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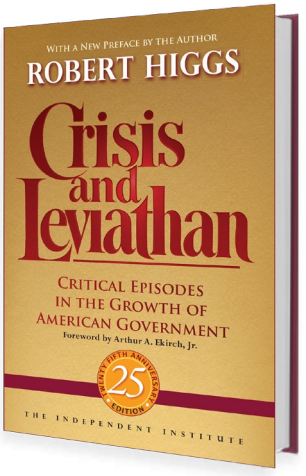


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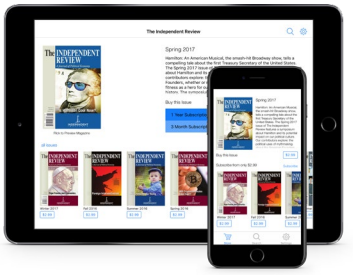

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# The Anatomy of Social Security and Medicare

EDGAR K. BROWNING

Social Security in the United States is the largest government expenditure program in the world, with expenditures of $523 billion in 2005. That figure includes only the cash retirement benefits paid. Social Security's companion policy that covers the elderly's medical expenses, Medicare, had expenditures of another $299 billion. Taken together, the federally financed retirement benefits amounted to $822 billion.

Despite its vast size and its effects on almost all Americans each year of their lives, the Social Security system is probably the most poorly understood government policy of all. The jargon alone is incomprehensible: we hear of unfunded liabilities, infinite and seventy-five-year time horizons, average indexed monthly earnings and primary insurance amounts, trust funds and lockboxes, wage indexing versus price indexing of benefits, bendpoints in the benefit formula, carve-outs and add-ons, replacement rates, covered and uncovered earnings, and so on. Probably no policy, however, is more important to understand because its consequences for the way we live and for how well we live are monumental.

In this article, I focus on the fundamental issues surrounding the design of a system to provide retirement benefits to the elderly. I begin by explaining how Social Security works.

## Social Security Basics

The retirement benefits provided to the elderly by Social Security (and Medicare) each year are financed by taxes on workers' earnings. The benefits received by those persons

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now retired do not come from a fund they accumulated by paying taxes during their working years. All the taxes they paid in earlier years were spent on providing benefits to those retired then. Similarly, the taxes paid by workers today do not go into a fund to finance their own retirement; they are spent in providing retirement benefits to those retired now. Social Security is thus an income-transfer program, with income transferred each year from workers to retirees.

But, you may ask, what about the trust funds we hear about all the time? Doesn't the money go into the trust funds? It is true that there are trust funds, but they play a minor, even negligible, role in the operation of Social Security. They are temporarily playing a somewhat larger role right now than they did in the past or will in the future, but it is a minor factor even today. (In 2005, eighty-four cents of each dollar in workers' taxes were paid out immediately as retirement benefits; only sixteen cents went into the trust funds.) I discuss the trust funds later, but we can get a clearer understanding of how Social Security operates by first ignoring them.

A retirement system that finances retirees' benefits by taxing younger workers' earnings (as Social Security does) is said to be run on a *pay-as-you-go* (PAYGO) basis. Because no fund is being accumulated on behalf of the taxpayers, this arrangement is also sometimes called an *unfunded* system.

A PAYGO system bears an eerie resemblance to a Ponzi scheme (also known as a pyramid scheme), named after Charles Ponzi, who apparently first utilized this scheme to swindle investors. In 1920, Ponzi began to borrow money from investors, promising them a return of 50 percent after only forty-five days. (On an annual compound basis, this is comparable to a return of 2,500 percent!) He paid off the early investors by using the funds provided by later investors (as Social Security paid off early retirees by taxing later retirees—that is, younger workers); he did nothing with the funds to generate such fantastic returns (as Social Security does not invest the taxes paid by workers). Like most pyramid schemes, Ponzi's system collapsed, leaving the later investors with nothing because their funds had been used to pay off the earlier investors. The entire swindle lasted less than a year. Ponzi pleaded guilty to mail fraud and spent four years in jail. Since that time, pyramid schemes have been illegal.

That is, unless they are run by the federal government, as with Social Security. But differences between privately operated Ponzi schemes and publicly operated PAYGO retirement programs enable Social Security to be a viable system for providing retirement benefits. Notably, the government can force current and future workers to "invest" (by collecting taxes from them), so that retirees can always be assured of incoming funds supplied by younger workers.

Saying that a PAYGO system is a feasible way to provide retirement benefits is not the same as saying it is desirable. Let's consider how it affects people over their lifetimes. To understand how it operates in the simplest way, imagine that people live only two years, working in the first year and retired in the second. When working, they pay a tax on their earnings of 10 percent, which finances retirement benefits for those retired. What can you expect to get from such a system when you retire?

When you retire, you get the proceeds of the 10 percent tax on the earnings of those then working. If their earnings are greater than the earnings you had when you paid the 10 percent tax, you will get back more in retirement than you paid in taxes when you were a worker. All retirees can potentially get back more than they paid in taxes as long as workers' earnings are growing over time and the number of workers per retiree does not change.

This relationship suggests a link between the growth in earnings and the returns that PAYGO Social Security can generate. Indeed, more elaborate calculations show that Social Security can provide over the long term on average an *implicit (annual) rate of return* on taxes paid that equals the annual rate of growth in (taxable) earnings. So all generations of workers can get back more than they paid in as long as earnings rise over time. As it is sometimes expressed, Social Security allows people to "share in the growth of the economy" because economic growth and earnings growth are approximately the same thing.

What you can expect to get back (or, more precisely, what people on average can expect to get back) is therefore tied to the growth in earnings. Over the past fifty years or so, the annual growth in total *real* earnings has averaged about 2.5 percent. For reasons to be discussed later, future growth is expected to be somewhat lower, perhaps 1.5 to 2.0 percent per year. Therefore, the implicit real rate of return on taxes paid into Social Security will likely average around 1.5 percent or so in the foreseeable future. In the next section, I compare that return to the returns available from other ways of providing for retirement.

All of the rates of return (or interest rates) discussed in this article are *real* rates; in other words, they are adjusted for inflation. If the nominal (or monetary) rate of return is 10 percent, but prices are rising by 10 percent a year, then the real rate of return is zero—because the purchasing power of the $1.10 you get back one year after investing $1.00 has the same purchasing power as the $1.00 you started with. Real returns determine living standards, and therefore the growth rates in earnings I cited previously are expressed in real terms—that is, in terms of dollars of constant purchasing power.

