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SHOULD SOCIAL SECURITY RELY SOLELY ON THE PAYROLL TAX?

BY ALICIA H. MUNNELL*

Introduction

It's no secret that Social Security is facing a long-term financing shortfall. This problem can be solved only by putting more money into the system and/or by cutting benefits. There is no silver bullet. So the following discussion is not to suggest that there is an easy way out, but rather to explore whether the entire financing of the Social Security system should rest on the payroll tax. The payroll tax may be a perfectly reasonable way for current workers to pay for their benefits. But is it the right tax to finance the costs left over from paying benefits far in excess of contributions to early generations?

This *brief* explores the question of the appropriate tax, or combination of taxes, to finance Social Security. Since the need for more revenues gives the question increased currency, the first section briefly describes Social Security's financial outlook. The second section then describes the payroll tax. The third section explores whether the whole cost of the Social Security system – the contributions necessary to generate current benefits and the contributions required to make up for giving early participants benefits far in excess of their contributions – should be financed in the same way. The fourth section concludes that

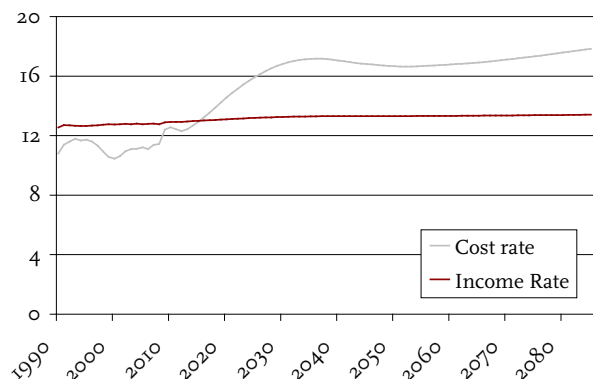
perhaps a portion of Social Security financing could be transferred from the payroll tax to the income tax. It would mean higher income taxes, but the burden of the “legacy debt” would be borne more broadly.

Social Security's Financial Outlook

Social Security is financed primarily on a pay-as-you-go basis, since trust fund assets are modest compared to long-term obligations.¹ Therefore, for any given level of benefits, long-run costs closely reflect the demographics. An increasing ratio of retirees to workers means a rising cost rate. Figure 1 on the next page shows the cost rate as projected in the 2009 *Trustees Report*. Rising costs combined with a relatively stable income rate generate a long-run deficit. According to the Social Security Trustees, the projected 75-year deficit as of 2009 is 2.0 percent of taxable payrolls.² The easiest way to interpret the 75-year deficit is in terms of the size of the tax increase required to restore solvency. That is, if the payroll tax

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FIGURE 1. PROJECTED SOCIAL SECURITY REVENUE AND BENEFIT RATES, 1990-2085 (AS A PERCENT OF TAXABLE PAYROLL)



Source: 2009 Social Security Trustees Report, Tables IV.B1.

rate were raised immediately by roughly 2 percentage points – 1 percentage point each for the employee and the employer – Social Security would be able to pay the current package of benefits for all recipients over the next 75 years.

But a lasting fix would require additional changes. Solutions that focus just on the next 75 years typically involve the buildup of Trust Fund assets in the near term and the sale of those assets to pay benefits in the out years. Since the trust funds have no further bonds to sell in the 76th year, the program is suddenly short of money. Lasting solvency would require either a pay-as-you-go system with substantially higher payroll tax rates/lower benefits beyond the 75th year and/or the buildup of a trust fund larger than that required for 75-year solvency, the returns from which could cover the difference between program costs and revenues. Assuming the system operates on a pay-as-you-go basis in the long run, the permanent increase in the ratio of retirees to workers increases the cost of the OASDI program to about 17.5 percent of taxable payrolls. Thus, to pay for promised benefits in the very long run will require a 5-percentage-point increase in the payroll tax – 2.5 percentage points each for employers and employees.

The Payroll Tax

Today, most Social Security non-interest revenue comes from the payroll tax.³ The payroll tax excludes capital income, has no exemptions, and makes no provision for family size. As a result, considered by itself, it probably fails almost anyone's test of an equitable levy. Moreover, the fact that it is imposed only on earnings up to a cap produces a peculiar distributional profile; it is proportional over the lower and middle ranges and then becomes regressive above the ceiling. The Social Security system does have an offsetting progressive structure on the benefit side, which more than mitigates the regressivity on the revenue side.

