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Time Discounting and Economic Decision-making among the Elderly

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Many older people make critically consequential financial decisions that affect the remainder of their lives, so it is important to understand how older individuals make decisions with intertemporal dimensions. Examples include how much to save and spend, when to work versus claim Social Security benefits, whether and how much to invest in health and health insurance, whether to sell one's home and move, and other factors central to retirement well-being. Yet little is known about how elderly peoples' discount rates vary, and how such diversity might relate to personal characteristics. If time discounting varies systematically with demographic or cultural characteristics, this could have important implications for how economic outcomes vary for the elderly within society. Moreover, discounting could potentially change in old age, something that can only be studied in data on elderly individuals.

Our paper presents and analyzes time discounting metrics measured in a representative sample of individuals age 70 and older. We use a purpose-built survey module we devised for the 2014 Health and Retirement Study (HRS) to examine the levels of and heterogeneity in time discounting among the elderly, and we study how this heterogeneity varies with personal characteristics. Moreover, we leverage the rich information about retirement, wealth accumulation, and health behaviors reported in the HRS to evaluate how and whether such heterogeneity helps explain differences in important economic behaviors across older individuals.

Our research shows that the mean value of the implied Internal Rate of Return (IRR) used by our older respondents to discount future payments is 0.54. (The IRR is the interest rate that sets equal the net present value of the future money amount and the money amount offered today.) IRRs rise with age, such that a 15-year increase in age from 70 to 85 would be associated with about a one standard deviation higher IRR. Whites and the better-educated have lower IRRs, while people with serious health conditions implying reduced life expectancy have 11 to 30 percent higher IRRs. Also IRRs are 35 percent higher than average for individuals

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diagnosed with a mental condition (dementia or Alzheimer's). This latter could potentially be due to a shorter life expectancy, or it could reflect a systematic impact of dementia on decision-making. If dementia leads to more impatient choices, this has important implications for the outcomes of the elderly who are affected by this condition.

When we relate our impatience measures to outcomes of interest, we find that net wealth is significantly lower for the least patient individuals. This likely indicates that impatient people save less and arrive at old age with fewer assets. Moreover, the impatient are much less likely to engage in healthy behaviors and make little provision for end-of-life challenges. Finally, our analysis shows that Social Security claiming ages are not significantly related to the IRRs, though impatience is associated with people claiming benefits earlier than anticipated.

Our findings have implications for policy. For instance, the existence of widespread impatience among older Americans suggests that people may be willing to take less than actuarially fair incentives in exchange for working longer, particularly if they have access to lump sums. Increasing immediate rewards to other behaviors could also encourage choices, such as investing in one's health and making end-of-life decisions, in advance of need.

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