One other matter deserves emphasis. What I have explained is that over the long haul a PAYGO system offers an implicit real rate of return equal to the rate of earnings growth. "The long haul" here refers to people who spend their entire lifetimes under the full-blown system, paying taxes throughout all their working years and then receiving retirement benefits. In a PAYGO system, some people will do much better than this long-haul return. They are persons who retire in the early years of the system's operation and who did not pay taxes for all their working years or who paid taxes when rates were lower. To see this effect, imagine that we start a PAYGO system with a 10 percent tax rate this year. People who are retired this year will receive the tax revenues as retirement benefits (remember, it is PAYGO), even though they paid no taxes at all during their working years because the system did not exist before this year. They get a really sweet deal—benefits at no cost to themselves—and clearly fare

much better than young workers just starting out, who will pay taxes and receive only a return equal to the rate of growth of earnings. People who are near retirement age also do extremely well because they will pay taxes for only a small proportion of their working years.

Therefore, we expect those who retire in the early years of a PAYGO system to fare much better (receive a much higher rate of return) than those who retire later. They receive windfall gains, as did the early participants in Charles Ponzi's scheme who were paid off before the operation collapsed. In contrast to Ponzi's scheme, however, Social Security, as we have seen, can continue to pay later generations of retirees an implicit rate of return equal to the rate of earnings growth.

The windfall gains that early retirees receive are one of the major differences between a PAYGO system of providing retirement benefits and a funded system. In a funded system, what you get back is strictly linked to what you put in; if you put nothing in, you get nothing back. Early generations of retirees do not automatically get much higher returns than later generations in a funded system, as they invariably do in a PAYGO system.

## Is Social Security a Good Deal?

We have seen that not all generations of retirees will receive the same rate of return on their Social Security taxes. Generations that retire earlier do better than later generations. In contrast to my earlier heuristic discussion, however, Social Security did not emerge "full blown" after its enactment in 1935. Benefits were first paid in 1940, and not all the elderly received benefits because of the specific legislative restrictions on eligibility. In fact, in 1950 only one of six people older than sixty-five (17 percent) was receiving benefits. That figure rose to 62 percent by 1960 and 86 percent by 1970. Today, more than 95 percent of the elderly receive Social Security pensions. Tax rates also rose gradually, starting at a rate of 2 percent in the 1940s, rising to 4 percent in the 1950s, reaching 9.6 percent in 1970, and finally attaining the current level of 15.3 percent in 1983.[1]

The gradual expansion of Social Security and the complicated and changing rules determining individual benefit payments make it difficult to ascertain exactly how good a deal people get from the policy. However, a number of careful studies have provided estimates for both past generations and future generations. Table 1 shows some of the findings from three of these studies to present an overview of the rates of return that have been generated in the past and likely will be provided in the future

1. The rates reported are the combined employer and employee tax rates for Social Security and Medicare together (after 1965, when Medicare was enacted). The tax rate today, 15.3 percent, is nominally composed of equal rate levies of 7.65 percent on the employee and the employer. Economists agree that despite this use of separate taxes on employer and employee, the employee bears the full burden of this tax. The wage that employers pay workers would be 7.65 percent higher if the employer did not have to remit this sum to the government.

## Table 1
## Overview of the Rates of Return from Social Security

**A**

**Year in Which Household Head Becomes Sixty-five**

| Demographic Status | Earnings Profile | 1970 | 1980 | 1995 | 2008 | 2020 | 2038 | 2050 | 2068 |
|---|---|---|---|---|---|---|---|---|---|
| Single Male | Low | 7.5% | 5.3% | 3.1% | 2.4% | 2.5% | 2.3% | 2.2% | 1.8% |
| | Average | 6.3 | 4.5 | 1.9 | 1.3 | 1.4 | 1.3 | 1.1 | 0.8 |
| | High | 5.4 | 4.0 | 1.5 | 0.8 | 0.8 | 0.6 | 0.4 | 0.2 |
| Single Female | Low | 10.7 | 7.7 | 3.7 | 2.9 | 2.9 | 2.7 | 2.6 | 2.2 |
| | Average | 9.1 | 6.6 | 2.7 | 1.9 | 2.0 | 1.7 | 1.6 | 1.3 |
| | High | 6.7 | 5.1 | 2.3 | 1.5 | 1.4 | 1.1 | 1.0 | 0.7 |
| One-Earner Couple | Low | 9.7 | 7.4 | 6.1 | 4.9 | 4.8 | 4.6 | 4.4 | 4.0 |
| | Average | 8.5 | 6.7 | 5.0 | 3.9 | 3.9 | 3.6 | 3.4 | 3.0 |
| | High | 7.5 | 6.0 | 4.7 | 3.4 | 3.2 | 3.0 | 2.8 | 2.4 |
| Two-Earner Couple | L/L | 8.8 | 6.4 | 3.9 | 3.1 | 3.1 | 2.9 | 2.8 | 2.4 |
| | A/L | 7.7 | 6.0 | 3.5 | 2.7 | 2.8 | 2.6 | 2.4 | 2.0 |
| | A/A | | | 2.7 | 2.0 | 2.1 | 1.9 | 1.7 | 1.4 |
| | H/A | 6.7 | 5.1 | 2.7 | 2.0 | 1.8 | 1.7 | 1.5 | 1.2 |
| | H/H | | | 2.3 | 1.5 | 1.4 | 1.2 | 1.0 | 0.7 |

**B**

| | | 1960 | 1970 | 1980 | 1990 | 2000 | Long Run |
|---|---|---|---|---|---|---|---|
| Average Rate of Return | Unadjusted | 14.7 | 9.2 | 6.0 | 4.8 | 3.5 | 2.5 |
| | Adjusted | 14.3 | 8.2 | 4.1 | 2.1 | –0.4 | –1.1 |

*Sources:* **Part A:** 1970 and 1980 data from Hurd and Shoven 1985, table 11. All other data from Advisory Council on Social Security 1997, 219–22. **Part B:** Edwardson 2000, 90.

(if Social Security continues unchanged).[2] All of the figures represent the implicit annual real rate of return on Social Security taxes paid. In other words, they show what interest rate would have to be earned if the taxes were invested to produce a pension equivalent to that provided by Social Security.

Note that table 1A provides estimates for fourteen (or only twelve in two years) different family types. The reason for this diversity is that Social Security has complicated rules for the determination of individual benefits. If all people received pensions

2. The figures for the years after 2020 are based on the assumption that tax rates will be increased to finance benefits. The necessity of this or some other change in the system is discussed in a later section.

that were strictly proportionate to the taxes they paid, then the rates of return (in a given year) would be the same for all of these family types. But they are not the same; some family types do significantly better than others. These differences are deliberate and represent how egalitarian ideology has affected the design of this policy: the government gives higher returns to those deemed needier.

Although the table shows many numbers, we can make sense of this potpourri by noting that two definite patterns exist. The first pattern can be seen by looking across any row. This approach shows the rate of return received (or to be received) by a given family type retiring in different years. In all cases, the rates decline over time. For example, a two-earner couple in which one earner has high lifetime earnings and the other average earnings received a 6.7 percent rate of return in 1970, but only 2.7 percent in 1995. By 2050, the rate of return declines to 1.5 percent, and by 2068 to 1.2 percent. The same pattern—lower rates for those retiring in later years—holds for all family types.

