



LEVERAGING BEHAVIORAL SCIENCE TO IMPROVE RETIREMENT SAVINGS

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1. WHAT WE WANT VERSUS WHAT WE DO: A COMMON HUMAN STRUGGLE

Each year in January, millions of people across the world hope to leverage the momentum of the new year to start, drop, or change certain behaviors, habits, and goals. Yet we are all too familiar with how New Year's resolutions usually go. You may set a goal to eat healthier, home-cooked meals, and yet often struggle to get started on doing so. Even if you do start, it is often difficult to maintain the habit. Or maybe you decide to improve your fitness and set your alarm for 5 a.m. to go to the gym each morning. But you go to bed late, and when the alarm blares in the morning you hit the snooze button. Even though exercise is important to you, and you know that working out is essential for your health, you still struggle to go.

We experience similar challenges with following through on our intentions in many other areas of our lives. This chapter focuses on the difficulties that all people face in trying to save effectively for retirement, and the additional challenges faced by those employed informally who lack a full array of tools to help them overcome these difficulties. Trying to put money away for the future comes with very similar challenges to that of eating more healthy foods. Both involve the need to forego desires today in pursuit of a distant goal that will only be achieved and enjoyed in the future. Postponing today's desire for a greater benefit tomorrow often feels like deprivation, making the experience feel unpleasant and difficult to keep up with. When a person is already facing deprivation or insufficient resources in other areas of their lives, sacrificing today's wants for tomorrow's benefit can be even more challenging.

Behavioral science helps us understand why we so often find ourselves struggling to follow through on our intentions. We want to do something and may even know how. Yet time and again, we simply don't do it. Or we don't do it with the consistency

required to reap the benefits. The brain is a complex machine that is constantly processing high volumes of information,¹ and it makes some decisions quickly and automatically and others more thoughtfully and slowly. These functions help make sense of the large amounts of data our brain constantly receives and save us from having to spend too much time thinking about every little decision or action that we need to take. However, they can be subject to biases that lead us to making mistakes.

Without realizing it, we often rely on cues from our environment and from others' behavior to determine how to behave. The context we live and operate in—what we see and hear, who we interact with, and what we think others are doing—all have a powerful effect on our decisions and actions, often in ways that we don't consciously realize. Remember the resolution to eat only healthy meals? Imagine how hard it is to hold on to this resolution if you get to work and everyone is munching on office snacks or going out for lunch; it's much easier to find yourself joining them, ignoring the healthy sandwich that you packed. Or think about the plan to save for retirement—you open your laptop and see that the gadget you've been eyeing for months is finally on sale! You tell yourself you'll start saving tomorrow.

Behavioral scientists often work with people struggling to follow through on decisions or actions that are clearly in line with their intentions and interests. Their challenge is the context. Often, our intentions and desires are unable to resist strong contextual cues. Behavioral science shows us that by changing the context within which people are making decisions, we are able to counter some of these forces to achieve the desired change in behavior. For example, if we restocked the office fridge with healthy snacks and encouraged everyone to bring their own lunch rather than go out, it would be easier for a person who desires healthier food to follow through. Similarly, identifying and highlighting a person's savings goals and sending them regular reminders might

¹ Kahneman D. *Thinking, fast and slow*. 1st pbk. ed. New York: Farrar, Straus and Giroux; 2013. 499 p.

help them remember to put away money more consistently for retirement.

Understanding the context people are in, and the cues they encounter in their environment, is critical to designing products and services that work effectively. Once we know which cues are influencing behavior, we can focus on changing existing cues or introducing new ones rather than simply overloading people with information. More information is usually more costly and often has negligible impact as people may not lack knowledge or motivation.

2. THE CHALLENGE OF SAVING FOR THE FUTURE

Saving consistently is challenging for most people, regardless of income or socioeconomic status. It is difficult to defer today's consumption for an outcome that is so remote. This difficulty is not a matter of intention or motivation—it is about following through, doing the things we know we should and want to do. All around us are cues that make today's consumption salient—we see people's purchasing behavior in person, on social media when they post their latest vacation, the delicious dinner they just had, or their shiny new electronic gadget. We are bombarded with advertisements on all media platforms, and it doesn't help that they are often personalized to our specific preferences and past behavior. These things make today's needs and wants loom larger than more distant needs like ensuring that we can enjoy a comfortable life after retirement.

For people who work in the formal sector, there is external support. Many employers are required by law to make contributions to our pensions, and there are systems in place that default employees into *automatically* saving a portion of our income for our old age. Formal pensions programs address some behavioral barriers in consistently putting money away for the future—by taking the responsibility of planning and saving away

from salaried individuals and placing it on their employer. The automaticity of the process also reduces the need for workers to make active decisions about whether to spend money today versus put it aside for tomorrow. But for the majority of people (~60% of the world's population²) who are informally employed, such systems do not exist. Each self-employed non-salaried person is instead left to her own devices and must figure out a way to save for her future by herself. Once a self-employed person decides to save for her retirement, she must then rely entirely on her own self-control to overcome the various cues in her environment to spend money, and stick with her decision. This is especially true for most workers in low- and lower-middle income countries (LMICs), where most citizens tend to be self-employed or operate in informal sectors and are therefore excluded from pension benefits traditionally restricted to salaried employees.

