

# Fatalism, Locus of Control, and Retirement Saving

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August 17, 2009

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\*Department of Economics, University of Michigan, and Finance Department (Ross School of Business), University of Michigan respectively. We owe our ability to complete this project to critical assistance with survey design by Robert Willis, Jim Lepkowski and the students in the Winter 2009 Survey Methods Practicum course at the University of Michigan and critical financial assistance from the University of Michigan Survey Research Center and National Institute of Aging grant 2-P01-AG10179. We also thank Daniel Weagley for his expeditious research assistance at the analysis stage, and we thank seminar participants at Harvard and conference participants at the National Bureau of Economics for their insightful comments.

## Introduction

Even in almost identical circumstances, some individuals and households save a great deal, while others save very little. What accounts for these differences? Standard Neoclassical economic theory accounts for the lion's share of these difference by a single dimension of preferences, which goes by the names 'impatience,' 'time preference,' or 'utility discount rate.' Lesser factors used to explain differences in saving propensity include differences in the elasticity of intertemporal substitution that governs the responsiveness of saving to the real interest rate, risk aversion and the closely related strength of the precautionary saving motive, and differences in expectations about the rates of return on financial assets. However, all of these lesser factors combined can explain only a small fraction of differences in saving between people in similar circumstances. (See Laurie Pounder, 2007.)

In Neoclassical theory, time preference is so closely tied to saving that explaining differences in saving for people in similar circumstances by differences in time preference is close to saying that "Some people save a great deal because that is what they want to do, while others save very little because that is what they want to do." There are two problems with this. First, it is not much of an explanation, unless it is possible to explain where the differences in time preference come from. Second, this explanation assumes without argument that households are saving just the right amount as far as their private affairs are concerned (though benefits to others and to the economy as a whole of saving more or less might justify encouraging a higher or lower saving rate).

The trouble with going beyond the Neoclassical model, whether by trying to map out the sources of time preference, by modeling more exotic, non-Neoclassical preferences or by allowing for the possibility of households making mistakes in their level of saving is that there are so many factors that might matter for saving propensities. Leo Tolstoy famously began *Anna Karenina* by observing that "Happy families are all alike; every unhappy family is unhappy in its own way." Just so, as Kimball and Robert Willis (2009) put it: "There is only one way to do things right, but many ways to do things wrong." Possible mistakes come in many varieties, as do potential departures from Neoclassical preferences and potential underlying determinants of time preference.

How can economists narrow down the wide range of possible determinants of saving propensities? Even more crucially, what can economists do to minimize the danger of missing an important determinant of saving propensities? We argue that the best research strategy to make sure we don't miss an important determinant of saving propensities and to set appropriate research priorities is to cast a wide net by collecting rough-and-ready data on a wide range of possibilities. That data can then be analyzed to narrow the inquiry down to a smaller set of promising possibilities deserving of urgent further research. The most promising possible determinants of saving propensities then warrant serious theoretical development and more detailed data collection, especially if they have not been emphasized previously in economic research.

In our efforts to pursue this strategy, we were fortunate to have an opportunity to collect 15 minutes worth of additional data from the nationally representative sample used for the June 2008 Reuters/University of Michigan Survey of Consumers. The primary purpose of the Surveys of Consumers is to collect the data to construct the Index of Consumer Sentiment. Our rider on saving attitudes and behavior was funded by the University of Michigan Survey Research Center (to which we belong) as part of a Survey Methods Practicum course taught by James Lepkowski and taken primarily by Sociology graduate students. Along with Robert Willis, who worked with us on all phases of the survey design, we were chosen through an internal competition as the scientific clients for the course in the Winter, 2008 semester. In our effort to identify determinants of saving propensities that economists might otherwise miss, we thought it was an advantage to have the assistance of a class full of Sociology graduate students. We were able to do final editing

of the Survey of Consumers rider, but many of the questions we chose reflect the influence of these students. In addition, many of the questions arose from observing two focus groups of local adults conducted by the class.

