

The Role of Savings in Developing Countries: A Review of the Microeconomic Evidence

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October 28, 2020

Some stylized facts about formal saving in developing countries

- 63% of adults in developing countries have accounts and 21% saved in an account in the past year (Global Findex)
- Saving in formal accounts increases investment and consumption in some contexts
- Behaviorally-informed design of accounts can increase savings balances and improve welfare impacts
- But mechanisms and magnitudes of impacts of basic accounts and variants are sometimes hard to understand

Saving

Why save?

- Precautionary savings: to be able to consume in a future period that includes a negative income shock
- Consumption smoothing: to be able to smooth consumption across (anticipated) periods of high and low income
- Indivisible purchases: to buy or invest in things that cost more than one period's discretionary income

What keeps people from saving?

- Frame the question more precisely: what causes people to save less cash than optimal, *given the relevant constraints, returns, and marginal utilities of consumption?*
 - important to recognize that low levels of saving may be optimal for very poor households
 - for these households, the appropriate policy response involves social protection schemes and strategies to increase potential earnings
 - and, when real interest rates are low, then low levels of cash savings may be optimal
- Distinguish between obstacles to *saving* and obstacles to *saving in a formal bank account*
 - emphasis on constraints to HH behavior and on liquid savings
 - will not discuss low returns to investment or market conditions for financial institutions

Obstacles to saving

- Self control problems: time inconsistent preferences that result in saving less (spending more) than planned, and in saving (consumption) that is later regretted
- Other control problems: inter-household or intra-household, including social pressure to share income
- Lack of salience: inattentiveness to future benefits of saving

Obstacles to saving

- Self control problems: time inconsistent preferences that result in saving less (spending more) than planned, and in saving (consumption) that is later regretted
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- Lack of salience: inattentiveness to future benefits of saving
- Negative return to saving at home: “no place to save”
 - may be poorly defined or derive from one of the constraints listed above
 - actual incidence of theft or destruction of cash appears to be low

Framework

- Objective: review the empirical evidence about the welfare impacts of formal savings products through a framework of savings objectives and constraints
 - increases in savings balances are not the same as improved welfare
- Strongest evidence is about encouraging account opening (“take-up”)
- Gaps in knowledge about
 - increasing use of accounts
 - the match between products or interventions and households’ savings needs
 - the welfare impact of accounts, especially in the medium or long run
- Focusing on the match between constraints and needs can improve the design of products and increase welfare

Improving welfare through formal accounts by matching constraints and motives for saving

	Precautionary savings	Consumption smoothing	Indivisible purchases
1. Self control problems	savings groups savings defaults account labeling goal setting	commitment accounts savings groups savings defaults account labeling goal setting	commitment accounts savings groups savings defaults account labeling goal setting

Improving welfare through formal accounts by matching constraints and motives for saving

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Review of the empirical evidence on saving

Self control problems and precautionary savings

Defaults, labeling, goal-setting

- Limited evidence about general precautionary savings
- Labeled accounts for health goals did not affect ability to afford medical care in Kenya (Dupas and Robinson 2013)
 - combination of labeling/goals plus commitment *did* improve ability to cope with shocks
- Goal setting and peer monitoring increased precautionary savings among MFI borrowers in Chile (Kast and Pomeranz 2018)
- 44% of savers in Peru choose to set goals for “emergency” savings; reminders increase savings (Karlan et al. 2016)
- Funds in commitment accounts in the Philippines were rolled over, not withdrawn (Ashraf et al. 2006)
- Commitment to save from tax refund in the US (Refund to Savings 2013) had modest effects

Self control problems and consumption smoothing

Commitment, defaults, labeling, goal-setting

- Proxy outcomes: food security, lean season consumption
- Savings groups increased food security and lean season consumption in Mali (Beaman et al. 2014)
 - includes commitment to deposit and deferred, lean season pay-out
 - also provides goal setting and monitoring (oral accounting system)
 - and access to loans – not a full commitment model, might have increased take-up

Self control problems and indivisible purchases or investments

Commitment, defaults, labeling, goal-setting

- Most extensively studied constraint-outcome pair
- There is demand for commitment, especially among those with hyperbolic preferences (Ashraf et al. 2006, Gine et al. 2016, and others)
 - failure to follow financial plans is driven by hyperbolic preferences (Gine et al. 2018)
- Commitment not to withdraw increase the amount saved (Ashraf et al. and others) and invested (Gine et al.)
 - but savings are rolled over after maturity in the Philippines
 - and commitment accounts apparently have effects despite very low balances in Malawi

