



Saving without barriers:

Lessons from the Retirement Savings Laboratory's pilot projects

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1

Introduction



1. Introduction

Despite being designed to protect workers, the reality of pension systems in Latin America and the Caribbean (LAC) is that they leave many people behind, disconnected from insurance mechanisms.

Today, fewer than half of the region's workers save for retirement¹ and, as such, are not financially preparing for old age. These are also low-income workers, who are mostly self-employed. In other words, those who are less fortunate during their working lives and the least protected from sudden transitions or shocks in the labor market will also be tomorrow's most vulnerable, with a high probability of depending on family members to maintain them or, without that option, becoming impoverished in old age.

Time is not on our side. Building a pension requires a very significant effort to save over long periods. Under certain conditions, to receive a pension income of 10% of a worker's final salary, the worker must save between 3 and 5% of their salary for at least 30 years²; even more if they begin saving when they are older. Therefore, a non-negligible savings rate is required, especially for people who have never habitually saved. Furthermore, as life expectancies increase, people will also have to make more of an effort to save.

Saving for a pension requires workers to navigate an obstacle-ridden path. Being able to save for retirement regardless of employment status is still a challenge in Latin America and the Caribbean. In this sense, financial products for long-term voluntary savings offer a possibility for these disconnected workers to prepare financially for old age. However, a vulnerable worker who wishes to use one of these types of options must traverse an obstacle-ridden path full of multiple barriers with diverse origins, including concrete regulatory and technological barriers and psychological biases that make saving for retirement complicated, and sometimes impossible³.

New allies to look for new and innovative solutions. Facing this challenge requires new solutions. The good news is that there are new allies. On the one hand, technology makes saving easier and more accessible for previously disconnected workers. On the other hand, behavioral economics, a hybrid science between psychology and economics, illustrates how to help people overcome barriers that prevent them from fulfilling their intentions, such as preparing themselves financially for the future.

The IDB's Retirement Savings Laboratory seeks to explore these solutions with two main objectives. First is to understand how behavioral tools that promote pension savings can be successfully **deployed at scale** in Latin America and the Caribbean, a region characterized by high labor informality and relatively low banking. Second, this project seeks to **evaluate and measure results** of innovative pilots to

1. Bosch *et al.* (2013).

2. Ibid.

3. Bosch *et al.* (2019).



increase the pension savings of the most disconnected workers in the region as a way to understand the potential to scale the solutions, so they can have a positive effect on the region's pension systems.

For four years, this project has implemented solutions in Chile, Colombia, Mexico, and Peru based on behavioral economics and supported by the possibilities offered by new technologies to facilitate savings for low-income citizens. Through the implementation of 14 pilot projects, the Retirement Savings Laboratory has tried to raise, as far as possible, the physical and psychological barriers that hinder the savings process for citizens. This, in a nutshell, meant minimizing the number of steps from when the will to save is generated until the transaction takes place. Thus, the project has tried to reach more citizens and give them a “nudge” to save. With this objective, a wide range of strategies has been used: from creating automatic savings mechanisms on digital platforms to encouraging instances of savings in transactions, such as at the time of purchase, payment of taxes or at the end of loan repayment. In addition, an attempt has been made to focus that “nudge” with the aim of generating the will to save⁴. Thus, through eight reminder initiatives, the Retirement Savings Laboratory has appeared on more than 17 million Facebook feeds and sent more than 7 million text messages, 6 million push notifications and pop-up messages, 500,000 emails and almost 100,000 calls. These messages were specially designed to inform and overcome the psychological barriers that make saving difficult for us.

The following are the project's four main findings, after four years of implementation.

LESSON 1. Solutions linked to a source of income have a significant impact on generating voluntary savings. However, scaling them for the low-income and self-employed population is challenging.

Solutions that significantly increase voluntary savings automatically set aside part of the income towards a savings program (mimicking mandatory savings systems). Although not easy to implement for the self-employed, this project shows that technology increasingly provides more avenues to do so. A great opportunity is through digital on-demand work platforms. In Peru, through the Cabify application, drivers were invited to voluntarily save part of their earnings, leading 18% of them to sign up for an automatic savings debit.

LESSON 2. Reminders are easy to scale and cost-effective, but they have little impact on saving for retirement and they don't always work. Nudging, informing, encouraging, or convincing a citizen in a simple way, taking advantage of behavioral economics, can work, but in some cases, it has a small or short-lasting effect. However, reminders can be cost-effective strategies, especially if they are combined

4. Not only is increasing the amount of savings for retirement important. From a public policy point of view, identifying where the greatest savings come from is relevant too. If the nudges encourage retirement savings, this may be the result of an income effect. For example, the person's total saving level increases due to a reduction in current consumption and/or a substitution effect, that is, to the same level of saving, and the person reallocates between saving instruments. Half of the OECD countries, including Chile, have some type of tax exemption regime for both contributions and returns on investment, with profits taxable upon retirement (OECD, 2018; OECD, n.d.). The literature focuses on the impact of tax incentives on long-term savings in developed countries. Attanasio *et al.* 2004 study the impact of tax benefits associated with retirement savings accounts in the United States and the United Kingdom, finding that a small proportion of the savings in these instruments correspond to “new” savings. Unfortunately, it is beyond the scope of this document to assess whether the impact on savings of the pilots corresponds to new savings or to the resignation of resources.

with the use of technologies that can accelerate or scale the effects, such as facilitating multi-channel contributions (web portals, banking correspondents, merchants, mobile apps, etc.).

