



STANFORD
GRADUATE SCHOOL OF BUSINESS

STANFORD SOCIAL INNOVATION *review*

Helping the Poor Save More

By Dean Karlan

Stanford Social Innovation Review
Winter 2010

Copyright © 2009 by Leland Stanford Jr. University
All Rights Reserved



STANFORD
GRADUATE SCHOOL OF BUSINESS

Stanford Social Innovation Review
518 Memorial Way, Stanford, CA 94305-5015
Ph: 650-725-5399. Fax: 650-723-0516
Email: info@ssireview.com, www.ssireview.com

Helping the POOR Save More

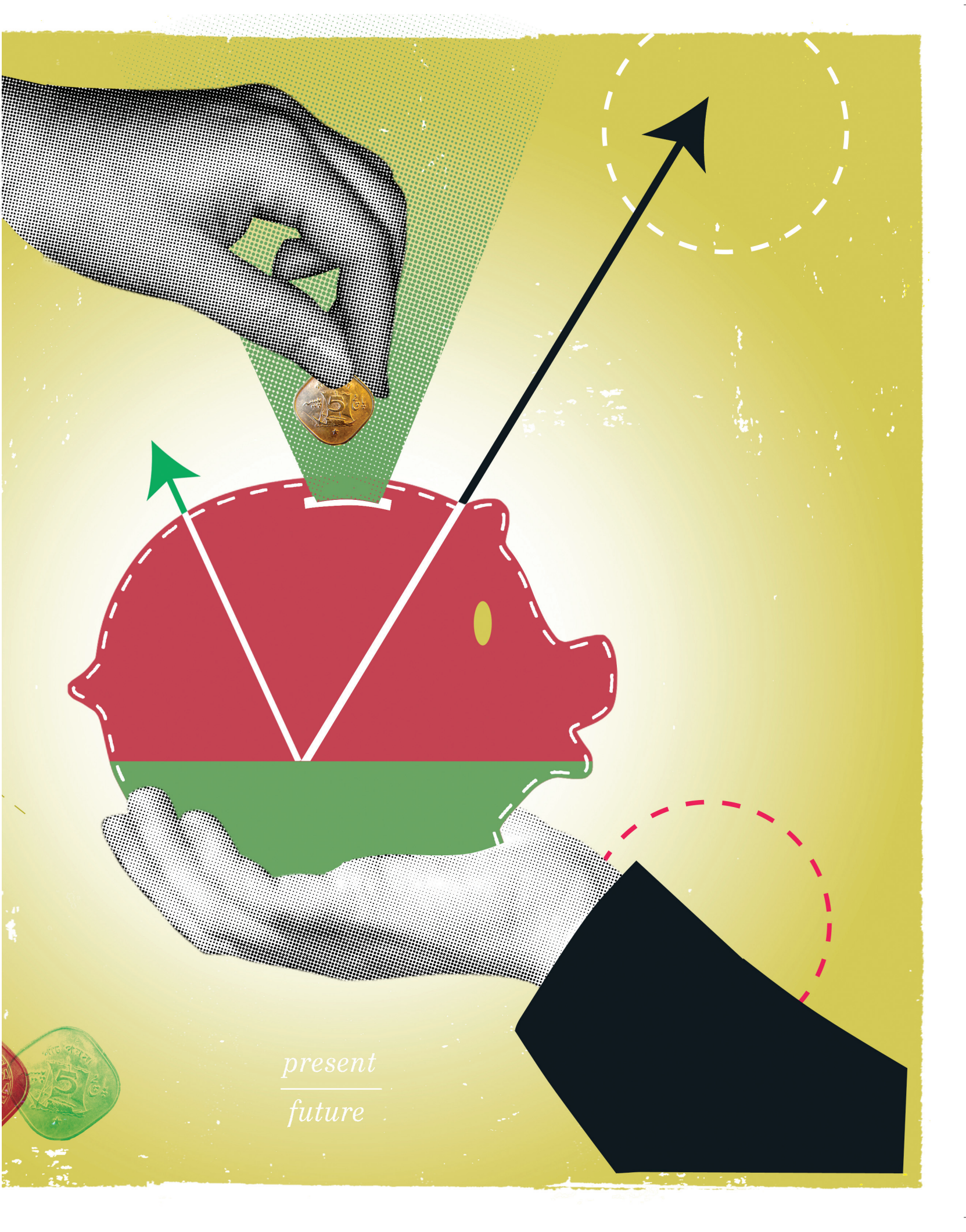
THE POOR ARE JUST LIKE EVERYONE ELSE: THEY DO NOT SAVE AS MUCH AS THEY WOULD LIKE. YET UNLIKE THEIR RICHER COUNTERPARTS, POOR PEOPLE DO NOT RECEIVE THE CLEVERLY MARKETED, CAREFULLY TESTED FINANCIAL PRODUCTS THAT COULD HELP THEM REACH THEIR SAVINGS GOALS MORE EASILY. TO ENRICH THE BOTTOM OF THE PYRAMID, BANKERS TO THE POOR SHOULD MAKE SAVING MONEY EASIER BY USING THE LATEST FINDINGS FROM ECONOMICS AND PSYCHOLOGY.