Self control problems and indivisible purchases or investments

Commitment, defaults, labeling, goal-setting

- (Soft) commitment to deposit does not reduce future reliance on loans for borrowers in Guatemala (Atkinson et al. 2013) and increases borrowing and crowds out other saving for heavy overdrafters in Ghana (Buehren et al. 2018)
- Labeled accounts had bigger effects on preventative health *without* commitment (Dupas and Robinson 2013)
- Reminders to deposit that invoke goals increase deposits when there is a financial penalty for not adhering to the plan in Peru and Bolivia (Karlan et al. 2016)

Self control problems and general increase in savings

Defaults

- Deposit collectors for high-interest accounts in Sri Lanka increased savings by inducing higher labor supply and income (Callen et al. 2016)
 - among those with regular income but no bank use in the last month
 - no evidence of change in transfers or consumption
- Mixed evidence about the effect of direct deposit on savings accumulation
 - DD of weekly payments increased savings through reduced consumption; repeated interaction developed trust in bank (Somville and Vandewalle 2018)
 - DD of a large one-time payment in Malawi did not increase savings balances or affect consumption (Brune et al. 2018)
- Understanding savings goal could inform the type of account to use for direct deposit

Other control problems and precautionary savings

Labeling, goal-setting

- Limited direct evidence about this constraint-objective pair
- Suggestive evidence that some earmarked health accounts are more effective for married than single women (Dupas and Robinson 2013)

Other control problems and consumption smoothing

Commitment, savings groups, labeling, goal-setting

- Limited direct evidence about this constraint-objective pair

Other control problems and indivisible purchases or investments

Commitment, savings groups, labeling, goal-setting

- Those with different preferences from spouses are most likely to deviate from a consumption plan (Gine et al. 2018)
- Kenyan women with “intermediate” bargaining power most likely to join ROSCAs (Anderson and Baland 2002)
- Commitment accounts do not change the value of transfers made or received in Malawi (Gine et al. 2016)
- Married women benefit more from labeled health accounts than single women; “providers” use health commitment accounts (Dupas and Robinson 2013)
- Basic bank accounts increased investment and profits for female market vendors in Kenya (Dupas and Robinson 2013)

Lack of salience and precautionary savings

Reminders

- Limited direct evidence about this constraint-objective pair
- Reminders to deposit alone do not increase savings; only effective when specific goal is invoked (Karlan et al. 2016)
- Text message updates on savings progress increase deposits but have marginal effects on savings balances (Kast et al. 2018)
 - cannot separate reminders from anchoring

Lack of salience and consumption smoothing

Reminders

- Limited direct evidence about this constraint-objective pair

Lack of salience and indivisible purchases or investments

Reminders

- Limited direct evidence about this constraint-objective pair
- Reminders to deposit (into soft commitment accounts) increased savings balances but not reliance on future loans in Guatemala (Atkinson et al. 2013)

Negative return to saving at home and precautionary savings

Savings groups, basic bank accounts

- Villages in Ghana, Malawi, and Uganda with VSLAs had marginally higher incomes following droughts (Karlan et al. PNAS 2017)
- Basic bank accounts have positive effects on some measures of welfare
 - negate decline in consumption or increase in borrowing after shocks and increase subjective wellbeing in Chile (Kast and Pomeranz 2018)
 - non HH heads and those who lend to friends and family are somewhat more likely to open accounts
 - puzzle: total savings decline and amount withdrawn may be insufficient to fund response to shock
 - increase subjective wellbeing in Nepal (Prina 2014)

Negative return to saving at home and consumption smoothing

Savings groups, basic bank accounts

- Savings groups increased food security and lean season consumption in Mali (Beaman et al. 2014)

Negative return to saving at home and indivisible purchases or investments

Savings groups, basic bank accounts

- Basic savings accounts increased investments and profits for female market vendors in Kenya (Dupas and Robinson 2013)
 - most investments were in inventory; not clear that these were indivisible
- Village savings groups improved business outcomes in Ghana, Malawi, and Uganda (Karlan et al. PNAS 2017)

Improving welfare through formal accounts by matching constraints and motives for saving

	Precautionary savings	Consumption smoothing	Indivisible purchases
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Banking

Obstacles to opening or using a bank account

- Account opening
 - lack of information about how to open an account
 - documentation requirements
 - fixed costs (account opening fees, travel time, transaction costs)
- Account utilization
 - account fees (monthly maintenance, withdrawal fees, etc.)
 - other transaction costs (travel time)

Addressing obstacles to opening or using bank accounts requires matching products and interventions to constraints

	Intervention
1. Lack of information about account opening	information
2. Documentation requirements	information account opening assistance
3. Account opening costs	subsidies for account opening mobile accounts
4. Ongoing costs of using accounts	subsidies for ongoing fees mobile accounts direct deposit