This pattern reflects the PAYGO nature of Social Security. As explained in the previous section, a PAYGO system invariably treats earlier retirees much better than later retirees, who receive (on average) only the rate of growth in total earnings. An overview of this pattern is provided in table 1B, which shows the unadjusted average rates of return for all those retiring in different years (ignore the adjusted figures for now; I explain them later). They declined from 14.7 percent for those retiring in 1960 to 3.5 percent in 2000 and in this study are *assumed* to stabilize ultimately in the future at 2.5 percent (somewhat higher than most economists today expect).

The second pattern displayed in table 1A is the variation in rates of return received by different household types retiring in the same year. Looking down the column for 2008, we can get a good idea of this variation for people retiring now. The rates of return vary from a high of 4.9 percent to a low of 0.8 percent. As mentioned earlier, this variation reflects the specific rules for determining individual benefits. Some groups can receive rates higher than the overall average, but of course this excess must come at the expense of other groups who receive rates lower than average. In general, these differences reflect egalitarian concerns to provide higher benefits to families in greater need. Thus, lower-earning households systematically receive a higher rate of return than higher-earning households.

We still need to consider whether and for whom Social Security has represented or will represent a "good deal." To evaluate this matter, we must remember that the rates of return shown in table 1 are *compound annual* rates of return that apply over long periods of time (lifetimes). As Albert Einstein once said (perhaps apocryphally), compound interest is the eighth wonder of the world. By this quip, he meant that small differences in rates can produce big differences in outcomes when compounded over long periods of time.

Consider a person who contributes (or pays Social Security taxes of) $200 every month ($2,400 a year) to a retirement fund for forty-five years (say, from age twenty-two to age sixty-six). How much will he have accumulated when he retires at age

sixty-six? The following numbers show how the accumulated amount depends on the rate of return; the figures in parentheses approximate the annual pension that such an amount can finance.[3]

At 1 percent $136,438 ($8,868)
At 1.5 percent $154,305 ($10,030)
At 2 percent $175,223 ($11,389)
At 3 percent $228,645 ($14,861)
At 4 percent $302,900 ($19,689)
At 5 percent $406,976 ($26,453)
At 6 percent $553,954 ($36,007)
At 7 percent $762,943 ($49,591)

The specific case we are examining here is analogous to a worker who earns approximately $22,000 a year because such a worker pays Social Security taxes of approximately $2,400 a year. If he gets a 1.5 percent return (which, recall, is the long-run average prospect for Social Security), he will accumulate a total of $154,305 at age sixty-six. That amount can provide an annual pension of $10,030 for the remainder of his life, which is only 45 percent as large as his preretirement annual earnings. However, if he achieves a 5 percent return, his accumulation is $406,976, which can provide a pension of $26,453, or 20 percent more than his earnings before retirement. And if he gets 7 percent, his accumulation is more than three-quarters of a million dollars, with an annual pension of $49,591. His pension is nearly *five times* as high if he receives a rate of return of 7 percent rather than 1.5 percent. Such is the power of compound interest over a working lifetime.

These examples demonstrate that even seemingly small differences in rates of return can make huge differences in a retired worker's pension and thus his living standard. With that background, we return to the central question: How good a deal is Social Security? We now see that the answer depends on what family types (high or low earnings, and so forth) we are considering and on their year of retirement. Families retiring in the earlier years of Social Security (roughly, the 1980s or before) typically did much better than those retiring in the later years did and will do.[4] Future retirees, as we see from table 1A, can expect lower returns that decrease over time and bottom out at approximately 1.5 to 2.0 percent on average.

Our assessment of Social Security must also reflect the alternative means of providing retirement income that exist and the returns expected from these alterna-

3. The annual pension is computed on the assumption of a rate of return of 3 percent and based on a twenty-year remaining lifespan. (In 2003, life expectancy at age sixty-five was nineteen years for females and sixteen years for males.)

4. The very high returns shown in table 1 for the earlier years must be interpreted with some caution. They do not imply that the pensions were large in absolute amounts, but only large relative to the taxes paid. Early retirees paid much lower tax rates during their working years.

tives. The obvious alternative is for people to save individually for retirement (or through company-sponsored pension plans), accumulating assets in the form of stocks or bonds that then finance retirement income. According to Jeremy Siegel's definitive study *Stocks for the Long Run,* the real compound annual rate of return on stocks has averaged 6.9 percent over the past two hundred years (from 1802 to 2001). The returns have been remarkably stable over shorter (but still quite long) subperiods, averaging 6.9 percent since 1926 and 7.1 percent since World War II (from 1946 to 2001), for example (2002, 12–13).

Stocks are risky, and their returns vary greatly over short periods. Those who want a guaranteed rate of return normally choose bonds. Since World War II, corporate bonds have generated real returns that average approximately 4 percent. Many investors choose portfolios with stocks and bonds. Martin Feldstein and Andrew Samwick point out that a portfolio composed of 60 percent stocks and 40 percent bonds has generated a yield of about 5.5 percent since 1946 and over the entire period since 1926 (1997, 120).

These yields (stocks 7 percent, bonds 4 percent, and mixed 5.5 percent) that have resulted from private savings in the past provide a perspective on the deal provided by Social Security. Certainly, for those retiring now and even more so for future retirees, the implicit returns implied by Social Security pensions pale in comparison with those of private investments. Recall from my earlier example that the pension generated by a 7 percent return (stocks) is five times as large as that produced on average in the long run by Social Security (which has a 1.5 percent rate of return). A 4 percent return (bonds only) will produce a pension about twice as large as Social Security, and the 5.5 percent return from a portfolio of stocks and bonds will produce a pension three times as large.

Everyone "knows" that private investments yield higher returns than Social Security. Few know that the differences in returns compounded over a working lifetime imply huge differences in the pensions available to retired persons. Do persons retiring today realize that they would have a pension two, three, or more times the size of their Social Security pension if they had been able to invest their taxes in stocks? Although we must recognize that future yields on private investments may differ from past yields, it is difficult to avoid the conclusion that Social Security is a bad deal for present and future workers. Surprisingly, however, these comparisons actually *overstate* the benefits from Social Security, as demonstrated in the next section.

## The Hidden Costs of Social Security

Comparisons like those in the previous section are commonplace in evaluations of Social Security, yet they invariably make Social Security look better than it really is because they ignore two of the important economic consequences of PAYGO Social Security: how it affects private saving for retirement and how it affects workers' work effort (labor supply). Let us examine these consequences.

