

**Procrastination, Present-Biased Preferences, and Financial Behaviors**

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It is intuitive that procrastination may be the enemy of good financial planning for retirement: financial planning involves near-term actions with distant consequences, and it is easy to put it off when faced with more immediate temptations or demands on one's time. Indeed, the trade-off between near-term costs and distant consequences is the reason that economists treat procrastination as stemming from present-biased preferences (e.g., Akerlof 1991, O'Donoghue and Rabin 1999). Surprisingly, however, there is very little empirical research to confirm or refute the idea that procrastination has a meaningful effect on financial security in retirement, and virtually no empirical work showing that procrastination arises from present-biased preferences. This paper seeks to fill that void by providing robust evidence that procrastinators behave differently than non-procrastinators when it comes to major actions related to financial preparation for retirement. We then discuss why the existence of present-biased preferences is the only theory that is consistent with the entirety of our empirical results.

We construct a novel empirical measure of procrastination based on actual decision-making delays, an approach that can be easily implemented using administrative data on benefit choices. Specifically, we measure procrastination by whether an individual waits until the last day of an open enrollment window to make their health care plan election. We label those who wait until the last day as "procrastinators," whereas those who make their health care plan election in advance of the deadline are labeled as "non-procrastinators." We then examine how procrastinators differ from non-procrastinators when it comes to five financial behaviors that are important for retirement planning; and we find significant differences for all five. Relative to non-procrastinators, we find that procrastinators: (1) are less likely to participate in supplemental savings plans; (2) conditional on eventually signing up, take longer to join; (3) contribute less; (4) have a higher fraction of their portfolio in default portfolio options and are more likely to have 100 percent of their portfolio invested in the default portfolio; and (5) are less likely to annuitize (i.e., more likely to take the lump sum option) from a defined benefit plan.

Having established a robust correlation between procrastination and important financial behaviors, we then turn to the task of showing that our measure of delay is indeed a measure of procrastination that derives from present-biased preferences. We do this by ruling out alternative stories, including optimal delay, rational inattention, or the basic notion that individuals may simply be busy or disorganized. We conclude that the only hypothesis that can explain the entirety of our results is that individuals with present-biased preferences are more likely to

procrastinate, and that this combination of preferences and behavior lead them to behave quite differently from non-procrastinators when it comes to preparing for retirement. These results clearly indicate that non-optimizing procrastinators are making decisions that are, on average, detrimental to their future retirement security.

These results have wide-ranging implications. At an intellectual level, our results provide what is, in our view, the most direct and robust evidence to date in support of recent economic models of present-biased preferences. From a research perspective, our results suggest that measures of decision-making delays can be a good empirical measure of present-biased preferences. Our results are also relevant to policymakers and those responsible for designing retirement plans. For example, our evidence suggests that procrastination is an important underlying reason why default options (such as automatic enrollment in 401(k) plans) are so powerful. We also show that procrastinators are more heavily influenced by some aspects of plan design, such as the use of default investment portfolios. Knowing that present-biased preferences are a pathway through which plan architecture matters is informative for how to design other behavioral interventions. For example, these results suggest that plan architects may find it fruitful to use tools to address procrastination and present-biases directly, such as through forcing choices, changing the incentives around deadlines, or increasing the salience of future payoffs. This should help guide future research on the relative efficacy of alternative plan design interventions.

## **References**

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