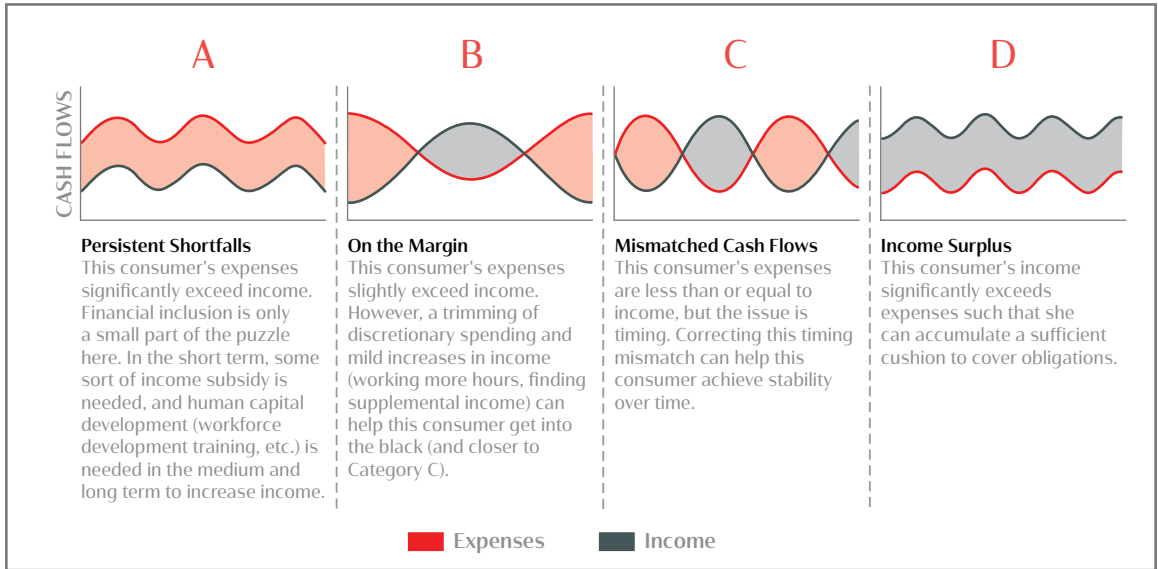
Furthermore, the daunting task of building adequate retirement savings is especially challenging for informal sector workers living in contexts of financial scarcity, with modest intermittent incomes that barely cover basic day-to-day needs and the absence of any cushion for health shocks or emergencies. Lower income individuals must often manage finances in an environment where both income and expenses can be volatile and unpredictable, making the prospect of putting money aside for retirement feel almost impossible. Though many point to a lack of savings as a sign of inadequate financial education, our research finds that informal workers with modest incomes are savvy, sophisticated financial planners, as they are required to keep detailed track of their cash inflows and outflows often across multiple incomes sources and financial tools. Also, they, more than most, know the importance of saving for a rainy day. Not having some money set aside for unexpected expenses could have dire consequences—utilities cut off, important medications not purchased, unpaid school fees, or the inability to purchase fuel for getting to work, which could threaten their job security. Yet despite their knowledge

² *Five Things to Know about the Informal Economy* [Internet]. IMF. [cited 2023 Jan 26]. Available from: <https://www.imf.org/en/News/Articles/2021/07/28/na-072821-five-things-to-know-about-the-informal-economy>

and keen desire to save, people dealing with financial scarcity face a myriad of obstacles in saving consistently for a rainy day, let alone for retirement, which may feel a lot more distant. Behavioral science tells us that dealing with scarcity often leads to tunneling (where people focus so intently on the area of scarcity that they may lose track of other important things that may not be as pressing, i.e., things that are “outside the tunnel”). For example, being focused on making ends meet today may distract a person from planning for their future. Additionally, when a person is in the “tunnel” caused by financial scarcity, little obstacles in the way of future thinking can have outsized impacts. For example, people who are hyper-focused on making ends meet today are unlikely to have the bandwidth to navigate cumbersome, complicated, or confusing retirement saving products and processes. Even standard formal finance and pension system practices, such as a long application forms, or the need to provide extensive ‘Know Your Customer’ (KYC) documents could discourage low- and lower-middle income people from exploring and pursuing savings and retirement products that may be useful for them in the long run. Products, processes, and services that feel unnecessarily complicated and cumbersome can cast doubts on their usefulness, and engender mistrust around the motives of product providers.