Most people intuitively understand that Social Security leads workers to save less for their own retirement. It does so in two ways. First, by taking 15 percent of workers' earnings, it reduces their ability to save. Second, and more important, Social Security reduces the need to save by providing a pension to workers when they retire. To see this second point most simply, imagine a worker whose goal is to maintain his preretirement standard of living during his retirement years. In the absence of Social Security, he will save and accumulate assets sufficient to produce the required pension. Now suppose Social Security promises the worker a pension of this amount. He no longer has any reason to save, and he will reduce his savings (for retirement purposes, at least) to zero.

Clearly, we do not expect all workers to reduce retirement saving to zero. Depending on the size of the expected Social Security pension, some will want to supplement it by saving privately. Nevertheless, they will save less than they would have if there were no Social Security pension. And do not make the mistake of thinking that the government is saving for you when it collects the taxes. Those taxes are not saved in any economic sense; they are transferred directly to retired persons (PAYGO), who spend the proceeds.

Economists generally agree that PAYGO Social Security decreases private saving for retirement for these reasons.[5] Why is this decrease important? Remember that private saving usually involves purchases of stocks or bonds, which provides funds that finance investments in things such as buildings, vehicles, equipment, computers, and software. Saving thus ultimately finances the acquisitions of real productive assets—that is, *real capital,* in the economist's lingo. Sometimes, as when a person uses his savings to finance a small business, the link between saving and the subsequent investment in real productive assets is even clearer.

An important point here is that real capital is productive; in other words, it adds to the economy's output. When a business has new or better machinery or facilities, its output is greater even with an unchanged labor force. For the economy as a whole, then, additional saving leads to additional capital accumulation, which in turn leads to higher output in later years. Capital accumulation financed by saving is one of the reasons economies grow over time, and growth in the gross domestic product (GDP) means growth in personal incomes because output equals income for the society as a whole.

Thus, when Social Security reduces saving by workers, additional negative outcomes ensue. Less saving means less investment, hence lower output in later years (lower, that is, than it would have been had saving not fallen), hence lower personal incomes in later years. We end up with a lower stock of real capital, so there is less

5. Fuchs, Krueger, and Poterba (1998) surveyed economists who specialize in public finance, the field that deals with Social Security. Question 17 asked them what the personal saving rate would have been if Social Security had never been enacted. The median response was that the saving rate would have been 60 percent higher. Twenty-five percent of those surveyed thought it would be at least double the actual rate.

capital for each worker to use, which means the productivity of labor will be lower and wage rates will be lower. This course of events does not mean wage rates will be lower than in previous years, but lower than they would have been if saving had not fallen. Despite Social Security's effect on saving, some saving still occurs. This saving and other factors that contribute to economic growth generally raise wage rates over time, but the rates rise less rapidly than they would have if saving had not fallen in the first place.

The second significant economic consequence of PAYGO Social Security flows from its taxation of labor earnings. The tax is currently levied at a rate of 15.3 percent on earnings up to a ceiling amount ($97,500 in 2007, indexed to grow automatically over time). This tax can affect workers' decisions regarding whether and how much to work, when to retire, whether to work overtime, and how diligently to perform on the job. In general, the tax can be expected to reduce the amount of effective labor supplied to the U.S. economy. Less labor means lower output (lower GDP) and lower *before-tax* incomes for workers.

In summary, PAYGO Social Security leads to lower quantities of productive capital and lower quantities of labor employed in the economy. Both consequences imply lower output and hence lower average incomes for Americans. The latter represents a real cost borne by people over and above the taxes directly paid to finance Social Security. Workers have lower before-tax incomes prior to payment of their Social Security taxes.

These hidden costs are not incorporated in the rates of return for Social Security reported in table 1A. Those rates are calculated by comparing Social Security's pensions with the taxes paid during working years. As we now see, workers bear costs in addition to taxes paid; their earnings are lower before they confront the tax collector. Hence, these rates overstate how beneficial Social Security is (or understate how harmful it is). Although the magnitude of this overstatement is difficult to pin down, there is no question that the "deal" provided by Social Security is actually worse than suggested by the comparisons presented in the previous section.

It is important, however, to have a rough idea of the magnitudes involved. Economists have studied this issue, of course, but they have reached no consensus as to precisely how much lower GDP is than it would have been if Social Security had never existed. Nonetheless, the available evidence suggests that Social Security has reduced GDP by 5 to 10 percent.[6] Most of these studies, however, examine only the effects of Social Security; they do not consider Medicare. Because Medicare can be expected to reduce saving for retirement just as Social Security does, it seems reasonable to conclude that the system as a whole causes a reduction in GDP of at least 10 percent.

6. See Kotlikoff 1996; Feldstein and Samwick 1997; Edwardson 2000; Kotlikoff, Smetters, and Walliser 2001; Ehrlich and Kim 2005. Some of the relevant studies estimate how much GDP would rise if Social Security were completely privatized. That amount, of course, approximates how much Social Security has previously depressed GDP.

It is also important to understand that this 10 percent reduction is the cumulative effect of a seemingly small annual reduction in the rate of economic growth over a long period; it did not occur all at once. The reduction in annual saving caused by the Social Security system might have reduced the growth rate of GDP by perhaps 0.3 percentage points per year, say, from 3.0 percent to 2.7 percent.[7] Given the normal year-to-year variations, that reduction would hardly be noticeable, but it is enough to cause the level of GDP after thirty-two years to be 10 percent lower than it would have been if the long-term growth rate had remained at 3.0 percent.

With 2005 GDP at $12.5 trillion, a 10 percent reduction means that GDP (and personal incomes) would have been about 11 percent higher had Social Security (and Medicare) never been enacted. On a more personal level, note the implication of this calculation: the average household in the United States would have had an income $12,175 greater than its actual income in that year. The average household thus loses more than $12,000 from Social Security each year, and that loss comes *before* the household members pay their Social Security taxes.

This loss is an immense effect, and it would be huge even if the effect on GDP were only half as large as I assumed it to be. Consider that expenditures on Social Security and Medicare now amount to 7.3 percent of GDP. A 10 percent reduction in GDP because of these programs means that each dollar spent on them reduces GDP (and personal incomes, of course) by nearly $1.40 before the taxes are collected.

We now see why discussions of Social Security that do not go beyond comparisons of its implicit rates of return with private investment's returns, like those displayed in the previous section, are seriously incomplete. The implicit returns calculated for Social Security are based only on the taxes paid, treating the taxes *as if they were the only cost of the program*. But workers not only pay taxes to finance Social Security retirement benefits, but also have lower before-tax incomes because of the effects on private saving and labor supply. In the comparisons shown in table 1, we have ignored a large portion of the cost of providing Social Security retirement benefits.