LESSON 3. Making saving easy must be accompanied by better financial and social security education. Although regulations that protect savers have good intentions, they make the saving process complex and bureaucratic. For this reason, eliminating this tension and putting solutions in place that automate and simplify the saving process requires well-informed workers who know the rules of the game of pension systems, as well as the consequences of their decisions during their working years. Some of the pilots at the Retirement Savings Laboratory found that it is possible to increase the population's systemic understanding and, perhaps more importantly, that greater knowledge of the system translates into greater confidence in it. In Chile, the results of an intervention among students of technical-professional high schools reflect the importance of financial education; for example, among students in the course, financial and social security knowledge increased, in addition to confidence in the pension system (by about 10 percentage points).

LESSON 4. Betting on voluntary retirement savings requires institutional leadership to overcome regulatory and technological barriers, as well market failures that make it difficult to implement scalable and effective savings solutions. The project's results confirm that the process of saving for retirement should be as simple and automatic as possible. However, in practice, the path to saving for retirement is fraught with regulatory hurdles, technological constraints, and market failures that make it difficult to implement scalable and effective savings solutions that truly reach all segments (not just formal workers). Overcoming these barriers requires institutional leadership with the goal of establishing a universal, voluntary retirement savings pillar.

From lessons to action: Toward a voluntary savings pillar for all

A central conclusion of the lessons of the Retirement Savings Laboratory is that technological and behavioral tools are necessary, but insufficient, to solve the region's pension challenges. The challenges of pension systems in Latin America and the Caribbean are so complex that technology and psychology alone will not solve the problems, which is not to say these types of tools are not an important part of the solution. All pension systems in the region face the challenge of improving coverage for the lower segment of the income distribution and generating more savings for the middle class. Thus, digital and behavioral solutions can help build an inclusive voluntary savings pillar so that more people save for retirement.

The lessons from the Retirement Savings Lab provide an implementation guide for building a voluntary savings pillar for all. In this sense, three essential principles ensure that any source of income and expenses can potentially be transformed into retirement savings:

1. First, the regulatory environment must favor voluntary savings, making it easy, accessible, and understandable. To do this, restrictions on retirement savings should be eliminated, allowing the implementation of automatic savings mechanisms, and investing in financial and pension education.
2. Second, it is important to design a long-term savings product that truly responds to the reality and needs of many workers in the region, incorporating, for example, liquidity elements that allow people to access a part of their savings in emergencies.
3. Third, outreach to citizens must be expanded and improved by leveraging technology, which allows easy and safe access to a variety of channels, making voluntary savings for retirement easy and accessible. Technology is also an ally in improving the collection of micro-contributions at low cost, making pension savings affordable.

The next sections are organized as follows: Section 2 discusses the obstacles faced in saving for retirement, emphasizing the psychological barriers that lead people away from saving even when they want to. Section 3 presents the potential of two new tools to overcome these challenges: solutions informed by behavioral sciences and digital technologies. Section 4 analyzes the results of 14 pilot projects, organizing the lessons from this experimental space around four major lessons. Sections 5 propose guidelines to implement a voluntary savings pillar for all.



2

An obstacle-ridden path

2. An obstacle-ridden path

Low participation of self-employed and low-income workers in pension systems is one of the main social security challenges faced by Chile, Colombia, Mexico, and Peru. In Colombia, Mexico, and Peru, only two out of every ten workers in the first four deciles of income distribution contribute to a formal pension scheme. The main factor behind this disconnection with the mandatory pension systems is that the formal labor market is the main mechanism for generating pension savings in a context with high degrees of informality. Given this reality, one possibility is to make voluntary pension savings contributions to prepare financially for retirement.

Although all four countries have voluntary pension savings pillars in their pension systems, very few people choose this savings option, especially among self-employed and low-income workers. Less than 7% of affiliates in Chile have made a voluntary contribution and, among low-income affiliates (first quintile), this figure drops to 3%. The same happens in Mexico and Colombia, where only 6.8 % and 5.7 % of managed accounts register voluntary savings, respectively.

The virtual non-existence of voluntary pension savings in the four countries is due to a series of obstacles faced by low-income and independent workers if they want to participate. Three types of impediments can be highlighted: demand barriers, supply barriers and environmental factors. Demand barriers to voluntary pension savings refer to factors at the individual level that inhibit saving for retirement, such as insufficient or irregular income (ability to save), behavioral factors (behavioral biases) or ignorance of how to save or why it matters (financial education). Supply barriers to voluntary pension savings limit the development of long-term savings products adapted to the needs of vulnerable populations. Finally, among the environmental factors that hinder people's voluntary pension savings in the four countries, two factors that stand out are deficiencies in the design of non-contributory pensions (which in some cases discourage voluntary contributions to the systems) and the lack of confidence in pension institutions.

