SUPPLY-SIDE EFFECTS OF SOCIAL INSURANCE

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Introduction

The Social Security Amendments of 1983 were hailed by their authors as the ultimate solution to the financing problems of the Social Security system. In view of the persistence of these problems throughout much of the system's history and the frequency with which this claim has been made on behalf of legislation in the past, any skepticism one may entertain about the future financial health of the system is certainly understandable.

What is remarkable about the assertions that "this time we've really fixed the system" is that there is any occasion to make them. Why should the world's largest "insurance" system need such frequent and drastic revision of its structure of benefits and "premiums"? If the private insurance industry had produced anything like this record of financial near-disaster, it would have been clear that the market for these services had failed. Yet no matter how often it is confronted by the imminent collapse of the Social Security system, the American public is always assured that the system must and can be saved. What never seems to come through loud and clear is that the system is fundamentally flawed. Nor does the public at large ever seem to ask whether we really need this system and whether there are not far better alternatives.

This is not to suggest that these questions have not been raised or that they have not undergone rigorous analytical examination. Surely one of the most constructive developments of recent years is the growing conviction that the provision of most, if not all, of the kinds

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of benefits now afforded by the social "insurance" system must be turned over to the private-market system.[1] To a significant extent, this view has been associated with the perception that a major economic problem confronting the United States is inadequate growth in the stock of privately owned capital and that the Social Security system has been a major factor in discouraging saving and private investment.[2] Far less attention has been directed to whether the social insurance system is essential to remedy private "market failure" and (as a corollary) whether the private market system would more efficiently provide the same sort of insurance.

This paper deals briefly with both of these sets of questions. First, it examines the effects of the social insurance system on private saving and capital accumulation. Second, the question of whether the social insurance system affords a net gain or loss of welfare is examined. In this context, the paper also examines the benefits of a private system of retirement insurance.

What I do not attempt to cover is the difficult problem of implementing transition to a private insurance system, given the conviction that the existing system of social insurance is fundamentally flawed. It is encouraging to see the efforts that are being made by serious-minded individuals in the private sector to solve this problem. It would be even better to see the administration and Congress demonstrate real political courage by undertaking similar efforts or by at least being willing to consider the results of the existing private studies.

Social Insurance, Saving, and Capital Formation

Much of the analysis of the effects of social insurance on private saving is derived from a life-cycle hypothesis about consumption and accumulation. This hypothesis implies, among other things, that people aim at a certain income for retirement and adjust their saving out of the incomes they earn over their working lives so as to meet this income target. In this context, the Social Security system is perceived as exerting opposing influences on private decisions to save. On the one hand, the earnings test is thought to encourage retirement at an earlier age and to discourage part-time employment after formal retirement. Given life expectancies, these responses are deemed to

[1]See Peter J. Ferrara, *Social Security: The Inherent Contradiction* (San Francisco: Cato Institute, 1980).

[2]See Martin S. Feldstein, "Social Security, Induced Retirement, and Aggregate Capital Accumulation," *Journal of Political Economy* 82 (September/October 1974): 905–26.

raise the target for retirement income, thereby increasing the desire to save. On the other hand, the Social Security system is perceived to provide an annuity that substitutes for the retirement income that would otherwise have to be provided by private saving, thereby reducing the incentive to save. Furthermore, because payroll taxes reduce disposable income, the life-cycle hypothesis holds that they must tend to reduce current saving. As a result, the life-cycle hypothesis implies that one cannot predict, in the abstract, whether the Social Security system promotes or impedes private saving. It seems to follow, therefore, that an empirical investigation is necessary to determine the true effects of Social Security on private saving and investment behavior.

The life-cycle model has serious shortcomings. First, it incorrectly identifies the determinants of saving behavior by considering the target for retirement income as depending on the length of one's expected retirement and on one's preretirement income. That may be a useful approach for an insurance salesman in getting potential clients to focus on their "insurance needs," but sooner or later he must inform his potential client about premiums. At that point it becomes clear that the *cost* of the benefits is a major determinant of whether, and how much of those benefits, the client wants to buy. Surely the cost of acquiring any given amount of retirement income should be seen as a principal determinant of private saving. In turn, this must mean that the income targets for retirement (if they exist) must be variable rather than stationary. But if the target for retirement income is not a fixed amount, then the dollar amount of retirement benefits from Social Security will not necessarily have any systematic influence on the amount of private saving for retirement.