By Dean Karlan | Illustration by Wes Duvall

WHILE TEACHING AT Bangladesh's University of Chittagong in 1976, Muhammad Yunus interviewed a stool maker named Sufia Begum.¹ Because Sufia did not have the 22 cents she needed to buy bamboo, she borrowed bamboo from a middleman every day. The middleman then purchased her stools for only 2 cents more than the cost of the bamboo. Yunus asked Sufia if she could borrow money elsewhere to buy her own bamboo. She replied that she could borrow from the local moneylender, but he charged up to 10 percent interest per day. She also noted that the moneylender's clients only became poorer.

Because of his experiences with people like Sufia, Yunus founded the Grameen Bank in 1983 and began making small business loans (microloans) at lower interest rates to poor people. Through these microloans, clients could get the working capital they needed to keep more of their profits.





present

future

But giving people credit is only part of banking the poor. Savings gives people the ability to turn irregular cash flows into lump sums for larger purchases, emergencies, and investments. Where there is no health insurance and no social security, savings are critical for poor people's welfare. Credit can satisfy these needs, too, but at a higher cost and with higher risk.

Poor people do have surplus money to save, find Massachusetts Institute of Technology (MIT) economists Abhijit Banerjee and Esther Duflo. Even people living on less than \$1 per day spend money on many nonessential items such as alcohol, tobacco, and televisions.² And when poor people increase their earnings, they spend only two-thirds of their windfall on food. These findings suggest that poor people are not just living hand to mouth; they do have funds to save.

So the question is, what financial products could help the poor lay away some of those funds for the future? In wealthier countries, financial institutions offer a panoply of products to help their clients set aside savings. But in poorer countries, microfinance institutions (MFIs) offer few savings options. Instead, most poor people stash cash under mattresses or invest in assets such as livestock, land, or informal social savings arrangements.³ Some do use local deposit collectors, but for a fee. As a result, very few poor people in the developing world put their extra money into savings accounts.

Yet many poor people (and rich people, too) say that they want to save more money. For instance, in a study my colleagues and I conducted in the Philippines, 79 percent of a rural bank's clients reported dissatisfaction with their savings.

Saving money is hard, however, because it requires people to override a natural tendency to prioritize the present over the future. For the poor, this challenge may be even starker. Banerjee and Harvard University economist Sendhil Mullainathan posit that poor people spend a greater share of their income on so-called temptation goods, such as alcohol, tobacco, and take-out food. They argue that as income goes up, people are indeed tempted by pricier goods—iPods rather than candy, for instance. But the price of temptation goods does not rise as steeply as income. Think about it: Even the wealthiest people seldom buy cars or houses on a whim. Instead, they tend to indulge in smaller-ticket items like cell phones, shirts, and shoes. But when poor people give in to temptation, they pay a greater share of their income than their richer counterparts do. As a result, saving is sometimes even more difficult for the poor than for the rich.

To help people get out—and stay out—of poverty, MFIs must draw on the very best economic and psychological research in designing and marketing their savings products. These products can help bypass the cognitive biases that all people have, but whose effects especially harm the world's most vulnerable people. I am testing some of these products myself both as a professor in the Yale University Department of Economics and as president of the New Haven, Conn.-based nonprofit Innovations for Poverty Action (IPA). (Banerjee, Duflo, and Mullainathan are also part of IPA.) Along with other nonprofits and academic researchers, we are discovering what works and what doesn't work to help the poor save more.

DEAN KARLAN is a professor of economics at Yale University, as well as president of Innovations for Poverty Action, founder of stickK.com, and a research affiliate at the MIT Jameel Poverty Action Lab. He received a Presidential Early Career Award for Scientists and Engineers in 2007.