FIGURE 1. VOLUNTARY RETIREMENT SAVINGS BARRIERS FOR LOW - INCOME AND INDEPENDENT WORKERS IN LATIN AMERICA

	TYPE OF BARRIER		
	DEMAND	SUPPLY	ENVIRONMENTAL
EXAMPLES	<ul style="list-style-type: none"> • Limited savings capacity, which increases the cost of resource mobilization. • Intrinsic characteristics of formal retirement savings products incompatible with individual needs (illiquidity). • Psychological factors (behavioral biases). • Lack of education related to personal finance and social security. 	<ul style="list-style-type: none"> • Lack of commercial incentives to reach self-employed and low-income workers. • High collection costs for micro deposits. • Insufficient reach of deposit networks in rural areas. • Low connection between the image of fund administrators and the preferences and necessities of informal and low-income workers. 	<ul style="list-style-type: none"> • Noncontributory pillars that are not integrated generate labor market distortions and can act as a disincentive for low-income workers to participate in the formal retirement savings system. • Lack of trust in financial intermediaries that receive savings⁵.

Source: Self elaboration, based on the experience of the Retirement Savings Laboratory.

Among existing demand barriers, cognitive tendencies or behavioral biases intrinsic to human nature represent one of the best-documented obstacles to saving. Behavioral science, which brings together learnings from psychology, anthropology, and other disciplines about the factors that influence human decisions, identifies many money-related cognitive and behavioral trends, as well as how they result in people undersaving, especially over the long term. For a discussion of the origins and causes of human behavioral biases, see Box 1.

One of the most relevant biases is people's tendency to overvalue benefits obtained today, or in the near future, well above those that are achieved in a more distant future⁶. This present bias is reflected in self-control problems and a tendency to postpone decisions that have a certain present cost, but that offer significant long-term benefits, as is the case with saving for retirement. Another important bias includes people's propensity to mimic the financial behaviors of friends or family, who in many cases do not save or save insufficiently. Other biases involve a tendency towards limited attention, which refers to the paradox that people tend to forget about exceptionally large or infrequent spending, and

5. Pension fund administrators and other financial intermediaries, including banks, which in some countries are authorized to receive retirement savings deposits.

6. Laibson (1997); O'Donoghue and Rabin (1999).

the tendency to underestimate the likelihood of negative events occurring throughout one's life⁷. The latter is manifested, for example, in a high percentage of people in Latin America and the Caribbean who plan to continue working after retirement age to finance their old age, despite the fact that only a minority will have the necessary health conditions to do so.

BOX 1. THE EVOLUTIONARY REASON FOR BEHAVIORAL BIASES

Humans are distinguished from other animals by our high cognitive capacity, which allows us to analyze, think, and create. However, cognitive processes consume a great deal of energy, and humans have evolved over hundreds of thousands of years to recognize patterns and use energy in a more efficient way to understand their environments. These shortcuts, or heuristics, cause people to make decisions in a more automatic and less conscious way, reducing the time and effort required.

Very likely, adaptations that helped human survival in other circumstances may now be limitations⁸. Cognitive biases, which are the application of shortcuts that systemically lead people to outcomes that appear to be detrimental to their state of well-being, have been widely written about. Among the cognitive biases relevant to the issue of long-term savings, several stand out, particularly present bias, social preferences and over-optimism⁹.

Each of these biases could have its evolutionary logic in trying to maximize human survival¹⁰. In the case of present bias towards maximizing the probability of survival in adverse situations, it could be seen as more important to collect resources in the present because the future is not guaranteed¹¹. In the case of social preferences, conformity within a small group has been a key element throughout human evolution to show consistency, as well as confidence, in the group's stability, improving its chances of survival¹². In the case of over-optimism, optimistic people tend to live longer and have better health than less optimistic people do¹³.

7. Although there is ample evidence of how widespread the psychological biases listed here are, a large part of this evidence comes from studying samples with subjects from Western, Educated, Industrialized, High-income, and Democratic cultures (WEIRD populations, defined in "The weirdest people in the world?"). Henrich and co-authors (2010) have shown that cultural differences are accompanied by social preferences. Likewise, culture can affect the manifestation of the aforementioned psychological biases. Levinson and Peng (2007) document cultural differences associated with financial risk assessment, assignment of probabilities under uncertainty, the endowment effect, and retrospective bias. However, it is worth noting that the greatest cultural difference between WEIRD populations and low-income self-employed workers in Latin America is their income level, with its main effect being that it deepens biases in intertemporal decisions, as suggested by Mullainathan and Shafir (2013).

8. For a full summary, see Haselton, Nettle, and Murray (2015).

9. Bosch *et al.* (2019).

10. Fawcett, McNamar, and Houston (2012).

11. Imas, Kuhn, and Mironova (2015).

12. Haselton and Nettle (2006).

13. Hintze, Olson, Adami, and Hertwig (2015).



3

New Solutions to
Old Problems



3. New Solutions to Old Problems

Saving for retirement is difficult because one encounters many barriers to doing so. In this sense, how can people who want to save be helped so that they actually do save? Two new tools offer great potential to overcome these challenges and help people save: behavioral sciences and digital technologies.

