

Simple Arithmetic Driving Social Security Reform, The

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In his latest economic perspective column, Tax Notes economic consultant Gene Steuerle explains why something will have to be done to the current social security system.

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The debate over social security reform is awash with numbers on changes in tax rates, benefit reductions, and saving patterns required to bring the system into balance for the long run. Sorting through these numbers has been confusing for most of the public, as well as many members of Congress. Predictions are made by actuaries and economists using sophisticated models that appear to almost everyone else as black boxes. This article is intended to skip around those more elaborate calculations and to present the financing dilemma in a simpler, more understandable, form.

Currently there are slightly more than three workers for every social security beneficiary. Once the baby boomers begin to retire, a dramatic drop to fewer than two workers per beneficiary is predicted to occur within a period of about two decades—that is, as the entire generation of baby boomers born between 1946 and 1965 become eligible for social security retirement. (They hit age 62, the age of first eligibility for social security, between the years 2008 and 2027. The so-called normal retirement age is currently 65 but is scheduled to rise to 66-67 during the period the baby boomers become eligible. Therefore, baby boomers hit the so-called "normal retirement age" between about 2011 and 2032.) To simplify our arithmetic, let's focus on the drop from 3-to-1 to 2-to-1 in workers to beneficiaries, recognizing that this slightly understates the size of the problem.

Suppose that this drop were to occur instantaneously. Recall that social security is almost entirely a pay-as-you-go system, despite a slight and temporary build up in trust funds that ultimately would pay for only around one-tenth of liabilities outstanding under current law. Now consider three workers, A, B, and C, who each transfer \$3,333 and 1/3 dollars to pay \$10,000 of benefits to D. All of a sudden C disappears, so that only A and B must pay for the benefits of D. What to do? A and B can continue to pay \$3,333 dollars each. But then D would receive only \$6,666 dollars in benefits. Thus, her benefits would fall by one-third. Or D can be held harmless so that she still receives \$10,000. But then A and B would have to increase their payments to \$5,000 each. If we must hold at least one group harmless, then what is required is either a benefit cut of 33 percent or a tax rate increase of 50 percent.

Simple Example			
Effect of a Drop in Workers to Beneficiaries From 3-to-1 To 2-to-1			
Taxes Paid By Taxpayers			Benefits per Beneficiary
A	B	C	D
Pre-Baby Boomer Retirement			
\$3,333	\$3,333	\$3,333	\$10,000
Post-Baby Boomer Retirement - Hold Taxpayers Harmless			

\$3,333	\$3,333	\$0	\$6,666 (33 percent reduction in annual benefits)
Post-Baby Boomer Retirement - Hold Beneficiaries Harmless			
\$5,000 (50 percent increase in tax rates)	\$5,000 (50 percent increase in tax rates)	\$0	\$10,000

When the actuaries show these numbers, they usually do so by pointing to the tax rate required to maintain current benefits as a percent of taxable payroll. This more elaborate calculation typically shows that the tax rate for Old Age and Survivors Insurance tax rates would eventually have to increase by over 5 percentage points from its 10.6 percent tax rate for the years 2000 and beyond. (This tax rate excludes the disability insurance and health insurance tax rates, which under current law make up the remainder of what is known as the combined social security tax rate of 15.3 percentage points.) Now the actuarial calculations also take into account a lot of other factors, such as possible temporary use of savings in the trust fund, transfers of general revenues to social security through the income taxation of benefits, and so on. The basic result, however, is roughly the same—an increase of about 50 percent in the social security tax rate.

What about all the talk of increased retirement age, cuts in annual benefits, and increases in savings either in social security or in individual accounts? None of these affect the basic calculation presented above. Increases in the retirement age attempt to cut back on the drop in workers to beneficiaries to less than 2-to-1. If beneficiaries delay their retirement, they add both to the number of workers and subtract from the number of beneficiaries. This allows taxpayers to pay lower rates and beneficiaries to maintain higher benefits.

An example of a cut in annual benefits is shown above by a drop from \$10,000 to \$6,666 in benefits for D. These cuts would be less if the retirement age were increased. If individuals had enough saving, then they might also supplement their loss in annual benefits. Note, however, that in the above example, we allowed the drop in workers per beneficiary to occur instantaneously. In point of fact, we skipped over an important detail. Social security is designed so that annual benefits increase for each new generation of retirees by the growth in their wage levels relative to those of the previous generation. Thus, if my generation earns approximately 30 percent higher wages than my parents' generation, then I and the rest of my cohort are on average scheduled to get social security benefits that are 30 percent higher than those received by our parents. Thus, cuts in annual benefits over time, while they would involve a decline in the income of the typical elderly person relative to a typical nonelderly person, do not necessarily mean a drop in income relative to those who are elderly today. Instead, they may involve only a cut in the rate of growth in annual real benefits.

Despite all the confusion over whether surpluses should be saved and whether we should have individual accounts, such reforms do nothing at all to change the basic arithmetic shown here. The same types of calculations are required for transfers from workers to retirees. If we save more on net, and it is an open question how much government can effectively cause net societal saving to increase, then there might be more income available to future generations because of a larger capital stock. If the elderly garner most of the returns from that saving, then their reduction in transfers received from working taxpayers is offset partly by their higher capital income. If working taxpayers garner most of the returns from a larger capital stock, then they still have to pay more tax to support the same level of benefit for the elderly. If typical elderly and nonelderly individuals are to maintain their same relative position—a feature of the current social security law—then more saving in society does not really get around the dilemma posed above. That is, if the income of the average elderly person is to maintain the same ratio to the income of the average nonelderly worker, then either the elderly have to garner a larger share of society's total wealth and pretax income (even if they are not working) or the nonelderly still have to pay higher tax rates.

In summation, if a smaller share of adults in society work, then nonworkers get less income, workers pay a higher share of their income in transfers to the nonworkers, or nonworkers make up for a shortfall in wage income or transfer income by holding a much larger share of society's (hopefully larger) stock of wealth. Period. It's not politics, it's arithmetic.

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