Let's revise the conclusions from the previous section to incorporate the effects of Social Security on GDP. We saw that early retirees (retiring in the 1980s or earlier, roughly) did extremely well. That conclusion remains largely true even when we consider the growth-retarding effects of reduced saving *because these effects start out small and accumulate only slowly over time*. By 1970, the effect of Social Security on GDP was probably no more than 1 or 2 percent, and people retiring that year had worked in years when the effect was even smaller. Thus, we can reaffirm the earlier

7. Moreover, for reasons I need not go into, this reduction in the growth rate is not permanent. After the economy fully adjusts to Social Security, the growth rate should gradually revert to its former level, other things being equal.

conclusion that earlier retirees fared extremely well under Social Security because they avoided most of the GDP-reducing effects.

Later retirees have not done so well. It is probable that by the present time, GDP is 10 percent lower than it would have been without Social Security, so people who retire today had significantly lower before-tax earnings during their working years. For people retiring now and certainly for those retiring in future years, the implicit rates of return reported in table 1A greatly overstate the program's benefit. In fact, when we account for the hidden costs of Social Security, it is evident that most, if not all, current and future retirees are worse off than they would have been if the system had never begun.

Results from Jeffrey Edwardson's (2000) study, reported in table 1B, confirm these conclusions. Edwardson developed an elaborate simulation model to track how Social Security evolves and affects people over time. The row for "unadjusted" rates of return shows the average implicit returns from Social Security when calculated in the conventional way (benefits relative only to taxes paid); they are quite similar to the figures from other studies listed in table 1A. The "adjusted" rates of return show the retirement benefits relative to *all* the costs borne by younger workers, including the lost before-tax wages as well as the taxes. The returns are lower, of course, but note that for the early years the adjusted returns are only slightly lower than the unadjusted returns and that the difference becomes greater over time.

Edwardson finds that by the year 2000, the adjusted rate of return to Social Security had become negative, implying that retirees at that time got back less in Social Security benefits than the costs (taxes and lost earnings) they bore as workers. All later generations are estimated to receive negative returns as well. Because Edwardson's study does not include Medicare and is based on an ultimate estimated reduction in GDP of only 8 percent, actual outcomes from the system are likely even worse than he estimated.

Is Social Security a good deal? Our analysis suggests that the answer to this fundamental question is that it was a good deal for early retirees, but for present and future retirees it represents a very bad deal. Put differently, with PAYGO Social Security, early retirees gained at the expense of all later generations. This result, it should be emphasized, is the consequence of the PAYGO nature of the Social Security system. In contrast, with a funded system of providing retirement benefits, as with private saving, future generations do not lose out.

## The Future of PAYGO Social Security

Under certain conditions, a PAYGO system of providing retirement benefits can operate indefinitely with no change in the tax rate necessary to finance pensions. The primary condition is that the number of workers per retiree not change over time.

Today there are 3.3 workers paying taxes for every retiree receiving benefits.[8] The average worker must therefore pay a tax that will provide about 30 percent of the average retiree's benefits. If the 3.3 to 1.0 ratio of workers to retirees does not change, a given tax rate on workers' earnings can fund benefits indefinitely.[9]

However, the worker/retiree ratio is on course to decline sharply in the foreseeable future. According to the Social Security Board of Trustees, there will be only 2.6 workers per retiree in 2020, and the ratio will continue to decline, reaching 2.0 workers per retiree in 2040 and 1.9 workers per retiree in 2065. Most of the future financial difficulties that are often highlighted in the news stem directly from this large decline in the worker/retiree ratio.

This projected decline is driven by population trends that have been in progress for several decades: people are having smaller numbers of children and are living longer. Of particular note is the Baby Boom that occurred after World War II, followed immediately by a Baby Bust. In the Baby Boom period (from 1946 to 1964), the number of children that the average woman had over her lifetime peaked at 3.7 in 1957, then began a steady decline, bottoming out at 1.7 in 1976. It has remained low since then, varying in the narrow range from 1.82 to 2.07 since 1980. (These numbers measure the total fertility rate, which must be 2.1 to result in zero population growth over the long term.)

As a result, the labor force is now awash with workers from the Baby Boom generation (yielding 3.3 workers per retiree), but when they retire, the labor force will be populated only by the Baby Bust generations. Combined with slowly improving life expectancy for the retirees, this reduction in the labor force will produce the dramatic change in the worker/retiree ratio in the near future.

Both Social Security and Medicare will be affected by the coming decline in the worker/retiree ratio because they are funded on a PAYGO basis. An additional factor, however, influences Medicare's future: the rising costs of medical treatments. If medical costs continue to rise faster than overall prices, as they have for the past half century, then in the future Medicare will have to deal with fewer workers per retiree *and* higher medical costs per retiree. This double whammy makes the future financial condition of Medicare much worse than the condition of Social Security alone.

Social Security and Medicare's looming financial problems can be quantified in various ways. The easiest to understand is to consider the taxes required to balance income and outgo in the PAYGO systems in the future *if currently scheduled benefits are to be paid*. In 2006, outlays on Social Security were 4.2 percent of GDP and outlays on Medicare were 3.1 percent, for a 7.3 percent total. In 2040, outlays on Social Security are projected to reach 6.6 percent of GDP, and Medicare's outlays will

8. The data cited in this section are drawn from various publications of the Board of Trustees of Social Security and Medicare, especially *A Summary of the 2007 Annual Reports* (2007).

9. This statement is true for the cash pensions of Social Security. It will not be true for Medicare, which requires higher tax rates to meet the rising costs of medical treatments.

be 8.6 percent. Total outlays on the PAYGO programs thirty years from now will therefore more than double present outlays as a percentage of GDP, rising from 7.3 percent to 15.2 percent. After that date, Social Security's costs will stabilize at approximately 6.6 percent of GDP (because the worker/retiree ratio will not change much after 2040), but Medicare's costs will keep rising. By 2078, Medicare's cost is estimated to reach 13.8 percent of GDP.[10] Thus, Social Security's costs are projected to increase as a percentage of GDP by about 50 percent, and Medicare's costs will more than triple by 2040 and more than quadruple by 2078.

It is evident that these scheduled future benefits cannot be paid without a huge increase in taxes. As long as we stay with PAYGO financing, we have basically two ways to deal with this situation. First, we can reduce scheduled benefits to match the taxes generated by unchanged tax rates. This way would require scheduled benefits to be reduced by about 50 percent in 2040. (Reductions in benefits would have to begin before 2040, of course, but they would have to reach a 50 percent reduction in that year.) Second, we can double the tax rates that finance these programs and continue to pay the scheduled benefits. The payroll tax rate would become at least 30.6 percent (higher if taxpayers respond by earning less), which in combination with the federal income tax and other taxes would expose most Americans to marginal tax rates in excess of 60 percent. Further benefit cuts or tax increases (or both) would be required after 2040.

These alternatives are unappealing options, but no other possibilities exist (apart from a combination of tax increases and benefit cuts) so long as we stick with PAYGO retirement programs. These programs have promised much more than they can deliver in the future, and something has to give.