3.1. Behavioral Tools

Behavioral science has allowed the development of a series of highly cost-effective principles and tools that can help people overcome these biases¹⁴. However, evidence about the effectiveness of these mechanisms has been based primarily on experiments conducted with workers in the United States. For this reason, when the Retirement Savings Laboratory was launched in 2016, one of its main objectives consisted of transferring these learnings to Latin America and the Caribbean and testing the effectiveness of these behavioral tools to generate retirement savings in contexts of high labor informality.

According to international evidence, the behavioral mechanism with the greatest promise to promote retirement savings for individuals is automatic enrollment in pension plans (see Annex 1 for a brief review of the evidence)¹⁵. This is because automatic enrollment turns a person's status quo into a savings-friendly situation. That is, without doing anything, one is already automatically enrolled in an option that by default deducts a percentage of one's income and allocates it to a long-term savings account, helping one overcome behavioral biases such as inertia and procrastination¹⁶. In circumstances where automatic enrollment is not possible, active decision enrollment may be a feasible alternative. This mechanism consists of encouraging people to decide to save.

Simplifying information, sending reminders, and offering savings subsidies are less effective, but they are more easily scalable. The great advantage of these mechanisms is that they can be applied outside the formal labor market. Several studies demonstrate that simplifying information, for example, reducing the number of options a person has to evaluate when making a retirement savings decision by preselecting the rate and fund to which the person will contribute, substantially increases worker participation rates in pension plans. Reminders, on the other hand, consist of messages sent (e.g., from institutions that manage retirement savings funds) to account holders at opportune moments to focus their attention on saving. In doing so, they help people get past limited attention spans. Finally, savings

14. Carroll *et al.* (2009) and Benartzi *et al.* (2017).

15. For literature reviews about behavioral economics mechanisms to promote retirement savings, see, for example, Madrian (2013) and Choi, Laibson, and Madrian (2004).

16. NEST <https://www.nestpensions.org.uk/>

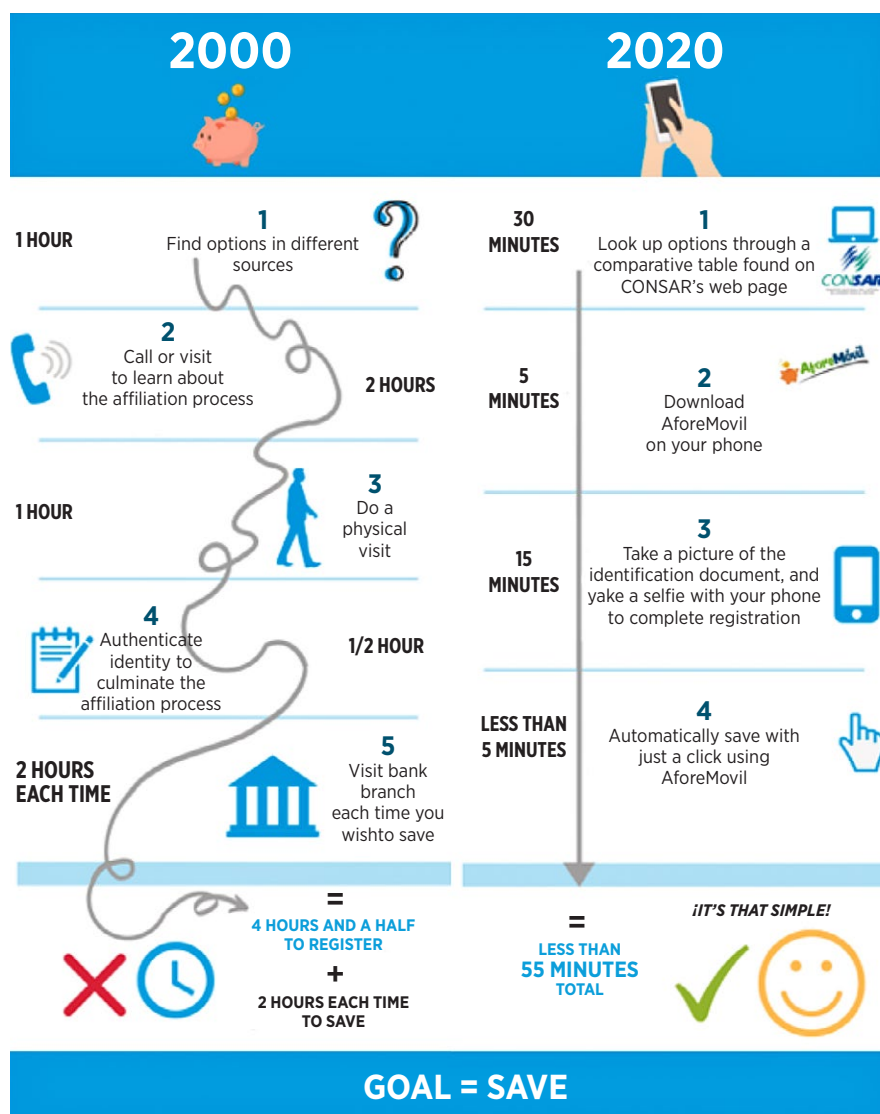
subsidies or matches, which provide rewards in the present for moving consumption into the future, have relatively modest effects compared to the other tools mentioned.