Even those who worry about the regressive nature of the payroll tax generally acknowledge the importance of an earmarked levy to finance Social Security. An earmarked tax gives workers the distinct sense they are making a contribution and thereby are entitled to benefits at retirement. The contributory nature of the program avoids the social stigma often associated with the receipt of welfare payments. An earmarked tax also means that program revenues are not subject to the annual Congressional appropriation battles and thereby are stable and predictable, key properties for a retirement system.

Recognizing the advantages of an earmarked source of revenue, policymakers have tried to compensate for the regressivity of the payroll tax. The Earned Income Tax Credit (EITC), which was introduced in 1975, began as a modest attempt to reduce the effects of a rising payroll tax. Since then it has expanded several times⁴ and in 2009 provides a married worker with two children a maximum refundable credit of \$5,028, with the credit phased out at \$45,295 for joint filers.⁵ The EITC and other changes in the personal income tax have more than offset the increasing payroll tax rates. Between 1979 and 2006, the effective tax rate on the bottom quintile of the income distribution has declined much more than those for higher quintiles (see Table 1 on the next page). The progress made in protecting low-income workers could be undone, however, by a substantial increase in the payroll tax to eliminate Social Security's long-run deficit.

TABLE 1. EFFECTIVE FEDERAL TAX RATES FOR ALL HOUSEHOLDS, BY QUINTILE, 1979-2006

Tax	Quintile				
	Lowest	Second	Middle	Fourth	Highest
Individual income					
1979	0.0	4.1	7.5	10.1	15.7
2006	-6.6	-0.8	3.0	6.0	14.1
Payroll					
1979	5.3	7.7	8.6	8.5	5.4
2006	8.5	9.2	9.4	9.6	5.8
Total ^a					
1979	8.0	14.3	18.6	21.2	27.5
2006	4.3	10.2	14.2	17.6	25.8

^a Total also includes the corporate income tax and excise taxes.

Source: Congressional Budget Office (2009).

Financing Legacy Costs Separately

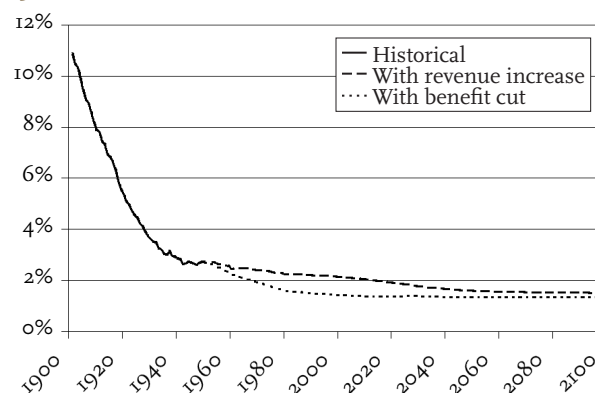
The question, then, is whether all revenue-raising efforts for Social Security should rely on the payroll tax. As noted in the introduction, Social Security costs actually consist of two components – the contributions necessary to generate current benefits and contributions required to make up for paying benefits to early participants that far exceeded their contributions.

The 1935 Social Security Act set up a plan that bore a much stronger resemblance to a private insurance plan than to the system we know today. The legislation called for the accumulation of a trust fund and stressed the principle of a fair return. The 1939 amendments, however, fundamentally changed the nature of the program. They tied benefits to average earnings over a minimum period of coverage, and thus broke the link between lifetime contributions and benefits. As a result, early cohorts received windfall returns on their contributions.

The story of Ida Mae Fuller is an extreme example. Ms. Fuller had worked under Social Security for less than three years when she became the first person to claim monthly benefits. She died at the age of 100, after receiving benefits for 35 years. She clearly enjoyed an extraordinary rate of return on her contributions to the system.

As shown in Figure 2, early retirees generally enjoyed high returns. These unusually high returns have declined over time as the system has matured and workers have contributed over their entire worklives. (Since the system is facing a long-run deficit, returns are shown on the assumption that balance is restored either by increasing taxes or by cutting benefits.)

FIGURE 2. OASI REAL INTERNAL RATE OF RETURN, BY POLICY AND BIRTH COHORTS BORN BETWEEN 1900-2100



Source: Leimer (2007).

Virtually all observers agree that the decision to provide full benefits to early cohorts was a wise one. Many of these people had fought in World War I and had endured the economic devastation of the Great Depression. Poverty rates among older people were at unacceptably high levels. Moreover, the recession of 1937 followed rapidly after the introduction of the Social Security system, making the accumulation of a substantial surplus undesirable on fiscal policy grounds.

