

The Interaction of Long-Term Care Insurance Demand and Informal Care Supply

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More than 70% of elderly Americans have limitations in carrying out basic daily activities and require some form of assistance. Formal long-term care services in the U.S. are very costly with an average nursing home cost of \$6,546 per month. Despite the costly nature of formal care services, only 10% of elderly individuals own a private long-term care insurance. To be covered by the public insurance program Medicaid, retirees need to draw down most of their assets and income. Due to the restricted financial access to formal long-term care services, family members are the backbone of long-term care delivery; but little support policies exist for caregivers.

This paper studies how the demand for private long-term care insurance by elderly parents interacts with informal care provision decisions by their adult children. The literature has largely approached the topics as separate issues. However, empirical evidence suggests high substitutability between formal and informal care and theoretical evidence suggests possible strategic non-purchase of insurance by elderly parents to induce informal care and strategic caregiving incentives by adult children to protect potential bequests. In this paper, I develop and estimate a finite dynamic game model between an elderly parent and an adult child to analyze the demand for long-term care insurance and informal care supply within a unified framework. The elderly parent makes saving, long-term care insurance purchase, and formal care utilization decisions while the adult child makes caregiving, leisure, and work decisions. The parent derives utility from consumption and receipt of care while alive and is allowed to have bequest motives. The child derives utility from consumption and leisure, and she/he has

both altruistic and strategic incentives to provide care to the parent. The model incorporates Medicaid and allows for rich individual heterogeneity to capture empirical patterns across individual characteristics. Using data from Health and Retirement Study, I estimate the model using conditional choice probability method.

The estimated model is used to conduct various policy experiments including premium subsidies, Medicaid expansion, work leave policies for employed caregivers and caregiver allowance. As the insurance market and the child's labor market are both incorporated, I can evaluate how policies targeted at one market spill over to the other market. Paid leave policies of different payment amounts increase informal care rate by 54-95% and employment rate by 5-8% without crowding out the demand for insurance. Caregiver allowance policies of the same payment amounts as the paid leave policies, on the other hand, increase informal care rate by 104-168% while reducing employment by 16-21% and insurance coverage by 27-36%. The current federal tax incentive for long-term care insurance is ineffective in increasing the insurance coverage. Caregiver support policies generate larger welfare gain compared to the Medicaid expansion subject to the same implementation cost.