Happy Together or Home Alone: A Structural Model of Health Insurance, Saving and Coordinated Retirement Decisions

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It is important to understand how health insurance affects couples' joint retirement decisions. The baby boomers are approaching retirement, and the majority of them are married. Yet, employers are increasingly less likely to provide retiree or spousal health insurance. Aside from health insurance, household joint retirement behavior is also affected by other complex incentives and characteristics, including own and spousal health status, joint consumption and saving, and complementarity of leisure between spouses, making it difficult to study the effect of health insurance or any other single factor on retirement in isolation.

We develop a dynamic model of household retirement in which married couples jointly decide how much to save, when to retire, and how to choose among available health insurance options, which vary by their premium, deductible, and coinsurance rate. Spouses coordinate their retirement decisions in response to the following motivations: (1) they share the household budget constraint and bargain over available economic resources; (2) they may care about spending leisure time with each other; and (3) their health insurance coverage choices are interdependent. We model two channels through which married couples value health insurance: (1) insurance smooths consumption by reducing the mean and volatility of medical expenses; and (2) insurance can improve health and thus decrease individuals' value of leisure relative to work.

We use data from the Health and Retirement Study (HRS) and the Medical Expenditure Panel Survey (MEPS), and employ a two-step procedure for estimation. First, we estimate a medical expenditure function, a joint health transition function, and a survival transition probability function, conditional on health insurance types. These functions describe how state space evolves in the dynamic joint retirement problem, given each health insurance choice. Then, we use the Maximum Simulated Likelihood (MSL) method to estimate household preference parameters, including the risk aversion coefficient and the discount factor, and remaining primitive parameters in the model, including the household consumption floor.

Using our estimates, we isolate the effects of different types of health insurance through simulation of counterfactuals. We find that employer-provided health insurance (EPHI) plays an important role in retirement decisions. For workers with tied health insurance (those who lose employer-provided coverage if they retire), gaining employer-provided retiree coverage would decrease the average retirement age substantially, by 1.1 and 0.5 years for husbands and wives, respectively. Similarly, raising the Medicare eligibility age is predicted to delay retirement by 0.7 and 0.4 years, while the Affordable Care Act (ACA), which makes health insurance independent of employment status, is predicted to accelerate it by 0.4 and 0.3 years. The effects of Medicare are larger than the effects of the ACA but smaller than the effects of EPHI due to the differences in plan quality, which have been overlooked in the previous literature. In addition, in decomposing the employment response to EPHI coverage, we find that over 80% of the response reflects the valuation of the consumption smoothing effects of health insurance, and less than 20% reflects the valuation of the health improvement effects. Furthermore, we find that spousal coverage motivates simultaneous retirement by delaying husbands' retirement and accelerating wives' retirement, and it explains about one-fourth of the simultaneous retirement observed in the data. Lastly, we find that husbands and wives enjoy spending leisure time together, which explains nearly one-third of the observed simultaneous retirement.