EPI Issue Brief

PRODUCTIVITY GROWTH AND SOCIAL SECURITY'S FUTURE

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"In 1950, there were 16 workers per one putting money into the system—which means that when somebody retired, there's 16 workers contributing to that person's retirement. Today there's 3.3 workers contributing for each beneficiary. And when youngsters retire, it's going to be 2.1—two workers per beneficiary. In other words, the burden of paying for retirees is increasing on workers."

—President Bush, February 10, 2005 [1]

The president is right that our society has changed in many important ways since Social Security began in 1935 and that people are living longer in retirement. But he is wrong about what that means for Social Security because he ignores the fact that people have also become much more productive at work, which translates into more income to support those too young or too old for the workforce. He also ignores the fact that the elderly are, and will remain, a relatively small share of the total population. When the number of children and working-age people are brought into the picture, the total population change presents an entirely manageable additional burden in coming decades.

As productivity increased in the 1950s, 1960s, and 1970s, the United States made substantial improvements in Social Security benefits—raising benefits in tandem with wages (to maintain income replacement), incorporating disability benefits, and allowing for early retirement. Although the share of the population in retirement will rise in coming decades, the U.S. economy can readily afford to maintain a strong Social Security program because productivity will rise faster than population. Even the relatively modest projections for productivity gains made in the recent trustees report will support a much higher standard of living for all in the future.

What does productivity growth mean for the future of Social Security?

In order to get an accurate picture of who is contributing to Social Security and how much, first we must measure the right thing. Social Security solvency is not just about the number of people contributing to the system, but about *how much* they are contributing. Because of productivity growth, workers today are more than twice as productive as they were a generation ago. So, 16 workers from 1955 are are much less efficient than 16 workers today, rendering any comparisons moot. It is easy to understand why: compared to workers armed with typewriters, telephones, and paper Rolodexes, today's workers using the Internet and BlackBerries are moving at lightning speed. The same holds true for future productivity rates: even with the Social Security Trustees' modest projections on productivity growth, two workers from the future would produce as much as a greater number of workers today, making the program less of a burden on future workers.

Social Security already weathered a much more dramatic change in the worker-to-retiree ratio when it went from 18-to-1 in 1950 to 4-to-1 in 1965 without collapsing. Compared to that change in just 15 years, the far less dramatic change from today's 3-to-1 ratio to 2080's 2-to-1 ratio is less daunting. To understand why, we have to look at the bigger picture.

The real issue is how many workers there will be going forward, how productive they will be in the future, and how much will be produced per person—workers and non-workers. Those who work will have to provide for those who do not work, including children and retirees, as well as for themselves.

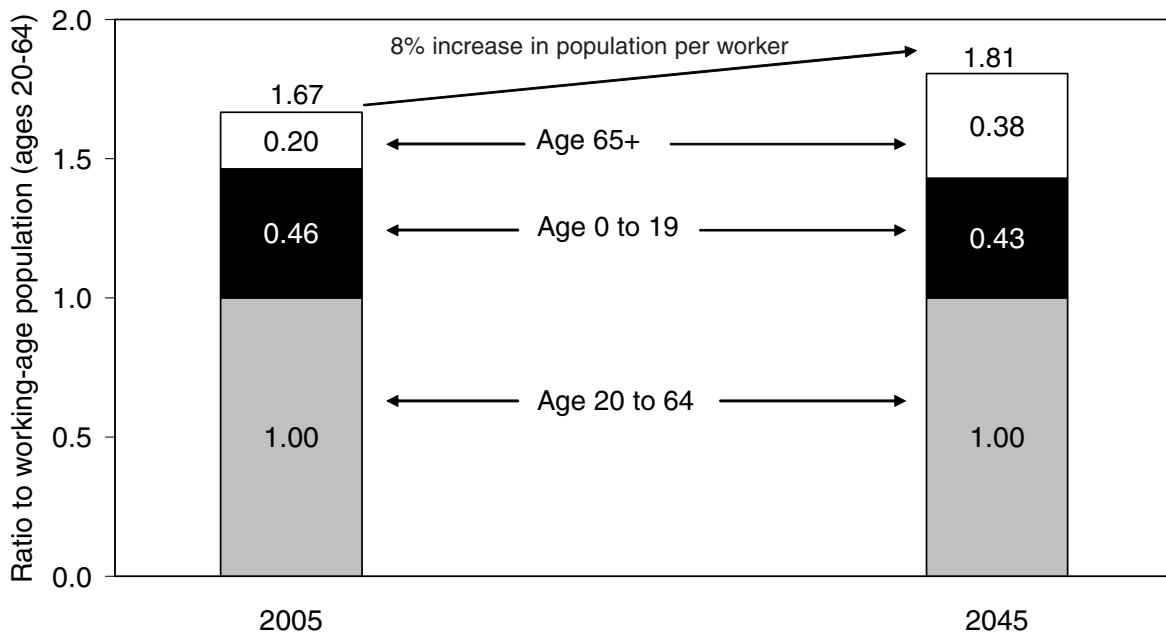## What do population changes mean for the future of Social Security?

