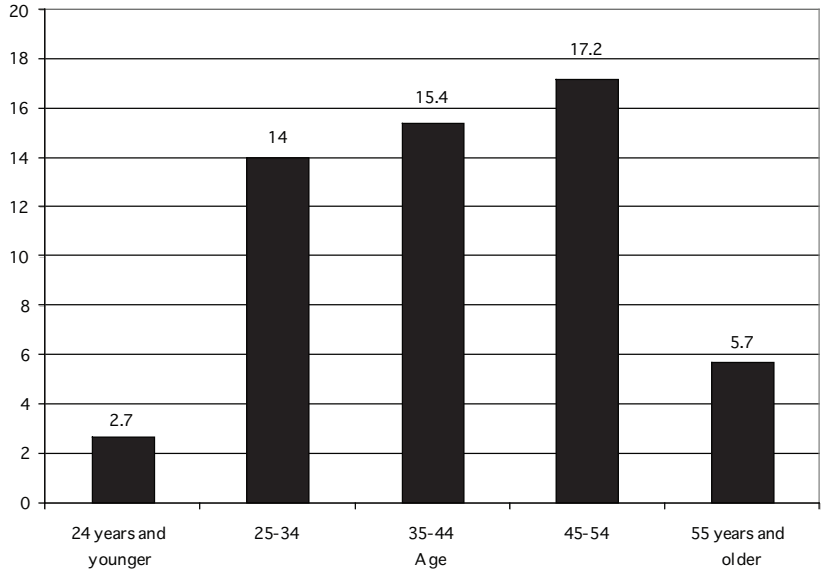
Current sources of retirement income will likely be inadequate for low- and middle-income individuals. The Social Security program will be significantly less

Figure 16. Percent with Favorable Employer Responses, by Age, to Paired Résumés



Source: Marc Bendick, Jr., et al. 1996. "Employment Discrimination against Older Workers: An Experimental Study of Hiring Practices." *Journal of Aging & Social Policy* 8 (4): 25–46.

Figure 17. Hours of Formal Training per Employee, by Age, May–October 1995



Source: Harley Frazis et al. 1998. "Results from the 1995 Survey of Employer-Provided Training." *Monthly Labor Review* (June).

generous relative to preretirement income in the future than it is today; and employer-sponsored pensions, where coverage has moved from traditional plans to 401(k)s, will provide less reliable retirement income. Because of these impending shortcomings in traditional sources of retirement income, many people will seek employment later in life as a way to provide a more secure retirement.

The same demographic shifts that will cause Social Security to be less generous will put employers in a tight situation as well. They will no longer be able to rely on a rapidly growing group of younger workers in the future. So how will employers respond to a stagnating supply of labor? They will expand their use of women, immigrants, and capital, and some firms may relocate. But these responses will not be enough to make up for the labor shortfall. Older workers are well educated and healthier than in the past and have a lifetime of experience.

Although the stage appears set for hiring older workers, a number of impediments exist. First, older workers are expensive. They are paid more, sometimes in excess of their greater productivity. They involve expensive healthcare costs and rapidly rising pension costs under traditional DB plans. Second, most existing employment policies have been geared to encouraging early retirement. Incentives to retire early rather than later are the hallmark of traditional DB plans. Although these plans are less important in the private sector than they were in 1980, they are still the dominant plan for states and localities. Third, employers resist part-time employment, which is the preferred mode for older workers, and it is unclear that employer preferences will change in the future. Fourth, legal impediments preclude employers from offering flexible retirement arrangements. Finally, age discrimination, while technically illegal, probably exists.

In sum, increased employment of older workers is clearly in the interest of both workers and employers. But mutual interest is not enough. It will require massive social change, legal and regulatory reform, and increased flexibility on the part of both employers and employees for these employment options to materialize. The speed at which we make these social, legal, personal, and personnel-policy changes could well be the most important factor in assuring the future retirement income of the elderly.

Notes

The author would like to thank Kevin Meme for his excellent research assistance and Jerilyn Libby for updating all the figures and tables.

1. Combined income is adjusted gross income as reported on tax forms plus nontaxable interest income plus one half of Social Security benefits.

2. Replacement rates are typically expressed on a pre-tax basis, i.e., pre-tax benefits as a percent of pre-tax earnings. Subtracting taxes from benefits in the current exercise means that the resulting ratio will consist of post-tax benefits relative to pre-tax earnings. While it would be technically possible to produce this ratio on a consistent post-tax basis, this discussion relies on the commonly reported pre-tax replacement rate as the benchmark. Also, using a full post-tax measure would not affect the main point—that taxation of Social Security benefits will significantly reduce replacement rates in the future.

3. The pension coverage data discussed above apply only to individual workers at any given point in time. Over a lifetime and on a household—rather than an individual—basis, coverage rates are somewhat higher. For households aged 55–64, the 2001 Survey of Consumer Finances shows that approximately 65 percent of households had some sort of pension coverage in 2001. Again, pension coverage is much more extensive for high-income households.

