How Real People Make Long-Term Decisions
The Case of Retirement Saving

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- In the U.S., many workers have to save themselves (a lot) if they want to achieve an adequate level of old-age spending.
- This may also be the case in some European countries in the future, in case that pension benefits will be reduced.
- So it's important to study the determinants of retirement savings.

Views on savings behavior

What matters according to the standard view are – only:

- Preferences over intertemporal risky consumption streams;
- Financial constraints.

However:

- These factors explain relatively little of the variation in retirement wealth (Bernheim et al., 2001).
- Existing evidence that planning causes higher wealth accumulation (Ameriks et al., 2003, Lusardi and Mitchell, 2007).
- BUT: Is literal planning really necessary for "successful" wealth accumulation" What about *simple rules of thumb*?
- Do people with a simple rule of thumb behave "as if" they were planners? ($\rightarrow$ Friedman's billiard player.)

Decision processes and retirement saving

In this paper, we analyze the relationship between three different decision processes and retirement saving.

- Working out sophisticated plans for literal optimization. $\rightarrow$ Planner type.
- No plan, but only simple rule of thumb, e.g. saving 10 percent of monthly salary. $\rightarrow$ Rule of thumb type.
- No systematic approach, "go with the flow." $\rightarrow$ Random type.

- Do decision processes matter for the decision outcomes?
- Do rule-of-thumb types behave "as if" they were planners?
- Does Friedman's "billiard player argument" hold empirically in the domain of retirement saving?

- We field an internet survey with the RAND ALP (August 2008).
- This allows us to collect novel data on decision processes.
- Traditional data sets lack the information that we interested in.

Measuring Types

PLAN1 *I've tried to determine my financial needs during retirement.*

PLAN2 *Have you ever tried to find out how much you should save in total today and in the coming years in order to finance your target needs during retirement?*

ROT1 *I have a saving target of regularly saving some percentage of my income, e.g. 5, 10, 15, or . . . percent.*

ROT2 *I have a saving target of regularly saving some amount of money, e.g. $100, $500, $1000, or . . . per month.*

Planner types: Agree to PLAN1 and PLAN2.

Rule-of-thumb types: Agree to ROT1 and ROT2 *and* are not planners.

Random types: the rest.

	Rule of thumb	Planner
Econ courses	2.26**	1.91*
N econ courses	0.88	1.02
Math confidence	1.11	1.34**
Health research	1.37***	1.76***
SS replac rate	1.02	0.74
DB plan	1.41	0.88
Access DC plan	4.04***	2.26
Time preferences	0.71	1.26
Rel risk aversion	0.97	0.95
Age	0.86*	0.97
Age^2	1.00	1.00
Income	1.00*	1.00**
House ownership	1.38	1.19
Married	1.03	1.33
Male	1.90**	2.10***
College	0.91	0.73
Advanced degree	1.02	1.27
N	440	

Results for wealth accumulation

	OLS	IV
Planner	1.24***	2.54**
Rule of Thumb	0.85***	3.35*
Soc Sec repl.	-2.10**	-2.12*
Time preferences	0.25	0.42
Risk aversion	-0.03	-0.02
Log income	1.12***	0.89**
House	1.44***	1.32***
College	0.45	0.42
More than college	0.73**	0.69**
[…]	[…]	[…]
Observations	440	440
R-squared	0.52	0.44

- I am highly confident in my mathematical skills.
- (1) During your school education (high school, college or graduate school) did you take any courses in economics or finance? (2) How many courses did you take?
- When I have to make a decision about health care, I do a lot of research to find out what all of the options are, e.g. on the internet or in the library.

First-step regressions for wealth accumulation

	Planner	Rule of thumb
Econ courses	0.03	0.11*
N econ courses	0.02	-0.03***
Math confidence	0.04	-0.00
Health research	0.07***	0.01
Soc Sec repl.	-0.06	0.06
Time preferences	0.07	-0.10
Risk aversion	-0.01	-0.00
Log income	0.07**	0.06
House	-0.01	0.05
College	-0.05	0.01
More than college	0.05	-0.03
[...]	[...]	[...]
R^2	0.16	0.06
Prob>F	0.00	0.03

Results for saving rates regressions

	OLS	IV
Planner	5.37***	18.22**
Rule of Thumb	7.18***	25.99**
Soc Sec repl.	-2.16	-3.11*
DB-plan	1.72	-0.30**
Access to DC-plan	1.75	-3.37*
Time preferences	2.10	3.02
Risk aversion	0.04	0.03
Log income	-1.32	-3.23*
House	-0.03	-0.22
College	1.36	1.44
More than college	4.92**	4.10*
[...]	[...]	[...]
Observations	447	447
R-squared	0.15	

Discussion

- *Planner = Rule of thumb* not rejected for any specification.
  $\rightarrow$ Main result!
- For OLS, rule of thumb types accumulate 2.3 times, planner types 3.4 times more wealth than random types. For IV, the effect is even larger.
- Our results are very robust. We find the same patterns for *saving rates* (flow instead of stock) and for alternative measures of decision making *sophistication*.

- Heterogeneity in decision processes does explain variation in retirement wealth.
- Planner and rule of thumb types accumulate a substantially higher amount of wealth than random types.
- Rule-of-thumb types behave "as if" they optimized by means of a careful plan.
- A rule of thumb is very effective for wealth accumulation.
- This may be good news for people who find working out a careful plan cognitively too demanding.
- We are not able to say anything on "optimality," however.
- Friedman was right, but only partially so.

- Main policy implication: People may react very differently to the introduction of a privatized pension system and to low replacement rates.
- If benefit levels are reduced, it may be desirable to communicate simple rules of thumb that are understood by everyone in order to promote adequate saving.