Dealing with financial scarcity is not a one-size-fits-all experience. Individuals with low incomes are often treated as a homogenous group but are in fact diverse in their needs. Though some may simply not have sufficient funds to cover necessities, others may earn enough or even slightly more than they need, but their cash inflows and outflows may be volatile and unpredictable. Those with insufficient resources should not be confused with those who face timing issues that make it difficult to plan and ensure that they have cash on hand when unexpected expenses arise. For the former, saving for retirement may not be possible without external support to help them improve their earning ability. For

the latter, they may need support to save during cash influxes to make it more likely to have some cushion during financial shocks. Solutions for helping people build and maintain regular savings should therefore be tailored to the specific circumstances of target user segments.



Source: *Reimagining Financial Inclusion* – ideas42 & Oliver Wyman³

3. THE PROMISE OF BEHAVIORAL DESIGN

Behavioral science draws on insights from psychology, economics, and other social and physical sciences to understand how humans behave, and why. Behavioral design allows us to explore an individual's environment and circumstances to better understand the things in their context that may be influencing their decisions and actions and shed light on how and why a person may behave the way they do. This is particularly critical when designing solutions for people across diverse contexts where cultures, norms, and access to resources vary. Applying a behavioral lens helps policy makers, program designers, and implementers to identify and strip themselves of assumptions and biases that could lead to flawed hypotheses, and ultimately to solutions that do not work. It involves

³ Chandrasekhar C, Cohen N, Davis K, Spence T, Tania P, Wright J. 2015. *Reimagining Financial Inclusion*. ideas42 [Internet]. Available from: <http://www.ideas42.org/wp-content/uploads/2015/11/Reimagining-Financial-Inclusion-Final-Web-1.pdf>

leveraging both qualitative and quantitative research tools to identify priority behavioral problems, user testing to confirm relevance and feasibility, and rigorous monitoring to understand if and the extent to which the designed behavioral interventions and solutions indeed achieve the intended outcomes.

Decades of behavioral science research has provided field tested, evidence-based recommendations for addressing some of the most difficult behavioral challenges that humans face. Behaviorally designed solutions have been shown to work across diverse fields, from health to education to criminal justice and financial inclusion. For example, simple plan-making exercises have been shown to boost vaccination rates in contexts where traditional interventions like information campaigns and monetary incentives could not. In one study, postcards⁴ with planning prompts that encouraged people to write the date and time for receiving their flu shots increased vaccine take up rates by 4%. Similarly, light-touch behavioral interventions have reduced college drop-out rates. For example, at San Francisco State University,⁵ norm-setting videos, self-affirming exercises, and monthly messages increased retention by 10% among students at risk of dropping out. Behavioral interventions have also been used in the field of criminal justice to decrease crime among at-risk youth. Youth who engaged with a computer-based activity-planning tool designed to nudge them away from risky activities were half as likely as the control group to participate in unsafe activities, to report feeling unsafe, and to report experiencing violence in the past week.⁶

⁴ Milkman KL, Beshears J, Choi JJ, Laibson D, Madrian BC. Using implementation intentions prompts to enhance influenza vaccination rates. *Proc Natl Acad Sci*. 2011 Jun 28;108(26):10415–20.

⁵ Nudging for Success [Internet]. ideas42. [cited 2023 Jan 26]. Available from: <https://www.ideas42.org/pse/>

⁶ Discouraging Violent Crime Among Youth [Internet]. ideas42. [cited 2023 Jan 26]. Available from: <https://www.ideas42.org/project/safety-pilot/>

4. CASE STUDIES: HOW BEHAVIORAL INTERVENTIONS IMPROVED SAVINGS RATES

Applications of behavioral sciences to financial health have grown increasingly common, leaving us with a body of literature that can help bridge the gap between individuals' good intentions

and action. While solutions that have worked in a specific context might not have the same effect in differing contexts, the evidence that has already been produced can inform our strategy and serve as a starting point for us to begin adapting the same. Simple and often low-cost tools like reminders, goal setting exercises, plan-making activities, partitioning devices, and other commitment devices have led to impressive changes in financial behavior, leading to results like increases in savings rates and amounts, loan repayments, and take-up of digital financial products and services.⁷ Below, we outline a few examples of ingenious ways in which we can alter people's environment to provide them with channels that facilitate saving.

CASE STUDY 1:

Increasing Savings Rates Among Male Construction Workers in India

While access to bank accounts has been steadily increasing among low-income communities in India, active use of bank accounts continues to lag. As a result, many low-income households, where people also tend to be informally employed, manage their finances outside of the formal financial system. When thinking about saving for retirement, they often face a set of trade-offs that are more challenging than the ones formally employed individuals face.