3.2. Digital Technology

The path that people must follow to save voluntarily for retirement is long and includes multiple steps. People must first decide whether they want to save for retirement and whether their budget allows it. Then they must decide where. Do they have a retirement savings account? If they don't, how can they open one? If they do, in which institution? Do they remember their account number? Once they pass this step, other questions arise. How much should they save? How can they contribute? All these questions must be answered before making a single contribution to retirement savings. Unlike mandatory contributions, voluntary contributions often involve many steps and decisions.

Digital technology makes it possible to simplify or even eliminate many of these steps to save voluntarily for retirement. To illustrate how much technology can simplify retirement savings processes, a comparison between the steps for a self-employed worker to contribute voluntarily to their pension 20 years ago versus today is helpful (see Figure 2). In 2000, a taxi driver who wanted to save for retirement in Mexico first had to choose a pension fund administrator (*afore*, in Spanish), searching through scattered sources to make an informed decision. Then, he had to make multiple phone calls or visits to retirement-fund administrator offices to learn about how to sign up and which documents he would need to have. Finally, he had to go in person to authenticate his identity and successfully open an account. However, all these steps only led to opening an account. Later, he had to go to a bank branch to make a deposit and repeat this every time he wanted to save. On the other hand, two decades later, in 2020, with the Internet and a smartphone at hand, all of this can be done with a few clicks. To find information about the fund administrators, he can search on Google, where he can quickly find the CONSAR (Mexican pension regulator) website, which contains a comparison table of the net performance of the different retirement fund administrators. Afterwards, he can download the *AforeMóvil* application on his phone, sign up for the highest performing retirement fund administrator by taking a photo of his identity document and capturing his biometric data through selfies. Making his first contribution is also easy, because in the same application he can register bank details and set up automatic debit. A process that could take days or weeks has been reduced to a couple of hours, without physically needing to visit offices or banks.

FIGURE 2. STEPS TO MAKE A DEPOSIT IN THE MEXICAN RETIREMENT SAVINGS SYSTEM. 2000 vs. 2020



Technology not only makes the process of saving for retirement easy and automatic, but also allows outreach in places that were not previously accessible. In the example of Mexico in 2000, where people had to register in person, it was much more difficult to reach workers in small cities, where there were no retirement-fund administrator offices. With the introduction of *AforeMóvil*, and high penetration of broadband and digital telephony, there are no geographical barriers to saving for retirement. However, the adoption of technology in the world of pensions has not progressed at the same rate throughout the region.

FIGURE 3. POTENTIAL SCOPE OF TOOL DEPLOYMENT

		POTENTIAL TO REACH INDEPENDENT WORKERS	POTENTIAL TO REACH LOW-INCOME WORKERS
ACTIVE CHOICE	Digital platforms	500,000	★
	Labor contracts	29,497,822	★
	Tax payments	55,459,771	★
	Household utility bills	64,204,780	★
REMINDERS	Social networks	150,000,000	★
	Mobile phones	231,200,000	★

Sources:

- Mobile phones: GSMA Intelligence/United Nations - World Populations Prospect 2018. Corresponds to the total number of SIM cards per country.
- Households: SIMS-IDB (2019).
- Tax payments: Chile (SII 2019), Colombia (DIAN 2018), Mexico (SAT 2019), Peru (SUNAT 2019).
- Digital platforms: Estimations based on "The Changing Nature of Work." World Bank (2019).
- Labor contracts: Labor Overview LAC - ILO (2019).
- Social networks: GlobalWebIndex (2019).

Channels related to income sources have the potential to generate more savings, and channels related to spending make it easier to reach independent workers. Channels related to income sources facilitate savings, because they take advantage of what is known in the literature as *savable moments*, which is the idea of saving when resources are available or when income has a constant flow (e.g., pay-days). The latter, in turn, makes it easier to establish recurring savings mechanisms such as automatic debits, so that once a person signs up, inertia allows them to keep saving. While these mechanisms may work well for formal workers working for a company or paying taxes, they are more difficult to implement for independent workers who receive their payments through multiple channels, often in cash. This is an advantage of spending-related mechanisms, since they help reach the public. Furthermore, they allow institutions to combine a pleasant activity (consumption) with a more painful activity (saving).