In choosing questions for the rider, we took the perspective of Cognitive Economics. (See Kimball and Willis, 2009.) Since the middle of the 20th century to this day, many economists have felt that economists should focus only on data about people's outward behavior, such as their market transactions. Cognitive economists, such as Robert Willis and the two of us, reject this rule. We argue that it is important for economists to collect and analyze data on what is in people's minds, as well as what people do. Psychology was once dominated by Behaviorists, such as B.F. Skinner and John Watson, who felt that psychologists should concentrate only on explaining outward behavior, until cognitive psychologists successfully made the case that it was productive for psychologists to study internal mental states as well. We argue that economics should undergo a similar broadening.

## Results

Our key results came from looking at the relationship between measured saving propensity and various traits, attitudes, beliefs and opinions, after controlling for income, region of the country, years of education, sex, race, age and whether someone was a home-owner. The most important of these controls were income and region of the country. Those with higher income and those who live in the West show a higher saving propensity in our data.

As our primary measure of saving propensity, we asked people to imagine they had a new job and needed to choose what percentage of their salary to contribute to a 401(k) retirement savings plan. In one question, we asked them to imagine that every \$1 they contributed was matched by a contribution of \$1 by their employer. In the next question, we asked them to imagine that every \$1 they contributed was matched by a contribution of 25 cents by their employer. Most people chose to contribute the maximum of 10% in both situations (74% and 60% respectively), but sizable minorities chose to contribute less. We combined the answers to these two questions to form one index of saving propensity. In our other index of saving propensity, we also used answers to six other questions: whether survey respondents thought they had more, less or about the same amount of retirement saving as others of their age, income and family size; whether they had anything saved for retirement outside of employer retirement plans from current and past employers; the total amount of savings relative to income, controlling for age; what they would do with a windfall of \$1000 and two questions on what they thought of a government program of required saving. These questions asked survey respondents to imagine a government program that, in addition to Social Security taxes, required every worker under 65 years old to put an additional 10% of pre-tax income into a personal retirement account. The two questions were how easily they could adjust to that requirement and whether they would vote for such a program. (36% of respondents said they would vote for such a program.) Results were similar for both indexes of saving propensity.

**Self Control and Self Management.** For presentation, let us organize our 34 traits, attitudes, beliefs and opinions relevant to saving into about nine groups. The first two groups, "Self-Control and Self Management" and "Planning, Thinking and Budgeting" have been emphasized in the economics literature. In particular, in these two areas, ad hoc teams from each of three groups of authors have written many papers on the determinants of saving: (1) George-Marios Angeletos, John Beshears, Christopher Carroll, Christopher Chabris, James Choi, Xavier Gabaix, Christopher Harris, David Laibson, Brigitte Madrian, Andrew Metrick, Carrie Morris, Andrea Repetto, Jonathon Schuldt, Jeremy Tobacman, Dmitry Taubinsky, Stephen Weinberg, and Brian Weller; (2)

Robert Alessie, Vilsa Curto, Erik Hurst, Adam Keller, Punam Keller, Annamaria Lusardi, Olivia Mitchell, Peter Tufano and Maarten van Rooij; and (3) John Ameriks, Andrew Caplin, Steven Laufer, John Leahy, Tom Tyler and Stijn van Nieuwerburgh. The first group of authors also established in a striking way the importance of inertia in affecting saving behavior: the default settings in retirement savings plan have a big effect on how much people save for retirement.

The best evidence we know of for the importance of self-control is in the data collected by Ameriks, Caplin, Leahy and Tyler (forthcoming). They find that among those who feel they should be saving more, better self-control seems to raise saving. However, they find there are also people who feel they should be consuming more quickly and so saving less. Among those who feel they should be saving less, better self-control reduces saving. Their finding that their measures of self-control interacts with their measure of the gap between desired and actual saving in determining saving gives a reason why it might be difficult to clearly identify the effects of self-control in the absence of data on the gap between desired and actual saving.

