

Federal Reserve Bank of Cleveland

Does Social Security Worsen Inequality?

by Jagadeesh Gokhale

Social Security's long-term financial health is weak at best. It is widely appreciated that hiking payroll taxes or cutting benefits to restore solvency will postpone but not eliminate Social Security's impending financial shortfall. Neither will such fixes remedy the system's structural shortcomings. The current program treats some groups more favorably than others, and it distorts individuals' economic decisions. In particular, payroll taxes induce people to work less, and the expectation of retirement benefits reduces saving, lowering overall capital formation and output.

Some have proposed establishing individual Social Security accounts, which would be privately owned and controlled, as a solution. Such a reform may ultimately reduce payroll tax rates and eliminate the negative influence of the current Social Security system on capital formation and output growth.¹ Opponents of private accounts counter that they will increase the already high wealth inequality among retirees by exposing savings to greater market risks. Private accounts may jeopardize retirement security for poorer households, who typically are less able to manage retirement portfolios.

Very few seem to appreciate that the current Social Security arrangement may, in some ways, be contributing to rather than limiting wealth inequality among retirees. Social Security may induce lower-earning households to save less for retirement than they would otherwise, and this may be even more important in increasing wealth inequality among retirees than other factors such as financial skills.

Another rarely discussed issue concerns the long-term impact of Social Security on *intergenerational wealth mobility*. Greater wealth inequality provokes calls for redistributive public policies to level the playing field. However, attitudes are also molded by perceptions regarding wealth mobility. If those who are poor today have (or their children have) a good chance of becoming rich tomorrow, the desire for public intervention would be weaker. This *Economic Commentary* suggests that Social Security itself may be causing greater wealth inequality and may lower intergenerational wealth mobility. Establishing individual accounts may result in greater wealth equality and mobility.

■ Inequality in Bequeathable Wealth: Why is It Important?

Bequeathable wealth includes cash, bank accounts, stocks, and life insurance policies—assets that can be passed on to the next generation. Alternatively, wealth can exist in an *annuitized* form: annual income flows such as Social Security benefits or pensions. Some annuities allow for limited contingent benefits to survivors. Most, however, cease upon the owner's death.

Concern over the distribution of bequeathable wealth at retirement emerges because access to it expands the available options in configuring one's spending when retired. For example, financing college education for children, helping them with a down payment on a home, entering a nursing home, or leaving a bequest, are feasible when a person owns bequeathable wealth but are foreclosed when all wealth is annuitized.

Further, in order to examine how Social Security affects wealth mobility, it is

Gaps between the rich and poor grow once people hit retirement. Some say privatizing Social Security will increase wealth inequality among retirees. This *Commentary* argues it won't and suggests that the current system may be reducing wealth mobility from one generation to the next. This *Commentary* is based on a presentation given at the CATO Institute's conference on Social Security Privatization, February 5—7, 2001.

most useful to focus on the distribution of bequeathable wealth *at retirement*. Most inheritances have been received by this point, and the bequeathable-wealth distribution at retirement fully reflects their influence. Likewise, most bequests to succeeding generations are made out of retirees' bequeathable wealth, and any public policy influences on its distribution will be propagated forward to successive generations of retirees. Hence, this distribution reflects the influence of public policies on intergenerational wealth mobility.

Many factors potentially affect the distribution of bequeathable wealth at retirement. Fertility and mortality are two obvious ones: Parents with more children spend more on consumption when working and cannot save as much for retirement as parents with fewer children. Children whose parents die sooner after retirement receive larger bequests and may themselves retire richer as a result. Other influential factors are the distribution of skills (and, hence, earnings), the degree to which people sort by wealth or earnings when marrying, and the extent

to which skills are inherited by children. Policy-related factors such as progressive income taxation and Social Security may also play an important role. Each of these factors affects the *equilibrium* level of inequality in bequeathable wealth at retirement that which would emerge absent random shocks to pertinent demographic, economic, and policy factors.

The same factors also influence the degree of intergenerational mobility across the distribution of bequeathable wealth. Mobility across a wealth distribution refers to the likelihood that someone who is poor today turns up rich tomorrow. *Intergenerational* mobility across the distribution of bequeathable wealth refers to the likelihood that children of poor (or rich) retirees will themselves retire poor (or rich). High intergenerational wealth mobility means that the offspring of poor retirees have a good chance of retiring with more bequeathable wealth than their parents. In contrast, low intergenerational wealth mobility implies persistent poverty among successive generations within the same family dynasty. Obviously, policies that allow the children of the poor a greater chance to escape poverty are more desirable than those that trap descendants of poor parents in a state of poverty: Greater intergenerational mobility in bequeathable wealth is more closely aligned to the ideal of equality of opportunity.