In the second place, the perception that Social Security retirement benefits are a substitute for the returns on private saving, however acceptable from the viewpoint of the individual, is clearly not acceptable from the aggregate viewpoint. Nothing in the Social Security system's intergenerational tax/pay process adds to the aggregate income-producing capacity of the economy. The total amount of benefits promised to any generation of retirees represents only a redistribution of a given amount of income; it does *not* represent any additional income produced by increments to the stock of capital. For this reason, even if a potential or actual beneficiary perceives the expected flow of Social Security benefits as a perfect substitute for returns on his private retirement saving, the same person and/or others must view that flow as imposing an equal drain on the rewards for working and saving. If the present value of expected benefits from

Social Security is deemed to be an addition to the net worth of the beneficiaries, then the present value of the obligations to fund the transfers must be seen as an equal decrease in net worth. There can be no positive Social Security net wealth.

Those who persist in maintaining that there is a positive Social Security net wealth that substitutes for private-sector wealth implicitly assume that people perceive only the flow of benefits while ignoring the flow of payroll taxes that are used to fund the benefits. Such an assertion may be convenient for econometric exercises, but it certainly is not a view that accords with reality or with clear thinking.

The notion of a positive Social Security net wealth cannot be rescued by demonstrating that the present value of the benefits an individual will receive exceeds the present value of the payroll taxes he will have paid (including the taxes paid by his employer on his behalf). At any point in time, the total amount of benefits paid must necessarily equal the total amount of withdrawals from the income stream of some people. Only if part or all of these withdrawals are hidden from the individuals from whose income the withdrawals are made could it be assumed that the aggregate of households behaves as if there were positive Social Security net wealth. No Ponzi-scheme explanation can validate the notion that there is any positive Social Security net wealth that substitutes for private capital.

In short, the conventional approach to analyzing the effects of Social Security on private saving and capital formation is unsatisfactory. And the econometric exercises conducted within this framework are of little value in explaining or measuring the effect of Social Security on private capital.[3]

An alternative—and superior—analytical framework leads in a straightforward way to the conclusion that Social Security erodes private saving. One element in this analysis is the use of national income accounting to assess the *initial* impact of Social Security on Gross Private Saving (GPS)—Gross National Product (GNP) less consumption and less taxes. Obviously, the greater the amount of taxes, the less the amount of GPS, unless it is assumed that consumption declines in an amount equal to taxes. This would be true if and only if such taxes raised the cost of consumption relative to saving enough to induce an equal dollar decrease in consumption. A payroll tax, however, does not raise the cost of consumption relative

[3]The pattern for much of the econometric investigation of the effect of Social Security on saving was set by Feldstein in his 1974 paper, "Social Security, Induced Retirement, and Aggregate Capital Accumulation." The technical quality of the Feldstein study apart, the fundamental concepts employed therein are faulty, as explained above.

to the cost of saving; it increases the cost of labor relative to leisure.[4] There is, therefore, no increase in the fraction of GNP that is devoted to saving as the result of imposition of payroll taxes. Moreover, since Social Security benefits do not represent either the value of the contribution of current labor or capital services to total production, the immediate effect of the payroll tax in lowering GPS is not offset by an increase in GNP. Payroll taxes result in an unqualified reduction in GPS.

In the long run, the effect of Social Security taxes is to reduce the supply of labor, thereby reducing total output. As a result, aggregate saving, i.e., aggregate additions to the stock of capital, must also be reduced.

Social Insurance and Efficiency

In addition to the distortions discussed above, the efficiency criterion pertains to the effects of social insurance on total utility. The question then arises: Does the Social Security system reduce an individual's utility by distorting his time paths for consumption and accumulation?

The Option of Private Retirement Insurance

To provide a conceptual framework for answering this question, consider first the results likely in a risky world with imperfect knowledge, uncertainty about the outcomes of economic decisions, and costly information, but in which there is no *compulsory* insurance system. In such a world each person must decide on his own timing of consumption and saving. These choices are based on each individual's perception of the probability distributions underlying the relevant phenomena, e.g., continuity and duration of employment, illness and other events affecting his productivity, his longevity, and the productivity of the capital he acquires. The existence of risks creates the conditions in which there is a market for a private insurance industry. Although insurance does not alter the total losses that occur, it redistributes those losses, provided the premiums equal the losses. This means that those who incur losses that are less than the mean expected value of total losses are the transferors to those individuals who have incurred losses greater than that mean.

[4]It also raises the cost of labor services relative to capital services, resulting in a higher capital/labor ratio. This change in relative costs does not result from a decrease in the cost of capital services, i.e., in the amount of current consumption that must be foregone to obtain a given amount of output from the addition of another unit of capital. It does not, therefore, increase the proportion of total income that individuals want to save.

In the individual's choice of the time paths of consumption and saving, he may include in his portfolio an insurance policy that provides him with an annuity at the time of retirement, due to either voluntary choice or illness. He may also want to include in his policy a provision for income during periods of unemployment prior to his chosen retirement date. Finally, he may want his policy to provide survivors benefits if he chooses to leave an estate.

