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Introduction

Martin Feldstein and Jeffrey B. Liebman

Social Security is the largest and probably the most popular program of the federal government. It reduces the number of the aged in poverty and transfers more than 4 percent of gross domestic product (GDP) to retired workers, disabled workers, and their dependents. These benefits are larger than the defense budget and nearly twice as large as the transfers provided by all of the other means-tested programs (including Medicaid, food stamps, et.) combined. For a retiree who has always had the average level of earnings, Social Security benefits equal 42 percent of earnings in the year before retirement. An average-earning retiree with a spouse can receive up to 63 percent of preretirement earnings, depending on the spouse's previous earnings. After benefits begin, they are fully indexed for inflation so that their real value never declines.

It will be difficult but not impossible to maintain this level of generosity in the future, when the increasing life expectancy of the population in general and of retirees in particular will make it substantially more expensive to provide such benefits. Instead of the ratio of three workers per retiree that prevails today, the demographic trend will cause the ratio to fall to two workers per retiree, implying that a 50 percent rise in the payroll tax rate would be needed to maintain the current rules linking benefits to preretirement earnings. The Social Security actuaries estimate that the payroll tax for the Old-Age, Survivors, and Disability Insurance (OASDI) program will eventually have to rise from the present 12.4 percent to 19.0

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percent. The retirement of the employees born in the baby boom years after World War II will accelerate this process, but the problem of rising costs is not the baby boom wave of retirees but the longer-term increase in longevity (and decline in fertility), and therefore the increase in the relative number of retirees.

The projected cost increases have led to a variety of alternative proposals to close the gap between the projected tax receipts and benefits: slowing the growth of future benefits, raising tax revenue, investing the OASDI trust fund in private financial assets, and shifting from a pure pay-as-you-go (PAYGO) system to one with investment-based personal retirement accounts. As the papers in this volume show, the distributional consequences of these different proposals vary substantially.

Researchers at the National Bureau of Economic Research (NBER) have been engaged for several years in studying alternative Social Security reforms, particularly reforms that would involve using investment-based personal retirement accounts to augment the benefits from PAYGO taxes. These analyses have focused on the aggregate national effects of such reforms and on the potential experience of a typical middle-income employee. The studies in the present volume go beyond the previous work by looking at how the current system and alternative reforms would affect a variety of groups, particularly those groups who now depend on Social Security to avoid poverty in old age: women (especially those who are widowed or divorced at a relatively early age), workers with low education or low earnings, and others who are less likely than average to have additional private saving or pension incomes and more likely to have irregular employment histories.

Previous NBER Studies of Social Security Reform

Before discussing these distributional aspects of Social Security and Social Security reform, it is helpful to put the current studies into the context of the broader analysis of Social Security reform in earlier NBER studies. Our research began with an investigation of the economic feasibility of a transition from the current PAYGO system to one with either a pure investment-based system or a mixture of PAYGO and investment-based accounts, while providing the benefits to current and future retirees that are promised in current law. This research included studies of the experience in a number of other countries that had successfully made such a transition as well as detailed calculations of what would be required in the United States. A basic conclusion of this research was that such a transition is feasible: Contributing a small additional fraction of payroll earnings to personal retirement accounts that are invested in portfolios of stocks and bonds would permit a gradual reduction in future PAYGO benefits, while maintaining a combined benefit from the two sources that is at least as large as the benefits promised by current law. The ability of a large number of countries in different parts of the world to achieve such a transition suggested that it would be possible in practice as well as in our computations. The results of these studies are presented in Feldstein (1998). Subsequent studies, including Feldstein and Samwick (1997, 1998), provide more detailed and realistic calculations of the transition process.