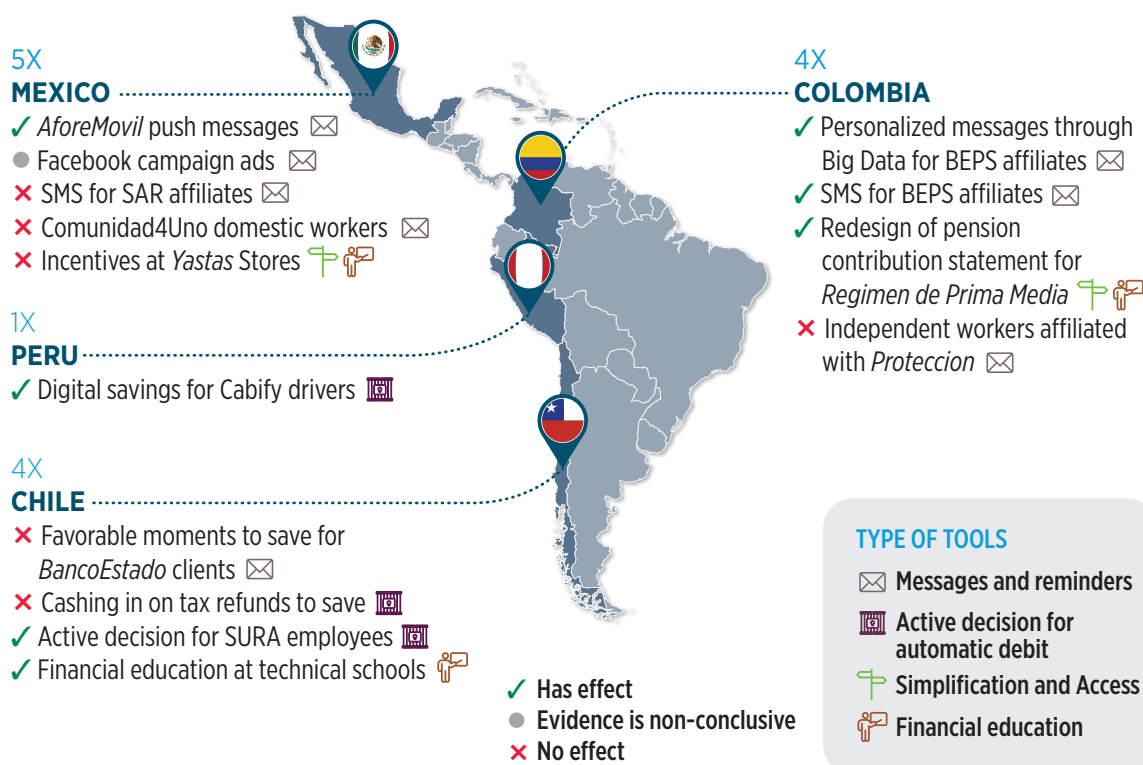


4 A space for trial and error

4. A space for trial and error

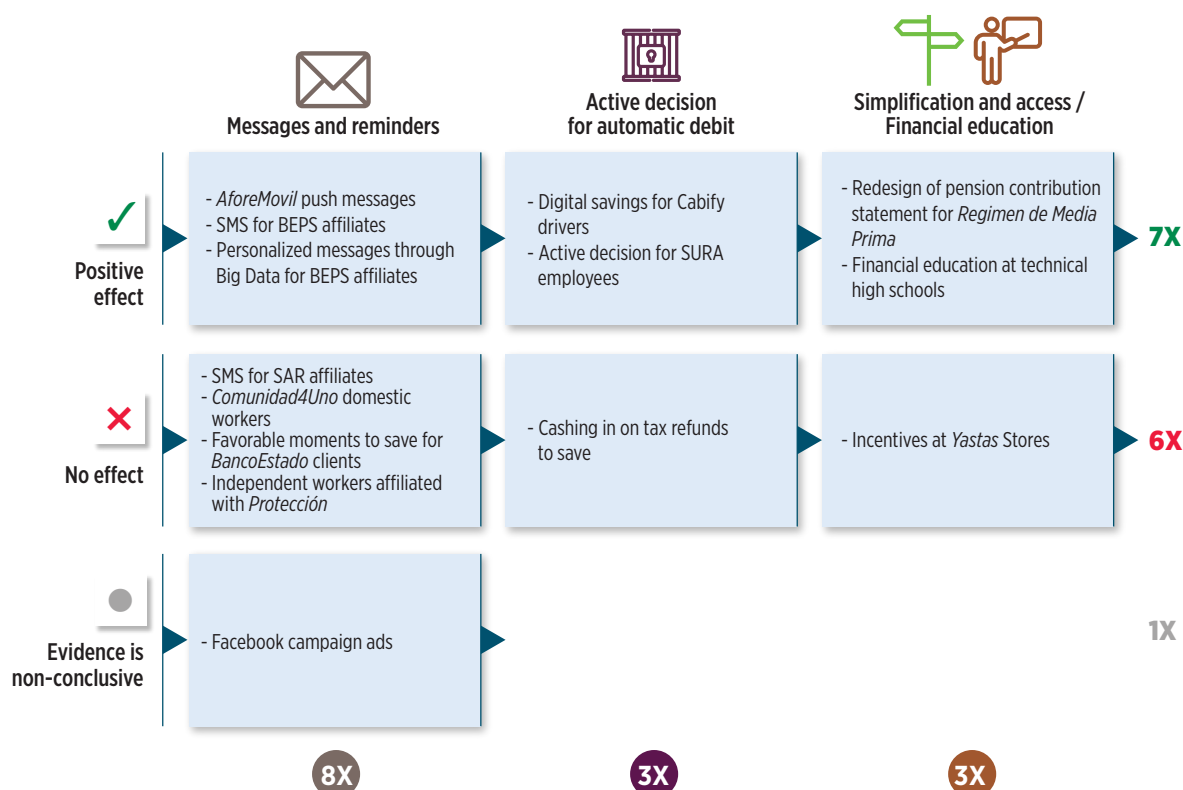
For four years, the Retirement Savings Laboratory has analyzed the contexts of Chile, Colombia, Mexico, and Peru to develop and implement solutions based on behavioral economics and digital technologies, taking advantage of new windows of opportunity and making it easier for citizens to save. In this space for trial and error, the project team designed and implemented 14 pilot initiatives with the goal of encouraging voluntary retirement savings and improving knowledge about the operation of pension systems (see Figure 4). Annex 2 presents a summary table of the Retirement Savings Laboratory initiatives, specifying the type of behavioral tool used, the design and objective of each intervention, and the number of beneficiaries. This section presents the results of the impact evaluations of these pilots grouped into four main lessons.

