Modelling Family Retirement Decisions: Impact on Policy Estimates

Alan L. Gustman and Thomas L. Steinmeier*

This research analyzes how Social Security policies influence the retirement behavior of two earner couples when there is heterogeneity in time preference, which means that there are differences among people in the rate at which they are willing to trade current for future incomes. An implication of heterogeneity in time preferences is that there are differences among people in the rate at which they are willing to tradeoff between current and future Social Security benefits.

In the past, Social Security rules created tradeoffs that were not actuarially fair, meaning that when a person delayed retirement, that person lost benefits. That loss could be made up by increasing benefits paid out in future years, but until the adoption of the 8 percent delayed retirement credit and other benefit adjustments, future benefits were not adequately adjusted to compensate for a loss in benefits when postponing retirement, effectively reducing the reward to work for an older person who postponed retirement.

These rules have now been changed so that a person who postpones receipt of benefits is compensated by an increase in benefits in future years at a rate that is designed to make current Social Security policies actuarially fair and thus supposedly neutral because within certain ranges, these policies will result in the same present value of total payments to an individual who retires no matter what age the individual chooses to retire. In the case of those people who have high rates of time preference, however, an actuarially neutral policy that is designed to increase future benefits to just compensate for benefits lost when retirement is postponed is not sufficient. An actuarially neutral policy will discourage them from postponing retirement.

We investigate two such actuarially neutral policies. The first, increasing the Social Security early entitlement age from 62 to 64, is a relevant policy to pursue if one is interested in raising the age of retirement due to the increase in life expectancy of the population. The second actuarially neutral policy - allowing people to cash out the annuity paid by Social Security for an equivalent lump sum payment - is a policy that might be considered as part of a reform that adopted personal retirement accounts.

Analysis Model

The setting for the present analysis is the two earner family, with each spouse's decision interacting with the other's as they decide when to retire. We use an estimate of a structural model of the retirement behavior of two earner couples to examine the likely effects of these two policies. The main question being investigated here is whether using a model that explicitly incorporates the retirement interactions of two working spouses yields different results from using a much simpler model that treats the retirement decisions of the second spouse as determined independently.

*Alan L. Gustman is Loren T. Berry Professor of Economics at Dartmouth College. Thomas L. Steinmeier is Professor of Economics at Texas Tech University. This Research Brief is based on MRRC Working Paper WP 2008-179.
**Modelling Retirement Jointly**

The findings indicate that unless the question of interest is specifically related to joint retirement issues, the effects of the two actuarially neutral policies being investigated are roughly equal whichever model is estimated. The implication is that estimates of the effects of these policies in two earner households are not much compromised if simpler models that treat the second spouse's retirement as exogenous are used.

**Combining One and Two-Earner Households**

A second question explored is whether two earner and one earner households can be combined in the analysis. The effects of policy changes are clearly different for one earner and two earner households, but there is some evidence that the principal difference is due to the differing employment opportunities of the two groups. Though the estimated preference parameters are significantly different, the critical parameters governing responses to policy changes are similar. As a result, it seems plausible that unless the question being investigated involves looking at these two groups separately, the overall impact of the policy changes may be adequately assessed by combining the two groups.

**Policy Impacts**

A third question involves the magnitude of the effects for these two specific policy changes. In summary:

- Increasing the Social Security early entitlement age from 62 to 64 would reduce the level of retirement for husbands from two earner households by 4.4-4.6 percentage points at age 62, and by 5.1-5.7 percentage points for wives.

- In contrast, this policy change would induce husbands from one earner households to reduce the level of retirement by 10.2 percentage points at age 62.

- In a system of personal accounts, offering Social Security benefits as a lump sum instead of as an annuity would increase the level of retirement for husbands from two earner households by 7.1-8.1 percentage points at age 62 and by 8.9 percentage points for husbands in one earner households, and by 2.8-3.2 percentage points for wives in two earner households.

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**University of Michigan Retirement Research Center**

Institute for Social Research 426 Thompson Street Room 3026 Ann Arbor, MI 48104-2321 Phone: (734) 615-0422 Fax: (734) 615-2180 mrrc@isr.umich.edu www.mrrc.isr.umich.edu

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Julia Darrow, Laurence B. Deitch, Olivia P. Maynard, Rebecca McGowan, Andrea Fischer Newman, Andrew C. Richner, S. Martin Taylor, Katherine E. White, and Mary Sue Coleman, ex officio