This first set of studies did not deal explicitly with the risks involved in either the existing PAYGO system or the alternative systems that rely, at least in part, on investment in stocks and bonds. The PAYGO system is subject to the uncertainty created by possible fluctuations in growth rates of productivity and labor force that alter the implicit return on Social Security PAYGO taxes. A PAYGO system is also subject to the political uncertainty of whether future generations of taxpayers will be willing to pay the higher taxes necessary to finance benefits at a time when the rate of return is less than that available in private pensions.[1] The NBER project presented in Campbell and Feldstein (2001) analyzed these PAYGO risks and the risks inherent in a variety of investment-based systems. Separate studies considered the risks if the investments were held in a single government investment account, as well as the risks involved in individual personal retirement accounts. Based on the stochastic distribution of returns on stocks and bonds over the past fifty years, a mixed system that combines PAYGO and investment-based components could be designed in a way that would involve very little risk that retirees would receive less than the benefits projected under current law. Such a system could nevertheless have a substantially smaller long-run total cost to future employees than would be required in a pure PAYGO system.[2]

Finally, John Shoven organized a project to examine the issues involved in administering an investment-based system and the costs of doing so (Shoven 2000). Those studies show that the costs of managing the funds are small relative to the potential costs involved in collecting funds from individuals, maintaining records of individual accounts, mailing regular account statements to investors, and answering phone calls from investors. Goldberg and Graetz (1999) described a low-cost system of individual accounts in which funds are collected from employers as part of the Social

1. This political uncertainty appears to be the reason that the Roosevelt administration originally proposed a funded system. Treasury Secretary Henry Morgenthau testified in 1935 to the Ways and Means Committee that "There are some who believe that we can meet this problem as we go by borrowing from the future to pay the costs. . . . They would place all confidence in the taxing power of the future to meet the needs as they arise. We do not share this view. We cannot safely expect future generations to continue to divert such large sums to the support of the aged unless we lighten the burden upon the future in other directions. . . . We desire to establish this system on such sound foundations that it can be continued indefinitely in the future" (Costa 1999, 173).

2. During the transition period, the total of account contributions and PAYGO taxes would be more than under the pure PAYGO approach.

Security tax but invested in privately managed individual accounts by firms designated by employees.

Distributional Aspects: Some Key Conclusions

The present volume looks at the effects of alternative Social Security reforms on a variety of population groups and examines the distributional effects of the current Social Security system. Six findings in these studies strike us as particularly important.

First, despite the very substantial current spending of the Social Security program, there are significant gaps in the protection provided to the existing elderly. Some 10.5 percent of those over age sixty-five are officially classified as poor. Among elderly women who are widowed, divorced, or never married, 19 percent have incomes below the poverty line. Average benefits for a retired worker are only $9,360 a year (the official poverty line for an elderly individual is $7,818 and is $9,863 for an elderly couple).

Second, the various means of cutting benefits that have been proposed in the political debate as alternatives to higher taxes (reducing the cost-of-living adjustment, altering the benefit formula, increasing the number of years used in calculating average lifetime earnings, raising the retirement age, etc.) would distribute their cuts differently, but all would have a significant adverse effect on the standard of living of future retires.

Third, the existing system is not nearly as redistributive as the benefit formula would imply. The formula that specifies higher annual benefits per dollar of contribution for those with low-average earnings is substantially offset by the higher mortality rates among individuals with low levels of income and education. The higher mortality rates mean that such individuals are less likely to receive any benefits, and that those who do begin to receive benefits will do so for a shorter period of time. The lack of bequests in the PAYGO program substantially reduces the rate of return for these high-mortality groups. The higher benefits provided to the spouses of high-income workers also reduces the progressivity of the system.

Fourth, continuing the current pure PAYGO system would mean a 7.0 percentage point increase in the current 12.4 percent payroll tax rate. This tax places a particularly high burden on low- and middle-income employees, for whom it is typically larger than the income tax (because the payroll tax has no personal exemptions or deductions). A rise in the payroll tax rate would imply a significant increase in the share of the overall tax burden borne by low- and middle-income employees and a proportionately larger decline in their standard of living.

Fifth, adding an investment-based system of personal retirement accounts with deposits of 3 percent of payroll would increase the long-run benefits of every major demographic group, including women, blacks, and individuals with low education. Although this system would require extra funds in the transition years, the 3 percent additional contributions would in the long run be less than half of the payroll tax rise required in the pure PAYGO system.