Formally employed individuals often have a portion of their income automatically deducted at the front-end by employers and channeled to retirement funds on their behalf. As salary receipts are net of pension contributions, these savings are neither visible to employees nor require an active savings vs. consumption decision. As a way to insulate savings for specific future goals, such as for children's higher education, some

⁷ <https://www.bhub.org/>

people often partition such savings in a separate bank account or investment pot. This process of “earmarking,” which consists of mentally allocating a sum of money to a certain goal, has proven to be effective in creating a clear separation between the act of budgeting and consuming, and hence controlling expenditure.⁸ The process of “partitioning,” on the other hand, consists of creating a physical distance between money allocated to various uses by putting earmarked funds into a separate account altogether, to moderate consumption.⁹ While formally employed people have systems in place that facilitate such behavior—for instance, the ability to ask an employer to split income into a number of bank accounts—informally employed people are more often than not operating in a context that does not facilitate savings. Additionally, informally employed people often get paid in cash. While some people may use tools such as mobile wallets to digitize and store cash, many other may not, either due to unnecessary hassles, poor access to digital tools, or distrust. Women are usually even more excluded from digital finance due to lower mobile phone and smartphone ownership and usage.¹⁰ Easy access to savings, especially when the money is sitting as cash at home, makes it difficult for people to accumulate savings, especially when they are facing intermittent incomes and unexpected expenses. The easier it is to act on a temptation, the more likely a human being will be to give in. After all, it is much easier to grab some money from your savings jar lying at home, in plain sight, compared to having to accessing the less visible money in your bank account, with no physical cues reminding you of its existence.

In 2011, Dilip Soman and Amar Cheema¹¹ attempted to recreate such a savings-conducive environment among male construction workers in India who received weekly wages. Workers were matched with a financial planner who provided them with a savings target (the earmarked amount) that was either equivalent

⁸ Heath C, Soll JB. *Mental Budgeting and Consumer Decisions*. *J Consum Res*. 1996 Jun 1;23(1):40–52.

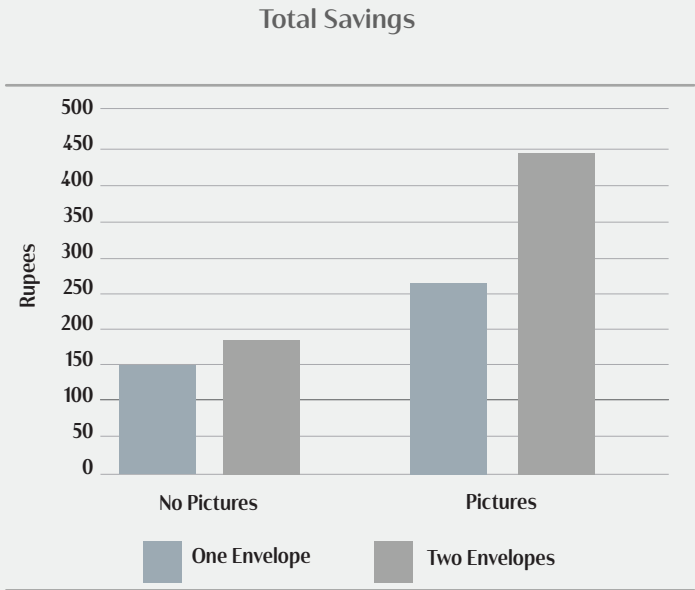
⁹ Cheema A, Soman D. *The Effect of Partitions on Controlling Consumption*. *J Mark Res*. 2008 Dec 1;45(6):665–75.

¹⁰ GSMA. *The Mobile Gender Gap Report*. 2022.

¹¹ Soman D, Cheema A. *Earmarking and partitioning: increasing saving by low-income households*. *J Mark Res*. 2011;48(SPL):S14–22.

to 6% or 12% of their weekly income. Thereafter, financial planners met up with the construction workers on a weekly basis to place the earmarked savings in one (no partition) or two envelopes (partition) that they would then seal. Soman and Cheema expected that partitioning the savings into two envelopes would increase self-control and savings. Additionally, some of the envelopes had photographs of the workers' children printed on them—conversations with the workers revealed that most of them wanted to save to improve their children's quality of life. With this design feature, the researchers hoped to make the savings goal salient at the moment of a cash influx, when workers might be particularly tempted to unseal the envelope and put the money to other uses, while also leveraging the guilt that might accompany the action.

The researchers observed that placing the earmarked savings in two envelopes rather than one resulted in a 72% increase in savings. Adding pictures of workers' children to the envelopes resulted in a 15% increase in savings. Overall, workers who received two envelopes with pictures of their children printed on them saved the most. These were considerable improvements, within the context of a low-cost intervention. While the experiment focused on putting money aside to provide for children, it shows that earmarking, partitioning, and highlighting goals in a manner that makes them salient during moments of temptation are strategies that can increase savings, including retirement savings. It also goes to show how simple changes in the person's environment—the introduction of barriers that stand between the temptation and the action, such as having to unseal an envelope, and the redirection of one's attention away from temptations and toward their ultimate priority, such as one's children, at a critical moment of decision-making—can result in much improved outcomes.