PRESENTING THE FUTURE

Most of the research about how to increase poor people's use of savings accounts has focused on technical features such as transaction costs, minimum balances, and liquidity (that is, how easily people can access their money). Although these technical features do influence whether people open and use bank accounts, other factors often matter just as much, if not more, to the poor.

In an experiment in South Africa, for instance, my colleagues and I found that the seemingly irrelevant marketing features of a mailed advertisement led more poor people to borrow from a regulated microlender than did interest rates.⁴ For instance, giving consumers only one choice of loan size, rather than four, increased their take-up of loans just as much as if the lender had reduced the interest rate by about 20 percent. This follows from research showing that people of all socioeconomic statuses are easily overwhelmed by choice: Columbia Business School psychologist Sheena Iyengar has demonstrated, for example, that giving supermarket shoppers a wider selection of jams leads them to buy less jam, and to like it less, than does offering them fewer choices.⁵

Even more striking, we found that putting a photograph of a woman on the mailing drove take-up of the loans as much as if the lender had reduced the interest rate by about 33 percent. These microfinance clients obviously are not getting a higher-quality product when they get a woman's photo on their mailer. They are getting better marketing. Yet the advertisement gets their attention and perhaps makes them feel better about banking with this microlender. Given how much attention microfinance institutions pay to interest rates, these results suggest that the microfinance industry cares more about interest rates than clients do.

Delivering quality financial services to the poor, then, involves more than just optimizing the technical features of accounts. The marketing of accounts can have just as much, if not more, to do with take-up and usage as do their terms.

Of particular importance in marketing financial services is working around people's natural psychological features—especially their tendency to shortchange the future in favor of the present. Traditional economic models do not account for this widespread psychological quirk. Instead, these models assume that people make rational trade-offs between the things they want right now and the things they want in the future. Economic models also assume that the value of these trade-offs holds steady over time. So, for example, if I say today that I want to buy a new house in 12 months, and that I need to reduce my spending by \$100 a week to save for the down payment on that house, then my decision not to eat in restaurants at all during the savings period should be relatively easy to accomplish, as I will be compensated for my sacrifice when I am sitting in my new living room at the end of the year. Economic models assume this “no restaurants” trade-off holds steady over the year, regardless of whether my wife wants to celebrate a success at work, or my father reaches a milestone birthday, or I failed to make a trip to the grocery store, or I simply don't feel like cooking.

Everyone knows that reality is often very different from economic models. Psychological and economic research confirms the intuition that what people are doing and consuming right now takes precedence over what they could be doing or consuming in the future.

Sure, people talk a lot about what they want to do in the nebulous future—exercise more, eat less, read more, and save money for a down payment on a house, to name a few goals. But when the moment comes, the things they are already doing—sitting on the couch, eating a candy bar, scrolling through the Internet, and spending huge amounts of disposable income in restaurants—temporarily crowd out their future goals.

Psychologists and economists have studied four different reasons for people's troubles with laying away for the future: loss aversion, status quo bias, the so-called dual self, and attention constraints. In the following sections, I discuss each of these obstacles in greater depth.

Scientists are also discovering ways that marketing can help people override their future-discounting ways. In their recent book, *Nudge*, for instance, University of Chicago economist Richard Thaler and Harvard Law School professor Cass Sunstein discuss how different “choice architectures”—that is, different ways of presenting options—can lead people to make better or worse decisions. (By “better” and “worse,” I mean decisions that are closer to or farther from what a person ultimately wants to achieve—not a normative evaluation of what people “should” be doing.) Likewise, in the following sections I document how different marketing strategies can help microfinance clients overcome our species' focus on the present, and therefore save more money for the future.

LESSENING LOSS AVERSION

In 1990, psychologist Daniel Kahneman and economists Jack Knetsch and Richard Thaler published the results of a curiously simple but pioneering experiment.⁶ First, the researchers asked a group of Cornell University students what they would pay for a mug with their university's logo on it. They then randomly assigned half of the students to receive the mug for free. Next, they allowed the students to buy and sell the mugs in a market game.

According to many economic theories, the students who had initially most valued the mug should have ended up with one in hand. Yet regardless of their initial liking of their mugs, very few students who were given mugs wound up trading them for cash. It seemed that once a student had a mug in hand, he or she valued the mug more than the students without a mug did. Moreover, the students with the mugs seemed to view giving up their mugs as a loss, and the students without the mugs seemed to view acquiring a mug as a gain.

