Social Security’s Effect on Private Saving: A Review of Empirical Studies

In his most recent press conference, President Bush put forth his recommendation for restoring Social Security’s solvency.† In addition to reducing promised benefits, Bush proposes giving “younger workers the option . . . of putting a portion of their payroll taxes into a voluntary personal retirement account” (“Press”). Bush’s plan entails creating a new defined-contribution (“funded”, “privatized”) retirement plan with personal accounts invested in the private economy. Proponents claim that such a defined-contribution program would prove more efficient than the current unfunded system; moreover, such a program would, supporters say, offer individuals better rates of return on their payroll taxes thus mitigating necessary reductions in defined benefits.

Supporters of privatization maintain that—to the extent that current workers’ defined benefits “crowd out” private saving and thus decrease national saving—society suffers a welfare loss from forgone investment in private capital; specifically, society misses out on investment income, economic growth, and government tax revenue that would result from savings invested in the private economy (Feldstein 5-6).

† Under Social Security’s current structure as a defined-benefit (“unfunded” or “pay-as-you-go”) program, today’s workers pay for the retirement benefits of today’s retirees; likewise, for their own retirement benefits, today’s workers count on payments from future workers. Since 1983, Social Security’s annual revenues from payroll taxes have exceeded benefit payments—leading to the accumulation of a trust fund comprising government bonds purchased with the annual surpluses. The latest report from the Social Security Trustees, however, forecasts an imbalance between projected revenues—from future payroll taxes and the trust fund—and projected costs from retirement benefits over the next 75 years. In the Trustees’ intermediate projection, Social Security will begin to pay out more in benefits than it takes in from payroll taxes in 2018. The program will exhaust its surplus in 2042 at which point annual payroll tax revenue will cover 70% of scheduled benefits. The net present value of Social Security’s outstanding liability over the 75-year time horizon is $3.7 trillion.
The life-cycle theory of consumption and savings suggests that Social Security wealth—defined as discounted future benefits minus discounted future payroll taxes—has a very large negative impact on private saving (Page 3). In its simplest form, the life-cycle theory assumes that only the need for consumption during retirement motivates individuals to save during their working years. Under this assumption, individuals accumulate savings during their pre-retirement years to fund consumption in their retirement years. In theory, to the extent that individuals expect Social Security wealth to fund consumption during their retirements, they will save less during their pre-retirement years. However, the life-cycle theory alone does not explain individuals’ saving patterns. Other factors affecting saving behavior include: precautionary saving (e.g. in case of sickness or unemployment); plans for early retirement; skepticism of promised Social Security benefits; bequest saving; real-life deviations from idealized rational-choice behavior; and myopic disregard for retirement planning (Page 6-9). Given the variety of saving motivations, one can hypothesize that Social Security has a wide range of both negative and positive effects on private saving. Thus, one must look to empirical evidence in the hope of understanding the actual net effect of Social Security on private saving.

Economists have conducted a number of empirical studies in an effort to discern the actual effect of Social Security on private saving. Despite widely divergent results, a review undertaken by the Congressional Budget Office (CBO) of fourteen cross-section studies leads to the conclusion that Social Security most likely does “crowd out” private saving with an estimated reduction of between zero and fifty cents in savings per dollar of Social Security wealth (Page 3). A review of two such cross-section studies highlights the differences in methods that can lead to divergent results and thus different policy implications.
Cross-section studies examine data on samples of people and compare each person’s private savings with their Social Security wealth to determine to what extent, *ceteris paribus*, someone with greater Social Security wealth accumulates less personal savings. The two studies reviewed below both utilized data from the 1983 Survey of Consumer Finances (SCF) which provides data on “households’ assets, debts, demographics, income” and includes calculations of households’ expected Social Security benefits and future contributions—i.e. Social Security wealth (Gale 713).