Source: *Divide Money to Save More10*

CASE STUDY 2:

Increasing Retirement Savings in Mexico

Saving for retirement can feel like a distant and obscure concept for many of us. In a world of competing priorities and limited attention, rarely do we have the chance to pause and think about securing a comfortable life for our distant, older selves. While behaviors such as consumption are very visible to all, we rarely get cues from our environment that remind us of the need to save for our retirement.

And when we do, these cues often are undermined by a troublesome phenomenon: present bias. Present bias is the term behavioral scientists use to describe human beings’ tendency to opt for immediate rewards, rather than the same or larger ones

that lie in the future. In one experiment¹² examining this tendency, participants chose to receive \$20 now instead of \$50 one month from now. People chose \$50 only when there was an added time delay to receive both rewards (e.g., \$20 in one year or \$50 in two years). The results show that while we may prefer the larger, more delayed reward when both alternatives are far off in the future, we may choose a smaller, more immediate reward if they are offered to us in the present. The decision to put money aside for our retirement offers a prime setting for present bias to take over, as we are compelled to choose between spending that money in attractive ways today or saving it for future use by our distant self.

Between 2015 and 2018, ideas42, in partnership with MetLife Foundation,¹³ collaborated with Mexican private retirement fund administrators known as AFORES (Administradoras de Fondos para el Retiro) and the government regulatory commission CONSAR (Comisión Nacional del Sistema de Ahorro para el Retiro) to identify barriers to contributing to voluntary retirement savings in Mexico, and test solutions through randomized controlled trials. One of the main barriers identified was present bias and people's inability to connect with their future selves, which made it harder to make sacrifices in the present.

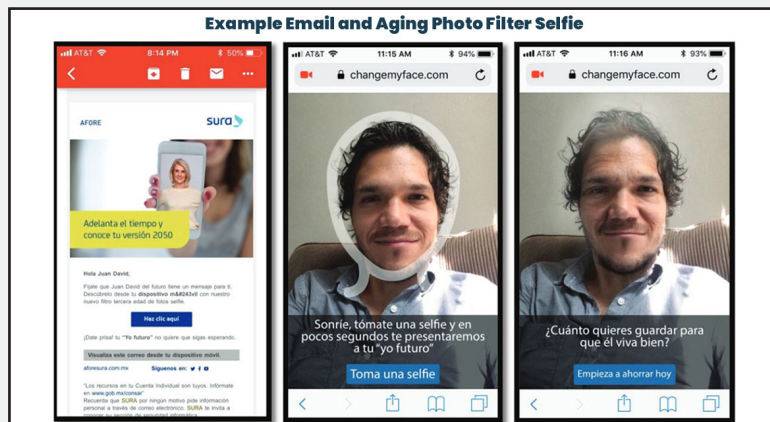
To counter present bias and increase the level of connection people feel with their future selves, ideas42 designed and tested two interventions that helped people visualize and connect with their future selves before deciding about their retirement contributions. In the first intervention, the researchers leveraged in-person interactions between potential contributors and retirement fund promoters. During this interaction, the promoter would ask the person a series of questions about their future goals. Promoters would enter responses into an app that automatically populated a story about the person's future, which they would then ask the person to read out loud. With this story, researchers primed the participants with images of their future

¹² Green L, Fristoe N, Myerson J. Temporal discounting and preference reversals in choice between delayed outcomes. *Psychon Bull Rev.* 1994 Sep 1;1(3):383–9.

¹³ Fertig A, Fishbane A, Lefkowitz J. Using behavioral science to increase retirement Savings in Mexico. A look at what we have learned over 3 years. November 2018. http://www.ideas42.org/wp-content/uploads/2018/11/142-1046_MetLifeLatAm_paper_ENG_Final.pdf

selves during retirement to help them make beneficial savings decisions. After going through this visualization exercise, 20 times more account holders signed up for automatic retirement saving, showing that the intervention managed to bridge the gap between our younger and older selves, aligning participants' current action with their future selves' interests.

The second intervention leveraged similar principles of visualization but was this time deployed on a more accessible platform—people's own smartphones. Participants were in this case invited to “meet their future self” through text message, email, or push notifications from an existing, linked app. If they accepted the invitation, they were redirected to a web page with an aging photo filter. There, they were given the option to take a selfie and would then be presented with a picture of their older selves, together with an empathetic question asking, “How much would you like to save for him/her to live well?” and a link to a page where they could set their saving preferences. The randomized controlled trial found that the intervention increased the total amount saved among participants by 54%. It not only increased the number of contributors but also increased the size of contributions by subscribers.



Source: *Increasing Retirement Savings Using Photos of One's Future Self*¹⁴

¹⁴ Ibid.