The amount of the retirement income and income-assurance benefits an individual can provide for himself at any time will be constrained by his available resources and by the marginal productivity of his accumulated capital. Benefits do not depend on any systematic transfer of income from nonannuitants to annuitants. To be sure, some transfers are involved within the insurance system, but these transfers are random. The *average* amount of such transfers included in the benefits of all the insured must be zero. If it were other than zero for any length of time, appropriate revisions in the actuarial calculations and premiums would be made.

Opportunities for realizing economies of scale in insurance may result in group contracts to cover some of the insurable phenomena. Group insurance should tend to reduce the transfer element included in insurance benefits, provided the groupings are based on variables relevant to the shape of the probability distribution of these phenomena. Some transfer element remains, but taking all the insured together, transfers should net out entirely. Aggregate benefits for retirement, then, are a function only of the marginal productivity of capital.

A snapshot of the private insurance system at any moment in time would reveal that retirees receiving annuities and other insurance proceeds or returns on their own assets acquired over their working lives are paying nothing into retirement funds, while workers are receiving no benefits but are contributing to such funds. This does not mean that the system is redistributing income between generations. The present generation of workers is not transferring income, in the form of retirement benefits, to an earlier, now retired, working generation. The amount of retirees' benefits depends on how much they had earlier saved and on the marginal productivity of the capital to which they have acquired claims. The present generation of workers can be said to be contributing to present retirees' annuities only in the sense that the conditions of labor supply (taken in conjunction with the stock of capital, the conditions of supply of capital, the state of the industrial arts, and the technical production relationships) determine the productivity of capital that is the source of the benefits flow. In no literal sense are present workers financing the retirement of former workers.

The total amounts consumed and saved at any given time represent the most efficient state of affairs, given the risks and costs involved in the institutional arrangements for averting risk. Of course, some individuals will wind up with less than their optimum wealth accumulations and others with more, simply because without perfect foresight, their forecasts of the relevant phenomena are not perfectly realized. The individuals who were overanxious about the future will find that they have consumed less over their working lives than they would have, had they had perfect foresight. They will approach and reach retirement with larger accumulations than they had earlier aspired to, and if their utility functions have not changed, they might attempt a one-shot adjustment in their total assets by increasing their consumption. On the whole, however, they are likely to retire with some "excess" endowment. Other individuals, meanwhile, will have accumulated "too little," having been excessively confident during their working years. Some of these may be destitute and may be sustained either by charity or not at all.

These errors in forecasts should cancel out for all individuals. If, for some reason, there were a systematic bias in people's forecasts against the actual distributions of events around their mean values, insurance premiums would be higher or lower than required by the actual distributions. Unless individuals were completely unresponsive to changes in the cost of retirement insurance, the amount of insurance acquired would be different from the amount that would be optimum for the actual distributions. The difference in the amount of insurance proceeds actually paid, therefore, would be offset to some degree—possibly more than 100 percent—by the differences in the amount of premiums paid. Whether this offset would be perfect would depend on the price elasticity of demand for insurance, but the degree of market failure, even if the offset were not perfect, would be slight.

In admittedly oversimplified terms, the preceding discussion delineates the kind of private insurance system and how it would operate to maximize efficiency if there were no impediments imposed by the public sector. Against this outline, one can evaluate the efficiency implications of the existing social insurance system.

Efficiency Implications of Social Insurance

Suppose public-policy makers insist on providing some systematic, collective remedy for the underaccumulation by those who forecast poorly. The resulting social "insurance" system might require everyone to increase his accumulation rate. The result would be an accumulation that is excessive and a time path of consumption that is too

low. The social "insurance" system might be less than universal, requiring only certain groups of persons, deemed to be less-than-adequate accumulators, to increase their saving. In this case, the utility lost by the selected groups would not be compensated for by anyone else, since presumably everyone was already at a preferred rate of saving, given his own budget constraint and the productivity of capital. The social "insurance" system might be designed as a kind of organized charity, levying taxes on those deemed to be relatively affluent in order to transfer income to the poor. Those paying the taxes would then suffer losses in their utility. Moreover, the economy as a whole would sustain an efficiency loss in terms of changes in the composition of real output and/or in the mix of production inputs. Those receiving the transfer payments, of course, would realize utility gains.

