

**The Behavioral and Consumption Effects of Social Security Changes**

Wenliang Hou and Geoffrey Sanzenbacher  
Boston College

19<sup>th</sup> Annual Joint Meeting of the Retirement Research Consortium  
August 3-4, 2017  
Washington, DC

The research reported herein was pursuant to a grant from the U.S. Social Security Administration (SSA), funded as part of the Retirement Research Consortium. The findings and conclusions expressed are solely those of the authors and do not represent the views of SSA, any agency of the federal government, or the Center for Retirement Research at Boston College.

Social Security's Trust Fund is projected to be exhausted in 2034. Some proposals to delay this date would cut benefits – e.g., increasing the Full Retirement Age (FRA) to 69 – while others would increase revenue – e.g., raising the payroll tax cap. While Social Security's Office of the Chief Actuary projects the financial impact on the program of a wide variety of changes, understanding the impact on recipients' behavior and well-being is also a valuable exercise. After all, any programmatic change can be calibrated to reduce Social Security's financial shortfall by a given amount, so a potentially useful tie breaker for policymakers to consider is the effect on beneficiaries. This paper uses the Gustman and Steinmeier structural model to analyze the effect of four changes to the Social Security program on recipients' retirement timing and household consumption. All four of the changes would reduce the financial shortfall by roughly 1 percent of payroll, with two of the changes being benefit reductions and the other two being increases in program revenue.<sup>1</sup>

### **The Gustman and Steinmeier Model**

The Gustman and Steinmeier model is described in detail in Gustman and Steinmeier (2006, 2009). The model focuses on the retirement behavior of men who begin their time in the *Health and Retirement Study* as part of a married couple. Individuals in the model are assumed to decide whether to work full-time, part-time, or completely retire and to decide on their level of consumption. The goal of individuals at each point in time in the model is to make choices that maximize their expected lifetime utility. Each individual's labor choice is affected by his age and self-reported health status, with the appeal of work decreasing with age and when the individual is in poor health. The choice of consumption is a function of any income they have from work, pensions, retirement savings, and Social Security. The forward-looking workers in the model understand that while delaying retirement may bring them disutility from the work itself, delay increases their monthly Social Security benefits and potentially their pension benefits or retirement savings and decreases the length of time their savings will need to last.

Policy simulations can be carried out in the model by altering the equations that govern how much individuals get from Social Security or by altering how much of their after-tax income can be consumed. The four changes considered in this paper are: 1) an increase in the FRA from

---

<sup>1</sup> For simplicity, the policies simulated in this paper are assumed to be implemented in one shot. In reality, the financial impact of most changes to the Social Security program assumes a more gradual phase-in.

67 to 69 with a Delayed Retirement Credit available for delaying until age 70; 2) a decrease in the Cost-of-Living Adjustment (COLA) by 0.5 percentage points, which means the real value of an individual's benefit decreases gradually after claiming; 3) an increase in the payroll tax on employees from 6.2 percent to 7.75 percent; and 4) an increase in the taxable maximum to cover 90 percent of earnings (roughly \$270,000 in 2016 dollars).

The first two policies, which reduce benefits, would be expected to lead to delayed retirement as workers try to balance the disutility from continued work with the need to make up for a reduced Social Security benefit. The second two policies, which increase program revenues by reducing pre-retirement income, would be expected to have offsetting effects: 1) workers should retire earlier since the benefit to working is lower; but 2) they may retire later since savings during their careers were lower.

## Results

Table 1 shows the share of workers who completely retire at ages 62 through 69 for each of the simulated policies (the model assumes individuals claim their benefits by age 70).

Table 1. *Share of Sample Completely Retired under Various Policies*

Age	Baseline	FRA 69	COLA	Tax increase	Raise cap
62	42.6%	40.8%	41.7%	42.6%	42.6%
63	46.8	45.0	45.9	46.9	46.8
64	49.8	49.7	48.8	49.9	49.8
65	55.0	54.5	53.8	55.1	55.0
66	59.5	56.9	58.3	59.7	59.5
67	63.0	61.5	61.4	63.2	63.0
68	66.6	65.3	65.0	66.8	66.6
69	69.2	66.5	67.5	69.3	69.2

Note: The final sample consists of 2,231 households. For a full list of sample exclusions, see Gustman and Steinmeier (2006).

Source: Authors' calculations from *Health and Retirement Study* (HRS) and Gustman and Steinmeier (2006).

Table 1 indicates that both policies to reduce the Social Security benefit would cause people to retire later – at age 69, the reduction is 2.7 percentage points for the increase in the FRA and 1.7 percentage points for the decrease in the COLA. The behavioral effect is negligible for the revenue-based policies, with a very slight increase in the share retired under a payroll tax increase.

Because the behavioral effects are relatively small, the primary effect of the benefit reductions is to reduce the Social Security benefit and, thus, consumption in retirement. In general, the decrease in consumption is higher for individuals at the lower end of the income distribution, since they get more of their retirement income from Social Security. For example, at age 69 the average reduction in consumption under the increase in the FRA is 5.6 percent for individuals in the lowest third of the income distribution, and 2.2 percent for those in the top third. The corresponding numbers for the COLA adjustment are 2.8 and 0.8 percent. However, the effect of the COLA adjustment increases with age: for those living to age 90, the reductions are 10.5 and 4.0 percent for the lowest and highest third. Prior to retirement, the effect of benefit reductions on consumption is estimated to be relatively small, with a reduction of 0.2 percent at age 55 across income groups for an FRA increase and 0.3 percent for a reduction in the COLA, presumably because of increased saving while working.

On the other hand, an increase in the payroll tax decreases consumption primarily during the working life – by between 1.3 and 1.5 percent between ages 25 and 55 for the lowest third, and 1.2 and 1.4 percent for the highest third. The effect during retirement is smaller and operates through reduced saving prior to retirement. For example, the lowest third sees a decrease in consumption of 0.6 percent at age 69, compared to 0.5 percent for the highest third. Increasing the payroll tax cap affects only those in the top third, decreasing their consumption by about 0.5 percent during the working years and by 0.4 percent in retirement at age 69.

The results indicate that the effects of benefit reductions and revenue increases are likely to be different. Because benefit reductions result in a relatively large reduction in income concentrated over a shorter period of time, they tend to generate a larger behavioral effect with respect to retirement timing and result in larger decreases in consumption in retirement than do tax increases. But while the impact of tax increases appears smaller, it occurs over a longer period of time – consumption is reduced by a small amount over the entirety of a worker's career.

## **References**

Gustman, Alan L. and Thomas L. Steinmeier. 2006. "Social Security and Retirement Dynamics." Working Paper 2006-121. Ann Arbor, MI: University of Michigan Retirement Research Center.

\_\_\_\_\_. 2009. "How Changes in Social Security Affect Recent Retirement Trends."  
*Research on Aging* 31(2): 261-290.