In all the discussion to this point, I have neglected the trust funds, and it is time to repair that omission. Social Security and Medicare have always had trust funds, but until recent years these funds had the equivalent of only a few months worth of benefit payments, and they were used primarily to ensure continued benefit payments during recessions, when taxes temporarily declined. The system was fundamentally PAYGO. Congress changed this condition in 1983, when it scheduled increases in payroll tax rates, eventually producing the 15.3 percent rate we have today. Shortly thereafter, revenues began to exceed outlays on Social Security and Medicare, and the surpluses have been credited to the trust funds.

The idea behind the 1983 reform was to delay the day of reckoning when taxes would have to be increased or benefits cut. It was already known at that time that the system was in long-run trouble (how much trouble was not fully appreciated). With assets in the trust funds, when annual revenues first begin to fall short of benefit outlays (in 2017 for Social Security and in 2007 for Medicare), the shortfall can be made up by drawing down the trust fund assets. The annual shortfall grows greater

10. These estimates are from Board of Trustees of Social Security and Medicare 2007, chart B and p. 5.

each year, and the trust funds will ultimately be depleted. The depletion date is projected to be around 2041 for Social Security and 2019 for Medicare. On those dates, if not before, taxes must be increased or benefits cut.

The trust funds, at best, have bought us only a little time. Yet even this benefit is misleading because the trust funds do not contain any real assets. When the trust funds receive the surplus funds, the money is not used to purchase stocks or corporate bonds—claims on real assets. Instead, the money is turned over to the Treasury Department, which uses the funds to pay for other government programs, and the trust funds are given special government bonds that say the Treasury Department owes them money. What the trust funds contain is promises from one government agency to another.

Consider how the trust funds affect the options available in 2017 when tax revenues are insufficient to finance Social Security benefits. What can we do to make up the shortfall? We have the options of increasing taxes and reducing benefits, just as we would have with nothing in the trust funds. We also have the option of selling the pieces of paper in the trust funds to the public and using those revenues to finance the shortfall. In other words, we can use deficit finance (borrowing from the public) to finance the shortfall. But the option of borrowing to finance Social Security benefits exists whether or not the trust funds hold any pieces of paper. Thus, the trust-fund "assets" do not provide any new options. Deficit financing is always an option, but it is arguably worse than either raising taxes or cutting benefits. Yet resort to borrowing is exactly how Social Security is scheduled to balance its accounts until 2041, and Medicare its accounts until 2019.

The trust funds have acted as a major distraction that has permitted people to believe mistakenly that the future financing problems of Social Security and Medicare are smaller and further in the future than they actually are.

## Why Have Social Security At All?

Any serious consideration of Social Security and its potential reform should include an examination of the rationales for government involvement in the provision of retirement benefits. Only if we know what we are trying to achieve with the program can we ascertain whether it is working and whether any reform option is preferable.

The three most common justifications given for Social Security are the following.[11] First, many people are too short-sighted to anticipate their retirement needs, and they will not save enough to provide for their own retirement. Second, some people will consciously decide not to save in the expectation that society (that is,

11. Feldstein and Liebman (2002) call them the "three most common" rationales. The three rationales discussed in the 2004 *Economic Report of the President* delete one of the Feldstein-Liebman arguments and add a new third one: that private annuity markets have certain defects (President's Council of Economic Advisers 2004, 130–31). It is not a very convincing argument for Social Security and obviously suffers from the main defect in the three arguments discussed in this article.

government welfare programs) will take care of them in retirement, thereby "gaming the (welfare) system." And third, it is desirable to redistribute income from high-income retirees to low-income retirees.

Let us examine these arguments briefly. The first two can be dealt with together because they simply argue that many people will reach retirement age without sufficient assets to support themselves in retirement. That might be so, although I think it is easy to overstate how many people are likely to be improvident. But do we have to have a government retirement program to take care of these people? There is another option: they can keep working. If someone has not accumulated enough to retire at age sixty-five, is it unreasonable to expect him to work a few more years until he has accumulated enough? Most people are perfectly capable of working into their seventies, and for those who aren't, there are disability benefit programs. It is not clear why the government has to guarantee people a retirement at age sixty-five.[12]

Reservations about the third argument, that Social Security is needed to redistribute income among retired persons, also abound. Redistribution may be desirable, but we do not need Social Security to do it. We might, for example, tax the elderly wealthy to benefit the elderly poor without concealing this operation in Social Security's complicated benefit rules and indeed without having a government retirement program at all. Some defenders of Social Security acknowledge this possibility, but fall back on the contention that the public would not permit as much redistribution if it were done openly. Maybe so, but if the voters will not support this policy openly, is it acceptable to impose it on them in disguise? Many egalitarians answer this question affirmatively; I do not.

Related to the redistribution argument is the contention that one of Social Security's great benefits is that it has reduced poverty among the elderly. It is true that the (official) poverty rate among the elderly has declined pari passu with the expansion of Social Security spending: the rate declined from 24.6 percent in 1970 to 10.1 percent in 2005. But that rate would have gone down without Social Security because of the growth in earnings that occurred during this period. Perhaps it would have declined even more without Social Security.

In principle, Social Security affects poverty among the elderly in two opposing ways. First, it *increases* poverty by reducing the accumulated assets people bring to retirement (reduced saving),[13] and then it *reduces* poverty by providing the government pension. Which effect is larger is by no means clear. Consider that retirees in the lowest earning categories in table 1A will receive an implicit rate of return on taxes

12. In 2002, 56 percent of the people who reached age sixty-two began to receive Social Security rather than waiting until they reached age sixty-five. Early retirement is permitted, but the annual Social Security pension is 25 percent smaller for retirement at sixty-two rather than at sixty-five. Another 23 percent retired at age sixty-three or sixty-four on reduced benefits. Retired people are often depicted as financially strapped, but how strapped can the nearly 80 percent of them who accept lower Social Security benefits to avoid a couple years more work really be?

13. It also increases poverty among workers because of the reduced wage rates associated with lower GDP.

paid of approximately 3 percent (slightly more for one-earner couples) in 2008. Had they invested these same taxes in a balanced portfolio (60 percent stocks and 40 percent bonds), they would have received a return of approximately 5.5 percent. In view of the calculations reported earlier, this difference implies that their retirement income would be more than twice as great had they invested the funds privately. *There would likely be fewer poor among the elderly today if they had been permitted (or required) to save privately when younger rather than participating in Social Security.*

Despite these reservations about the practical significance of the three arguments for Social Security, these arguments do constitute logically valid positions. Yet they provide *no* justification for making a government retirement scheme a PAYGO program, transferring income each year from workers to retirees. As the President's Council of Economic Advisers puts it, "An essential part of this debate [on Social Security] is that none of these rationales require that Social Security be operated on a pay-as-you-go basis" (2004, 131). This important point is little understood, as evidenced by the fact that it is difficult to find any explicit argument favoring PAYGO over funded methods of providing retirement.