4. The annuity might be a dollar amount per month for each year of service, say $50; so workers with 20 years of service would receive $1,000 per month at age 65. The benefit could also be a percentage of final salary for each year of service, say 1.5 percent; so workers with 20 years would receive 30 percent (20 years at 1.5 percent) of their final salary for as long as they live. The employer finances these benefits by making pre-tax contributions into a pension fund, holds the assets in trust, directs the investments, and bears the risk. The Pension Benefit Guaranty Corporation (PBGC) insures benefits up to specified limits. The PBGC monthly guarantee limit in 2003 was $3,665 at age 65, and declines to $1,649 at age 55. Employers pay for this insurance with premiums largely determined by the plan's funding status.

5. As in traditional defined benefit plans, the employer makes the contributions, owns the assets, selects the investments, and bears the risk. The PBGC also insures the benefits. To the employee, however, cash balance plans look very much like defined contribution plans. The employer typically contributes 4 or 5 percent of the worker's pay to a "notional" account and provides an interest credit (generally at some specific rate such as that on Treasury securities) on the balances. Employees receive regular statements and generally withdraw the balance as a lump sum when they retire or terminate employment. Since hybrid plans are defined benefit plans, by law they must offer an annuity option. But it appears that the majority of workers opt for the lump-sum benefit.

6. Recent studies show that the use of computers among workers age 50 and over has doubled since the mid-1980s, and the entire population, including older workers, has now become familiar with computers, the hallmark of the "new economy" (Friedberg 2001).

7. While the workforce in the United States is and has been highly mobile, there is some dispute over whether this mobility has increased in recent decades (Munnell and Sundén, 2004 forthcoming).

8. The finding of improved health is not limited to the National Long-Term Care Survey. The results have been replicated using the National Health Interview Survey, the Medicare Current Beneficiary Survey, and the Survey of Income and Program Participation (Freedman, Martin, and Schoeni 2002).

9. In addition, a recent U.S. Census Bureau (2002) publication reports that, in 1997, 59.8 percent of employed people aged 45 to 64 were covered by health insurance compared to 51.7 percent of those 15 to 44.

10. Much of the following discussion comes from Hutchens (2001).

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Comments on "Working Longer: A Potential Win-Win Proposition"

JOHN TURNER

Alicia Munnell develops the hypothesis that it would be good public policy to encourage Americans to work longer and retire at older ages. She argues that it would be good policy both for many workers and for many employers. For workers, it would help solve the problem of not having sufficient savings to support a long retirement, due in part to increased life expectancy, as well as due to the poor savings habits of many Americans. Some widows may fall into poverty as a result of their husbands having taken early retirement, which results in their receiving reduced Social Security benefits. This problem might be ameliorated by people working longer. For employers, having employees work longer would help solve the problem of an anticipated labor shortage when the baby-boom generation (born between 1946 and 1964) begins to retire.

Increases in life expectancy have led to large increases in the expected years in retirement, placing a heavy burden on defined benefit (DB) pension systems, both employer-provided DB pensions and Social Security. Thus, her article title could add a third "win" for the positive effects working longer could have on Social Security and DB pensions.

Working longer appears to be a feasible option for many people. As Munnell documents, older workers are better educated and healthier than in the past. However, the labor supply effect of the increased lifetime wealth of workers suggests that they will want to have more lifetime hours of leisure, which may translate into opposition to working longer.

Working longer would be facilitated by the large increases in life expectancy, which could permit both more lifetime hours of leisure and more hours of work. Life expectancy at birth rose from 47.7 years in 1900 to 76.6 in 2000, a 60 percent increase. Most of this change (72 percent) occurred before 1950. At age 65, life

expectancy rose from 11.7 years in 1900 to 21.2 years in 2000, an 81 percent increase. Most of this increase (75 percent) occurred since 1950 (Technical Panel on Assumptions and Methods 2003). Life expectancy is projected to continue increasing. Because mortality rates are already low at ages younger than age 65 (Board of Trustees 2003), future increases in life expectancy are expected to result mainly from mortality reductions at older ages. Unless retirement ages increase, future retirees may spend substantially more years retired than do current retirees.

Working longer would be facilitated by the decline in the number of jobs that are physically demanding. Farm workers were among the occupations with the largest job declines over the period 1988–2000. Technology gains and new labor-saving machinery were the main reasons for the decline, along with increased farm consolidation. Over that period, other physically demanding occupations that experienced a decline in the number of workers included highway maintenance workers (7 percent), butchers and meat cutters (15 percent), fishers (22 percent), and cannery workers (32 percent) (Alpert and Auyer 2003). Between 2001 and 2002, employment in mining declined from 531,000 to 458,000 (U.S. Department of Labor 2003). While these occupations are frequently mentioned as ones where it would be difficult to work longer, a serious policy to encourage most groups of workers to work longer may encounter resistance from unexpected groups. For example, there is some international evidence that classical musicians are one such group, due to the physical demands of practice and performance (Tomes 2005; Turner and Guenther 2005).