Sixth, an investment-based system would increase the amount of capital per worker in the economy, raising real wages and, to a lesser extent, depressing the real rate of return on capital. These changes in wages and capital returns would benefit low- and middle-income employees relative to other groups.

Indirect Effects of Social Security on the Distribution of Income

Before presenting a brief summary of each of the individual studies, we consider here the more general ways in which the current Social Security system affects the distribution of incomes. It is common in discussions of Social Security—including most of the analyses in this volume—to assume that an additional dollar of Social Security benefits raises the retiree's income and consumption by a dollar. There are four major reasons that this direct effect is an incomplete picture of the distributional effect of the Social Security program.

First, Social Security taxes and the expectation of future Social Security benefits reduce personal saving, including employer-financed pension saving, and therefore reduce the amount of such personal income from this source that individuals have in retirement. If each dollar of Social Security wealth (i.e., the present actuarial value of future Social Security benefits) reduces personal saving by approximately fifty cents, a dollar of benefits raises retirement consumption by only fifty cents. We know of no studies of how this saving-offset effect varies among demographic groups.

Second, the Social Security program induces individuals to retire earlier than they otherwise would (see, e.g., Gruber and Wise 1999). This reduces the earnings of older individuals and thus offsets some of effect of the benefits on disposable income.

Third, the changes in saving and in the labor supply of individuals (both at retirement and at earlier working ages) that are induced by Social Security have general equilibrium effects on the rate of interest and on the level of real wages. Because the reduction in the capital stock is likely to be proportionally greater than the reduction in the labor supply, the net effect is to reduce wages and to increase the return to capital. The study by Kotlikoff, Smetters, and Walliser in this volume analyzes this effect.

Finally, Social Security is to some extent a substitute for intrafamily transfers. To the extent that Social Security benefits are offset by lower transfers from working children to their retired parents, the benefits raise the consumption of the children rather than of the retirees.

These indirect effects must be kept in mind when considering the effects of the Social Security program and of alternative reforms.

Individual Studies

Four of the individual studies in this volume deal with the distributional aspects of the current system, two deal with reforms within the context of the pay-as-you-go system, and four deal with the distributional aspects of a shift to a system that includes investment-based individual retirement accounts. The ten studies are organized in this manner in the volume as well as in this summary.

Jeffrey B. Liebman considers redistribution in the current Social Security system. He emphasizes that spouse benefits and differential mortality offset a substantial share of the redistribution provided by the progressive benefit formula, and that families with identical lifetime earnings can receive very different returns from Social Security. He also suggests that the system is likely to become more progressive in the future, as cohorts in which women had higher labor force participation rates reach retirement.

Kathleen McGarry focuses on the Supplemental Security Income (SSI) program, which provides means-tested benefits for the elderly poor. She notes that many of those who appear to be eligible for SSI benefits do not apply for them. She studies the factors that discourage eligibility and applies her analysis to estimate the effects of program changes on participation and poverty. Her analysis shows that relatively small expenditures ($12 billion per year in 1993 dollars) could raise SSI benefits to the poverty level, although incomplete take-up would still leave some of the elderly in poverty.

Although most of the studies in this volume deal with the distribution of income, two of the chapters deal with different aspects of the distribution problem. Jagadeesh Gokhale and Laurence J. Kotlikoff deal with the distribution of wealth. They show that by depressing saving and therefore leaving most Americans with little or no bequeathable wealth, the Social Security program reduces wealth—particularly among lower- and middle-income households. The authors also note that in depressing wealth accumulation, Social Security increases the overall wealth inequality in the country.

Angus Deaton, Pierre-Olivier Gourinchas, and Christina Paxson study the way that the inequality of consumption behaves in a life-cycle model without bequests. Social Security, by substituting PAYGO benefits for actual accumulation, reduces the inequality of wealth that results from variations in lifetime earnings and therefore of retirement consumption that would occur if there were greater reliance on individual saving. The contrast with the Gokhale-Kotlikoff paper shows the important role that bequests can play in determining long-run wealth inequality.