Nevertheless, we find it striking that in our data, of the eight questions in the "Self-Control and Self-Management group, the only one with a statistically significant relationship with either saving index at even the 10% level is set of agree/disagree responses to the statement "I often make impulse purchases." We found no relationship between what can easily be accounted for by chance between our measures of saving propensity and the degree of agreement with any of the following statements: "I have problems with self-control," "I am very thrifty," "breaking a rule gives me a feel of freedom," "I can stick with a task until it is done, even if it is unpleasant," "Before I buy something I ask myself if I am really going to use it," "Before I buy something I think twice to make sure it is something I really need," and "Pretending to yourself that you have less money than you really do is a good idea." Of these indicators of self-control and self-management, the question for which additional data would be most valuable is degree of agreement with "I can stick with a task until it is done, even if it is unpleasant. Responses to this statement have a relatively strong correlation with the propensity to save, but so few people admit to being unable to stick with a task until it is done that there is a high degree of uncertainty about the correlation between being able to stick with a task and saving. Overall, it is not easy to find indicators of self-control and self-management that correlate with our measures of saving propensity.

**Planning, Thinking and Budgeting.** By contrast, it was very easy to find strong relationships between measures of planning, thinking and budgeting and the propensity to save. The relationship of the answers to "How much have you thought about retirement?" with our saving index confirms a result of Lusardi (2003). The statement "I enjoy planning for activities like vacations well in advance" is not exactly the same as the Ameriks, Caplin and Leahy (2007) question "Before I go on vacation, I spend a great deal of time examining where I would most like to go and what I would like to do," which they used as an instrument for planning, but it barely misses statistical significance at the 10% level. The significant results for "Thinking about money stresses me out" tend to confirm the discussion in Lusardi (2003) about the effects of the cognitive and emotional costs of planning, while the results for "I often wonder 'Where did all my money go'" tend to confirm the emphasis in Ameriks, Caplin and Leahy (2007) on budgeting. The only weak relationship in this group is the weak and statistically insignificant relationship between the propensity to save and willingness to say "I am good at seeing the big picture."

**Institutional Trust and Reliance on Others.** We found trust in institutions to have a strong relationship to saving propensity. In particular, even in June 2008, before the recent financial crisis, levels of agreement with the statement "If I try to save through financial institutions, someone is likely to figure out a way to cheat me out of the money" had a strong relationship to the propensity to save.

As for reliance on others, before we collected the data, we guessed that many people would

explain their lack of saving by saying that the government or their children would take care of them in old age. We found no evidence of this. Indeed, those who agreed that "Whether for political or other reasons, the US government will always make sure that senior citizens have basic food, shelter, clothing and medical care," had a *higher* propensity to save. We found a similar, but weaker pattern (and one that is uncertain given the amount of data we have) of those agreeing that "Even in the worst case, I will be OK financially when I am old because I will have government programs to fall back on" having a *higher* propensity to save than those who thought they could not trust the government to ensure they would be OK financially. Finally, while those who agreed that "My children will make sure that I am OK financially when I am old" had a slightly lower propensity to save, the relationship was weak enough it could easily be due to chance—the weakest relationship in this group of attitudes.

**Attitudes Toward Being Careful with Money, Mild Attitudes Toward Saving, and Social Pressure.** It would be reasonable to expect that those who believe that people in general *should* save more would themselves save more, even if these attitudes were expressed in a relatively mild way. It is natural to think that those encouraged by parents to save more would save more. And it is natural to think that those who have negative things to say about being careful with money would save less. Out of the 11 measures in these three groups, the only one related at a statistically significant level to saving propensities in the direction we expected was agreement with the statement "It is nice to have money saved up, but you have to live." This was negatively related to the propensity to save. At even the 10% level, the only other statistically significant relationship among these 11 measures was that those who agreed that "Money doesn't buy happiness" seemed to have higher saving propensities. As expected, agreement with the closely related pair of statements "Most Americans save too little" and "most Americans borrow too much" had substantial positive relationships with the propensity to save, but so few people disagreed with these statements that statistical uncertainty remained about those relationships. And strikingly, we found only weak, insignificant relationships between agreement with each of the following and the propensity to save: "Thinking about money all the time, even when you have enough is a terrible way to live," "I really respect people who have managed to save a lot of money," "My parents or guardians encouraged me to save," "When I was growing up, my parents were good at saving their money," "I would hate to have people think I am careless with money," "I would hate to have people think that I am stingy with money," and "I would feel guilty about going bankrupt, even if I had to."

