Referee Report: "The Role of Regret in Prize-Linked Savings: Experimental Evidence from Kenya"

Summary

This paper asks whether delivering stochastic interest payouts, as opposed to certain returns, affects the savings behavior of low-income Kenyans. In order to do this, the authors worked to set up their own custom savings program, run through M-Pesa, Kenya's mobile money service. Participants saved by texting airtime to a project phone, which held the credit (plus any matches/interest) in the beneficiary's account. Beneficiaries had an opportunity to withdraw after 30 days, then another 30 day cycle took place, and then the program ended, with balances sent back to participants in mobile money. All individuals in the study receives some form of mobile savings account. In "control" condition, each deposit received a certain 5% match. In two prize-linked savings (PLS) treatments, deposits instead entered participants into a daily lottery, which yielded a 5% return in expected value. In one PLS treatment arm, participants were assigned lottery tickets even if they did not saved and informed if they won (or would have won, had they made deposits – I'll call this PLS-D for disclosure); in the other arm, lottery numbers and results were only disclosed to individuals who deposited (PLS-N for "no disclosure").

The authors find that PLS increases the number of days participants deposited, but not the total amount deposited. While there are no significant differences in number of deposits in the PLS-D and PLS-N arms, the authors observe qualitatively more deposits in PLS-D. They hypothesize that this is because of regret aversion – individuals are motivated to deposit more to avoid the "regret" associated with getting a winning ticket but not having made a deposit. To test this, they show that non-depositors in PLS-D are significantly more likely to deposit the next day if they were informed they had a winning ticket on the previous (non-deposit) day.

Comments

The paper is overall well written and easy to read. I do, unfortunately, see a couple limitations that the authors can't really do anything about:

- The paper is underpowered: with just over 300 participants spread across three treatment arms, the authors don't have enough power to reject non-trivial shifts in key outcomes – especially once a FWER correction is applied. For example the standard error on "total deposit amount" is around 3 (see Table 3); but the control mean is 14.87 – which means that a 30% increase in deposits would not be statistically significant.
  - Generally the paper is clear on this, but you over-interpret a bit at times when comparing PLS-D and PLS-N (especially in the introduction/when you say regret aversion accounts for 20% of the change in deposit behavior). The paper should always be clear that you cannot reject equality.
- External validity is limited: the authors built a custom product – it was not offered by a bank, but rather the Busara Center for Behavioral Economics. The product

only lasted for 2 months (did people know this in advance?) and ran off of transferring airtime to a project phone. Participants were drawn from Busara's pool of respondents (so presumably they have past experience participating in research studies? Do you know how many had gone through Busara projects before?). I am not inherently opposed to studies that leverage niche populations or designs, but it would be useful to see a little more discussion of how you think this might matter – specifically I worry that individuals may have limited deposits because they didn't trust the product/were worried they wouldn't get their money back.

  - Indeed, given that (as I understand it), respondents got 5% of a deposit no matter when they deposited. This is an extraordinarily high interest rate: you could, theoretically, deposit your life savings in the product on day 29, pull it out on day 30, deposit again on day 59, and take everything out on day 60. Based on the graphs it didn't look like many people did this, but if not, why do you think this sort of strategic behavior was limited.

There are also some more actionable things I think the authors should consider:

- The second test of regret aversion is compelling, but I don't think it rules out an alternative explanation, which is that people revise their expectations of being "lucky" up when they are told they had a winning ticket. In fact you have evidence from the endline that beliefs about luck shifted. One way to test this would be to run the same test for people who deposited on day t-1 (so they actually won/didn't experience regret). There would be some income effect bundled in here, but I'd expect that would be small for most given how small deposits are.

- It would be useful to show the text of the messages people got in an online appendix so the reader can better understand the nature of the treatments

- PLS may have been a poor substitute to gambling in your setting because of the commitment aspect of the product: lottery winners cannot immediately access their winnings, which strips out the immediate gratification aspect gambling typically has

- You mention a PAP but don't discuss how your methods relate to it. I would make clearer in the discussion how you follow/deviate from the PAP.