



# Social Security and the Age of Retirement

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## About the Author

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## Introduction

The last century has seen large increases in life expectancy for both men and women. A man born in 1899 could expect to live 51.0 years, but a man born fifty years later could expect to live to age 72.9. Similarly, women born in 1899 could expect to live 57.8 years while those born a century later could expect to live to age 84.8.

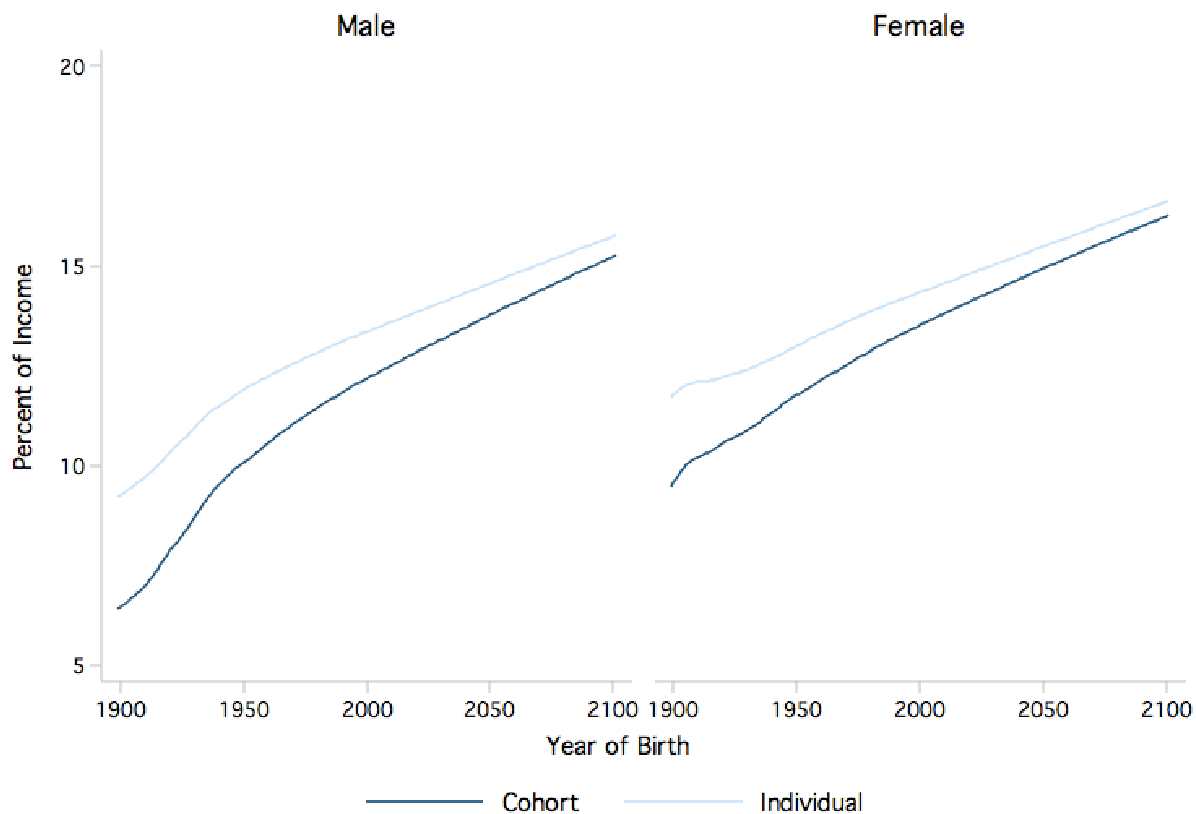
Unlike a century ago, people can expect their children to live past the age of retirement. This fact has important implications for how workers save for retirement, but has no specific implications for the retirement portion of Social Security. In addition, the increase in life expectancy is not nearly as important as it might first appear. A significant part of the increase in life is between birth and age 20. Including declines in child and teen mortality exaggerate the increase in retirement length. Furthermore, much of the gains in life expectancy come during working years – between age 20 and retirement. This means that workers are not only experiencing longer retirements, but longer working lives as well. Finally, each succeeding generation has been vastly more productive than prior generations – a trend that will continue. Thus, not only do workers experience, on average, more years of work over their lifetime, they are also better able to save for their retirements.

## Longer Retirements Require Extra Savings

There is nothing magical about Social Security that provides a free lunch. Workers somehow must pay for longer retirements one way or another. At the same time, there is nothing magical about private savings either. The fact that workers are living longer means they must save more in order to provide for themselves later in life – whether they save as individuals or through a program like Social Security.