It is true that the retired population (age 65 and over) is now one-fifth the size of the working-age population (those between 20 and 64), and that ratio will rise to 38% by 2035. But to understand the impact of an aging population, we should not look at the elderly in isolation. The number of children far exceeds the number of elderly, and children's share of the population will fall relative to the working population. So, the falling share of children will offset the growing number of elderly to a great extent, which will substantially lower the growth in the number of nonworkers who need to be supported by the working-age population. Finally, we should remember that the working-age population must also support itself. Clearly, the working population consumes the lion's share of resources; the smaller shares go to children and the elderly. The ratio of the total population to the working-age population will rise from 167% today to 181% in 2045 (see **Figure 1**).

If the focus is solely on the population over age 65, the picture looks worrisome. Over the next 40 years, the number of people 65 and older will rise 81% relative to those 20 to 64. Adding those under 20 to those 65 and older produces a dependency ratio that will rise by 21% over the next 40 years—a much more manageable number. But the most expensive people in our society on a per capita basis are the working-age population. When the entire population is considered relative to the working-age population, we find that the ratio rises by only 8% over the next four decades. While it may seem daunting to manage 81% more people in 40 years, the burden of an additional 8% more people seems much less problematic.

The Social Security Trustees conservatively project that productivity gains will slow to 1.6% per year by 2013 and beyond. Even that amount of growth generates 91% more output per hour by 2045, as shown in **Figure 2**. In other words, the total output of American workers (measured in gross domestic product, or GDP) will grow from $84,152 per worker today to $156,285 per worker (in today's 2004 dollars) by 2045. Even when that growth is spread among 8% more people per worker, it would raise GDP per capita. Future workers will be so much more productive that they will be in a position to support Social Security and still be better off than today's workers.
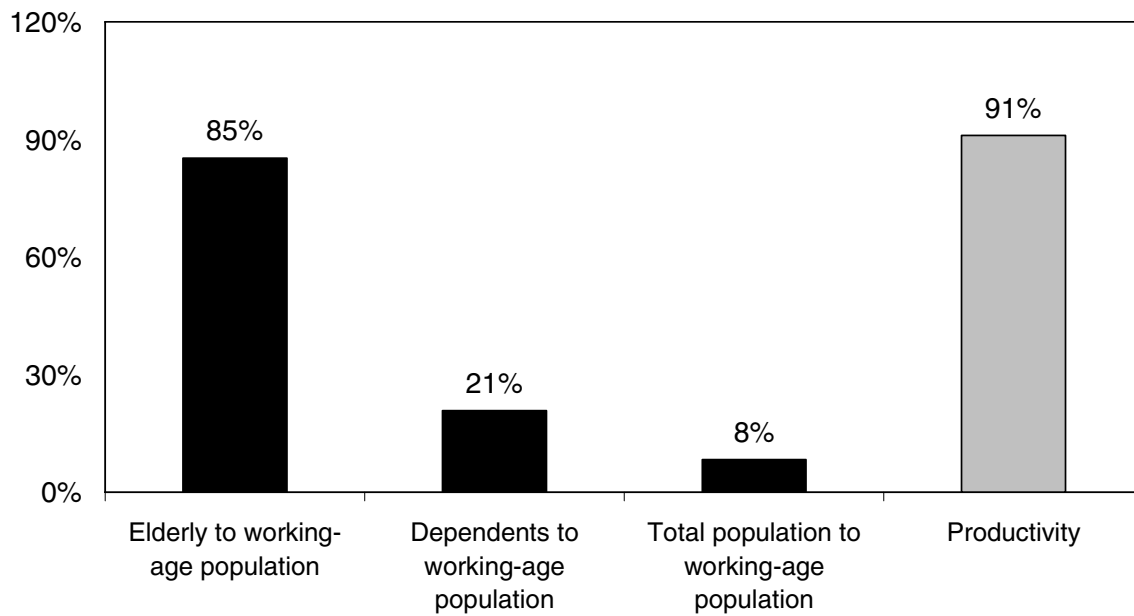
FIGURE 1