Studying obstacles to banking

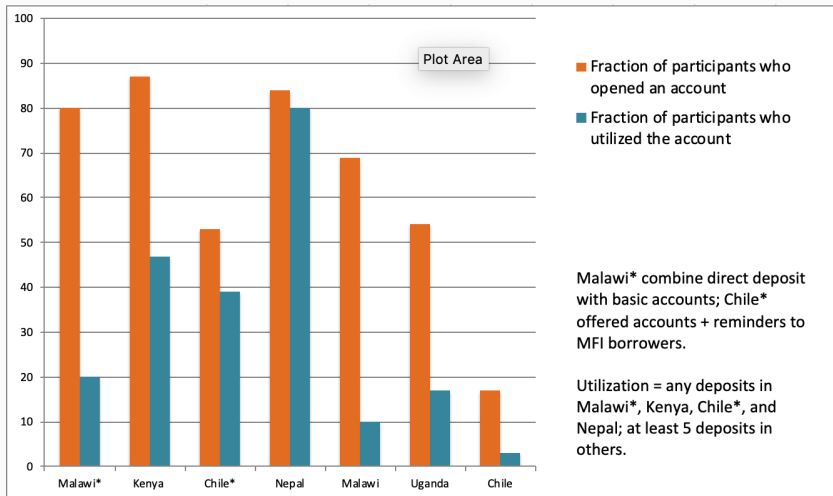
- Treatment in RCTs often relaxes a bundle of obstacles to account opening
 - measuring take-up allows inference about importance of obstacles
 - experiment then estimates ITT effect of savings product
- Few studies compare different obstacles to banking or unbundle information vs. documents vs. fees
- Few studies consider account ownership when subsidies expire

Empirical evidence about banking

Account opening costs and take-up of bank accounts

- Interventions that encourage account opening generally result in high take-up
- Interventions typically combine information, assistance with paperwork, and fee waivers
 - information (encouragement) only in Chile increased take-up by only 17 pp among unbanked sample (26% of pop)
 - take-up was higher in Malawi (69%) and Uganda (54%), where opening and monthly/transaction fees were waived (Dupas et al. 2018)
 - high take-up (>60%) of basic accounts with fee waivers in Malawi, Kenya, and Nepal in other studies

Account opening interventions and utilization of bank accounts



Account utilization

- Despite low utilization, the ITT effect of account opening assistance and subsidies generally increases the amount saved in basic accounts
- Positive, statistically significant effect on basic bank account balance in 4 of 7 RCTs reviewed in Dupas et al. 2018
 - 2 of 4 reported positive effects on total savings
 - utilization (at least one deposit) 35-40% in most contexts; Nepal was an outlier
- For commitment accounts, positive effects on bank balances for 3 of 7 studies

Sustained account utilization

- Direct deposit or deposit collectors increase utilization
 - savings accumulation ended when reverting to cash payment from direct deposit in India (Somville and Vandewalle 2018)
- Most RCTs subsidize account ownership for the duration of the study, and little is known about what happens when interventions end
 - in Malawi, many accounts are drained by monthly fees (“ghost accounts”)
 - despite explaining fees to customers, 49% chose to keep previously subsidized accounts opened (Gine and Goldberg 2020)

Mobile money

Mobile money as a savings tool

- Mobile money is growing rapidly and has exciting effects, including reducing poverty
- For many poor HHs in developing countries, its primary purpose is remittances
 - in Kenya 94% of HHs use mobile money and there is an accompanying increase in savings (Suri 2017)
 - in Mozambique, encouragement to adopt and learn about mobile money did not increase willingness to save on the platform (Batista and Vicente 2013)
- In most countries mobile money accounts do not pay interest and are not regulated as bank accounts
- Fees for using mobile money are often high relative to bank fees

Improving welfare through mobile money depends on the constraint and motive for saving

	Precautionary savings	Consumption smoothing	Indivisible purchases
1. Self control problems	access to funds too easy?	access to funds too easy? commitment accounts and multiple “wallets” are feasible	access to funds too easy? commitment accounts and multiple “wallets” are feasible
2. Other control problems	can hide money (see Aker et al. 2014)	can hide money	can hide money
3. Lack of salience	reminders and savings defaults are feasible	reminders and savings defaults are feasible	reminders and savings defaults are feasible

Conclusion

What works, what doesn't...

- Having an account is a necessary condition for using one; removing costs increases ownership
- Direct deposit or savings defaults increase savings balances and generate learning-by-doing
 - digital payments and use of mobile money may facilitate these strategies
- Mixed evidence about commitment accounts seems to be driven by reluctance to commit; “soft” commitment may be a good option
- Many successful interventions address more than one constraint simultaneously

...and what next?

- Multiple savings needs mean that HHs may need multiple products, with different features
 - very little evidence about portfolios of savings projects
 - savings groups provide multiple financial services (store of value, reminders, commitment, loans)
- We need to develop and test bundles of savings tools, informed by multiple savings objectives
 - these bundles may include mobile money products
- We need better data to determine which products are effective for precautionary savings and consumption smoothing
 - combining administrative and survey data to unpack mechanisms