**Figure 1** shows – as a percent of working-life income according to birth year – the savings a worker must put aside in order to retire at age 65 with a 100% replacement rate of their income. That is, to have real retirement income equal to their income just prior to retirement.<sup>1</sup>

**FIGURE 1**  
Target Savings Rate Needed for 100% Replacement

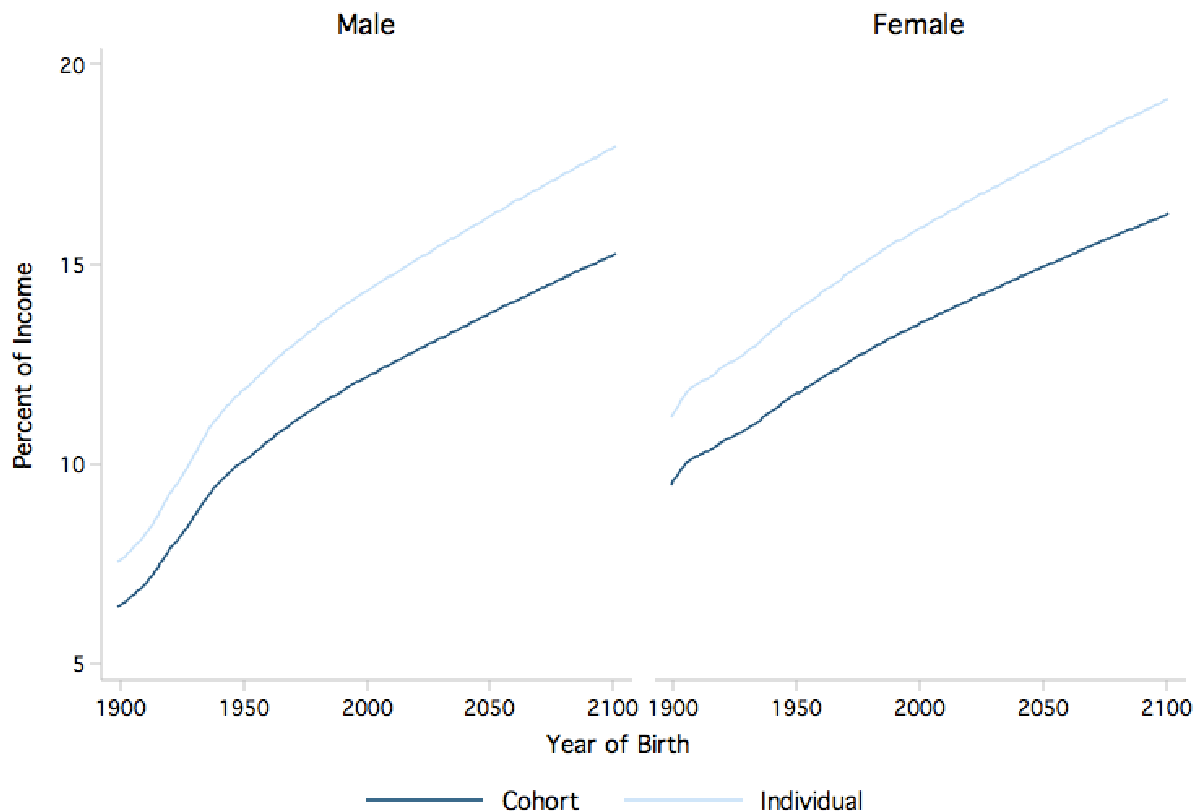


The savings rates are different if a worker saves as an individual rather than collectively. If an entire cohort of 20-year-old men in 1919 begins pooling savings equal to 6.4 percent of income, then in 1964 the survivors will have just enough money to fully replace their incomes upon retirement. If the individuals try to save individually, each must save 9.3 percent of income.

<sup>1</sup> Most workers do not plan for 100% income replacement. To find the savings rate needed for 50% replacement, simply divide by two. For 20% replacement, divide by five.

By itself, this is not to imply that group savings is more efficient – a cohort of savers contributes at a lower rate simply because those who survive claim the savings of those who do not. As 20-year-olds are increasingly likely to live to age 65, the difference in savings rates narrows over time. However, individuals attempting to annuitize their savings in the private sector face charges of 15 to 20 percent.<sup>2</sup> **Figure 2** shows the effect of both survivorship (taking out the savings of those who do not live to retirement) and a 10 percent annuitization fee.