Increase in population per worker over 40 years

Source: Author's calculations based on 2005 Trustees' report.
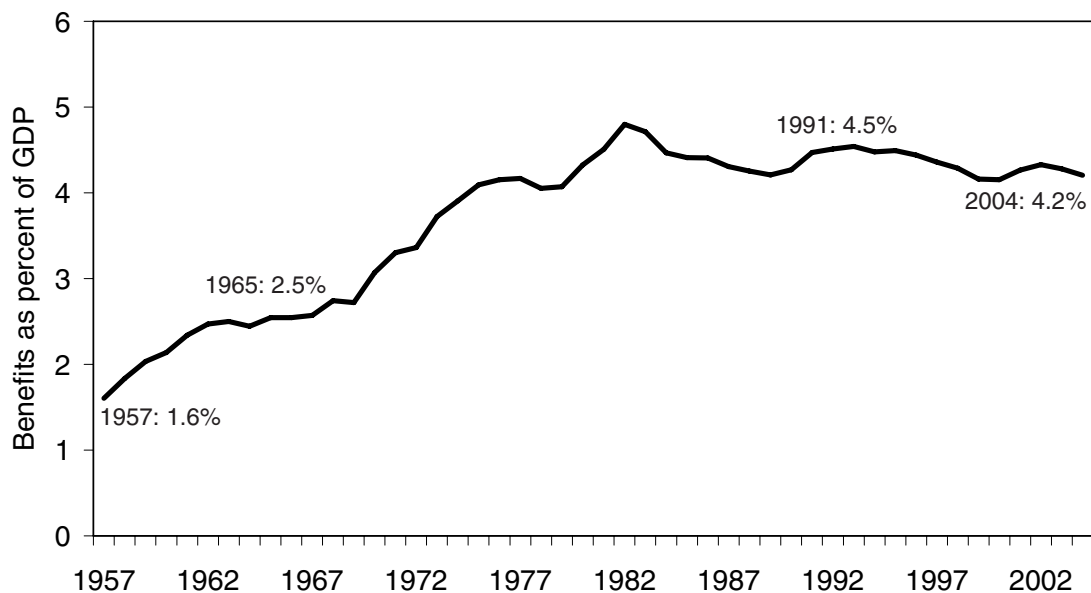
FIGURE 2

Change in ratios to working-age population compared to productivity growth from 2005 to 2045

Source: Author's calculations based on 2005 Trustees' report.

FIGURE 3

Social Security benefits as a percent of GDP, 1957-2004

1991: 4.5%

2004: 4.2%

1965: 2.5%

1957: 1.6%

Source: Social Security Administration and Bureau of Economic Analysis.

Because Social Security benefits rise with productivity, the cost of supporting the elderly will be higher in the future. With productivity rising so much more than total population, however, future generations will enjoy a vastly higher standard of living after fulfilling current promises for Social Security benefits.

None of this is new. In 1965, American workers supported about 20 million Social Security beneficiaries, and by 1991 the number of beneficiaries had almost doubled to 41 million. In that same time, the number of workers went from near 80 million to 133 million, far less than double the number. And as **Figure 3** shows, the size of the program grew from 2.5% of GDP—the value of all goods and services produced in the country—to 4.5% of GDP in 1991. To maintain currently scheduled benefits, the Social Security trustees estimate that benefits will rise to 6.0% of GDP by 2035. The difference is in the response of America's leaders. In the past, American political will simply found a way to live up to the pledge to keep the program funded and solvent.

Looking at this broader picture tells us that the resources will be there to keep our commitment to retirees. Productivity growth will more than make up for the 8% growth in the total population that working-age people will have to support in coming decades. Political pressures, not excessive economic pressures, will determine whether our society fulfills current commitments for Social Security benefits in the future.

Endnote

1.   See "President discusses strengthening Social Security in North Carolina BTI Center for the Performing Arts, Raleigh, North Carolina." < http://www.whitehouse.gov/news/releases/2005/02/20050210-8.html >