From this and numerous other studies, Kahneman, Knetsch, and Thaler concluded that losses hurt more—two times more, in fact—than gains help. In other words, people are more averse to losing things than they are inclined to gaining things. This *loss aversion* could partly reflect what economists call *diminishing marginal utility*:


The more we have of something, the less pleasure we get from having a little bit more of it. Loss aversion could have also arisen over the course of human evolution, during which losing one's club or leftover food often proved far deadlier than not getting a second club or extra food. Thus we learned to fight harder to keep what we have rather than to get more. In 2002, Kahneman received the Nobel Memorial Prize in Economic Science for his work on loss aversion and related concepts.

In banking, loss aversion may stymie people from putting their money into a savings account. Perhaps like the students given the Cornell mug, consumers feel that consumption today is “in hand,” whereas putting off consumption until the future feels like a loss. Avoiding that uncomfortable feeling of loss, then, people spend now rather than save for later.

To overcome loss aversion, microfinance and other deposit-taking institutions must make the gains that savings accounts will bring vivid, concrete, and tangible. One way to do this is to name accounts according to their intended use. In developed countries, we have accounts dedicated to health expenses, education, and retirement. But developing countries tend not to offer such products. In Ghana, my colleagues and I are testing whether concretely named accounts such as roof accounts, plow accounts, and health accounts can likewise inspire more savings.

Another way that MFIs can amp up the gains that come with saving while dampening losses is to give clients a concrete, if only representative, reward when they make deposits or reach a savings goal. In one novel program we designed and tested in Peru, for example, Caja Municipal de Ahorro y Credito de Ica created jigsaw puzzles with pictures of clients' savings goals, such as a student in school, a picture of a home, or a vehicle.⁷ Every time clients made a deposit, they received a piece of the jigsaw puzzle. The 1,200 people randomly assigned to receive the jigsaw puzzle pieces were 2.3 percentage points more likely to meet their commitment of making a deposit every month for one year than were the 879 participants who were randomly assigned to the control group. This two percentage point difference may seem like a small number, but it shows that a strikingly cheap and easy intervention can have a significant effect on savings.

A third way that MFIs can beat loss aversion is to talk more about what the depositor loses if he does *not* save. In the Philippines, my colleagues and I designed a pilot study with clients whose savings program required them to make a monthly deposit over the course of a year. If the saver made every deposit, he received a bonus. We randomly divided the savers into two groups. One group received this gain-oriented reminder (via text message or flyer) every month: “Don't forget to make your deposit in order to get your bonus at the end of the year.” The other group got this loss-oriented reminder: “Don't forget to make your deposit in order to not lose your bonus at the end of the year.”



MICROFINANCE
institutions should
note that simply
changing the
language that their
employees and
marketing materials
use can easily and
inexpensively
increase how much
their clients save.

We found that 86.4 percent of savers in the loss-oriented condition made all of their monthly deposits, while only 82.7 percent of savers in the gain-oriented condition met that goal.

As with the jigsaw puzzle incentive, the effect of the loss-oriented message is both small and large—small in magnitude, yet large when we consider how easy and cheap it was to implement. MFIs should take note that simply changing the language that their employees and marketing materials use can easily and inexpensively increase how much their clients save.

SIDESTEPPING STATUS QUO BIAS

Another reason that the present looms larger than the future is called *status quo bias*. People can plan to change all they want, but the simple fact is that one of the best predictors of our future behavior is our current behavior. This is because inertia is so powerful. We revert to our “default settings” rather than act on our future goals. People who are not saving now are likely to continue not saving in the future.

Organ donorship is a classic example of how status quo bias, as realized in public policies, can have huge effects on human behavior. A study by psychologists Eric Johnson and Daniel Goldstein of the Center for the Decision Sciences at Columbia University, for instance, traced the rates of organ donorship across several European countries.⁸ Most of these countries, including Austria, Poland, and Sweden, require people to opt *out* of being an organ donor. But some of them, including Germany, the United Kingdom, and Denmark, require people to opt *in* to donating their organs upon death. The researchers found that when the status quo is to donate organs, the modal rate of organ donation is almost 100 percent. But in countries where the status quo is not to donate organs, donation rates range from 4 percent to 27 percent.

