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How Longer Work Lives Ease the Crunch of Population Aging

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Abstract:
Population aging is not a looming crisis of the future—it is already here. The ultimate impact of population aging on our standard of living in the future depends a great deal on how long people choose to work before they retire from the labor force. Here there is reason for optimism. In this paper we document the striking shift in the U.S. population age distribution well under way, identify the primary reasons for the historic turnaround in labor force participation, and argue that forces such as changes in the structure of employer-provided pensions and Social Security are likely to propel future increases. We explore the diversity of adaptations already at play in the labor market as older men and women seek to extend their working lives and finally, relate these findings in the U.S. to other OECD countries.

Population aging is not a looming crisis of the future—it is already here. Populations age when life expectancy rises and fertility declines. Problems arise when the increase in people surviving to old age and the decline in the number of young people alive to support them causes society's consumption needs to outpace its productive capacity.

The ultimate impact of population aging on our standard of living in the future depends a great deal on how long people choose to work before they retire from the labor force. And here there is reason for optimism: the end of the 20th century witnessed a profound change in retirement behavior. For over a century, the labor force participation rate of men over age 65 declined—falling steadily from 75 percent in the late 1800s to just 16 percent in 1990 (Moen, 1994; Costa, 1998). At the end of the 20th century however, the labor force participation rate of older men began to rise (Quinn, 2002). The labor force participation rate of older women rose as well following a remarkable increase in labor force participation among younger women over many decades.

A constellation of forces, some just now gaining momentum, has raised labor force participation at older ages at just the time it is needed. Age-related health declines and the willingness of employers to hire and retain older workers present challenges, but the outlook for future gains in labor force participation at older ages is promising. The labor market is accommodating older workers to some degree and older men and women are themselves adapting on a number of fronts, which could substantially lessen the economic impact of population aging.

The paper begins by documenting the striking shift in the population age distribution well under way, the slowdown in labor force growth, and the corresponding rise in the economic dependency ratio, a measure of society's consumption needs relative to its productive capacity. We document the historic turnaround in labor force participation, and show how future increases in participation could significantly dampen the rise in the economic dependency ratio. We then turn to the most important factors behind the increase in labor force participation realized to date, the shift in the skill composition of the workforce and technological change. In the third section, we argue that forces such as changes in the structure of employer-provided pensions and Social Security are likely to propel future increases. The fourth section illustrates the diversity of adaptations already at play in the labor market as older men and women seek to extend their working lives. Finally, we discuss the relatively less dramatic population aging in the U.S compared to other OECD countries and how the U.S. is better poised than many countries to attain further gains in labor force participation at older ages.

Population Aging and the Workforce

The age distribution of the U.S. workforce has shifted dramatically in the last two decades, a shift that will continue in the next 20 years. Figure 1 presents snapshots of 1990, 2010, and 2030 based on actual and projected data from the Bureau of Labor Statistics (BLS). The height of each bar indicates the total population in a given age group, while the gray and black segments show how the age group is divided among workers (any labor force participation) and nonworkers (no labor force participation),

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respectively. The figure highlights three defining features of population and workforce change during this period.

The first defining feature is a striking shift in the shape of the population age distribution. In 1990, the distribution had a pronounced triangular shape; but by 2030, the distribution will become visibly rectangular. The primary force behind this structural change is fertility behavior, beginning with the birth of the post-war Baby Boom cohort between 1946 and 1964. The triangular shape in 1990 arose from the bulge created by the Baby Boom cohort's presence in the younger age groups. The Baby Boom bulge is still evident in 2010, when they Baby Boomers occupy the middle age groups, but less evident in 2030 as the Baby Boomers reach the oldest age groups. The disappearing bulge reflects a force known as population momentum. In the absence of population momentum, the age distribution in 2030 would be the mirror image of its shape in 1990—triangular rather than rectangular. Figure 2 illustrates the momentum effect by contrasting total births and birth rates over the 20th century. Even though birth rates fell dramatically in the 1960s, and have remained flat ever since, the annual *number* of births has risen steadily since the mid-1970s as the large Baby Boom cohort began having children, creating an Echo Baby Boom (born 1980-1999). More recently, the year 2007 saw the highest number of births in U.S. history, surpassing even the peak of the post-war baby boom.

Large younger birth cohorts will help slow population aging; the population grows older both as the Baby Boom bulge advances through the age structure and as life expectancy continues to rise. During the 20th century, life expectancy in developed countries rose *linearly*, by 0.2 years per calendar year among those 50 and older, and

shows no signs of decelerating (Christensen, et al., 2009). Although fertility and mortality are the primary forces changing the age distribution, immigration will also play a role. Because immigration inflows mostly affect the bottom half of the age distribution, they accelerate the movement toward a rectangular shape, helping to slow population aging.

The second defining feature implied by the patterns in Figure 1 is a sharp slowdown in labor force growth. The labor force is projected to have grown by 24.4 percent between 1990 and 2010; the effect is visually apparent in Figure 1 as an expansion of the area occupied by the gray bars in the top and middle panels. However, labor force growth between 2010 and 2030 is projected to be just 10.5 percent—less than half the growth expected between 1990 and 2010. Labor force growth between 1990 and 2010 is in line with expected population growth of 26.0 percent during the same period, but labor force growth between 2010 and 2020 will be well below population growth of 17.5 percent during that period. This *relative* slowdown in labor force growth compared to population growth will lead to a corresponding slowdown in growth of GDP per capita, absent an offsetting influence such as an increase in labor productivity, labor force participation, or immigration.

Another way of seeing it is to consider the trend in the economic dependency ratio, here defined as the ratio of nonworkers 16 and older to workers 16 and older.[1] The solid line in Figure 3 shows the economic dependency ratio implied by the BLS estimates of labor force growth between 1990 and 2030. The economic dependency ratio will rise modestly from 50 adult nonworkers per 100 workers in 1990 to 52 nonworkers per 100

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[1] Since we focus on the labor force, we exclude children from the numerator. As such, our economic dependency ratio might be more aptly termed an inactivity ratio.

workers in 2010, then shoot up to 62 nonworkers per 100 workers by 2030 as the Baby

Boomers retire from the labor force.

Tempering this drag on labor force growth is the third defining feature: a notable

rise in labor force participation at older ages. Throughout most of the twentieth century,

the labor force participation rate of men, and particularly older men, declined (Moen,

1994; Costa, 1998). Figure 4 shows historical and projected labor force participation

rates by age group and sex from 1950-2030 prepared by BLS. For men ages 55-64, the

rate of decline slowed in the 1980s, and then flattened. For men 65 and older, the rate of

decline also slowed in the 1980s, and then, remarkably, the trend reversed in the 1990s.

BLS assumes a flattening of the trend by 2010 for men ages 65-74 and by 2020 for men

75 and older.

Just as remarkable is the rise in labor force participation among women. Between

1950 and 2000, the labor force participation rate of women in the prime age groups (25-

54) approximately doubled from 35 to 70 percent, as shown in the bottom panel of Figure

4. Labor force participation among women 55-64 nearly doubled as well, rising from

roughly 25 to 50 percent. Labor force participation of women 65 and older remained low

during the period, but began rising between 1990 and 2000, and is projected to rise

further through 2020, and then flatten.