Some gains in utility may also be realized by the taxpayers. The destitute may become less numerous or less poor, less obvious, and hence, less a source of psychic distress to those who behold them; the amounts expended for private charity may be reduced; the unpleasant impact of poverty on the physical surroundings may be abated; and the inefficiently rationed demands of the poor for publicly provided services may be lessened. On the whole, however, there is no a priori case to be made that the sum of these gains would exceed the losses.[5]

Another argument for social insurance is that the net efficiency loss from some form of compulsory retirement system disappears and is replaced by a net gain when one takes account of real-world imperfections. The argument is that it is not merely the lack of perfect foresight that prevents an individual from realizing an optimum time path of consumption and saving; more significant are the objective events over which he has no control and for which he cannot obtain sufficient information, except at extraordinary costs. That is, if he believes that the information costs exceed the benefits to be derived from such information by way of better decisions about consumption and investment, and if these information costs depend on events external to his behavior, then there may conceivably be an efficiency gain in relieving him of the decision-making responsibility.

This argument obviously contains the principal elements of the externality argument for public decision making. Even so, it does

[5]These alternatives should not be perceived as equivalent in terms of the efficiency losses they involve. In the first two cases, the efficiency loss results from the social requirement for too much private saving, too much additional private capital. In the last case, in contrast, the tax/pay system must result in too little saving and too little private capital accumulation.

not support a *compulsory* retirement system. It merely suggests that we should make available to the most poorly informed some type of retirement insurance in which premiums and benefits are based upon information that such individuals cannot economically acquire by their own efforts, and that we should advise them of the pertinent costs and benefits.

Against the criteria suggested above, the Social Security system emerges as seriously deficient. The system is compulsory and well-nigh universal. Participation, therefore, implies nothing about any covered individual's preferences and perceptions regarding an optimum time path of consumption and saving. While the required participation undoubtedly conforms closely with the preferences of some of the covered individuals, it defies credulity that it does so for most of them. To assume the contrary requires one to assume an extraordinarily close clustering of participants' preferences around the mean values of the principal elements of the system.

Beyond this basic violation of efficiency, the Social Security system involves other significant efficiency losses. Since the amount of "premiums" paid by any covered employee is a function only of the amount of his wages or salary (given the statutory rate and base provisions), there is no a priori basis for assuming that the premium he pays at any time conforms with his preferred allocation between consumption and saving. Similarly, there is no basis for claiming that the path of consumption or saving implied by the premiums is congruent with his preferred path.

Moreover, one would have to assume lack of conformance even if the annuity accumulated on the employee's behalf were equivalent to what he might obtain independently in the marketplace with the same annual premium payments. Of course, his "premium" payments do not purchase a market-determined annuity for him, but rather an annuity that is based principally on his years of coverage and on his taxable earnings in covered employment. Thus, regardless of whether the Social Security Trust Fund is on an "actuarially" sound basis—in the sense that its total receipts are adequate to fund the total benefits paid—no present-day contributor is likely to receive benefits determined by a market rate of interest on his "premiums." And no present-day beneficiary's benefits are likely to be equal to the annuity that would result from the wealth accumulated, at market-determined rates, from the premiums he actually paid. In other words, for no given individual are the premiums paid and the benefits received likely to be related by the market measure of the marginal productivity of capital.

As in the case of private insurance, some covered employees will eventually wind up as transferors and some as transferees under the social "insurance" system.[6] In contrast with private insurance, however, the income transfers are not functions of the difference between an individual's actual experience and the mean value of the probability distributions of the relevant events that determine how much he actually has accumulated and how much he is contractually obligated to receive. In the case of private annuities (ignoring survivors benefits), the transferors are those who die before they reach the actuarial mean life expectancy that determined the amount of premium required per dollar of annuity, while the transferees are those who live longer than that mean. In the case of Social Security, on the other hand, the transferors and the transferees are distributed with respect to a much larger number of variables: how much they would have saved otherwise, into what kind of capital or claims they would have channeled their savings, when they would have chosen to begin to receive annuity benefits, how much survivors benefits they would have opted for, and so on, as well as their longevity.

Conclusion

Whether assessed in terms of how it impairs growth in the stock of capital and how it distorts the labor/leisure choice or in terms of the more traditional criteria of welfare economics, the social insurance system is basically deficient. These deficiencies are not addressed by concerns about the present or prospective balance in the trust fund, i.e., about the adequacy of financing the legislated benefits. The 1983 Social Security legislation has not repaired the fundamental flaws in the social insurance system; indeed, it has augmented them.

The same sort of examination that reveals the inefficiencies of social insurance urges that the private insurance industry, if unencumbered by a large government presence, would far more effectively satisfy demands for retirement income and income assurance. Notwithstanding the differences in analytical approach, there is a growing consensus that ultimately the government should—some would insist must—relinquish its dominance in this aspect of our economic life. At minimum, the Social Security system should revert to what it was originally intended to be: a supplement to private provision for retirement and income protection.

[6]The intragenerational transfer under social insurance is discussed in Anthony Pellechio and Gordon Goodfellow, in "Individual Gains and Losses from Social Security before and after the 1983 Amendments," *Cato Journal* 3 (Fall 1983): 417–42.