■ Social Security and the Distribution of Bequeathable Wealth

In general, households with low education and earnings save very little and, unlike the rich, retire with almost no financial wealth. This renders the distribution of bequeathable wealth across all retirees highly unequal. Calculations based on the Federal Reserve's *Survey of Consumer Finances* suggests that of the total bequeathable wealth owned by retiring married households, the richest 1 percent own a third; the top 5 percent own one-half; and the top 10 percent own nearly two-thirds. Unfortunately, no reliable data exist to inform us about the extent of intergenerational wealth mobility. Anecdotal evidence suggests that children of rich parents also own or accrue substantial wealth. However, no one has documented parent-child bequeathable assets at the same stage of their respective life cycles namely, at retirement.

A recent study based on a computer simulation designed to match the features of

the U.S. economy isolates the influence of several factors in determining wealth inequality at retirement. It suggests that the U.S. Social Security system increases inequality among retirees because it substitutes public for private saving to a disproportionately greater degree for low-earning households than for high-earning ones. Under the current system, earnings are subject to payroll taxes and count toward the determination of future benefits only up to a limit. As a result, payroll taxes constitute a much greater fraction of low earners incomes than for high earners, reducing low earners ability to save for retirement. Moreover, Social Security provides low earners with annual retirement benefits almost equal to their post-retirement consumption (consistent with their lifetime earnings and pre-retirement living standard), thus reducing their incentive to accumulate significant personal savings. This forced annuitization of a large fraction of low earners lifetime resources leaves them with little bequeathable wealth during retirement. Hence, low earners leave few, if any, bequests upon death.

In contrast, high earners pay payroll taxes on a smaller portion of their earnings, and Social Security benefits constitute a minor fraction of their retirement consumption. They can and do accumulate considerable personal savings before retiring. Their stock of bequeathable assets remains high, and their children receive large inheritances in spite of Social Security. Because of its asymmetrical impact on saving by low and high earners, Social Security reduces or eliminates inheritances of children in poor households but not those in rich ones.

By making the distribution of bequests more unequal, Social Security may increase the persistence of low bequeathable retirement wealth among poorer households across successive generations. As mentioned earlier, no reliable data exist to validate this for the U.S. economy. However, the aforementioned simulation can be used to estimate Social Security's influence.²

■ Results

When the simulation is calibrated to match the features of the U.S. economy including Social Security's payroll tax and benefit benchmarks the degree of bequeathable-wealth inequality across the simulated retiree population closely matches that observed in

U.S. data.^{3,4} Furthermore, the simulated distribution closely approximates the concentration of wealth at the upper end of the U.S. distribution.⁵ Grouping the simulated distribution of bequeathable wealth into quintiles shows that the poorest 20 percent have less than \$99,000 in bequeathable wealth at retirement, and the richest 20 percent have more than \$455,000. The richest household has a bequeathable wealth level of \$118 million.⁶

The results on intergenerational mobility across the distribution of bequeathable wealth are quite striking. Table 1(a) shows probabilities (in percent) that a child will be in any particular bequeathable-wealth category at retirement, given its parent's position in the bequeathable-wealth distribution.⁷ For example, children of parents who hold less than \$99,000 of bequeathable assets at retirement have a 40 percent chance of themselves retiring with less than \$99,000, but less than a 5 percent chance of retiring with more than \$455,000. Children of parents among the richest 20 percent of households have close to a 50 percent chance of retiring with more than \$455,000. The likelihood that such children will retire with less than \$99,000 is less than 4 percent much lower than the 40 percent likelihood for children of poor retirees. Thus, under current Social Security, the simulation exhibits sizable persistence in bequeathable wealth among successive generations within a household dynasty.

■ Wealth Inequality and Mobility under an Alternative Social Security System

How would creating individual Social Security accounts change things? To find out, we carry out the simulation again, this time eliminating Social Security from the calibration. While most reform proposals envision supplementing the current system or only partially replacing it with individual accounts, eliminating Social Security in the simulation is equivalent to establishing a self-financed but mandatory individual accounts system because the households that populate the computer simulation save in order to smooth consumption over their lifetimes. The simulation thus forces each household to accumulate assets sufficient to maintain retirement consumption at pre-retirement level. Absent Social Security, the simulation

**TABLE 1 INTERGENERATIONAL MOBILITY
IN BEQUEATHABLE WEALTH**

(a) Under Social Security

Parent wealth (thousands of dollars)	Child wealth (thousands of dollars)				
	0–99	99–159	159–245	245–455	455–117,576
0–99	40.0%	27.3%	17.8%	10.2%	4.7%
99–159	24.2	24.4	22.1	18.1	11.3
159–245	15.4	21.0	22.8	22.7	18.1
245–455	8.1	15.2	22.6	27.8	26.3
455–117,576	3.5	7.0	14.4	28.5	46.2