Population predictions for 2030 are reasonably firm; after all, most people are

already alive. But the estimates of future labor force participation in Figure 4 are less

certain, and are made by advancing the population through the age structure and

assuming past trends in participation will level out. If BLS had assumed labor force

participation rates would continue to rise at the same rate after 2020 as before—and we

believe there is good reason to think they might—our calculations show that the

economic dependency ratio in 2030 would be significantly lower, rising slightly to 53

instead of 62 nonworkers per 100 workers. The dotted line in Figure 3 illustrates this

effect. In short, the economic impact of population aging on our future standard of living

depends a great deal on the evolution of labor force participation among older workers.

The next section discusses explanations for the turnaround in the labor force

participation rates of older workers, while the following section discusses how these

factors and others will shape future labor force participation rates for older workers.

Explaining the Trend Reversal

The cause of the reversal in labor force participation rates for older men has been

the subject of intense interest. Changes in the *level* of labor force participation over time

can result from changes in either entry or exit behavior. For example, an increase in

labor force entry at younger ages could lead to a higher fraction of the population

employed at older ages, as could a decrease in the rate of labor force exit at older ages.

Recent evidence favors the latter explanation. Labor force participation rates for younger

men have actually fallen over time (as shown in Figure 4), and retirement rates are indeed

lower among younger cohorts (for example, Hurd and Rohwedder, 2008). In contrast to

men, the rise in female labor force participation at older ages is a consequence of *both*

increased labor force entry at younger ages and decreased retirement rates at older ages.

But why have men's retirement rates declined? The principal supply-side

explanation for the trend reversal centers on the change in the skill composition of the

workforce. According to Goldin and Katz (2007), years of completed schooling rose on average by two years for every 25 successive cohorts born between 1876 and 1950 (and subsequently rose by only 0.68 years for the 25 cohorts born between 1950 and 1975). As a result, completed schooling (by age 30) among those in the 65 to 74 age group will rise from 10.4 years in 1990 to 13.3 years in 2030. Educated people work more at least in part because they are paid more, have more fulfilling jobs, and face fewer physical demands. Blau and Goodstein (2008) illustrate how, absent this compositional shift to a more educated workforce, the labor force participation rate of older men (ages 55-69) might have continued to decline; in fact, they argue, changes in the educational composition of the workforce can account for the entire trend reversal.

A second explanation for the trend reversal centers on the historic rise of the dual-earner family. Indeed, the percentage of married couples ages 51-56 with both spouses working rose from 53 percent in 1992 to 60 percent in 2004.[2] Schirle (2008) attributes 25 percent of the rise in labor force participation among older men to the rising labor force participation of their *wives*. A likely mechanism is complementarity in the leisure time of spouses, one reason for the empirical tendency of couples to retire around the same time (for example, Gustman and Steinmeier, 2000b; Maestas, 2001; Coile, 2003). The flip side of leisure complementarity is that retirement leisure is valued less if one's spouse is still working. Schirle's result, which is corroborated by Blau and Goodstein, suggests that the education effect may, at least in part, operate through the spousal labor supply channel; after all higher educated men tend to marry higher educated women (Mare, 1991).

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[2] Authors calculations (weighted data) using the Health and Retirement Study.

Perhaps surprisingly, reforms to the Social Security program have emerged as secondary forces. Three reforms in particular altered the return to work at older ages; a gradual increase in the age at which full benefits are payable (the full retirement age), from age 65 to 67 for people born after 1937; elimination of a penalty associated with claiming benefits *after* the full retirement age; and repeal of an implicit tax on earnings after the full retirement age (the so-called earnings test). Gustman and Steinmeier (2009) attribute only one-sixth of the increase in labor force participation between 1998 and 2004 among men ages 65 to 67 to the Social Security reforms and Blau and Goodstein (2008) reach a similar conclusion. In fact, the policy change may have even *reduced* labor force participation for some individuals, as it appears to have led to a small increase in both applications and enrollment in the Social Security Disability Insurance program (Duggan, Singleton, and Song, 2005; Li and Maestas, 2008). Overall, these policy changes do not appear to have been powerful enough to reverse the long-term trend by themselves, in part because some of the changes were not effective until 2000, well after the leveling of the downward trend among older men began.[3]

Finally, mortality decline is a supply-side explanation for the trend reversal that has not received much empirical attention. Life expectancy in developed countries has increased steadily over the past 165 years, but only since the late 1970s have the gains been fueled by increases in expectancy at older ages. This change was both unprecedented and unexpected (Christensen, et al., 2009). Furthermore, as we live longer, we also live better (Cutler, 2001). Most evidence points to deferred onset of

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[3] The gradual increase in the full retirement age from 65 to 67 was announced in 1983, but the first cohort to which it applied (b. 1938) did not reach age 62 until 2000. The increase in the credit for delaying claiming past the full retirement age was announced in 1983 and phased in between 1987 and 2005. The earnings test was first reduced in 1990 (announced in 1983) and then partially eliminated in 2000 (announced in 2000).

disability despite an increase in chronic conditions, with the latter in part due to earlier diagnosis (Christensen et al., 2009). As a result, most retirees in their 60s and 70s are now physically able to work (Weir, 2007). Still, health does decline on average with age, bringing challenges unique to later life careers.

Demand-side explanations for the trend reversal among men have received comparatively little study, mostly due to a scarcity of nationally representative employer data. One potentially important explanation is the nature of work itself. Technological advancement since 1960 has favored cognitive and analytic skills over manual and routine skills (Katz and Murphy, 1992; Autor, Levy and Murnane, 2003), although the shift in job content appears to have favored women more than men (Black and Spitz-Oener, forthcoming). Nonetheless, as technological change has made jobs less physically demanding and the American with Disabilities Act has required employers to provide reasonable accommodations for disabilities, it is now more possible than ever to work in the presence of health limitations. Moreover, continued growth in service-related industries such as healthcare that have historically employed relatively more women implies a growing availability of positions with job content suitable for older workers.

A second demand-side explanation is the shift in the structure of employer pensions from traditional defined benefit plans to defined contribution plans, such as 401(k) plans. Defined benefit pensions are usually based on age, final salary, and job tenure, so that once an employee reaches the plan's normal retirement age (usually somewhere between 55-65), he is eligible for full benefits, which vary with job tenure and his final salary. Defined benefit plans usually have early retirement ages (which may also depend on age and years of service), at which point reduced benefits become

available. Benefits often increase a lot in present value in the years right before

eligibility for early retirement benefits but less so afterward, in many cases becoming

actuarially unfair after the normal retirement age (Gustman, Steinmeier, and Tabatai,

Forthcoming). [4] This accrual pattern creates strong incentives for continued work before

eligibility for early retirement benefits, but weaker incentives and even disincentives for

work beyond that point.

On the other hand, defined contribution pension values are not directly tied to age

and tenure, can increase at rates approximating actuarial fairness depending on market

returns and availability of an employer match, and may be claimed penalty-free only as

early as age 55 if the individual leaves the employer or at 59½ if he continues to work.

But the transition in pension arrangements is not likely a primary explanation for

the reversal in labor force participation trends for older men in the 1990s. Defined

benefit plan coverage was never close to universal. Even at their height in the late 1980s,

only 50 percent of the workforce was covered by such a plan, and this figure fell only

modestly to about 45 percent by the end of the 1990s (Blau and Goodstein, 2008).

Although many employers stopped offering defined benefit plans during this period, data

from the Pension Benefit Guarantee Corporation indicate that plan closures were

concentrated among small employers (Perun and Valenti, 2008). Furthermore, plan

closures have affected younger workers more than older workers—a non-trivial share of

defined benefit plans has not been terminated altogether, just closed to new entrants.