**FIGURE 2**  
Effective Savings Rate Needed for 100% Replacement



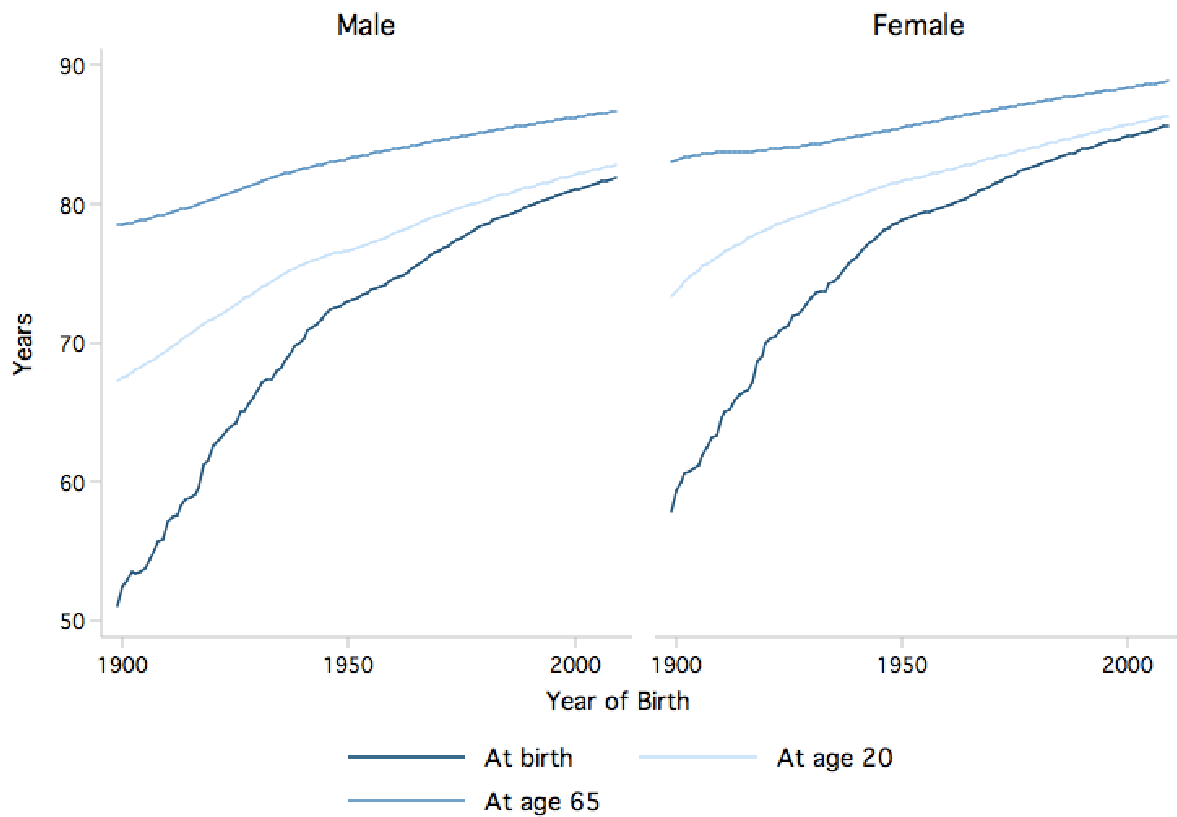
But for the annuitization fee, the savings rates would turn out to be exactly equal. The difference in required savings rates aside, retirement at age 65 necessitates a higher rate of savings over time. This is true for private savers as well as Social Security.

2 Mitchell, Olivia S., James M. Poterba, Mark J. Warshawsky, and Jeffrey R. Brown. 1999. "New Evidence on the Money's Worth of Individual Annuities." *American Economic Review*, 89(5):1299-1318 (December).

## An Additional Year in Life Expectancy at Birth is Not the Same as an Additional Year of Retirement

**Figure 3** shows how life expectancy improves both with each generation and as each cohort ages. A male born in 1899 could expect to live to age 51.0, but a 20-year-old male in 1919 could expect to live all the way to age 67.3 and at age 65 (in 1964) could expect to live to age 78.5.

**FIGURE 3**  
Expected Years of Life



The first half of the twentieth century saw extraordinary gains in the life expectancy at birth (for men, nearly 22 years; for women, nearly 21 years). But such improvements did not translate directly into longer retirements. Life expectancy at age 65 for men increased less than five years over this time; for women, about half that amount.

Thus, life expectancy at birth is not an accurate indicator of how workers' retirements have been extended over time. A better indicator is the expected length of retirement for 20-year-olds, which is shown in **Figure 4**.