**Strong Judgments.** The exceptions to this rule of weak relationships between attitudes toward saving and borrowing with our measures of propensity to save are two very strong statements about saving and borrowing. Large majorities of our respondents (76% and 69% respectively) agreed with the very strong statements "People who don't save for retirement are being irresponsible," and "Using a credit card without paying off the balance every month is really stupid." But those who disagreed had significantly lower propensities to save. We find this result intriguing. Perhaps the desire to avoid doing something that you and others condemn is a stronger motivation than the desire to do something that you and others praise.

**Fatalism and Internal vs. External Locus of Control.** In what we felt was our most interesting and novel set of results, every one of our four measures of fatalism and locus of control had a statistically significant relationship to the propensity to save. In other words, a respondent had a significantly lower propensity to save if they agreed with one of these statements: "If you don't let yourself get too worried, everything tends to work out in the end," "No one can predict the future, so trying to save doesn't do much good," "It is difficult to stay ahead financially because of the things my family members want to buy," and "Many of the things that keep me from saving more money are out of my control." What all of these statement share is the idea that outcomes are, in important measure, beyond one's control—that things will turn out in a particular way regardless

of what one does. The opposite would be to believe that one can affect one's own future and find a way to accomplish one's goals despite obstacles. Such a feeling that one's actions make a difference is associated with a higher propensity to save, while a feeling of helplessness or the unimportance of one's own efforts in the face of circumstances is associated with a lower propensity to save.

There is evidence for the importance of belief that one's actions can make a difference in the quite different context of choosing how hard to study in school. In his 2009 book *Intelligence and How to Get It: Why Schools and Culture Count*, Richard Nisbett discusses impressive evidence from a number of field experiments that students who watch videos showing how the brain can rewire itself in response to academic effort, thereafter perform much better academically than those not shown the videos. If one's actions don't make a difference, why try? But if one's actions matter, then it is worth trying hard. Saving, like studying, can be hard. So a belief that one's efforts in saving make a difference could be important in motivating saving.

## Conclusion: Directions for Future Research

In addition to its substantive importance, the surprisingly strong relationship we found between fatalism and external vs. internal locus of control is an excellent example of how people's mental models of the world can make a difference to their actions. The importance of trust vs. distrust of financial institutions and of having thought about retirement also indicate the importance of people's mental models. Thus it is important to gather data about their mental models, rather than assuming that people's mental models match the mental models of the economists who are studying them.

The results from this initial foray also provide more specific guidance for further research. First and foremost, we are eager to collect more data and develop more sophisticated theory about fatalism and internal vs. external locus of control. Second, it is important to rethink our approach to measuring self-control issues—among other things, taking more guidance from Ameriks, Caplin, Leahy and Tyler (forthcoming). Third, in this paper as in many others, evidence continues to accumulate of the importance of planning and budgeting as determinants of saving. Most strikingly, moving one point on a five-point scale of agreement with "Thinking about money stresses me out" lowers the full saving index by a full quarter of a standard deviation. Fourth, given recent events that could lower trust in financial institutions—and perhaps in the government, the seeming importance of institutional trust on saving is a matter for concern and future research. Fifth, we find the contrast between the strong correlations of strong judgments about saving and credit cards and the weak correlations of milder attitudes toward saving and social pressure telling. For many people, saving is not an easy thing to do, and mild admonitions may not be enough. Avoiding one's own self-criticism may be one of the most powerful motivations in existence. Obviously, there is a direct utility cost to self-criticism and to being criticized by others, so there is a tradeoff here. But the threat of strong judgments may have its place if in a particular situation there is no better way of getting the job done. It is important for future research to verify whether it is true more generally that behavior can be predicted better by the few opinions one is willing to state very strongly than by the many opinions one is only willing to state mildly.

Let us end with the reminder that future research beyond our initial foray must confront more squarely the question of causality. For example, do people who condemn running a credit card balance avoid it, or are people simply unwilling to condemn something they do themselves? The greatest single boon we can envision for testing such issues of causality would be to collect data on saving-relevant attitudes from young adults before they begin their independent economic lives in earnest, and then to track the subsequent evolution of their attitudes and economic behavior.

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