Even among terminated plans, about 95 percent have been terminations of healthy plans,

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[4] The actuarial penalty is much smaller now than it was decades ago when firms could stop crediting
benefits for work after age 65.

in which the full value of accrued benefits is set aside to be administered by an insurer as an annuity contract, or paid out in lump sum (Perun and Valenti, 2008).

Coincident with the shift in pension arrangements has been a steady reduction in employer-provided retiree health insurance benefits, both in terms of coverage and generosity (Kaiser and Hewitt, 2006). Retiree health benefits are a form of subsidized health insurance for those who retire prior to Medicare eligibility, and unlike pensions, reductions in benefit generosity have affected current as well as future retirees.

Finally, the passage of the 1968 Age Discrimination in Employment Act (ADEA) imposed new constraints on employers in hiring, firing, laying-off, and compensating older workers. Although the law was passed well before the turn-around in male labor force participation, researchers have generally agreed that the federal law did not have much effect until much later—in 1978, an amendment extended the law's protected age from 40 to 70; in 1979, enforcement became the responsibility of the Equal Employment Opportunity Commission; and in 1986, an amendment eliminated mandatory retirement (Neumark, 2001). While empirical evidence suggests the law may have, perversely, worsened employment outcomes for older workers (Lahey, 2008), the elimination of mandatory retirement could have indirectly affected labor force participation at older ages by changing social perceptions of the 'normal' retirement age.

The United States is not unique in the changing labor force participation patterns of its elderly. Figure 5 shows that in OECD countries, labor force participation among older women (50-64) has risen dramatically since the 1980s, and downward trends for men reversed between 1994 and 2004 (OECD, 2006).[5] Despite tremendous gains in labor

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[5] The reversal in the average labor force participation rate across OECD countries reflects underlying reversals in two-thirds of the countries.

force participation among women in most OECD countries, including the United States, women continue to participate at lower rates than men at all ages, they retire at younger ages than men, and conditional upon working, they work fewer hours. The similarity of labor force participation patterns in the U.S. and other OECD countries across time and space points to common forces, like the growth in educational attainment, technological change, and the labor force participation of married women, as the primary drivers of the reversal in male retirement behavior, and reforms to Social Security, private pensions, and employment protection law, which have tended to be unique to the U.S. context, as secondary forces. Although many OECD countries have also sought to reform their social insurance systems, often by eliminating implicit subsidies for early retirement, most changes have been only recently implemented or will be implemented in the near future. Similarly, owing to a 2006 European Union directive, most European countries have only very recently passed age discrimination legislation, and surprisingly, these new laws *do not* prohibit mandatory retirement (see OECD, 2006).

Future Trends in Labor Force Participation at Older Ages

The prospect for future increases in labor force participation at older ages is quite good. Although the growth in educational attainment that fueled the turnaround for older men slowed in the 1970s (Goldin and Katz, 2007), other forces are gaining momentum and could propel future increases.

Will Workers Want to Work Longer? The Supply of Older Workers

Changes to Social Security were not a major force behind the turnaround in participation by older men in the 1990s. One reason for this may be that the most important policy change, the scheduled increase in the full retirement age, has not yet been fully realized. The phased increase in the Social Security full retirement age will not be fully implemented until the 1960 birth cohort turns 62 in 2022, and given the system's solvency issues, more reforms seem likely in the future. Early evidence on the policy's effect thus far suggests its impact may be sizable (Mastrobuoni, 2008).

In addition, women increasingly face direct incentives for continued work at later ages, because additional work may raise their Social Security benefits. A woman's Social Security benefit is the higher amount of the benefit she is entitled to based on her own work history or 50 percent of the benefit her husband would receive based on his work history.[6,7] As the labor force participation rate of younger women has risen over time, more and more women qualify for benefits on the basis of their own work history, rather than their husband's. In particular, for an older woman with early-career gaps in earnings due to childbearing, the marginal increase in earnings and pension wealth coming from another year of work could be larger than that of a same-aged man with a continuous earnings history. As noted earlier, when women work longer, so might their husbands.

In the future, workers may not only want to work longer, but they may *need* to work longer in order to support consumption over a longer life span. The linear increase in life expectancy over the past 165 years shows no deceleration of progress or imminent limit to human lifespan. Continued progress toward better health during longer life will

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[6] A divorced individual may also claim a spousal benefit if the marriage lasted at least 10 years.
[7] The same rule applies to men, but in practice very few men receive spouse benefits.

depend in part on the adoption of healthy behaviors such as less smoking, more exercise, and better diets, but evidence is mounting that at least on some dimensions of health, age 60 is the new 50 (see for example Martin et al., 2007).

One potential constraint on labor supply in the future is that with increasing life expectancy, older Americans will feel the pull of family care giving responsibilities from many directions—their elderly parents, their spouse, and even their grandchildren. In deciding whether to work, older workers face tradeoffs that interestingly mimic those often faced by younger married women; the value of their alternative use of time (care-giving) is relatively high and technology may not provide a close substitute.

Will Employers Want Older Workers? The Demand for Older Workers

One of the most important forces gaining momentum is the fundamental re-structuring of private pensions over the last two decades. The full effect of the movement toward defined contribution plans has yet to fully manifest—even among the oldest Baby Boomers, about 60 percent of their pension wealth resides in defined benefit pension plans (Gustman, Steinmeier, and Tabatai, Forthcoming). Friedberg and Webb (2005) estimate that workers with defined contribution plans retire almost two years later than those with defined benefit plans, all else equal, and Hurd and Rohwedder (2008) show how the change in the structure of pensions accounts for a significant portion of changes in future *anticipated* employment at ages 62 and 65 among members of the baby boom cohort born between 1950 and 1953.

In addition, legal barriers to phased retirement have only recently been partially relaxed. The Pension Protection Act of 2006, while stopping short of explicit guidelines,

effectively permits pension payments to employees beginning at age 62 *even if* they have

not reached their plan's normal retirement age. The extent to which employers and thus

employees will choose to make use of this option and its effect on total hours remains to

be seen.[8] On one side, greater use of phased retirement may keep older workers at least

partially in the workforce; on the other side, phased retirement may lead some workers

who would have been full-time to choose partial retirement sooner (Gustman and

Steinmeier, 2008). Nonetheless, employers have a new tool with which to manage the

pace of transitions into retirement.

Over time, older workers are becoming closer skill substitutes for younger

workers raising demand for older workers, particularly in jobs where the productivity

return to experience is high. For example, data from Goldin and Katz (2007) show that in

1990 a retiring 65-year old had on average 10.9 years of schooling, while an entering 25-

year old in that year had 13.5 years of schooling, a gap of 2.6 years. In 2010, a retiring

65-year old will have on average 12.6 years of schooling, while an entering 25-year old

will have about 13.9 years, dramatically narrowing the education gap to just 1.3 years.

By 2030, a retiring 65-year old will have 13.5 years of schooling, while, if current trends

continue, an entering 25-year old might have around 14.0 years, further closing the

education gap of just half a year. The slowdown in growth of educational attainment

implies that for the first time in history, new labor force entrants are not substantially

more educated than those retiring from the labor force.

But do employers think older workers are less productive than younger workers?

Conventional wisdom suggests yes, but direct evidence on this point is scant. Research

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[8] Without further changes to plan rules, many defined benefit plans would impose a penalty on phased retirement since earnings in the final years of employment, which determine benefits, would be reduced.

in cognitive neuroscience finds that many aspects of cognition, including processing speed, long-term memory, and reasoning abilities decline from about age 20, and by some estimates, accelerate after age 60, although considerable heterogeneity exists across people (Hedden and Gabrieli, 2004). But, other valuable skills such as emotional processing, semantic knowledge, autobiographical memory and short-term memory remain relatively stable as one ages—and the extent to which individuals can use accumulated knowledge and experience to compensate for any limitations is not well understood. Productivity need not decline steeply with age if compensatory behavior is possible or if skills that do not decline with age are primarily used.