In the United States, many corporations take advantage of status quo bias by automatically enrolling their employees in retirement savings programs—a practice that results in far greater uptake of these benefits.⁹ In poor countries, where firms often cannot make direct deposits into savings accounts, researchers are nevertheless finding ways to overcome status quo bias and increase poor people’s savings rates. In a series of carefully controlled experiments,¹⁰ for instance, economists Duflo, Michael Kremer from Harvard, and Jonathan Robinson from the University of California, Santa Cruz, caught up with farmers in Busia, Kenya, right as they harvested their crops and were thus flush with cash. (These economists are also part of IPA and MIT’s Poverty Action Lab.) The researchers randomly assigned some farmers the choice to commit their earnings to a savings account dedicated to fertilizer—an investment that poor farmers often cannot afford by the time planting season arrives. In another condition, the researchers told the farmers about the fertilizer account, but

then waited a few days before letting them deposit their earnings into it. Farmers in a control group did not learn about the fertilizer account, but were offered the opportunity to purchase fertilizer a few months later, during the planting season.


The research team found that 57 percent of the farmers who immediately paid into the savings account bought fertilizer during the next planting season, but only 17 percent of the farmers in the control condition made this valuable investment in their crops. Even farmers who were offered the account, but then had to wait a few days to pay up, were much less likely to do so (30 percent); these people said they wanted to buy the fertilizer, but when the payment came due a few days later, they did not complete the purchase. The researchers also found that giving the farmers immediate access to a commitment savings account had the same effect on fertilizer use as a 50 percent discount on the price of fertilizer. This result confirms what we know from psychology: People are biased toward the status quo even when a change would be in their favor. They sometimes require nudges—like an immediate deposit option—to get them to act.

UNDOING THE DUAL SELF

A third psychological tendency that makes indulging in the present more likely than planning for the future is, simply, that people have competing preferences, with different preferences dictating different actions at different times. For instance, a woman who wants to buy new shoes for her children may endeavor to save money by forgoing sugar in her daily cup of tea. But when she is standing at the market with cash in hand, her present self finds it extremely difficult not to buy the sugar—even if it means that her future self will not be able to buy shoes. Because these two conflicting sets of preferences sit side by side in the same person, some economists say that humans harbor *dual selves*.¹¹ To get what they want in the future, these researchers say, people must devise ways to overcome temptations in the present—often by making their vices more expensive and their virtues cheaper.

Whereas nonbinding “soft” commitments can help consumers sidestep status quo bias, binding “hard” commitments are often required to undo the dual self. The Green Bank of Caraga, a for-profit rural bank in Butuan, Philippines, tested one such hard commitment product in 2003. The bank created a savings account from which clients could not withdraw funds until they reached their chosen goal. The goal could be a preset savings amount (e.g., enough money for a new roof), or a future date (e.g., in time for village festivals). The clients had complete flexibility to choose which of these restrictions they would like on their account.

Another IPA economist, Nava Ashraf of the Harvard Graduate School of Business, as well as Wesley Yin of Boston University and I, conducted a randomized controlled trial to test whether such hard



HELPING people save their way out of poverty can be much cheaper and less risky than helping people borrow their way out of poverty. Borrowing has its place, but now is the time to focus on saving.

commitments actually increase savings.¹² After 12 months, we found that people offered the binding accounts had saved 80 percent more than had people with traditional savings accounts, increasing their balances by an average of 337 percent.

In poor countries, a force similar to the dual self is the pressure of another person—usually a family member or neighbor. When this other self presses a person to give up his or her savings, the pressured person also gives up on the plans of his or her future self. There’s no point in overcoming the present self’s temptations if another person is going to get the money anyway.

Our research shows that commitment devices can also help with this other-self problem, and not with just self-control problems.¹³ Women with the specialized accounts from the Green Bank spent more of their savings on household-oriented durable goods, suggesting that they had gained more control over their household assets.

The commitment savings account experiment also suggests that more liquidity is not necessarily better. One explanation for why poor people don’t open savings accounts is that they need readier access to cash than a bank could profitably provide on such small deposits. Yet our study shows that at least some poor people would prefer less liquidity, either to help them rein in the preferences of their own present selves or to check the preferences of family and friends.

PAYING ATTENTION

A final reason that people fail to save for the future and instead squander their resources on the present is that they get distracted. Simply paying attention to one’s goals is often half the battle in reaching them. This is true of the rich and the poor. For example, people eat more when dining in front of a television simply because they are not paying attention to how much they are consuming. Likewise, when people do not focus on their financial needs, they save less. Meanwhile, microloans and other forms of debt occupy people’s attention because debt is more prevalent and because lenders frequently remind clients to pay down their debt. As a result, people are more aware of debt than of savings.