**FIGURE 4**  
**Expected Length of Retirement at Age 20**



Three scenarios for retirement are shown in Figure 4. The medium blue line shows retirement under current Social Security law. The dashed, dark blue line shows retirement at age 65, so the difference between the two represents the effect of the increases in the retirement age that have already been scheduled. Finally, the dashed, light blue line shows the effect of a proposal to index the retirement age to life expectancy.<sup>3</sup>

While life expectancy at birth rose 22 years for men, a young adult in 1969 could expect a retirement only 5.5 years longer (13.8 years) than a 20-year-old in 1919 (8.3 years.) In part, this is due to the increase in the retirement age from 65 to 66. For women, the increase in the retirement age was more meaningful, as their life expectancy increased by less than it did for men. In fact, women born in 1960 could, at age 20, expect a retirement of 17.1 years – one month longer than the expected retirement of women born in 1937 despite more than two extra years of life expectancy.

At first blush, one might think that increasing retirement lengths should require an increase in the normal retirement age. However, increases in life expectancy lengthened the average number of working years as well as years of retirement – even when holding the retirement age at 65. **Figure 5** shows the average number of years spent working by year of birth.

3 [http://www.ssa.gov/OACT/solvency/AARP\\_20080619.pdf](http://www.ssa.gov/OACT/solvency/AARP_20080619.pdf)

**FIGURE 5**  
**Expected Working Life, Age 20 to Retirement**



The average number of years a 20-year-old man could expect to work by age 65 rose from 39.0 to 42.0 between those born in 1899 and those born in 1949.<sup>4</sup> Raising the retirement age to 66 added another ten months to the average working life. Those born in 1999 will average 45.0 years of work before retirement age. Even under current law, the younger generations will work considerably longer than generations of workers past.

For many, these additional years of work needed to reach normal retirement age will be a considerable burden. While an investment banker, economist or senator may find it a small thing to delay retirement two more years, the same cannot be said for coal miners, auto workers, and janitors. Life expectancy may increase, but that doesn't mean a firefighter ought to keep working at age 66 or 68 or beyond.<sup>5</sup>

4 45 being the maximum number of years a 20-year-old could work before reaching age 65.

5 Some, such as Andrew Biggs, argue that raising the retirement age hits everyone equally – workers do not respond to the change and simply take an (approximately) equal cut in benefits. If this is a feature of such a plan, then there is no difference between raising the retirement age and explicitly cutting benefits. The only reason to implement such an increase in the retirement age would be to avoid calling it a benefit cut.



## Alternatives to an Increase in the Retirement Age

While raising the retirement age is problematic, the need for Social Security is greater than ever. With the collapse of the stock market bubble at the turn of the millennium and the more recent bursting of the real estate bubbles, workers have lost a large share of their meager savings. Many workers effectively made highly leveraged bets that their home price would continue to rise. They were led to believe that these bets were a sure thing by their own real estate agents, media outlets that celebrated the rise in house prices, and the economics profession that denied the existence of a housing bubble. By making the mistake of following the advice of the experts, many workers lost most or all of their savings when the price of their homes fell rather than rose. Consequently, they need stable and secure retirement income more than ever. Instituting cuts in Social Security (directly, or in the form of raising the retirement age) in the face of a crisis in savings would destroy any hope of a secure retirement for the baby boomers.

On the other hand, national savings must be increased. As we saw above, savings rates must increase over time in order to provide for longer retirements. Historically, this has been the case within Social Security. Congress has raised the OASI tax rate many times – in the 1950s, 1960s, 1970s, 1980s, and 1990s. Yet there is no evidence that these members of congress have suffered when it came time for reelection. Outside of Social Security, though, the rate of private savings has fallen in recent decades.

Only with the recent economic crisis and the resulting increase in the government budget deficits have private savings begun to recover.<sup>6</sup> The relationship between public dissaving and private savings follows from the savings-investment accounting identity:<sup>7</sup>

$$S - I = (G - T) - (M - X)$$

For a given level of investment, a large trade deficit (broadly defined) requires some combination of large budget deficits and low public saving. To increase national savings, then, requires a reduction in the trade deficit. The trade deficit, in turn, is driven by an overvalued dollar that makes imports to the United States relatively inexpensive and exports from the United States more expensive.<sup>8</sup> In effect, an overvalued dollar is akin to a tariff on exports and a subsidy on imports.