The best solution for retirement for occupational groups unable to continue working into old age because of the physical demands of their work may be occupational pension plans that permit early retirement. For example, police, fire fighters, the military, and miners—occupations with physically demanding jobs—all have occupational pension plans that permit early retirement.

If working longer makes sense for both workers and employers, can we expect it to naturally happen? Changes in employer-provided pensions suggest that to some extent employers will make adjustments that will encourage later retirement ages. In the past, many employers offered incentives for early retirement through their DB pension plans. In fact, early-retirement subsidies are common in DB plans. For most large employers that offer DB plans, a typical worker's lifetime value of benefits is larger if the worker retires before the normal retirement age than if the worker postpones retirement to the normal retirement age. While annual benefits increase with postponed retirement, the increase is insufficient to offset the loss of benefits that occurs with postponement of retirement (McGill et al. 1996, 453, 462). The shift to 401(k) plans and

the decline in DB plans has reduced the number of workers who are facing pension-based incentives to retire. Further, the shift toward cash balance plans, which are categorized in pension law as a type of DB plan, and away from traditional DB plans, is also reducing the pension-based incentives to retire. Cash balance plans are hybrid plans that to employees operate in many ways like defined contribution plans, and by design do not have incentives for early retirement.

The eligibility age in pensions may affect the ages at which some people retire. Age 62 is the minimum age at which Social Security benefits can be received. In 401(k) plans, workers can take their benefits starting at age 59 1/2 even if they are still working for the sponsoring employer. At age 59 1/2, workers can receive benefits from an Individual Retirement Account (IRA) or a Roth IRA without penalty. The majority of workers in private DB pension plans are in plans with an early retirement age of 55. Changes in eligibility ages may be an avenue for policy affecting retirement ages.

The primary criticism of policies that encourage working longer is that doing so places an unfair burden on certain vulnerable groups who have shorter life expectancies, who are unable to work at older ages because of physical limitations, or who become unemployed at older ages and are unable to find other jobs. Raising the eligibility ages may pose problems for workers forced to take early retirement, or who are fired in the few years before the pensionable age, because of the greater difficulty older workers have in leaving unemployment and finding a job.

Policies that encourage later work have a differential effect by race because of the racial disparity in life expectancy. Life expectancies at birth in 2001 were 75.0 and 68.6 for white and black males respectively, and 80.2 and 75.5 for white and black females (Centers for Disease Control and Prevention 2003).

Workers who retire before age 62 tend to be healthier, wealthier, and better educated than other workers. By contrast, workers that expect to retire at age 62 are in relatively poor health, more often in physically demanding jobs, and less financially well off (Panis et al. 2002). Workers who have high discount rates will place little value on the increase in benefits with postponed retirement and will tend to retire at the earliest date possible. Gustman and Steinmeier (2002) estimate that about three-fifths of those workers in the United States retiring at age 62 would postpone their retirement to age 64 if that were the new pensionable age.

A higher retirement age in pension and Social Security benefits may increase the demand by workers for disability benefits and poverty benefits, which would reduce the savings in benefit expense to the government. One study estimated that 22 percent of U.S. Old Age and Survivors Insurance (OASI) beneficiaries aged 62–64 have health problems that substantially impair their ability to work, and that 12 percent would qualify medically for disability insurance benefits

were the OASI benefits not available to them at that age (Leonesio, Vaughan, and Wixon 2000). The majority of those workers who would qualify medically for disability benefits, however, would not actually qualify for disability benefits because they lack either the requisite quarters of coverage or fail the recent-work criterion for eligibility. Because more workers at older ages would need to withdraw from labor force activity due to increases in disability rates with age, an increase in the pensionable age would increase the demand for disability benefits. If the pensionable age is raised, it may be desirable to reduce the stringency of requirements to qualify for disability benefits, providing an alternative pathway for some workers to early retirement. This change would better integrate and coordinate disability- and retirement-income policy.

Measuring the extent to which raising the retirement age would hurt vulnerable groups, one study found that fewer than 10 percent of men who take Social Security benefits at age 62 in the United States are both in poor health and have no source of pension income other than Social Security. For women, the figure is 20 percent (Burkhauser, Couch, and Philips 1996).

Conclusion

Alicia Munnell has made an important contribution by exploring some of the issues involved in policies intended to encourage workers to retire at later ages. Policies that removed barriers to work at older ages would expand the opportunities for older workers. Policies that ended incentives to retire early may also have positive effects for both workers and employers. Some groups of workers may have difficulty working at older ages. To the extent possible, it may be desirable for employer-provided pensions to continue to facilitate early retirement for those groups.

Note

The views, opinions and judgments expressed here are solely the responsibility of the author and do not necessarily represent the position of AARP.

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