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Addressing Social Security's Solvency While Promoting High Labor Force Participation

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The 2017 Social Security Trustee Report predicts the OASI trust fund will be depleted by 2034 in the absence of change. For 75 year solvency, the report suggests an immediate, permanent payroll tax increase of almost 24 percent, or an immediate, permanent OASI benefit reduction of almost 18 percent would be necessary. The primary causes of the solvency shortfall are demographic: Falling birth rates and greater longevity have increased sharply the ratio of beneficiaries to workers since the program's inception.

Although many reform proposals study payroll taxes or benefits, this project focuses on policies that could change work incentives, encouraging households to retire later. These could yield higher payroll and income tax revenues, which, in principle, could be allocated to the OASI trust fund. There is reason to hope that encouraging longer careers could be an efficient strategy. As a household decides when to retire, it weighs the extra wages and salaries from additional work against the loss in leisure. It values the extra earnings in terms of their net-of-tax magnitude. Society, on the other hand, values them at their gross-of-tax level — because tax revenues fund useful government services, transfer payments, and infrastructure investments. (The discrepancy in perspectives arises because private individuals expect to have access to the benefits of government spending regardless of the taxes they personally pay.) Once we recognize the potentially sizeable wedge between net and gross-of-tax earnings, we must suspect that retirement ages based on personal decisions may be premature from society's viewpoint.

To perform our analysis, we construct a structural economic model. In the model, households choose their lifetime saving/consumption trajectories and date of retirement to maximize their private utility, subject to their budget constraints. The model not only describes household behavior, but it also illuminates the incentives that households face as they make their life decisions. A change in, say, tax rates has direct consequences for government revenues but an effect on household work incentives as well. The latter may affect household labor supply, leading to additional, indirect impacts on revenues. The model can capture both the direct effect and feedbacks.

We estimate the parameters of the model using data from two sources. The primary source is the Health and Retirement Study (HRS). We use the original HRS cohort, consisting of individuals 51 to 61 in 1992. They have

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been resampled at two-year intervals. We use data through 2014. Many HRS respondents have given permission for their lifetime Social Security earnings records to be linked to the survey on a restricted use basis. We employ HRS households with linked lifetime earnings records. The survey provides extensive demographic detail. As households age, their consumption expenditures may change with age, and with changes in composition (i.e., children arriving and leaving home). We use a second data source, the Consumer Expenditure Survey (CEX), to deduce how household composition and age affect consumption. With indexes of "equivalent adults" derived from the CEX, we determine the optimal time path of wealth accumulation and the optimal retirement age for each HRS household, given parameter values. Our estimation process chooses parameter values that match the model to wealth and retirement data from the survey.

We then use the model to simulate the effect of policy changes. First, we consider a 24 percent payroll tax increase, and, separately, an 18 percent Social Security benefit reduction – see the Trustee's Report above. A tax increase causes a reduction in labor supply as households choose to retire earlier as well as a direct-effect reduction in household resources. A benefit cut also reduces household resources, but actually increases labor supply at the cost, to households, of leisure time. In either case, the magnitude of the labor change is small. And, as would be expected, household well-being is reduced.

An innovation of this project is to add an alternative to the existing set of proposals: We consider adjusting the formula by which Social Security benefits are set. For a worker with a Social Security earnings history from, say, age 23 to 62, the current benefit determination is as follows. We take the average of the 35 highest years' earnings. Before doing so, however, we "index" earnings before age 60, dividing each by average earnings for their year and multiplying by average earnings when the agent is 60. Dividing the average of the 35 highest earnings by 12 yields the AIME, which we apply in the Social Security benefit schedule. This project considers dispensing with the indexing step. The indexing enormously increases past earnings and their relative importance in the AIME. Accordingly, we rescale everyone's AIME by a common amount that preserves the size of the average Social Security benefit. Doing away with indexing still greatly increases the relative weight of end-of-career earnings. Thus, it magnifies the value of working a year longer. We also consider allowing households to count earnings past 60 twice in their 35-year average.

Our simulations show that the average retirement age can rise by one year or more as we drop indexing. If we allow double counting earnings past 60 as well, the retirement age can rise by one and a half years. Longer careers imply greater payroll and income tax revenues — all of which, in theory, could be directed to the OASI trust fund. Importantly, we start with a tax wedge (i.e., the difference between net-of-tax and gross-of-tax earnings). Hence, although inducing delays in retirement lowers leisure, the overall loss in household utility is commensurate with the (low) cost of a lump tax increase.

The new policy requires neither an increase in tax rates nor a cut in Social Security benefits. The reforms that we simulate do not eliminate the existing solvency problem, but they could play a role in resolving it. In other words, they seem to expand the set of potential options for policymakers in a potentially useful way.

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