The benefits paid to the early retirees did not come for free, however. If earlier cohorts had received only the benefits that could have been financed by their contributions plus interest, trust fund assets would be much larger than they are today. The assets in that larger fund would earn interest and that interest would cover a substantial part of the cost of benefits for today's workers. Without it, payroll taxes must be substantially higher.

To see the impact of having, in essence, given away the trust fund, compare the cost of a funded and a pay-as-you-go system. Assuming the Social Security

Trustees' real interest rate of 2.9 percent, the average worker would have to contribute about 9 percent to generate a benefit equal to 36 percent of earnings (the projected Social Security replacement rate for the average earner retiring at 65 once the full retirement age equals 67). Giving away the trust fund to early generations of retirees moved the system to a largely pay-as-you-go system. With a projected ratio of two workers for each retiree, a 36-percent replacement rate would require, in a world of no wage growth, a contribution rate of 18 percent. That is, each of the two workers would pay for half of the retiree's 36 percent benefit. Add in wage growth, and the cost rate falls, but remains well above that in a funded system.

The question is whether workers should be asked to pay the higher payroll tax resulting from the decision to give away the trust fund or whether they should in essence be asked to pay simply what they would have to contribute in a funded system. One could argue that the legacy burden should be borne by the general population in proportion to the ability to pay – that is, this portion of the Social Security financing problem could be transferred to general revenues.

The Mechanics

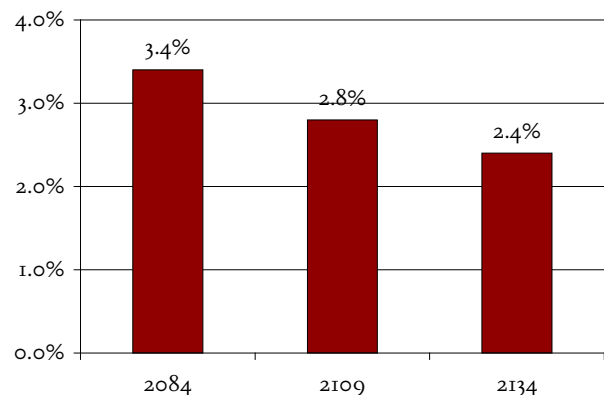
The first step in making such a proposal operational is to calculate the size of the trust fund that would have accumulated. This trust fund is equal to the present value of the transfers to early cohorts. Calculating the present value of those transfers is extremely sensitive to the interest rate selected. Other analysts have accepted the trust fund interest rate as a reasonable measure, and the transfers are calculated on that basis.⁶ According to these calculations, the contribution to early cohorts equals \$13 trillion.⁷

One approach would be to transfer the burden associated with the foregone \$13 trillion trust fund out of Social Security and make it the responsibility of the Treasury. The Treasury then could tackle the problem in a number of ways, but assume the decision was made to pay off the \$13 trillion like people pay off their mortgages.⁸ That is, the Treasury would make a payment to the Social Security system each year so that at the end of the period the debt would be extinguished.⁹

At the end of the period – be it 75 years, 100 years, or 125 years – a trust fund would have accumulated so that future workers would only be required to make contributions comparable to that under a funded system. In practical terms, today's payroll tax, which covers disability as well as retirement benefits, would not have to be raised substantially above its current level.

Of course, transferring the legacy debt – in the form of the foregone trust fund – to general revenues does not eliminate the burden of financing Social Security benefits. The average income tax rate would have to increase. Figure 3 shows the increase that would be required to pay off this debt over 75, 100, and 125 years. For example, to pay off the debt over the next hundred years would require that the ratio of taxes to taxable income would have to be 2.8 percentage points higher than otherwise. In 2009, that increase would mean income taxes would have to rise from 19 percent of taxable income to 22 percent.¹⁰ Whatever amortization schedule were adopted, it would be crucial that the income tax contributions be earmarked for the Social Security program – both to ensure the program's stability and to allow the actuaries to include these contributions in their projections of Social Security solvency.

FIGURE 3. INCOME TAX RATE NECESSARY TO REPAY SOCIAL SECURITY'S \$13 TRILLION LEGACY DEBT OVER 75, 100, AND 125 YEARS



Sources: Author's calculations based on Internal Revenue Service (2009); Liemer (2007); and U.S. Social Security Administration (2009).