Still evidence continues to mount that statistical discrimination, judgment based on a group's characteristics rather than the individual's, is an important factor in the hiring and retention of older workers (Johnson and Neumark, 1997; Neumark, 2001; Lahey, 2008). Based on an experimental labor market study, Lahey (2008) finds that a younger woman is 40 percent more likely to be offered an interview for an entry-level job than an older woman. Notwithstanding innovations that make it easier to test a worker's productivity or ability to learn, cognitive declines with age at the population level make it likely that this form of discrimination will continue to present a barrier to work at older ages.

Perhaps the biggest constraint on employer demand for older workers in the future will be health care costs. As the workforce ages, its average health declines and health care costs rise. The rising prevalence of disease, chronic conditions, and obesity among people aged 65-69 suggests that an aging workforce will surely increase the cost of providing health care to older workers in the near future (Christensen et al., 2009;

Lakdawalla et al., 2005).   Thus far, medical innovation has been a double-edged sword, both lengthening life and increasing costs. The extent to which expected health care costs depress employer demand for older workers is unknown but may be substantial. Age discrimination laws prevent employers from varying health insurance coverage by employee age. Employers can however, vary coverage by employment status; for example, it is legal to exclude part-time employees from coverage offered to full-time employees. Even when the employee is Medicare eligible, the employer is the primary payer and Medicare is the secondary payer, paying only what the employer plan does not cover (up to coverage limits). An alternative would be to make Medicare the primary payer under all circumstances, decreasing the cost of employing an older worker relative to a younger worker but increasing Medicare's expenditures. Despite these significant challenges a number of forces are already in line to further boost labor force participation at older ages and dampen the crunch of an aging workforce.

A Diversity of Adaptations Are Already at Work

As labor force participation at older ages has risen, the ways in which men and women work at older ages has been changing, too. The traditional view of retirement as a permanent and complete exit from the labor force and from a full-time job held since middle age does not describe most workers today.

For many workers, an exit from the labor force after age 50 is temporary. Between the ages of 51 and 61, only 40 percent of those who stop working remain out of the labor force; 40 percent return to work, and 20 percent pass through a period of partial

retirement (part-time work following retirement) during the next six years or more

(Maestas, forthcoming). Sixty-one percent of re-entering workers change (three-digit)

occupations, with a notable shift from managerial and professional specialty occupations

to sales, administrative support and services positions. A parallel shift in industry is

evident, as individuals move from the manufacturing sector to the services sector

(Maestas, forthcoming).

Retired workers from earlier birth cohorts were less likely to return to work. Only

25 percent of retirees from the 1905 to 1911 birth cohort reentered the labor force (Ruhm,

1990). But the fraction of older male workers reporting partial retirement is only slightly

higher among recent retirees than among earlier birth cohorts (Gustman and Steinmeier,

2000; Maestas, 2007). In fact, weekly hours worked at older ages have changed very

little over time. Data from the Current Population Survey reveal only a small increase in

part-time work (1 to 34 hours per week) from 24 percent in 1969 to 27 percent in 2001

(Karoly and Zissimopoulos, 2004) followed by a small decline over the last decade

(authors' calculations from Purcell, 2008). Nonetheless, older workers apparently want

part-time work. Zissimopoulos and Karoly (2007a) find that 58 percent of older workers

looking for a job state they are looking for part-time work and that approximately half of

older workers state a desire to reduce hours as they age.

So why don't more older workers work part-time? Several potential explanations

have been offered for the stickiness of work hours. As mentioned earlier, until recent law

changes, employees were restricted by law from collecting a pension while working if

they had not yet reached the plan's normal retirement age. Thus, an employee could not

offset a reduction in work hours with pension income. Moreover, leaving one's main,

full-time job for part-time work more often than not resulted in a lower hourly wage and loss of health insurance and other benefits. Even thought part-time workers need not be paid expensive health and pension benefits, employer demand for part-time older workers may be low in part because high turnover rates among workers nearing retirement make it difficult to spread fixed costs associated with hiring and training across a long horizon. While shorter payback periods are certainly an issue for employers, the concern applies to both full-time and part-time workers and increasingly applies to younger workers as well as older workers, as the gap in expected tenure between older and younger workers appears to be falling (Friedberg and Owyang, 2004).

For workers desiring a reduction in work hours, self-employment may be an alternative to labor force withdrawal and offer an opportunity to reduce hours. In fact, self-employment increases rapidly with age—nearly one in four 65-year-old workers is self-employed—and part-time work is common. About 41 percent of the self-employed over age 50 worked part-time in 2001 and this is up from 33 percent in 1969 (Karoly and Zissimopoulos, 2004). Older employees who become self-employed reduce hours over a ten-year period from an average of 41 weekly hours to 34 weekly hours.[9]

Is self-employment for older workers a form of retirement leisure? Its diversity suggests otherwise. Just over one-third of the self-employed are women and 44 percent have employees. Similar to wage and salaried employees, their occupations are varied. According to data on workers over age 50 from the 2001 March Current Population Survey (Karoly and Zissimopoulos, 2004), just over 35 percent of both self-employed workers and wage and salaried employees report their occupation as executive, managerial or professional. Another twenty-three percent of self-employed workers are

[9] Authors' calculations.

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in sales while administrative support is the next most common occupation for wage and salaried employees (16 percent). Self-employed workers, like wage and salaried employees, work in all industries (with the exception of public administration) and over time, increasingly more in the service industry. The most common industry for both classes of work is professional services followed by trade for self-employed older workers and manufacturing for wage and salaried workers.

As shown in Figure 6, self-employment rates start off very low among the youngest workers, increase steadily until traditional retirement ages (60-64) and then begin to rise more sharply at ages 65 and above. The rise in self-employment rates at the end of the labor market career is driven by both lower rates of retirement from self-employment than from wage and salary work as well as new movements into self-employment: nearly one third of self-employed older workers became so at or after age 50 (Zissimopoulos and Karoly, 2007a). A greater number of older workers may be self-employed in the future because the Baby Boomer cohort will reach retirement with considerably more wealth and education than prior birth cohorts.

The dynamics of labor force behavior at older ages are illustrated in Table 1. These data show the percent of men and women ages 51 to 67 in the Health and Retirement Study (HRS) who transition between self-employment, wage and salary work, and non-employment during a two-year period. About one-quarter of men and 20 percent of women changes labor force status over the course of two years.[10] Many of these changes in status are between wage and salary work and self-employment. About six percent of self-employed men and women are working as employees two years later and two (one)

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[10] Percent of men and women changing labor force status and class of work represents a weighted average of the percent of wage and salaried workers, self-employed and non-workers changing labor force status.

percent of male (female) employees become self-employed. Employees between the ages

of 51 and 55 are approximately twice as likely as those ages 62-67 to become self-

employed. Empirical studies reveal both push and pull factors at work in movements

between these classes of work. Wage and salary workers with work-limiting health

conditions are pushed into self-employment, possibly as a way to accommodate their

condition, while wealthy wage and salary workers are pulled into it (Zissimopoulos and

Karoly 2007b). Low wealth self-employed workers are more likely than those with high

wealth to transition to wage and salary work.