CASE STUDY 3:

Building a Savings Cushion with Microsavings

In 2012, ideas42, with support from the Grameen Foundation, partnered with CARD Bank Inc., a financial service provider based in the Philippines, to design and test an intervention aimed at helping low-income families to use their formal savings accounts to build a financial cushion. At the time of the study, only about a quarter of Filipinos used formal financial services, and over a third of households reported not having any cash saved for emergencies or other unexpected expenses. The Grameen Foundation's Microsavings Initiative (GFMI) and CARD Bank introduced a microsavings account called Matapat, which could be opened with a small initial deposit of about \$2.25 in U.S. dollars. The Matapat account also offered a deposit "pick-up" option where a savings collector went house-to-house to collect savings, thereby saving users from having to make trips to the bank to deposit their money.

Initially, GFMI and CARD Bank asked that we work with them to get more individuals from low-income backgrounds to open a Matapat account. They assumed that once an account was opened, users would naturally deposit money into them consistently. Our team investigated this assumption by reviewing customer data and found that getting people to sign up was not the problem, as over 34,000 people had signed up for Matapas accounts in less than two years. However, after accounts were opened, over half of them saw no activity. We therefore decided to redefine the key problem to focus on encouraging account holders to engage with their accounts more effectively after they opened them.

Our qualitative interviews with CARD Bank clients and staff, as well as observations of client interactions with the Matapat accounts revealed important insights to barriers that were

affecting ongoing account engagement. Due to the small minimum deposit required to open an account, users were anchored to lower deposit amounts, and some saved less than they could afford. Also, many clients did not have a clear intention to use these accounts after they opened them. They focused solely on opening an account, as a signal of their intention to save, and not on actually saving for goals that could be achieved with regular use of these accounts. Opening accounts provided a sense of accomplishment, while planning for and allocating scarce resources to savings may have felt more difficult. Also, the pick-up option for savings collection was not clearly articulated during account opening, and that was the only time clients were presented with this option. It was clear from our research that while CARD bank clients understood the importance of saving, the abstractness and remoteness of savings goals wedged apart their intentions and actions.

We designed a simple package of solutions aimed at helping clients concretize their intentions for saving and anchoring them to a more defined plan for achieving their savings goals. First, we redesigned the account application form to include clear prompts that asked clients to set a specific goal for their savings. Additionally, clients made a clear and personalized savings plan by writing down the total amount they wanted to save, selecting an initial deposit amount, and determining the frequency and timing of their deposits. The redesigned form made the goal salient and provided a clear savings roadmap for clients to follow. It also re-anchored them away from the initial smaller deposits toward higher, yet feasible, amounts. Clients were also asked to sign a “pledge” in front of a bank representative witness who cosigned it. This act signaled and strengthened a sense of commitment to their plans and created the feeling of accountability to the bank representative to encourage follow through. Finally, we displayed the free deposit pick-up feature prominently on the form.

We also provided an opportunity for clients to sign up for SMS reminding them to save, as per their commitments. The messages aimed at refocusing client attention on savings to mitigate the problem of inattention and remind them of their goals. The text messages appeared to come from a specific CARD Bank staff member, rather than a computer system, to reinforce the strong relationship clients feel with CARD Bank.

We also gave each client a free savings calendar that allowed them to track their daily savings and also provided spaces to calculate their weekly and monthly subtotals. The calendar served as a marker of progress and a visual reminder of their savings goal. It was framed as a “gift” to encourage reciprocity in the form of positive savings behavior.

[illegible]



CARD Bank Savings Calendar

Encouraging you to save little by little, day by day

My name is: _____

I'm saving for: _____

June								Total for the Week
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
Week 1						1	2	\$
Week 2								\$
	3	4	5	6	7	8	9	\$
Week 3	10	11	12	13	14	15	16	\$
	17	18	19	20	21	22	23	\$
Week 4								\$
	24	25	26	27	28	29	30	\$
Week 5								\$
GRAND TOTAL								\$

**Spend less.
Save more!**



Saving should come from the heart

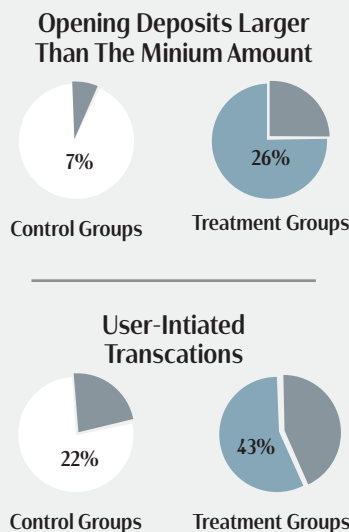
DO-ABLES & RUBLES - Save with a Plan





A randomized controlled trial conducted over eight weeks showed that the behaviorally designed materials led to larger deposits at account opening, more frequent contributions (though smaller amounts per transaction), and larger savings balances. For example, 26% of the treatment group made an opening deposit larger than the minimum amount, compared to 7% of the control group—increasing the opening deposit amount by 15%. What's more, 43% of the treatment group made a user-initiated transaction during the pilot period, whereas only 22% of the

control group did so. The treatment group had higher average balances than the control group by the end of the study period, with the treatment leading to a 37% increase in average savings balances.