In his cross-section analysis, Gale examined a subset of the SCF data that included only households whose heads were employed full-time and between 40 and 64 years of age. Gale performed both least absolute deviation (LAD) and robust regressions with household net worth as the dependent variable and with pension wealth, “age of the head of the household, years of education (averaged over the head and spouse), earnings of the head and spouse, earnings interacted with age, family size, marital status, and an indicator for the presence of two earners” as the independent variables (Gale 716). The LAD and robust regressions yielded coefficients for Social Security wealth of 0.51 and 0.11 respectively implying that an increase of one dollar in Social Security wealth offsets 51 or 11 cents in private saving on average (Gale 717).

As Gale notes, “borrowing constraints, precautionary saving, financial literacy, and other factors . . . likely vary across households” (717). In an effort to understand the effects of such household heterogeneity, Gale performed separate regressions on subsets of his original sample defined by whether households had savings incentive accounts—e.g. IRAs—and whether the head of household had 16 or more years of education. Gale theorized that these subgroups would differ markedly in terms of saving tendencies. Subsequent regression analyses did indeed
indicate that Social Security wealth reduces private saving to a lesser extent for households with less education and without savings incentive accounts (Gale 719).

By indicating a negative effect of Social Security wealth on private saving, Gale’s results lend credence to the claims of Social Security privatization’s proponents; however, owing to the wide range between the crowding-out effects calculated via LAD and robust regression analyses, supporters of the current unfunded Social Security system could use Gale’s findings to cast efficiency gains from privatization in an uncertain light. Moreover, the finding that for certain subsets of households suspected of having less incentive to save, Social Security wealth offsets a smaller amount of private saving might indicate that privatization’s supporters overestimate the economic gains from a defined-contribution system.

Like Gale, Gullason et al. used the 1983 SCF data; however, they used an ordinary least squares (OLS) regression model previously developed by Feldstein and Pellechio. The OLS model had as its dependent variable net worth but has only Social Security wealth, disposable labor income, and age as dependent variables. In addition to using a different statistical model than Gale, Gullason et al. chose a different sample from the SCF data; they analyzed only married households and excluded households with incomes below and above certain thresholds. Gullason et al. calculated a positive effect of Social Security wealth on private saving but one that was not statistically significant, leading them to conclude that an “increase in Social Security wealth has no effect on fungible wealth” (548). Based upon this finding, Gullason et al. rejected Social Security’s critics’ contention that the program “has a negative impact on the rate of capital accumulation and, consequently, on our capacity to produce output in the long run” (548).

The divergent results found by Gale and Gullason et al. illustrate the difficulties inherent in empirical studies of Social Security. In particular, the universality of Social Security
participation means that “most of the variation in Social Security wealth results from differences in earnings history, age, and marital status” all of which “also influence wealth holdings” thus making it difficult to discern the true effect of Social Security on savings (Page 18).

The two studies in question began with an identical dataset but applied different rules for selecting the sample for analysis and used different regression techniques and models. These different analytical approaches yielded two nearly opposite findings. With respect to the samples used for analysis, one might argue that Gale’s choice of older households—those aged 40 to 64—led to the overstatement of the impact of Social Security on private savings since, as Page notes, “precautionary saving [rather than retirement saving] may account for most of the saving among young workers for whom earnings are low and retirement distant” (7). In judging the findings of Gullason et al., one should note the small sample size (N=154 compared to N=638 for Gale) as well as their use of a regression model developed by Feldstein and Pellechio based on the 1963 SCF—data that, in comparison with 1983 SCF data, contained less detailed information on household wealth (Gullason, Kolluri, and Panik 548). Use of a smaller data set and a theoretically less robust regression model should temper the reader’s enthusiasm for accepting the conclusions of Gullason et al.

A review of the empirical studies conducted by Gale and Gullason et al. shows the uncertain nature of estimates of Social Security’s impact on personal saving behavior and the potential for economists to examine the same data and find nearly opposite effects; nonetheless, in a comprehensive survey of such empirical studies, the CBO tentatively concludes that a dollar of Social Security wealth does offset between zero and fifty cents of private saving.