While exits from the labor force are common at these ages, men and women also

enter the labor market. In a two-year period, seven percent of men who were not working

enter the labor force and among them, 30 percent become self-employed. Accumulation

of capital, in the form of prior experience in self-employment and assets are by far the

most important factors in the choice to return to work in self-employment (Zissimopoulos

and Karoly, 2008).

While job changes at older ages, whether voluntary or involuntary, are associated

with a decline in wages and loss of pension and health benefits, most are also associated

with reduced work stress, physical effort, and managerial responsibilities (Johnson and

Kawachi, 2007).   Overall, older workers appear to enjoy work with 89 percent of older

workers over age 50 reporting so (Zissimopoulos and Karoly, 2007a).

In fact, many older men and women would apparently like to work but cannot find

jobs. Maestas and Li (2006) find that only about one-half of older job-searchers attain

jobs within two years. Similarly, Chan and Stevens (2001) report that an older male

worker who is laid off has a 61 percent chance of returning to work two years later and an

older female worker has a 55 percent chance suggesting older workers face many hurdles in the job search. Understanding why individuals are involuntarily out of the labor force, who chooses self-employment and the consequences of both for retirement income and wealth take on added importance in a policy environment keen on encouraging work at older ages.

In short, older workers, like younger workers move in and out of the labor force, change jobs, occupations, and industries, and move between wage and salary work and self-employment. While there are challenges for employers in managing a workforce with a large number of experienced and highly educated older workers, many of whom will move in and out of jobs and the labor force and have preferences for part-time work, this variation presents opportunities for employers and older workers alike.

The Big Picture

The economic challenges posed by an aging society are significant, but not insurmountable. In fact, population aging will be less severe in the United States than in many other OECD countries, for the simple reason that fertility rates in the U.S. never fell quite as far as they did in other OECD countries following the post-war Baby Boom. Indeed, the decline in fertility experienced in the U.S. was only half the average decline in OECD countries (OECD, 2009).

Figure 7 shows how the U.S. compares to other OECD countries on two critical dimensions, population aging and capacity for labor force adjustment. In terms of population aging, the U.S. is in the middle, on course to experience a relatively moderate

change in the percent of its population over 65 between 2005 and 2030. The U.S. is also well positioned for further adjustment in labor force participation, having already attained labor force participation rates among those over 65 well above most OECD countries. In contrast, many European countries will face moderate to high population aging, yet virtually no one over age 65 works. While this certainly leaves ample room for adjustment, doing so may be particularly difficult given mutually reinforcing social norms and social insurance systems that facilitate early retirement through a variety of channels. Perhaps the main area in which the U.S. faces greater challenges than other countries is its health care system, with its high costs and its mixture of private-sector insurance with Medicare.

Demographics is destiny in the sense that the population age distribution is set decades before its impacts are realized. But the economic response is typically more adaptive than demographic determinism would suggest. Indeed, in the United States, a variety of economic forces are likely to push labor force participation at older ages higher even if there are no further changes in policy, including changes in pensions, longer life expectancy, delay in disability onset, and rising labor force attachment among women.

As markets continue to adjust to the aging of the American workplace, more employers will no doubt find it advantageous to hire older workers and to devise new mechanisms for retaining older workers. Making work attractive may require firms to compete on the non-pecuniary dimensions that are valued by older workers, such as flexible hours and reduced responsibilities. The dynamic nature of labor force participation at older ages suggests a workforce that is capable of change in response to economic incentives and evolving personal preferences.

Public policy could support these forces and encourage still greater labor force participation by older Americans. For example, policymakers could undo the remaining work disincentives that are built into private and public pensions or work to resolve information-related labor market imperfections; a growing body of evidence suggests that people do not fully understand the rules governing their pension and Social Security benefits. Encouraging work at older ages serves a variety of social goals, including counteracting the slowdown in labor force growth and shoring up the finances of Social Security and Medicare. As men and women extend their working lives, they enhance their own retirement income security and may ease the strain of an aging population on economic growth.

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Table 1. Employment Transitions for Men and Women Ages 51-67

Status at time t	Status at time $t+2$ (percent distribution)		
	Wage and salary	Self-employed	Not Working
a. Men			
Wage and salary	72.8	1.9	25.3
Self-employed	6.5	64.8	28.7
Not working	5.0	2.1	92.9
b. Women			
Wage and salary	71.8	1.1	27.1
Self-employed	6.1	56.5	37.4
Not working	4.4	1.6	94.0

Notes: Health and Retirement Study 1992-2000. Sample is persons age 51 to 67 at time t. Percents have been calculated using HRS sampling weights.
Source: Zissimopoulos and Karoly (2007a).

Figure 1. U.S. Population by Age and Labor Force Status in 1990, 2010, and 2030
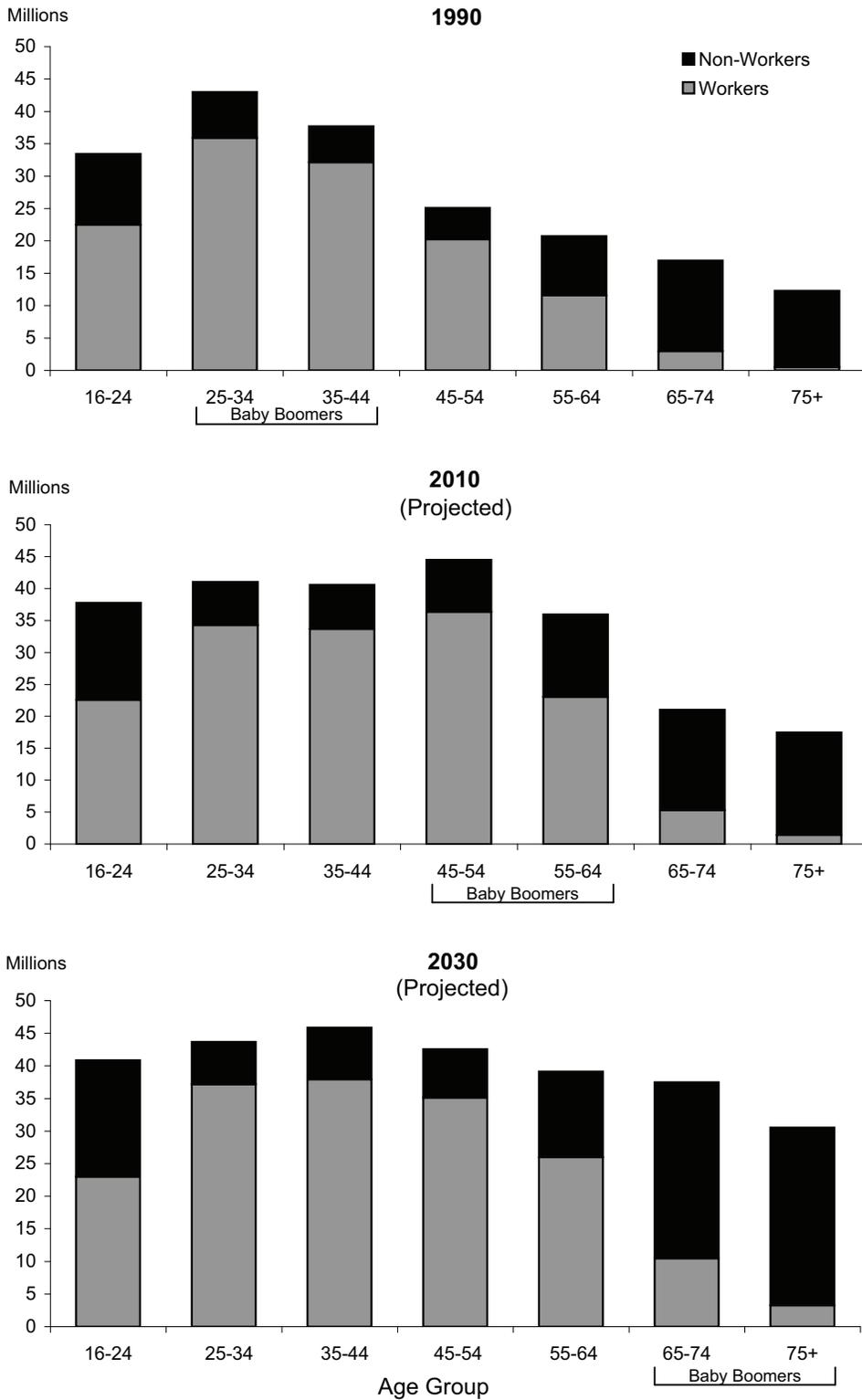
Source: Authors' tabulations of Bureau of Labor Statistics figures for civilian noninstitutional population reported in Toossi (2006) and at http://www.bls.gov/emp/emplab1.htm.