5. NOT LEVERAGING A BEHAVIORAL APPROACH CAN BE COSTLY

Solutions that do not consider the reality of human behavior and the relevant contexts of users often miss the mark. Significant time and resources are spent, but often yield little to no results. One such example is the recent efforts on prompting people to get vaccinated for COVID-19. Monetary incentives to encourage vaccination largely failed,¹⁵ especially among people who were vaccine hesitant. Without an experimental and behavioral approach, scaling such interventions would fail, costing millions of dollars with little to show for it. Similarly, several information campaigns are run on the assumption that people either do not know, or do not want to do, something that is desirable for their own good and for the good of society at large, and a lot of money is spent trying to inform or motivate appropriate action. In many

¹⁵ *Why cash incentives and lotteries for covid-19 vaccines failed [Internet]. [cited 2023 Jan 26]. Available from: <https://qz.com/2079162/why-cash-incentives-and-lotteries-for-covid-19-vaccines-failed>*

instances, people are dealing with completely different barriers to the desired action—from human flaws as simple as forgetfulness to cultural pressures around norms that influence behavior.

One study¹⁶ in Kenya aimed to understand and address the problem of low fertilizer use among farmers. The researchers explored various hypotheses, including an assumed lack of intention or interest among farmers to use fertilizers. When surveyed, however, nearly all of the farmers said they planned to use fertilizer in the next season. Yet less than 40% actually did so. Further investigation revealed that farmers had a hard time holding on to cash between harvest and planting. Hence, the problem was with the timing of when fertilizers were sold. By the time it was planting season, most people did not have money to purchase the fertilizers.

The researchers decided to sell early purchase vouchers right at harvest—futures in fertilizer—so people could lock their money away in the asset. It was in effect a savings account for fertilizer—and the moment of choice occurred when the farmer was most flush with cash. They also delivered the purchased fertilizer directly to the farmer to address procrastination, so that farmers could no longer say to themselves, “I’ll just get it tomorrow.” In the end, this system of early purchase and home delivery improved fertilizer use by 70%. The home delivery of fertilizer was equivalent to a 10% discount on market price (similar results would have required a 50% subsidy). If program implementers had led with the initial assumptions about low interest or intention to use fertilizers, they likely would not have seen why this intervention would be so important and effective.

6. THE USER SHOULD BE INVOLVED THROUGHOUT THE DESIGN PROCESS

Although a behavioral approach may take longer and cost more at the front end of designing a solution or an intervention, it pays

¹⁶ Duflo E, Kremer M, Robinson J. *Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya* [Internet]. Cambridge, MA: National Bureau of Economic Research; 2009 Jul [cited 2018 Aug 23]. Report No.: w15131. Available from: <http://www.nber.org/papers/w15131.pdf>

to do so in the long run. Using a behavioral lens allows program designers to capture the nuances of the intended users, and to develop solutions based on direct user feedback through the design and implementation process. It enables designers to tweak interventions that have been proven to work in certain situations for new contexts, and to adapt proven solutions to realities of the people who will use them.

For example, defaults^{17,18} have been an effective strategy for getting more people to sign up for a product or service that is beneficial to them. In many ways, human behavior is influenced by habit. We do not like switching things once we are settled into a position of familiarity or comfort, even if that position is detrimental to our well-being. Think about the many online subscriptions we continue to pay for even though we no longer use the services they provide. By automatically enrolling people into savings or retirement programs, with the freedom to “opt out,” rather than the other way around, employers have seen significant increases in their worker enrollment rates.¹⁹ Once enrolled, few people exercise their right to opt out. Since people are likely to stick to the option they were initially enrolled into, even if their preferences change over time, it may be useful to default people to an option that is most in line with their long-term (and often stated) interests.

However, even though defaults have been successful in many cases, they do not work in every context. For example, a study conducted in the U.S. sought to evaluate the effect of defaults on the savings behavior of low-income tax filers.²⁰ Whereas people in the control group could choose (opt in) to allocate some of their federal tax refunds to U.S. savings bonds, the treatment group had a portion of their refund automatically transferred to bonds unless the tax filers actively chose not to do so (opt out). Results showed that the opt-out default did not have a significant impact on savings. Further investigation showed that the intervention did not work because the low-income tax filers who participated in the

¹⁷ Blumenstock, Joshua, Michael Callen, and Tarek Ghani. 2018. “Why Do Defaults Affect Behavior? Experimental Evidence from Afghanistan.” *American Economic Review*, 108 (10): 2868–2901.

