

Savings: Behavioral Barriers to Savings

14.740x: Foundations of Development Policy

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In previous lectures we discussed what a household would do to smooth risk with borrowing and savings. We saw that if they can borrow and save, they will try to maintain a smooth consumption profile, especially if the shocks are temporary. Another reason to save, for a household that wants to invest in a business, is to accumulate some collateral and thus increase how much they can borrow.

However, we did not discuss the possibility that households have difficulty saving.

Two sources for those possible difficulties:

- External:
- Internal:

Savings Constraints

If you want to save, where can you keep the money?

Why may a bank be reluctant to keep small savings account? Is this because they are evil? is there an easy solution to this problem?

Poor households use all sorts of ways to save:

- Self Help Groups
- Rotating Savings and Credit Associations (roscas)
- Productive assets (e.g.: Bullocks)

Possible sources of inefficiency:

- Roscas: you don't get the money when you need it.
- Deposit collectors (who will charge negative interest rates to take the money)
- Productive assets : what will you do with ONE bullocks! (Rosenzweig and Wolpin).

An experiment which tries to test the idea that households may be “savings constrained” (Dupas and Robinson, 2009). Open free savings account for small business owners at a local bank and waive the opening fee, which is normally \$7 (for business owners who make on average about \$2 a day). The accounts have no interest and a withdrawal fee of 50 cents for transfers below \$8, 80 cents for withdrawals between \$8 and \$15 and \$1.5 above. At baseline, 2% of people had an account. Researchers did a baseline with 300 people, and randomly selected half of them, to whom they offered to pay the opening fees for a savings account.

After 6 months, they had people fill daily log-books on business activities and expenditures, for about 3 months. Usage: See conditional distribution function of savings. What is the main finding?

Results:

- Increase in investment in the business.
- Some increase in consumption
- Decrease in sensitivity to shocks.

Savings and Self-Control

- We just reviewed “external” savings constraints. In fact there may also be “internal” constraints. In fact, there must be such constraints, because otherwise, there would be ways to save for individuals:
- Vegetable/fruit vendors in Chennai
- Simple production function Purchase fruit in the early morning Sell through day
 - Key features of this production function: Continuous Daily Need for working capital How do they finance it?
- Why are people borrowing at 5% per day
- And not saving.
- Different way to frame it All borrowers have access to a high return “investment”: use money to borrow less

Benefits of saving

- Hard to comprehend what 5% a day actually means
- Consider the following strategy Drink one less cup of tea every day (or some thing else small). Reinvest this money back into business
- Compounding implies: in 30 days will have doubled income.
- Why don't they

Why don't they?

- Mismeasuring 'true cost' of the loan
 - Desire to keep relationship with money lender
 - Default rates high Can't borrow a little less
- Conceptual explanations
 - Inability to cut back on consumption (Stone-Geary)
 - Vendors discount the future a lot
 - Vendors don't understand compounding
 - Vendors don't have access to savings
 - Vendors face within family conflicts that lower returns to savings
 - Vendors face self-control problems

Experiment

- Two treatments. Cross-cut
- Buyout Give a cash grant enough for individuals to buyout their debt
 - Working capital on a good day (gotten from the baseline survey). As high as 3000Rs.
- Training Half day class where they:
 - Worked out how much they've spent in total on interest rate
 - Benefits of cutting down: illustration
 - Discussed what they could have done with the money
 - Brainstorm on ways to cut down

Potential hypotheses

- Training is to pick up the effect of financial literacy
- If they cannot cut back consumption then the buyout should put them on a path to save
- If they cannot save, they should be able to stay where they are unless they get hit by a big shock
- If they are impatient/self-control problems, they should fall back fast.

Data and Results

- Philippines:
 - Follow up surveys occur 2 weeks 6 weeks 10 weeks
- India:
 - Follow up surveys occur 3 months 6 months 12 months
- People fall back relatively rapidly
- No effect of training

Other examples

- They could use the savings account more systematically (Dupas-Robinson experiment)
- They could use fertilizer on their field, which is divisible, high returns (fertilizer in Kenya).
- They could invest more in their businesses (in Hyderabad, we calculate that spending just a little less on health would allow them to double their capital stock).

Hyperbolic discounting

We have seen that people may have preference that exhibit “hyperbolic discounting”:

With 3 periods, the individual maximizes:

$$\max u(c_1) + \beta[u(c_2) + \delta u(c_3)]$$

People will tend to save relatively little in this model: they will always wait till tomorrow to save (since today is important). They will tend to procrastinate.

Demand for Commitments Savings in the Philippines

If people have hyperbolic preferences and are at least in part aware of this, they should demand commitment devices, to tie their own hands. Moreover, those who get the option to tie their own hand should be able to save more.

Demand for Commitments Savings in the Philippines

These conjectures were tested in a randomized experiment in the Philippines.

Work with 1,700 clients of a microfinance institution in the Philippines, which offers savings account. Introduce a new savings product with a commitment feature.

Questions:

- Will anybody take it up?
- Will individuals identified as hyperbolic be more likely to take it up?
- Will it result in increased savings (for those offered/for those who take up)?
- Can we make sure it is the effect of the commitment and not something else?

Experimental Design

1,700 existing clients are randomly assigned to one of three groups:

- Treatment group (offer of commitment savings product is made during home visits).
- Marketing group (value of commitment is extolled during home visits but no product is offered).
- Control group: nothing is offered.

Before anything is offered, individuals are surveyed, including questions to evaluate whether individuals are likely to be hyperbolic. Savings in this bank and other banks are measured after 6 and 12 months.

Commitment Treatment

Individuals can choose to set either a time goals (I will leave the money in the account until X date) or a amount goal (I will not take the money out until I have reached a particular sum). The decision is theirs, but once they have decided they cannot withdraw the money until the target is achieved. They are given a certificate which says for what they are savings They are also offered a lockbox to put accumulate their savings before they go deposit it to the bank (low barrier comitment).

Marketing Treatment

Individuals receive a home visit, and they are encourage to set themselves a goal (either time or an objective). They are given a similar certificate However, they are not offered an account with commitment features. (they are not allowed to open one even if they hear about it).

Results

Did any body take this up 202 accounts were opened?

- 50% of the account stayed at the minimum deposit after 12 months.
- Half of clients did more than one contribution.
- Fewer people (62) chose the amount goal than the time goal (147).
- Those who did the amount goal saved much more.
- Nobody tried to withdraw before maturity.
- Accounts who reach time or amount maturity all rolled over.

Results

Did the people who are hyperbolic take it up? Survey questions try to elicit “preference reversal” that could indicate hyperbolic behavior.

- Would you prefer P200 today or P300 guaranteed in a month?
- Would you prefer P200 in 6 months or P300 guaranteed in 7 months?

In the table The light grey indicate preference reversal in the expected order. Note that people also reverse their preferences in the opposite order. Could be time-inconsistencies, or mistakes, or worry that the future is uncertain.

Does reversal predict take up of the product? Yes for females, not for males.

Results on Savings

Balances after 6 months are significantly higher in commitment savings group. Large effect in proportion (savings in control groups are rather small). Effect is due to commitment: there is no significant increase in balance for the marketing group (though the estimate is large too...)