Figure 2. Live Births and Fertility Rates, 1930-2007
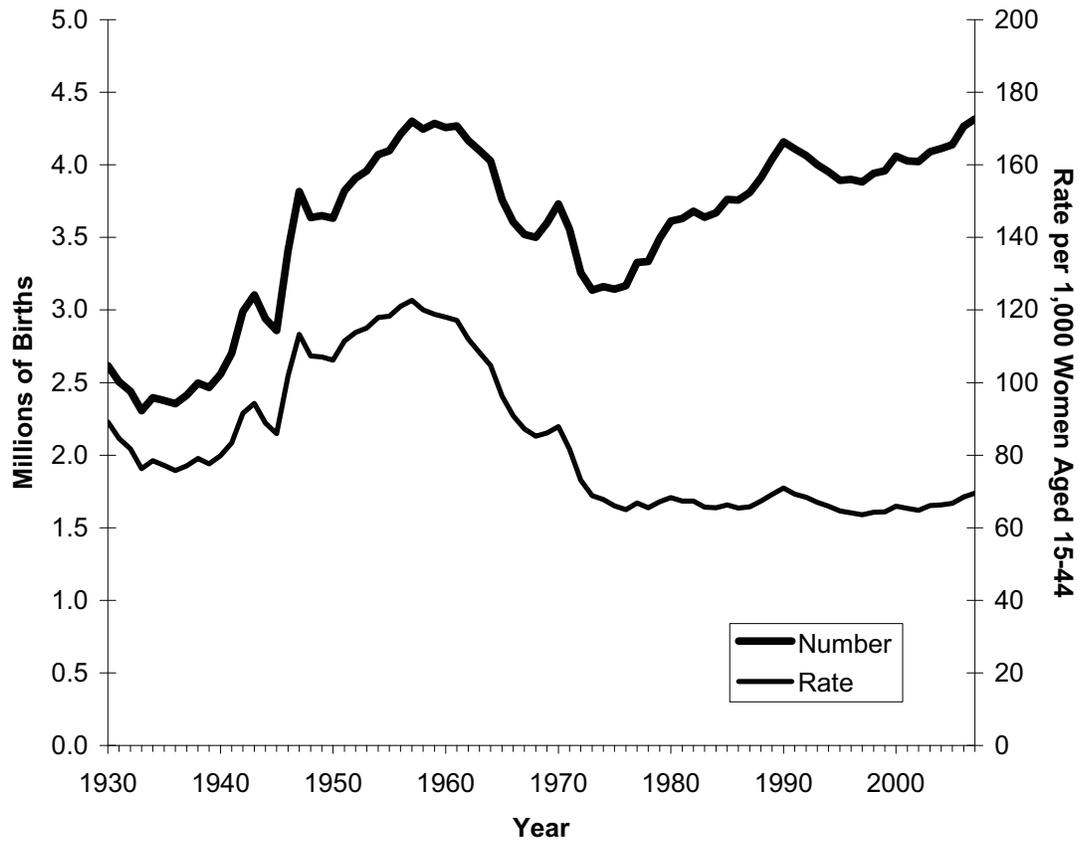
Source: CDC/NCHS, National Vital Statistics System.

Figure 3. Economic Dependency Ratio under Two Future Labor Force Participation Scenarios
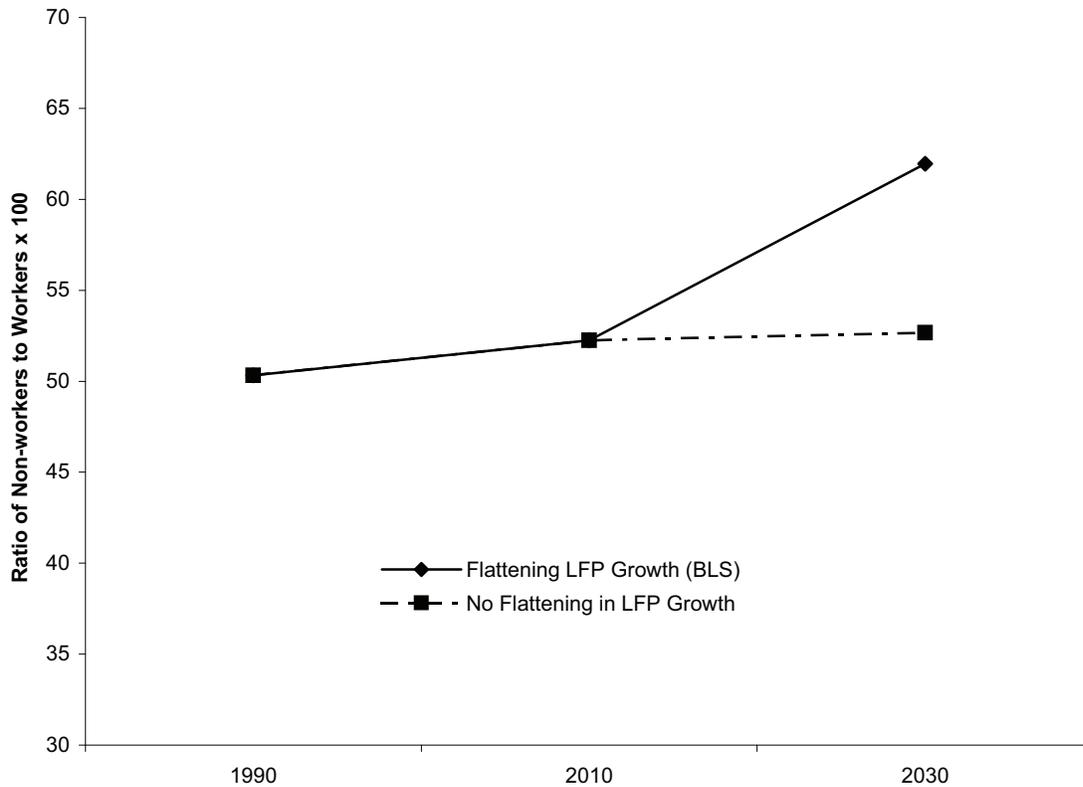
Source: Authors' tabulations of Bureau of Labor Statistics (BLS) data reported in Toossi (2002, 2006) and at http://www.bls.gov/emp/emplab1.htm.