Julia Lynn Coronado, Don Fullerton, and Thomas Glass use the Panel Study of Income Dynamics to generate estimates of lifetime incomes for a large sample of individuals, and then calculate the present value of taxes and benefits for each person. The degree of progressivity as measured by the net present value of benefits minus taxes depends on how incomes are measured. The current system is slightly progressive on a lifetime basis when individuals are classified by the present value of lifetime incomes, but becomes less so when incomes are defined to include the value of the leisure. The authors then use this framework to assess the effects of various pay-as-you-go reforms on the overall progressivity of the system.

Jagadeesh Gokhale and Laurence J. Kotlikoff use an extensive simulation model to generate lifetime incomes of current and future employees, and use those simulated incomes to assess the effects of alternative reforms on the implicit rates of return that individuals in different income and demographic groups receive on their Social Security taxes. They find that if current rules and tax rates were feasible in the future, individuals would get an implicit real return of slightly less than 2 percent. Because benefits must be cut or taxes raised to maintain the solvency of the system, the actual future rates of return must be even lower. Gokhale and Kotlikoff examine the effects of a variety of different proposals on these rates of return for different demographic and economic groups.

Martin Feldstein and Jeffrey B. Liebman use actual Social Security lifetime earning and benefit records matched to government survey data on a cohort of retirees to study the distributional impact of a change from the existing PAYGO Social Security system to one that combines both PAYGO and investment-based components. These data have an advantage in that the households in the sample reflect the full range of life experiences, including irregular work histories, unusual marriage and divorce patterns, and premature deaths. The study analyzes a system that combines the benefits that can be financed by the existing payroll tax with the annuity that could be financed by personal retirement accounts based on contributions equal to 3 percent of payroll. Although the mixed system would temporarily cost more than the pure PAYGO system, in the long run it would be substantially less expensive. More specifically, the increase in the cost of such a mixed system relative to current PAYGO taxes would be less than half of the rise in taxes required to maintain current benefit rules in a pure PAYGO system. Despite its lower cost, the mixed system would give most individuals in virtually all demographic groups higher average benefits than they would receive under the current system. The mixed system would also result in a smaller share of individuals in every category with benefits below the poverty level. These basic conclusions remain true even if the future rate of return in the investment-based component of the mixed system were substantially less than past experience implies. Moreover, by funding the personal retirement accounts in a redistributive manner, it is possible to have benefits for all income groups rise by a similar percentage.

Laurence J. Kotlikoff, Kent Smetters, and Jan Walliser use a computable general equilibrium model to analyze how the shift to an investment-based system would change wages and interest rates. They conclude that an investment-based system would help the poor both because of the higher return on investment-based accounts and because of the increased capital per worker in the economy.

Martin Feldstein and Elena Ranguelova examine the potential magnitudes of the bequests that might result in an investment-based plan under different rules about bequests. Permitting employees who die before retirement to bequeath the assets in their personal retirement accounts would reduce the funds available at age sixty-seven by about one-sixth, implying that (for example) the same level of annuity could be achieved with a 3.6 percent PRA saving rate and preretirement bequests, or with a 3.0 percent PRA with no bequest. The paper also studies a variety of possible post-retirement bequest rules. By taking into account the uncertain nature of the return on the PRAs, the authors study the distribution of bequest sizes as well as their mean levels.

Jeffrey R. Brown analyzes the financial redistribution that would occur under various annuity and bequest options in an individual accounts program. A key part of his analysis is applying mortality rates differentiated by gender, race, ethnicity, and education level to calculate the transfers that would take place between different groups under different assumptions about the structure of the annuity program. Mandating a single life annuity could result in much larger transfers from high-mortality groups (such as black males) to low-mortality groups (such as white females) than would occur if joint life annuities or bequest options were allowed.

The current U.S. Social Security system has large impacts on poverty and on the distribution of income and wealth. The studies in this volume highlight the importance of focusing on the distributional aspects of reform plans, because the distributional implications of the plans can vary greatly depending on plan details. In addition, the studies show that with appropriate attention to low-income groups and others at high risk of poverty in old age, reforms can both reduce the long-run burden of the aging society on future taxpayers and reduce poverty rates among the elderly.

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