

The Role of Time Preferences and Exponential-Growth Bias in Retirement Savings

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Key Findings and Policy Implications

This paper analyzes the extent to which time preference, present bias and exponential growth bias influence retirement saving behavior. The methodology included the fielding of an online survey, administered to both the RAND American Life Panel, and the Understanding America Study at the University of Southern California. The paper finds that:

- All three factors are highly significant in predicting retirement saving. People who discount future values at a higher rate save less. People with a stronger present bias (the tendency to value utility in the present over the future in a dynamically inconsistent way) save less. And people with a stronger exponential growth bias (the tendency to neglect compounding) save less. Lack of self-awareness of these biases has an additional independent negative impact on retirement savings.
- Quantitatively, a one standard deviation change in the long-run discount factor is associated with approximately \$20,400 less retirement wealth (relative to a mean of \$132,926). A one standard deviation increase in present bias is associated with approximately \$12,700 less in retirement wealth. A one standard deviation increase in exponential-growth bias is associated with \$13,400 less on retirement savings.
- After employing an instrumental variables strategy to correct for classical measurement error, a causal interpretation of our estimates suggests retirement wealth could increase by as much as 70 percent if present bias and exponential growth bias were eliminated.

The findings have important policy implications, particularly in demonstrating the degree to which common financial biases can dramatically alter saving behavior. The results underscore the importance of financial literacy as a policy aim. Also important is that the measured behavioral parameters are distinct and unlikely to stem from the same underlying factor, suggesting that a single policy tool is unlikely to address all of the misallocations these biases may cause.

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