Notes: The Inactivity Ratio is the ratio of non-workers 16+ to workers 16+ multiplied by 100. BLS labor force projections assume flattening growth in labor force participation rates in most age groups after 2010 for men and 2020 for women. The "No Flattening" scenario assumes labor force participation rates in all age categories would continue to rise at the same growth rate as between 2000-2010.

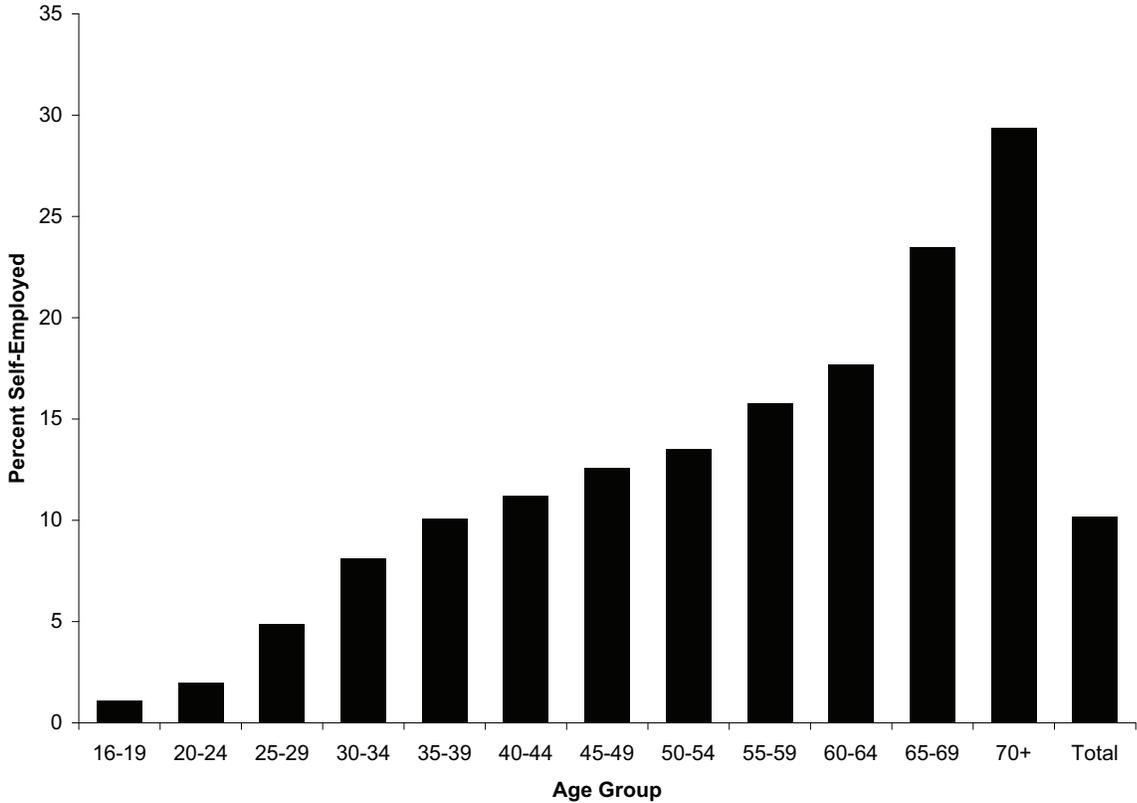**Figure 4. Labor Force Participation Rates by Sex and Age, 1950-2000, and Projected 2010-2030**
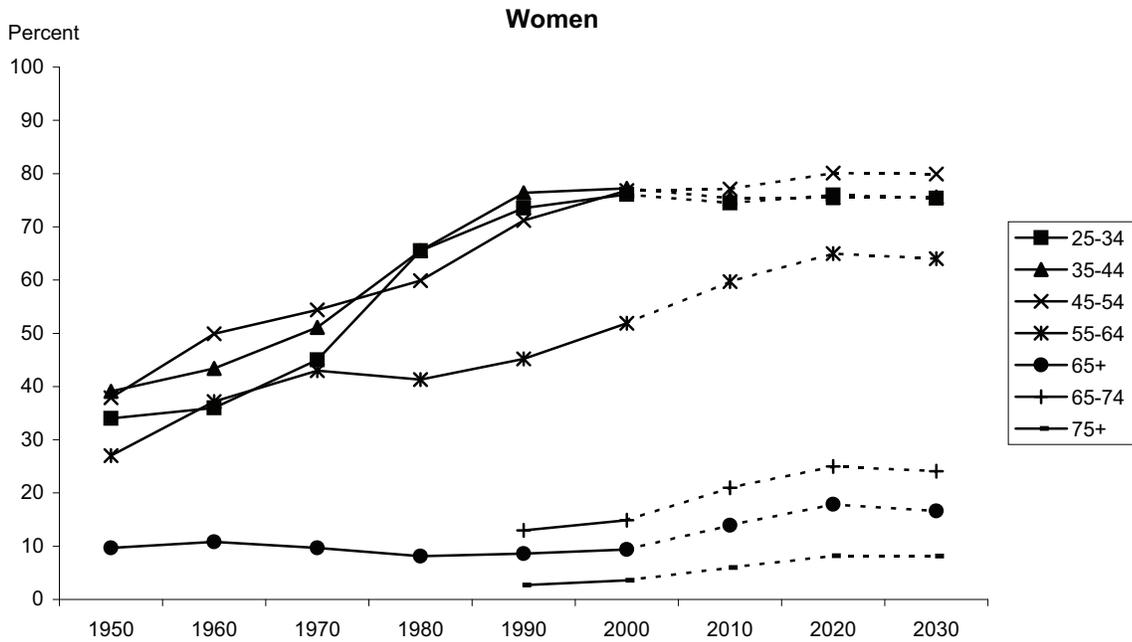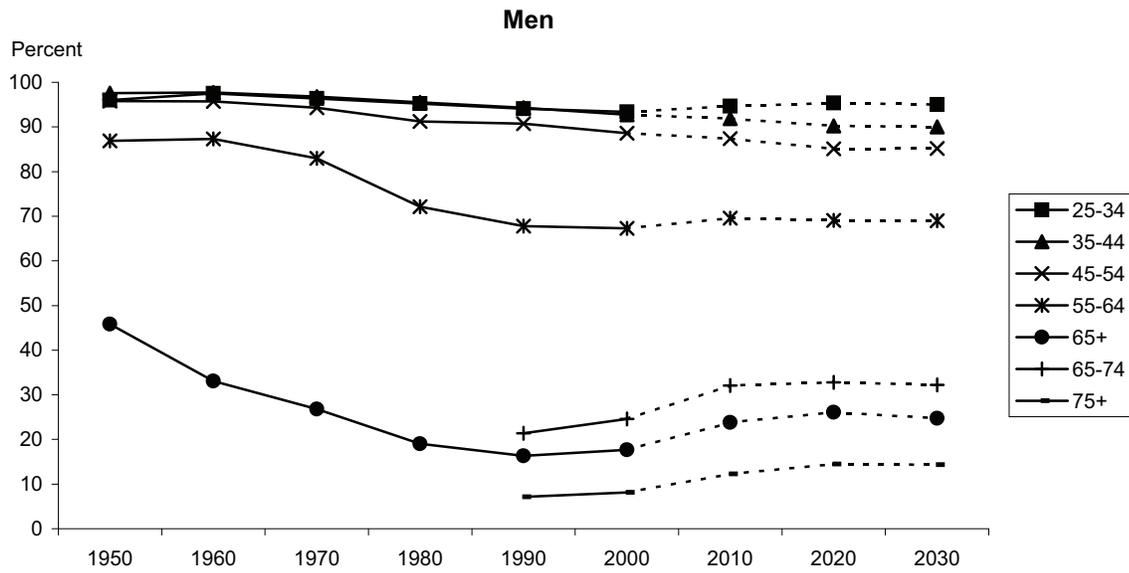
Source: Bureau of Labor Statistics (BLS) data reported in Toossi (2002, 2006) and at
http://www.bls.gov/emp/emplab1.htm. Dashed lines denote BLS projections.