Can a PAYGO system be defended? To see how one must argue to justify PAYGO financing, recall that the defining characteristic of this policy, the one that distinguishes it from funded alternatives, is that it benefits the early retirees at the expense of later generations. Why should we have a policy that harms all future generations in order to benefit those who retired in the early years of the Social Security system? It is not easy to give a good reason for this type of intergenerational redistribution.

One occasionally hears the argument that Social Security's intergenerational redistribution is justified because "the people who suffered during the Great Depression and World War II were unfairly treated by fate, and therefore deserve to be compensated by younger generations" (Rosen 2005, 201). This argument fails on at least two grounds. First, if we were to select the most-deserving generation from our past history, surely it would be those who survived the Civil War (including the freed slaves). Moreover, are we really so certain that there will be no future natural or man-made catastrophe that will make a future generation more deserving of compensation than those who endured the Depression and World War II?

Second, and more to the point, many of those who suffered from the Depression and World War II received little or no benefit from the Social Security system. Recall that only one in six people older than sixty-five was receiving any Social Security benefits in 1950 and that Medicare benefits did not begin until 1966. These facts tell us that those who were middle-aged or older in 1930—arguably those most deserving of our compassion—received little or no benefit from Social Security.

In fact, it is widely accepted that this type of intergenerational redistribution is immoral. One of the major arguments against the use of government deficits is that it unconscionably imposes costs on our children and grandchildren. Yet such an imposition is exactly what PAYGO government retirement programs make. This

similarity between deficit finance and PAYGO Social Security is not accidental: when operated on a PAYGO basis, Social Security is just like an elaborate deficit-financed pension program (that's what all the talk about "unfunded liabilities" is about). If deficit finance is unwise or immoral, then so is PAYGO Social Security.

These points, together with the absence of any convincing argument for PAYGO in the mountains of material written on Social Security, are sufficient for us to conclude that no good case can be made for the government's operation of retirement programs on a PAYGO basis.

## What Might Have Been

I have asserted that it is not necessary to have a PAYGO system to accommodate the three arguments most commonly made in support of Social Security. I now back up that claim by outlining a policy that satisfies all of these rationales.

Suppose that in 1940 we had begun a retirement program along the following lines (with figures in today's dollars). Each worker is required to contribute 10 percent of the first $12,000 in earnings to a retirement account. These contributions must be invested in a balanced portfolio of stocks and bonds containing 60 percent stocks and 40 percent bonds (chosen from index funds to assure diversification and low administrative costs). At the age of sixty-six (or later if so decided), the individual is required to use the accumulated assets to purchase an annuity, or annual pension, that will continue as long as he lives. The annual benefits will be indexed to inflation to assure no deterioration in purchasing power over the retiree's remaining life.

Note how this plan can satisfy all three of the common arguments for Social Security. Because people are required to save for retirement, no one will reach retirement age without adequate (as we will see) assets to provide a pension. Redistribution can be accommodated (if it is desired) simply by taking some of the assets in some people's accounts (presumably those who are well off) at age sixty-six and adding them to other people's accounts (presumably those who are poor). It is not clear that this redistribution is desirable, but it might be done easily.

Look closer at what we can expect from such a policy. Notice that everyone who earns in excess of $12,000 a year, which is almost everyone who works full time, makes the same contribution of $1,200 a year. That amount will entitle them to (roughly) the same government pension—not exactly the same because people who retire in different years will realize different returns. This pension will not be especially generous, and most people will choose to save privately to supplement it, but it will provide a guaranteed floor of income support for the elderly.

How large a pension will this policy provide? As we have seen, since 1946 this type of investment portfolio has generated a rate of return of 5.5 percent. So if people contributed $1,200 a year for forty-five working years (as in our earlier examples), at that rate of return the accumulated assets at age sixty-six would be $237,038. That amount can provide an annual pension of $15,407 to every individual worker. That pension exceeds the poverty line for an elderly single person ($9,367 in 2005) and

also for an elderly couple ($11,815) by a comfortable margin. So this policy assures that the poverty rate among the elderly will be close to zero.[14]

Most elderly people, of course, would not rely solely on this pension. They would save privately to provide additional retirement income, just as many people do today. That saving would yield the higher returns available to private investments rather than the low 1.5 percent return from Social Security. This retirement policy thus effectively creates a floor below which retirement income cannot sink, guaranteeing a minimum amount above the poverty line. Because this result effectively eliminates poverty among the elderly, we may not want or need to redistribute assets among the retired population, but, as stated earlier, such redistribution can easily be made if it is desired.

The returns generated by this policy might also be used to finance health insurance for the elderly. Indeed, the $15,407 pension exceeds the $9,367 poverty line by enough to provide a basic health-insurance policy to the retired person and still leave him with cash income above the poverty line. If we wished to ensure fuller insurance coverage, it would be necessary to increase the contribution rate, say, to 14 percent. That would yield an annual pension of $21,570, nearly $12,000 above the cash poverty line and more than adequate to finance a comprehensive health-insurance policy and provide cash benefits exceeding poverty.

If we had adopted this type of government retirement policy in 1940 instead of PAYGO Social Security, it is probable that all Americans alive today would be better off. There would be no poverty among the retired. Saving and capital accumulation would have been greater, so GDP and wage rates would be greater, and hence low-income (and other) young workers would also be better off. Retirees, of course, would be better off because they would have realized the much higher returns available on private saving. Tax rates would also be lower. Note that under the hypothetical plan, the *marginal* tax rate is zero for those who earn more than $12,000, which effectively means that marginal tax rates for most workers would be 15.3 percentage points lower than they are today. Higher-wage workers would have more after-tax income from which to save and increased incentive to save to supplement the basic pension. And all these benefits would be possible without raising taxes on low-wage workers because the 10 or 14 percent contribution rate is lower than the 15.3 percent tax they now pay.

The major objection to this type of retirement policy is that it exposes people to the great risks in the stock market. To be sure, the 5.5 percent historic return on stocks plus bonds and the 7 percent return on stocks only are not guaranteed returns. They are averages over long periods of time. Some retirees would do better and some worse, depending on their investments and when they converted their assets to pen-

14. For those who do not earn as much as $12,000 a year, the pension will be smaller, but note that the $12,000 ceiling is only slightly above what a minimum-wage job provides for those who work full time. For those unable to work, a welfare program would be required.

sions. So risk exists in that sense. If historical experience is any indication, however, it is much smaller than generally imagined.