¹⁸ Brigitte C. Madrian, Dennis F. Shea. *The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior*, *The Quarterly Journal of Economics*, Volume 116, Issue 4, November 2001, Pages 1149–1187, <https://doi.org/10.1162/003355301753265543>

¹⁹ Beshears J, Choi J, Laibson D, Madrian B. *The Importance of Default Options for Retirement Savings Outcomes: Evidence from the United States* [Internet]. Cambridge, MA; 2006 Feb. Available from: <http://www.nber.org/papers/w12009.pdf>

²⁰ Bronchetti ET, Dee TS, Huffman DB, Magenheimer E. *When a Nudge Isn't Enough: Defaults and Saving Among Low-Income Tax Filers* [Internet]. National Bureau of Economic Research; 2011 [cited 2023 Feb 8]. (Working Paper Series). Available from: <https://www.nber.org/papers/w16887>

study already had specific plans for spending their refunds. The default strategy appeared to be ineffective in a context where the intention to spend money was already strong. Understanding this unique exception is important for how policy makers and program implementers design defaults.

Commitment devices are widely used as a tool to help people practice greater self-control by making it difficult to dip into savings outside of prespecified moments. Several people open savings accounts or completely new accounts dedicated to saving, and sometimes even allow the banks to impose charges on them for each withdrawal as a disincentive for spending the money earmarked for savings. People who do not use the formal financial system as much resort to creative strategies for making it difficult to access their savings. For example, by locking their savings boxes with a key and throwing it away, or giving it to a trusted person to keep, or joining savings groups where multiple people keep the keys such that no one person can access the funds.

However, despite their desire to keep committed savings out of easy reach, many people are wary of totally cutting off their ability to access their money in times of an emergency. This is especially true among people living in a situation of financial scarcity, with unpredictable incomes, and with little or no financial cushion for difficult times. Nevertheless, and as the first case study in this chapter showed, partitioning and labeling can be an effective tool to build a sentimental connection between savings and specific goals. However, labeling too harshly may intimidate people who need flexibility around money and depend on short-term liquidity for surviving financial shocks. Pension program designers would therefore need to design products that balance long-term retirement goals and short-term liquidity needs for emergencies, and minimize early access while making savings feel and be accessible in times of emergency. Finding the right balance in

this case will also depend on the target client and their specific context.

Contextual reconnaissance—spending time observing and learning from the people you intend to serve before designing and finalizing solutions—is critical to success, as is testing post-implementation. Ideally, this should be done in an iterative manner, and on a limited scale, to avoid making costly mistakes at full scale. Focus-group discussions, key informant interviews, data reviews, and material audits are various ways of exploring a new context. A behavioral process enables program designers and implementers to use such tools, maximizing the likelihood of success when an intervention is eventually scaled.

7. THE WAY FORWARD: DESIGNING SOLUTIONS THAT WORK

Behavioral science shows us that human behavior is at the center of successful programs, products, and policies. An intervention may be designed elaborately and innovatively, but without an understanding of the day-to-day context of the target group, it may not achieve its purpose. Many program designers assume that once products are created, intended behaviors will follow. In practice, such assumptions are often wrong. Behavioral design highlights the importance of understanding how context influences behavior. Even when a situation feels similar, how it is experienced varies from person to person and from place to place. Using a behavioral approach, we can incorporate the voices and perspectives of users to more clearly understand what really affects the things they do. Qualitative and quantitative research tools enable us to test our hypotheses and adapt to reality.

When working with people from low-income backgrounds, where there are fewer formal supports for retirement, there are three important principles to keep in mind: flexibility, trustworthiness, and simplicity. People in informal employment often face irregular

cash flows and tight financial situations. Unexpected expenses can easily throw them off their planned expenditures and savings. For example, a study conducted in the U.S. showed that about half of households experience an income gain or drop of 25% each year. Around 92% of the respondents said they would prefer income stability to moving up the income ladder.²¹

Income shocks can be costly, sometimes making it difficult to meet financial commitments at specific times, leading to high penalties. Financial products for informal workers therefore need to be flexible. They should enable people to save when they receive an inflow, while permitting them to pause savings contributions during times of financial hardship, without any penalties. Aligning savings with cash inflows also makes it easier for people to save and removes anxiety about not being able to meet savings commitments. Program implementers who design products with these constraints in mind will win the trust of their users. If consumers feel that providers have thoughtfully designed services with their needs and autonomy preserved, they are more likely to reciprocate by being more loyal to the brand. For people with modest incomes, where such simple considerations are often neglected, providers who put in the forethought will stand out.

Products targeted at low-income populations should be designed to promote simplicity and ease of uptake and use, from the number of steps required to activate an account or to save to the way account information is presented or accessed. This will go a long way to strengthen trust in the product.

By leveraging insights from behavioral science, pension programs that serve informal workers can be better designed to close the gaps that people experience between their savings intentions and their actual savings behavior. Carefully designed solutions that take the reality and context of real users into consideration can lead to a more dignified and financially secure future for many people worldwide.

²¹ The Pew Charitable Trust. *Americans' Financial Security Perception and reality: FSM Poll Results Issue Brief_ARTFINAL_v3.pdf*. March 2015. http://www.pewtrusts.org/~media/Assets/2015/02/FSM-Poll-Results-Issue-Brief_ARTFINAL_v3.pdf