(b) Without Social Security

Parent wealth (thousands of dollars)	Child wealth (thousands of dollars)				
	0–99	99–159	159–245	245–455	455–117,576
0–99	16.3%	20.3%	24.2%	28.4%	10.8%
99–159	9.1	14.6	22.3	33.5	20.5
159–245	6.4	11.3	18.4	33.0	31.0
245–455	3.8	7.2	13.4	30.0	45.6
455–117,576	0.9	2.1	5.2	18.3	73.5

NOTE: Numbers in each cell express the probability that a child will retire in the wealth grouping identified by the column heading, given that the child's parent retired in the wealth grouping identified by the row heading. Bequeathable wealth groupings represent the quintiles of the distribution simulated using Social Security as part of the calibration.

exhibits lower inequality in bequeathable wealth among retirees.⁸ This occurs because low-earning households are now motivated and able to accumulate assets in bequeathable form in their personal accounts.

In contrast to table 1(a), table 1(b) shows intergenerational wealth transition probabilities when Social Security is absent. The same dollar limits are used as in table 1(a) to classify households among bequeathable wealth categories. Now, children of parents who are in the poorest category at retirement have only a 16 percent likelihood of ending up in the poorest group themselves at retirement. In contrast, the chance that they will retire in the highest bequeathable-wealth category rises to 10.8 percent more than twice that of table 1(a). Of course, children of richer parents enjoy a yet higher probability of being wealthy when they retire and a much lower probability of ending up poor.

One ought to take these simulation results with a pinch of skepticism. Replacing Social Security with personal saving for retirement may not improve intergenera-

tional wealth mobility if households purchase annuities in the same amounts upon retirement as Social Security provides today. However, given that retirement consumption is better configured when one owns some bequeathable assets, and given that Social Security disproportionately and forcibly annuitizes a high fraction of poor households wealth, these households are likely to prefer a lower degree of wealth annuitization under an individual-accounts-type Social Security system. An appropriate conclusion might be that these results indicate the direction rather than the amount of improvement in wealth equality and mobility in the U.S. economy that could be achieved by shifting to a system with individual accounts.

■ Conclusion

Preserving a portion of total wealth in bequeathable form during retirement is desirable because it increases the configuration of spending options available for retirees. Inequality in bequeathable wealth at retirement is quite high but this may be exacerbated rather than improved by the existence of Social Security. Simulating the

long-run equilibrium distribution of bequeathable wealth at retirement for the U.S. economy suggests that an individual-accounts-type Social Security system may slightly reduce inequality. The case for such a Social Security reform is strengthened further by its likely long-run impact in increasing intergenerational wealth mobility across the distribution of retirees bequeathable wealth.

■ Footnotes

1. Of course, benefits to current retirees would have to be financed by transitional taxes. Several economists have proposed alternative ways for doing this. Two examples are Martin Feldstein and Andrew Samwick, *Allocating Payroll Tax Revenue to Personal Retirement Accounts to Maintain Social Security Benefits and the Payroll Tax Rate*, NBER Working Paper no. 7767, June 2000; and Laurence J. Kotlikoff, Kent Smetters, and Jan Walliser, *Simulating a Way out of America's Demographic Dilemma*, NBER Working Paper no. 8258, April 2001.

2. The model simulates an 88-period, overlapping-generations economy, with each generation consisting of 2,000 married households with demographic and economic characteristics calibrated to the U.S. economy. Several factors that can influence wealth inequality are studied in this model. For more details, see Jagadeesh Gokhale, Laurence J. Kotlikoff, James Sefton, and Martin Weale, *Simulating the Transmission of Inequality via Bequests*, *Journal of Public Economics*, vol. 79, no. 1 (January 2001), pp. 93–128.

3. The simulated Gini coefficient is 0.674 for the distribution of bequeathable wealth at retirement. This is quite close to the observed value of 0.73 calculated from the 1995 *Survey of Consumer Finances*.

4. The estimates reported here should be viewed with caution, as they are based on a stylized life-cycle simulation model. First, life-cycle behavior may not be an accurate representation of individual behavior and second, for tractability, the model abstracts from a number of features of the real-world

U.S. economy for example, all households are assumed to be married, fertility among all households is positive, and the observed negative correlation of mortality with skills and wealth is ignored.

5. In the simulated upper tail of the distribution, the top 1 percent of households owned 33 percent of bequeathable wealth, the top 5 percent owned 49 percent, and the top 10 percent owned 59 percent.

6. The figure for the richest household seems rather low. However, the wealth generated by the simulation is based on the Federal Reserve's *Survey of Consumer Finances*. Admittedly, the survey may not adequately sample from among the Bill Gateses and Warren Buffets of the U.S. economy.

7. These are the probabilities that emerge when the simulation's bequeathable wealth distribution has stabilized.

8. The simulated Gini coefficient falls from 0.674 to 0.6038. (Editor's note: when this *Commentary* was first published, the latter number was incorrectly reported as 0.666).

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