Between January 2000 and July 2002, the stock market declined by 37 percent as measured by the Standard and Poor's 500 index. Suppose you had invested exclusively in stocks over the preceding thirty-five years, and you were unfortunate enough to have converted your assets to a pension in July 2002 at this low point—a scary scenario. What compound annual real rate of return would you have realized had you cashed out at this most unfortunate time? It would have been 7.35 percent, even *higher* than the historic long-run average for stocks. You would have been even better off if had you cashed out at the high point for stocks in January 2000 (garnering a rate of return of 9.74 percent), but a 7.35 percent return would finance a comfortable pension, certainly a much larger one than that associated with the 1.5 percent return of Social Security.

Another downturn in the stock market occurred in 1987, with stocks falling 26 percent between August and November 1987. If you had cashed out after investing for thirty-five years in November 1987, you would have realized a rate of return of 4.88 percent (6.64 percent if you had gotten out in August)—not as good as cashing out in 2002, but still three times the rate of return for PAYGO Social Security. Another large downturn occurred between January 1973 and December 1974, a decline of 43 percent. If you had cashed out at the low point in 1974, your rate of return would have been 5.77 percent. Still another downturn occurred between February 1966 and May 1970, a decline of 18 percent. Retiring in 1970, your return would have been 8.1 percent.[15]

These illustrations and numerous other examples that might be given show that even though returns vary in the stock market, they vary over a narrow range that even at its worst provides a much better deal than PAYGO Social Security in the context of long-term investing. There is large short-term variability (which is why stocks are too risky for short-term investing), but much smaller variability over the long term that characterizes saving for retirement. Stocks would be even less variable over a forty-five-year lifetime of investing than over the thirty-five-year time span reported in the study cited earlier.

Moreover, although risks are undeniably associated with private saving for retirement, risks are also associated with the existing PAYGO Social Security program—political risks related to how the government will deal with the system's impending financing problems. Will the government raise taxes or cut benefits or do both, and by how much and for whom? Your rate of return from PAYGO Social Security is by no means free of risk; all you can count on is that it will be very small or negative.

Although many details would have to be filled in, the plan I have sketched

15. The peaks and troughs discussed here are taken from "Are We There Yet?" 2002. The calculations of the thirty-five-year total returns for the Standard and Poor's 500 were provided by the Private Enterprise Research Center at Texas A&M University.

certainly seems preferable to PAYGO Social Security. Why not put this plan or something similar in place immediately? Why would anyone oppose it? The answer is that it is very difficult to extricate ourselves from a PAYGO system without harming some people.

Suppose we try to implement my plan by having workers divert $1,200 from their current Social Security taxes into the investment accounts I described. The problem is that this reduces tax revenues that finance benefits to current retirees (remember, it's PAYGO). We might cut benefits to retirees (about a 20 percent cut in both Medicare and Social Security would be required), but that cut would harm the elderly. Those near retirement would also be harmed because the accumulations in their investment accounts for only a few years will not offset the 20 percent lower Social Security benefits in retirement. Although the young and future generations benefit, the middle-aged and already retired people would bear costs.

This scenario illustrates what are referred to as the "transition costs" of replacing a PAYGO retirement policy with a funded alternative. Although an investment-based retirement system is superior to PAYGO Social Security *in the long run,* some people will be harmed *in the short run* when we substitute one policy for the other. Policy analysts have suggested different ways to cope with this problem, but it is difficult to design a transition plan that does not harm some people. Most proposals typically begin by guaranteeing that the currently retired population will not be harmed (their Social Security benefits will not be cut), but that guarantee means the middle-aged population will bear all of the transition costs.

Because of the much higher returns available from private investments than from the PAYGO system, these transition costs, though real, are not as large as one might suppose. It is possible to move to a system of private accounts in a way that does not impose annual costs in excess of 2 or 3 percent of earnings on anyone, and even these costs decline over time.[16] The details need not detain us; what is important is understanding the inherent superiority of investment-based (funded) methods of providing retirement income over our PAYGO system. If we selfishly try to shore up the PAYGO system to avoid the modest transition costs, we will consign our children and grandchildren (and their children and grandchildren) to substantially lower standards of living.

## The Most Successful Program?

It is surprising how often one encounters defenders of our PAYGO Social Security system making statements such as, "Social Security has been the most successful domestic government social program of the twentieth century" (Aaron 1999, 55). A charitable interpretation of such accolades is that the program has been politically

16. For an accessible treatment of the transition issues and one proposal for phasing in a privatized plan, see Feldstein 1998. The 2 percent figure refers to Social Security alone; if Medicare also were privatized, the costs for some would probably be on the order of 4 or 5 percent of income.

popular (probably true), but it is difficult to argue that it has produced desirable consequences. A policy can be politically popular and yet have deleterious consequences.

A number of features combine to make Social Security look good on a superficial examination, and therefore account for its political appeal. Among them are:

- The nominal splitting of the payroll tax into employer and employee portions. The 15.3 percent tax is composed of equal rates of 7.65 percent collected from the employee and the employer. Economists know that workers bear the full burden of both levies, but many workers are unaware of even the existence of the employer portion of the tax, much less that it is a cost to them. The true cost to workers is double what they believe it to be.
- The taxation of income from private investments. The U.S. tax system imposes severe taxes on the return to private saving (income taxes, capital gains taxes, corporate profits taxes, and property taxes). The after-tax returns that savers receive are much lower than the before-tax returns, and this difference leads them to understate the benefits of private saving. The before-tax returns measure the contribution that capital accumulation makes to the economy. This before-tax return is approximately 9 percent, even higher than the long-run returns of 7 percent in the stock market. (Investors receive 7 percent because businesses must pay corporate and property taxes from the 9 percent return before investors receive what is left.)
- The windfall gains to early retirees. As we have seen, early retirees fared very well, and people who base their assessments of Social Security on that fact will conclude that it is a successful policy. These returns were temporary, but to appreciate that fact it is necessary to understand how PAYGO systems operate.
- The hidden costs of PAYGO on saving and labor supply. Social Security has certainly decreased saving, capital accumulation, labor supply, and thus GDP. Very few people "see" these costs, and they can easily believe that the costs do not exist. (Try convincing someone that his *before-tax* earnings are 10 percent lower due to Social Security.)

These factors conspire to make it difficult for the average person to understand what a bad deal our PAYGO Social Security system really is. In turn, many politicians find it easier to play on these misperceptions than do the hard work of educating the public. These factors explain why we have PAYGO Social Security and why it is so difficult to achieve a genuine reform.

Franklin Delano Roosevelt, who signed the Social Security Act in 1935, is often referred to as the "father of Social Security." Yet there is convincing evidence that he favored a funded system rather than a PAYGO program, but was overridden by Congress (see Feldstein and Liebman 2002, 4:2250–251 and references cited there). Perhaps we would make more progress in reforming the system if we acknowledged Charles Ponzi as the true "father of Social Security."

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