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Sources of Lower Financial Decision-making Ability at Older Ages

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After middle age, further aging is associated with lower levels of many cognitive abilities. Some forms of memory, for example, are lower in older people. More general measures of intelligence also tend to be lower in people beyond middle age. These declines in skill could have important economic consequences for older people if they influence spending, saving, insurance, or health choices.

Consistent with this view, economists have found a negative relationship between age and several measures of economic decision-making ability. Our own prior research with Syngjoo Choi and Wieland Müller reveals a substantial negative relationship between age and the consistency of choices with economic rationality. The results of that study show that, in a simple economic choice experiment, people older than age 55 have significantly lower levels of rationality than younger people.

Because they are irrational, these choices are inconsistent with any stable goal and lower quality. This view is supported by more than just theory. Choi et al. (2014) finds a statistically significant correlation between rationality and wealth that is robust to conditioning on correlates of preferences, constraints, information, and beliefs.

In this new paper we investigate sources of the negative relationship between age and financial decision-making ability. We evaluate three hypotheses:

1. The negative relationship is not due to an underlying relationship between age and rationality, but is instead a "cohort" effect. The tasks required of people in economic experiments are relatively unfamiliar to those born before widespread use of computers and the Internet. Upon reaching their mid-50s, however, younger cohorts will not face the same difficulty and will appear just as rational as they did in their youth.

2. The correlation between age and rationality results from normal aging processes and can be accounted for by declines in other cognitive functions. In this view, age does lead to a reduction in economic decision-making ability, but this particular form of cognitive decline is not meaningfully distinct from other measures of it.

3. The average decline in financial decision-making ability with age is driven by those who have had important health problems.

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The quantitative importance of each of these sources of the relationship between age and financial decision-making ability has implications for policy and research. If older people make lower-quality decisions because they face unfamiliar economic environments, they could learn and adapt, and benefit from financial education. If the relationship is driven by cognitive decline associated with normal aging, then there is no additional need to make accommodation for older people in financial markets and finance-related government policies. If, instead, there is something special about financial decision-making ability, policymakers might focus resources on assuring that older people have the same effective opportunities as younger populations. Finally, if sharp declines in health drive the relationship between financial decision-making quality and age, then accommodations for older populations can be better targeted at those in poor health.

To assess the relative importance of these three sources of lower decision-making ability among older people, we analyze a replication and extension of the experiment in Choi et al. (2014), implemented with a sample about whose health and cognitive function we know much more. We study an experiment with more than 4,000 members of the Longitudinal Internet Studies for the Social Sciences (LISS) panel, a representative sample of more than 5,000 Dutch households.

Different from the survey used in Choi et al. (2014), the LISS contains relatively detailed health information. This information, includes self-reported health, and more objectively measures ability at activities of daily living. To this we added questions that ask respondents to implement particular allocations from budget sets. These questions are intended to test a respondent's ability to use a computer to navigate this choice environment. We also added classic tests of cognitive ability.

The main results are as follows:

- The LISS data reveal, after late middle age, an economically substantial and statistically significant negative correlation between age and measures of economic rationality in the experiment. Rationality scores are significantly lower for those age 63 and older.
- There is no evidence that the negative relationship between age and economic rationality in the experiment is attributable to a cohort effect. Conditioning on the ability of participants to implement a particular choice using the experimental interface does not alter the negative correlation between rationality and age. Older people are more likely to have trouble with the interface in this way, but this ability is not strongly correlated with violations of transitivity in the experiment.
- There is also no strong evidence that the correlation between age and economic rationality is the inevitable result of normal aging and its associated cognitive declines. Performance on the standard cognitive ability task is lower among older people in the sample, but conditioning on this measure of cognitive ability does not much alter the negative correlation between rationality and age. Thus, the lower levels of economic decision-making ability among older people appear to be a distinct phenomenon.
- There is no evidence that health is an important driver of the negative relationship between age and economic rationality. Older people who self-report worse health, are at an unhealthy weight, or report more difficulties with activities of daily living do not have lower decision-making abilities in the experiment.

The results of the study thus support the idea that age leads to declines in economic decision-making ability that are distinct from other forms of cognitive decline and are not primarily a consequence of declining health more generally.

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