Conclusion

Although the earned income tax credit has mitigated the regressive impact of the payroll tax to date, a major expansion of this levy would endanger low-income households. An earmarked tax, however, is essential to the political stability of the Social Security system. This requirement means that it is important to identify what should and what should not be paid for by the regressive levy. One could argue that the legacy costs associated with the start-up of the program should be borne by society in general in line with a broad measure of ability to pay. Thus, a rationale exists for shifting a portion of Social Security financing to general revenues. This is not a free lunch – income tax rates would have to increase. But the shift from the payroll tax to general revenues for the portion of the system's financing associated with the start-up of the program would represent a more equitable sharing of the burden. At the same time, through the payroll tax workers would be paying an amount for their benefits equal to what they would have paid had a trust fund accumulated. Thus, the burden would be distributed more broadly, but the sense that workers pay for and are entitled to their benefits would remain.

Endnotes

- 1 Since legislation in 1983, system revenues have exceeded outlays, resulting in the buildup of a trust fund of \$2.4 trillion at the end of 2008. The 2009 *Trustees Report* projects the exhaustion of trust fund assets in 2037.
- 2 See U.S. Social Security Administration (2009). A study by the Congressional Budget Office (2008) showed a lower deficit – 1.06 percent of payroll over the next 75 years. A comparable estimate in the wake of the severe recession would be higher, but almost certainly still below Social Security's.
- 3 A portion of the income from taxation of benefits under the personal income tax is earmarked for Social Security.
- 4 The credit was made permanent and expanded significantly in 1986. It was expanded again in 1990, and in 1993, when President Clinton and Congress doubled its size to ensure that full-time minimum wage workers would not live in poverty.
- 5 In addition for 2009 and 2010, the Obama Administration proposed – and Congress enacted – the “Making Work Pay Credit” of 6.2 percent of a taxpayer's earned income with a maximum of \$400 (\$800 for a couple).
- 6 See, for example, Geanakoplos, Mitchell and Zeldes (1999); and Diamond and Orszag (2004).
- 7 Diamond and Orszag (2004) characterize this legacy cost as legacy debt and argue that it be explicitly recognized and the interest financed in a systematic fashion within the Social Security program. They suggested three changes: 1) gradually increase coverage to include all state and local workers so that more workers would bear the burden of the legacy debt; 2) impose a legacy tax on earnings above the maximum taxable earnings base, so that high earners would contribute to the legacy cost based on their entire earnings; and 3) split the remainder of the legacy costs between future beneficiaries and workers in the form of a benefit reduction for those becoming eligible after 2023 and a modest rise in the payroll tax rate after 2023.

8 This approach is illustrative only; an equally good argument could be made for stabilizing the ratio of legacy debt to GDP.

9 The transfers from the Treasury to Social Security would be used to build up the trust fund since current receipts are more than enough to cover benefits. Policy analysts have long debated whether the trust fund buildup actually increases national saving. Trust fund assets are invested in Treasury bonds. So while building up these assets represents saving from Social Security's standpoint, the assets are also a claim on the Treasury. The issue is whether the presence of Social Security surpluses leads Congress to change its behavior and spend more on other programs or raise less in income taxes than it would have in the absence of the surpluses. If Congress did change its behavior, then the buildup in the trust funds would not have added to national saving. This argument is impossible to settle definitively. For a detailed discussion, see Munnell (2005).

10 Note the required increase in the income tax rate is less than would be the case using the payroll tax because the tax base is not scheduled to shrink over time due to the growth of fringe benefits, as is the case with the payroll tax.

References

- Congressional Budget Office. 2009. "Effective Tax Rates for All Households, by Comprehensive Household Income Quintile, 1979-2006." Washington, DC.
- Congressional Budget Office. 2008. "Updated Long-Term Projections for Social Security." Washington, DC.
- Diamond, Peter A. and Peter R. Orszag. 2004. *Saving Social Security: A Balanced Approach*. Washington, DC: Brookings Institution Press.
- Geanakoplos, John, Olivia S. Mitchell, and Stephen P. Zeldes. 1999. "Social Security Money's Worth." In *Prospects for Social Security Reform*, eds. Olivia S. Mitchell, Robert M. Myers, and Howard Young. Philadelphia, PA: University of Pennsylvania Press.
- Internal Revenue Service. 2009. *Statistics of Income Bulletin* 28(4). Washington, DC.
- Liemer, Dean R. 2007. "Cohort-Specific Measures of Lifetime Social Security Taxes and Benefits." Office of Research, Evaluation, and Statistics Working Paper No. 110. Washington, DC: U.S. Social Security Administration.
- Munnell, Alicia H. 2005. "Are the Social Security Trust Funds Meaningful?" *Issue in Brief* 30. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- U.S. Social Security Administration. 2009. *The 2009 Annual Report of the Board of Trustees of the Federal Old Age, Survivors and Disability Insurance Trust Funds*. Washington, DC: U.S. Government Printing Office.

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