How does the CBO’s estimate affect the claims of privatization’s boosters? In making his argument for privatization, Feldstein assumes that “each extra dollar of Social Security wealth
replaces about 50 cents of private wealth accumulation” thus implying that the “annual loss of national income would exceed 5 percent of GDP” (8). Since Feldstein’s calculations use a “crowding out” effect at the high end of the CBO’s estimate, an opponent of privatization could claim that the actual economic gain from privatization would be considerably less than that proposed by Feldstein. Nonetheless, even a gain in efficiency half the size of that proposed by Feldstein might lead to positive economic results.

In the end, though, empirical studies can neither confirm nor reject privatization or other Social Security reform proposals as the best option for Americans since, as Diamond declares, “the heart of the reform debate is based on different values and different prognoses of politics, not substantial economic disagreements” (25). Empirical studies such as those discussed above play a critical role in informing debate by quantifying the costs and benefits of Social Security policies. Ideally, then, the American people will decide in the political realm which policy best fits their collective valuation of efficiency, individual equity, and social adequacy.
Works Cited


Policy Memo

To: Senator John F. Kerry

Re: Social Security Reform

Background

President Bush has made Social Security reform one of the pillars of his second term. After traveling around the nation stumpin

Under Bush’s plan, future benefits for middle- and upper-income Americans would be tied to a price-index rather than a wage-index with the result that promised benefits would be lower than under current law (since wages tend to rise faster than prices). The proposed reduction of future benefits would make up most of the projected gap between payroll taxes and promised benefits. In addition, the President insists upon creating voluntary personal retirement accounts funded by payroll tax “carve-outs”—i.e. payroll tax contributions diverted from the current Social Security system with concomitant reductions in an individual’s promised benefits.

Recommendation

Democrats should negotiate with the President and Congressional Republicans with the goal of agreeing a plan that adopts some of Bush’s reforms while maintaining the current Social Security program’s emphasis on social adequacy and risk mitigation.

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Prudence dictates adjusting Social Security now before its financial situation necessitates more drastic reforms. A mix of benefit cuts and tax increases can balance the program’s long-term finances. In addition, Democrats should support voluntary “add-on” personal retirement accounts funded via new payroll taxes rather than “carved-out” of current payroll taxes—as Bush proposes.

First, an increase in the retirement age (the equivalent of a benefit cut) would counteract recent gains in life expectancy that strain the program. A shift to indexation of promised benefits to a mixture of price and wage indexes—similar to Bush’s plan—would limit the growth of promised benefits.

Second, the cap on wages subject to the payroll tax should be increased to cover the same proportion of total wages that have been covered over the past several decades—this proportion has declined of late due to disproportionate wage increases among high-earners.

Third, Congress should create a complementary defined-contribution retirement plan based on voluntary personal retirement accounts funded via new payroll taxes. In order to increase participation rates, workers should be included in the new program by default and voluntarily opt-out.

**Rationale**

The current unfunded program spreads risks across the entire population and even future generations—these risks include market fluctuations, inflation, and unexpected changes in mortality rates. The personal retirement accounts favored by the President shift risks onto individuals who—judging by the two-thirds of retirees who count on Social Security for at least half of their income—are in no position to gamble with their retirement savings.
Nonetheless, defined-contribution plans have been successful in other countries (e.g. Chile) and do hold the promise of improved economic efficiency and increased growth—personal accounts would allow workers to earn market rates of return on their contributions and increase national saving. The creation of “add-on” personal retirement accounts would avoid shifting undue risk onto individual workers while offering new savings vehicles to less affluent Americans who are less likely to have 401(k)’s or IRA’s. In addition, the “add-on” accounts would give Americans experience with a defined-contribution program and provide a base upon to expand should the program prove efficacious and more popular with Americans than today’s defined-benefit system.