Figure 5. Trends in Labor Force Participation at Ages 55-64 in the United States and OECD Countries
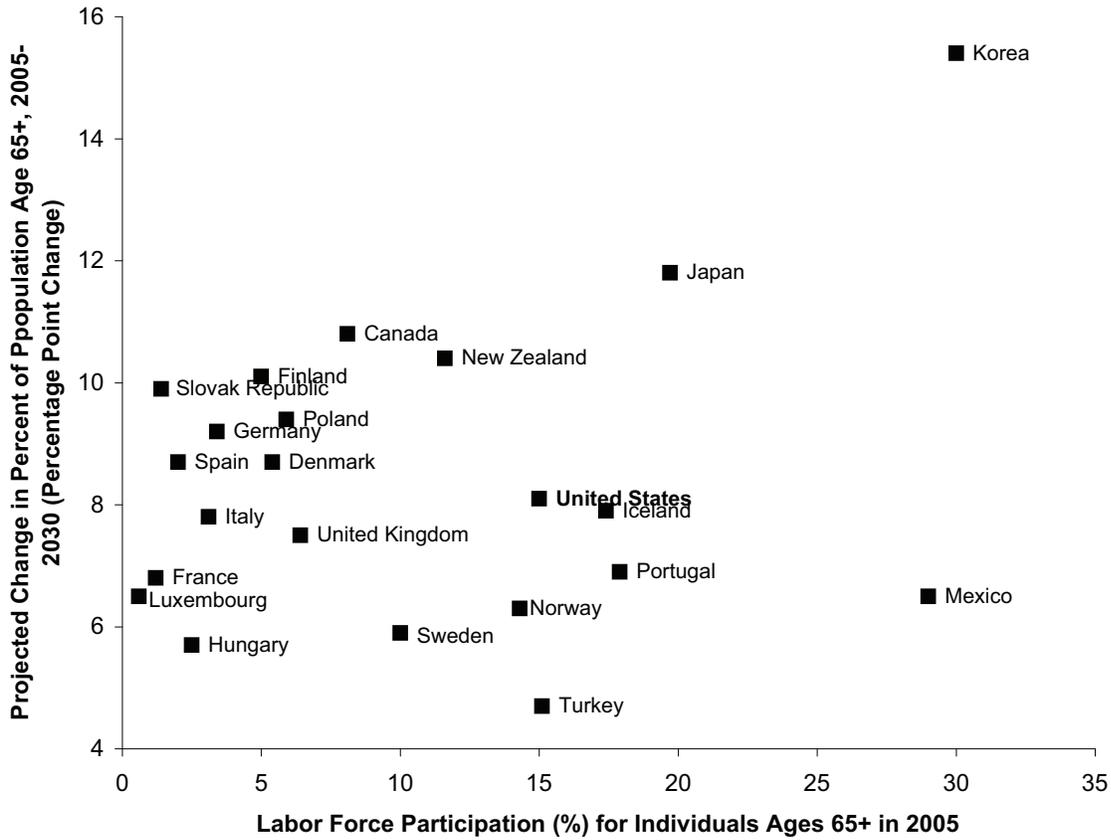
Men

Women
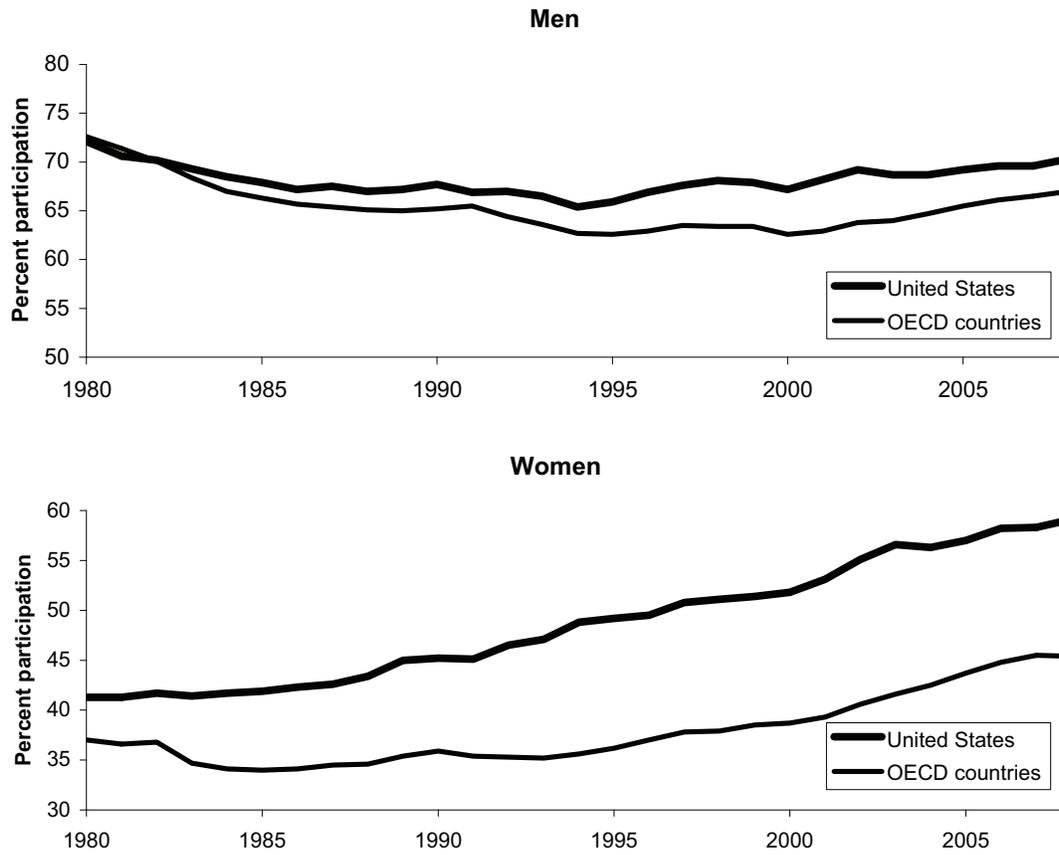
Source: SourceOECD Employment and Labour Market Statistics, LFS by Sex and Age. The OECD average participation rate is the population-weighted average of the participation rates in Canada, France, Germany, Italy, Japan, Netherlands, Norway, Spain and the United States.
http://titania.sourceoecd.org/vl=4696454/cl=14/nw=1/rpsv/~3962/v123n1/s8/p1

Figure 6. Percent of Workers Who Are Self-Employed by Age Group

Source: Tabulations of Current Population Survey 2002 presented in Zissimopoulos and Karoly (2007b).

Figure 7. Population Aging and Labor Force Participation in OECD Countries

Note: Labor force participaton rates are for men and women combined.
Source: SourceOECD Employment and Labour Market Statistics, LFS by Sex and Age.
http://titania.sourceoecd.org/vl=4696454/cl=14/nw=1/rpsv/~3962/v123n1/s8/p1
OECD Factbook 2008, Population 65 and over.
http://oberon.sourceoecd.org/vl=1758417/cl=11/nw=1/rpsv/factbook2009/01/02/01/index.htm