Regret Aversion in Prize-Linked Savings: Evidence From Kenya

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Motivation

- One behavioral approach: build decision theoretic models that reflect psychological processes.
- There is strong evidence that regret is an important factor in our decision making.
- Preferences incorporating regret aversion have been used to rationalize Allais and explain why (risk-averse) individuals play lotteries.

Motivation

Regret

"...a negative, cognitively based emotion that we experience when realizing or imagining that our present situation would have been better, had we decided differently."

Preferences depend on comparison between realized outcomes and foregone outcomes (Bell 1983; Loomes and Sugden 1982).

$$EU(f|f, g \in B) = \sum_i p_i \cdot Q\left(u\left(f_i\right) - u\left(g_i\right)\right)$$

Research Question

- Does regret aversion induce greater participation in prize-linked savings? (Yes)
- How does the effect of regret aversion change over time?
  1. Repeated experience can make the feeling of regret more salient.
  2. Regret aversion may have diminishing sensitivity.

Overview

1. Use experimental data from a savings experiment conducted in Nairobi.
2. Estimate a one-shot model of regret aversion using first period data in a calibration exercise.
3. Propose a model of dynamic regret aversion.
4. Test for decreasing/increasing effects over time.

Data

- 311 respondents from informal settlements in Nairobi
  1. Matched incentives account (105)
  2. Lottery-linked account (103)
  3. Lottery-linked account with regret (103)
- Lab component at baseline
  1. Risk aversion
  2. Temporal discounting
  3. Willingness-to-pay to play a lottery
  4. Internal locus of control
  5. Gambling questionnaire
  6. Demographics questionnaire
- Observed transactions over a 60-day period
- Endline questionnaire

Experiment

Matching

- Fixed 5% match on daily deposits
- Contributions dispayed at end of day

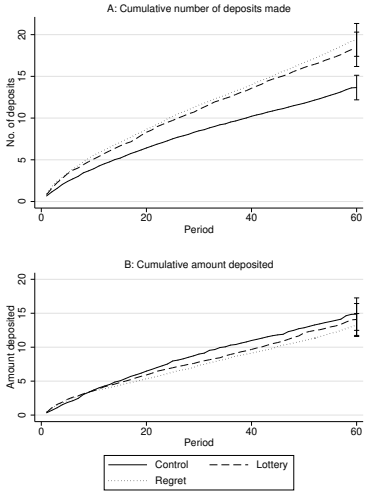
Lottery

- Entered into a daily lottery if saved a non-zero amount
- Prize equal in expectation to 5% match

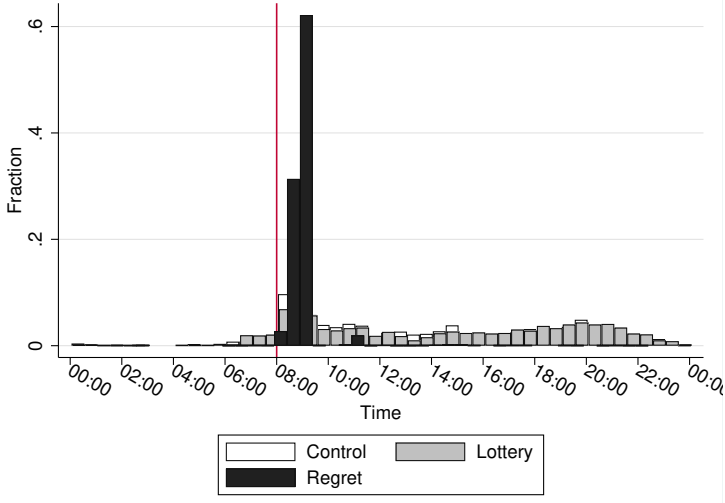
Lottery with Feedback

- Payoffs identical to lottery group
- **Lottery outcomes provided every morning regardless of deposit**

Preliminary Results



Preliminary Results



Literature

1. Lottery incentives motivate individuals over non-stochastic incentives (Atalay et al. 2014; Cookson 2016; Dizon and Lybbert 2016; Filiz-Ozbay et al. 2015; Herskowitz 2016).

2. “Behaviorally-informed” savings technologies in developing countries (Akbas et al. 2016; Ashraf, Karlan, and Yin 2006; Dupas and Robinson 2013; Karlan et al. 2010; Thaler and Benartzi 2004).

3. Empirical tests of regret aversion using feedback manipulation (Filiz-Ozbay and Ozbay 2007; Zeelenberg and Pieters 2004; Zeelenberg et al. 1996).

4. How is this different from reference-dependent preferences? Maybe not.

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