In wealthy countries, many banks remind people to sock away cash for the future. But in poor countries, few financial institutions bring people’s attention to the state of their savings. Given the low cost and prevalence of SMS in most countries, however, MFIs can readily use cell phones to communicate such reminders. Indeed, IPA recently tested whether such a cheap and simple intervention would increase poor people’s savings in Bolivia and the Philippines.¹⁴ After bank clients signed up for a savings plan, my colleagues and I randomly assigned them either to receive or not to receive monthly text messages that reminded them of their plan to save each month. In a similar program in Peru, we sent reminder letters through the mail. We found that people who received the reminders saved 6 percent more than people who did not and were three percentage points more likely to reach their savings goals.

Another attention-grabbing approach is peer saving groups—that is, groups of friends and neighbors who make public savings commitments and therefore serve as alarm clocks to each other. Rotating Savings and Credit Associations (ROSCAs) are one example of peer savings groups. My colleagues and I are working in Ghana,

Mali, Uganda, and Malawi to test whether the ROSCAs that CARE, Freedom from Hunger, and Oxfam have created are increasing savings among the poor in these areas. These ROSCAs may turn out to be stellar programs that help mobilize savings within communities, or they may just be replacing informal networks that already existed, and therefore effect more of a social gathering than a true change in savings practices. We are in the midst of four long-term studies to understand how these interventions change savings, investment, consumption, and social patterns within these communities.

RICHER RESEARCH

Financial institutions in rich countries spend large amounts of money designing and testing products. MFIs should put similar care into designing products for the poor, using both received insights about household decision making and carefully constructed randomized trials to test ideas. Meanwhile, nonprofits such as IPA and university labs such as the Jameel Poverty Action Lab at MIT are undertaking careful studies of what works best in banking the poor. With these findings, MFIs can develop clear prescriptions for improving the quality, and thus quantity, of access to financial products for the poor.

As we have seen, helping people save their way out of poverty can be much cheaper and less risky than helping people borrow their way out of poverty. Borrowing has its place, but the emphasis on credit has left savings unattended. Now is the time to focus on savings so that the poor can choose what is best for them. ■

The Bill & Melinda Gates Foundation supported the development of this article.

Notes

- 1 Muhammad Yunus and Alan Jolis, *Banker to the Poor: Microlending and the Battle Against World Poverty*, New York: Public Affairs, 1999.
- 2 Abhijit Banerjee and Esther Dufo, “The Economic Lives of the Poor,” *The Journal of Economic Perspectives*, 21, 2007: 141-67.
- 3 Stuart Rutherford, *The Poor and Their Money*, New Delhi: Oxford University Press, 2000.
- 4 Marianne Bertrand, Dean S. Karlan, Sendhil Mullainathan, et al., “What’s Advertising Content Worth? Evidence from a Consumer Credit Marketing Field Experiment,” *Quarterly Journal of Economics*, forthcoming.
- 5 Sheena S. Iyengar and Mark R. Lepper, “When Choice Is Demotivating: Can One Desire Too Much of a Good Thing?” *Journal of Personality and Social Psychology*, 79, 2000: 995-1,006.
- 6 Daniel Kahneman, Jack Knetsch, and Richard Thaler, “Experimental Tests of the Endowment Effect and the Coase Theorem,” *Journal of Political Economy*, 98, 1990.
- 7 Dean S. Karlan, Margaret McConnell, Sendhil Mullainathan, and Jonathan Zinman, “Limited Attention and the Salience of Savings,” working paper, 2009.
- 8 Eric J. Johnson and Daniel G. Goldstein, “Do Defaults Save Lives?” *Science*, 302, 2003.
- 9 James Choi, David Laibson, and Brigitte Madrian, “The Flypaper Effect in Individual Investor Asset Allocation,” working paper, 2007.
- 10 Esther Dufo, Michael Kremer, and Jonathan Robinson, “Understanding Technology Adoption: Fertilizer in Western Kenya—Evidence from Field Experiments,” working paper, 2006.
- 11 Drew Pudenberg and David K. Levine, “A Dual-Self Model of Impulse Control,” *American Economic Review*, 96, 2006: 1,449-76.
- 12 Nava Ashraf, Dean Karlan, and Wesley Yin, “Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines,” *Quarterly Journal of Economics*, 121, 2006: 673-97.
- 13 Nava Ashraf, Dean Karlan, and Wesley Yin, “Female Empowerment: Further Evidence from a Commitment Savings Product in the Philippines,” *World Development*, forthcoming.
- 14 Dean S. Karlan, Margaret McConnell, Sendhil Mullainathan, and Jonathan Zinman, “Limited Attention and the Salience of Savings,” working paper, 2009.