FIGURE 4. OVERVIEW AND EFFECTS OF THE RETIREMENT SAVINGS LABORATORY'S INITIATIVES



Source: Author's elaboration.

FIGURE 5. EFFECTS OF THE RETIREMENT SAVINGS LABORATORY'S INITIATIVES



Source: Author's elaboration.

LESSON 1. Solutions linked to an income source have a significant impact on generating voluntary savings. However, scaling them for the low-income and self-employed population is challenging.

Collecting contributions through an automatic debit is one of the most effective tools to promote retirement savings, because it simultaneously overcomes three behavioral barriers: limited attention, inertia, and loss aversion. This is the same principle used for workers' mandatory social security contributions, since companies automatically deduct pension contributions from paychecks, thus helping workers overcome their limited attention and a need to make a decision about whether or not they should save for retirement. Additionally, automatic payment from an income source helps mitigate loss aversion: because pension contributions are never deposited in workers' checking accounts, they do not consider it part of their monthly budgets and it doesn't feel like a "loss." Therefore, it is a highly effective tool to increase retirement savings.

The Retirement Savings Laboratory set out to understand the potential of automatic debits for self-employed workers who do not save (and formal workers who do not save enough) to smooth their old-age consumption. Both objectives have significant challenges, some of which are the same, and some of which are specific to each beneficiary group. Since self-employed workers do not have a single employer, the main challenge is to identify income sources from which their contribution to a retirement savings fund can be debited. For workers who are formally employed, the challenge is that they may think they are already saving enough through mandatory saving and no extra effort is required. The main challenge in common for both groups is how to present the call to save, since in both cases, countries in Latin America and the Caribbean have legislation that does not allow automatic debit enrollment of workers for savings contributions. The only exception to automatic enrollment for pension savings is for self-employed workers who issue an invoice in Chile, by the Treasury refunding tax that had been withheld during the previous year, during what is known in Chile as the *Operación Renta* (see Box 2).

BOX 2. AUTOMATIC SAVINGS THROUGH A TAX REFUND: THE CASE OF CHILE'S INTERNAL TAX SERVICE (SII).

Finding automatic savings mechanisms is challenging. Some countries have taken advantage of favorable moments for saving ("savable moments") such as annual tax refunds to establish default options (opt-out), voluntary enrollment (opt-in) or active choice around voluntary savings pension plans for workers who may not have a single employer, but do pay taxes. In 2013, Chile introduced a savings scheme for independent workers who issue invoices. They were automatically registered to contribute to pensions with the money from their tax refunds and until 2019 had the option of opting out of this contribution. This pension contribution became mandatory in 2019.

How many people opted out? Who were they? Prior to this pension contribution becoming mandatory, SII data show that around 90% of eligible self-employed workers opted out the automatic savings mechanism each year. Women, lower-income workers, workers with a lower balance in their retirement savings accounts, and older workers were more likely not to contribute. Workers entitled to a refund were around 80 percentage points more likely to opt out than those who did not have this right. This suggests that many workers already had a plan for what to do with their tax refund, including managing current situations, which they valued more than contributing towards their pensions.

How could this mechanism be more effective? To reduce the probability that an independent worker would opt out, we included a soft nudge that consisted of including a paragraph in red text on the implications of the decision to contribute or not on their savings for old age during the 2018 tax season. A total of 357,000 workers were exposed to the modified web site that included this soft nudge, and a similar number to the regular website.

What were the findings? Results indicate the intervention had no statistically significant effect on the probability of opting out among the total set of workers, or among any of the subgroups considered; that is, separating by sex, age group, level of income, and level of accumulated savings in the pension system. Although it is important to remember that the automatic enrollment mechanism of the SII allowed 10% of independent workers with invoices to contribute voluntarily to their retirement, these results show that reducing the percentage of those who opt out of automatic savings can be a difficult task. In particular, low-intensity interventions that arise very late in a worker's decision-making process (just before receiving the contribution) add to the challenge.