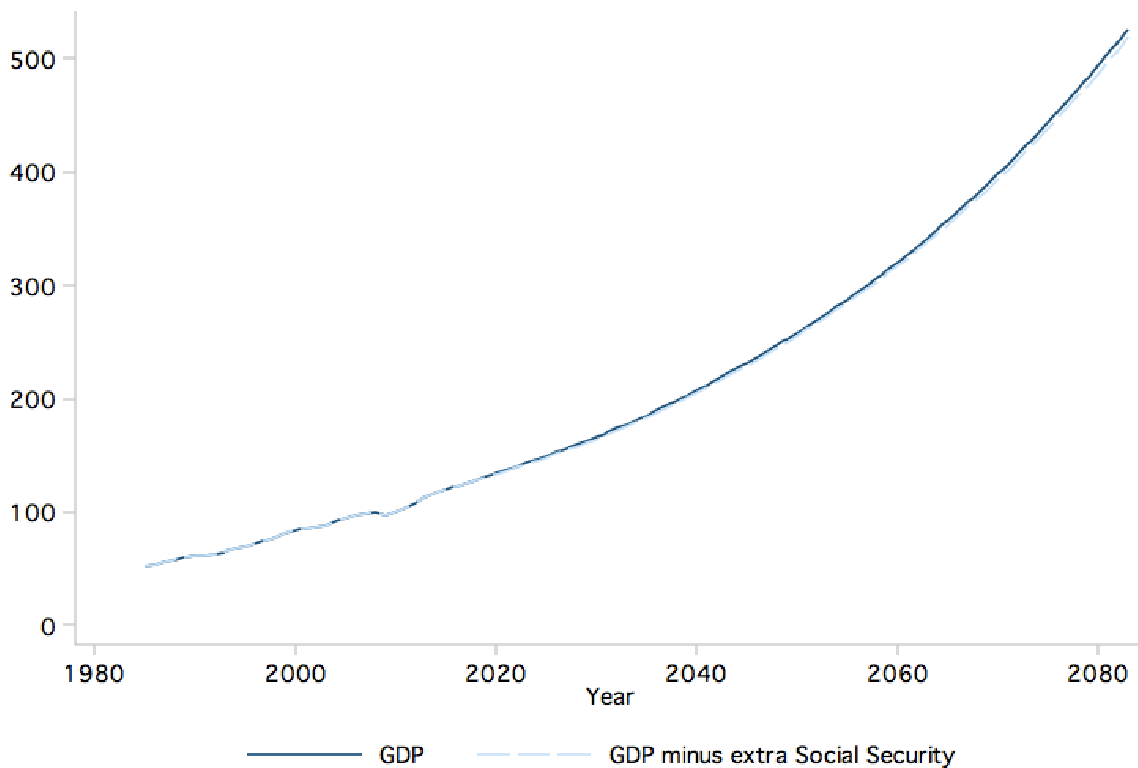
Finally, it is not true that increased savings (as opposed to delayed retirement) requires a reduction in the standard of living. Productivity has and – by all projections – will increase with each generation. Each succeeding generation will be wealthier and more productive than the previous. For example, the Congressional Budget Office projects that the cost of Social Security will rise from 4.8 percent of GDP in 2010 to 6.2 percent in 2083 – an increase of about 1.5 percentage points. On the other hand, over those same 73 years, CBO projects that real GDP will increase 2.3 percent *per year* – a combined 426 percent (see **Figure 6**).

6 In the long run, very large and increasing budget deficits will be overwhelming, but this is a consequence of a broken private health-care system. Without reform of that system, the entire economy will be increasingly threatened. Increasing deficits would be a symptom – not a cause – of the underlying economic danger.

7 Savings – Investment = (Government Expenditures – Taxes) – (Imports – Exports).

8 That is, without consideration for the actual costs of production. U.S. exports are not lacking competitiveness from a productivity standpoint. They simply appear so in prices because the exchange rate makes foreign purchases of U.S. goods relatively costly.

**FIGURE 6**  
**The ‘Burden’ of Social Security**



If we take the extra cost of Social Security out of future income, then the burden is equivalent to reducing real GDP growth from 2.30 to 2.28 percent per year. Rounding error will have more impact on projections of future income than will paying for Social Security.

## Conclusion

Since the introduction of Social Security, life expectancy has grown, but much of the gains have taken the form of increased time spent working. For women in particular, the increase in working years means that they will see a length of retirement virtually the same as their parents. For those who labor in more physically demanding areas of the economy, working to an even later age is not a serious option. Fortunately, future generations will be far more productive than today – hence able to afford the lengthy retirements that increased life expectancy offers. While paying for these longer retirements does require additional savings on the part of workers, this is no less true in retirement planning generally than it is for Social Security. Thus, there is a need to increase national savings; but this requires addressing America’s persistent trade deficits – not denying seniors retirement income.