What is the most effective way to present an active choice? First, the “easy” way: helping formal workers save more. The Retirement Savings Laboratory worked with a company in Chile to increase its workers’ participation in a Group Voluntary Pension Savings (APVG) program through two pilot initiatives. The first pilot included a letter, as part of a packet of information during an annual human resources process, to all workers inviting them to make an active choice regarding their participation in the program. Follow-up was not mandatory, so 63.7% of the participants did not return the letter and the mechanism effectively ended up being voluntary enrollment. Six months after receiving the letter, the proportion of workers who signed up for voluntary savings was 5.8% (8.4% among those who had not previously done so). A comparison between the cohort of new hires that was exposed to the experiment and one that was not shows the letter had no impact. The second pilot incorporated lessons learned in two areas: (a) information provided to new workers was delivered face-to-face or via telephone and (b) the steps to opt-in and save were simplified. With these modifications, 25.6% of the new workers enrolled in the program.

Results from the second pilot to encourage formal workers to increase their savings through active choice are aligned with international evidence. For example, in the United States, the active choice to enroll in 401(k) pension plans increases participation between 28 and 37 percentage points compared to cohorts from previous years¹⁷. In the context of the Save More Tomorrow (SMarT) program, which seeks to increase workers’ retirement funds by saving “extra” or “additional” income to minimize the feeling of loss in the present, the rate of enrollment in the 401(k) plan was 13% in the company that contacted workers through letters. However, in the company that used advice from a financial consultant, the rate was 25%¹⁸. How can the self-employed, who do not have an employer that deducts a percentage of their income, save? How can the effectiveness of active choice be harnessed for this group?

To reach the self-employed, the potential of digital work-on-demand platforms, as well as the high banking and digital literacy of its affiliates, was used to boost voluntary savings. Through the Cabify application, the Retirement Savings Laboratory invited 3,348 drivers to save in one of two savings plans: a fixed savings plan or a surplus-driven savings plan¹⁹. To sign up, drivers had to fill out a very simple online form by which they would automatically start saving on a weekly basis. Half of the drivers were invited to save using the “emergency” plan, a traditional automatic debit that allowed drivers to save 2% of their weekly income. The other half were invited to save in the “smart and flexible savings” plan, which took into account independent workers’ income variations and sought to encourage drivers to save 3% of their earnings only in their good weeks. Drivers determined their own threshold of a “good”

17. Madrian and Shea (2001) and Choi, Laibson, Madrian, and Metrick (2004).

18. Benartzi and Thaler (2004).

19. Guerrero and Silva-Porto (2020). “Digital savings for on-demand platform workers.” Retirement Savings Laboratory, Inter-American Development Bank.



week, choosing the equivalent of USD 57.46, USD 143.65, or USD 287.30²⁰. Because drivers' incomes are highly variable, the idea behind this scheme was to promote saving that “doesn't hurt” by avoiding automatic debits during weeks with lower earnings.

After eight weeks of promoting the savings initiative, 18% of the drivers who received the notification and were eligible to participate in the savings scheme signed up. The simplest plan turned out to be the most attractive; the participation rate (take-up) in the savings plan for emergencies was 20%. In contrast, that of the smart and flexible savings plan was 15.9%. One possible explanation is that the smart and flexible savings plan was a bit more complex and included one more decision: Choosing the income threshold that drivers classified as a “good” week. Another noteworthy aspect is that among the drivers who signed up for the smart and flexible savings plan, the majority (57%) chose the threshold of USD 287.30. That is, they set a higher earnings goal before considering saving.

In addition, in line with what international theory and evidence demonstrate, automatic debits are sticky, since opt-out rates are low. After three months, the opt-out rate in Cabify was only 3.3%; that is, only 10 drivers requested to leave the savings scheme. In the case of Chile, of those who enrolled in the APVG scheme and saved the first month, 100% continued to do so the following month and 97% continued to save for the next six months²¹. These opt-out rates are similar to, or even lower than, those seen in 401(k) plans in the United States or NEST in the United Kingdom (around 10%).

A clear lesson that emerges from both interventions is that the enrollment process should be as simple as possible because each additional step reduces the effectiveness of the active choice mechanism to an automatic contribution scheme (see Figure 6). In the case of the financial company in Chile, during the first intervention to encourage voluntary savings, the letter sent to introduce the active election was not binding, and only revealed a preference. Afterwards, workers had to formalize their intentions by contacting human resources. If the letter had been binding, 18% of workers who were not previously registered and 9% of workers who would have completed their registration or an increase in savings in the APVG scheme. Instead, due to the additional steps, only 9% and 4% did so, respectively²². Similarly, in the second intervention, 46% of the new hired workers indicated they want to save, but only 26% ended up formally enrolling. In the case of Cabify in Peru, the challenge was that only half of the drivers received the notification introducing the new way to save, due to high driver turnover and a lack of database updates, an issue that will be covered in more detail later (Lesson 4)²³. The results of both pilots underscore the importance of the timing and the way in which the saving notification is delivered.

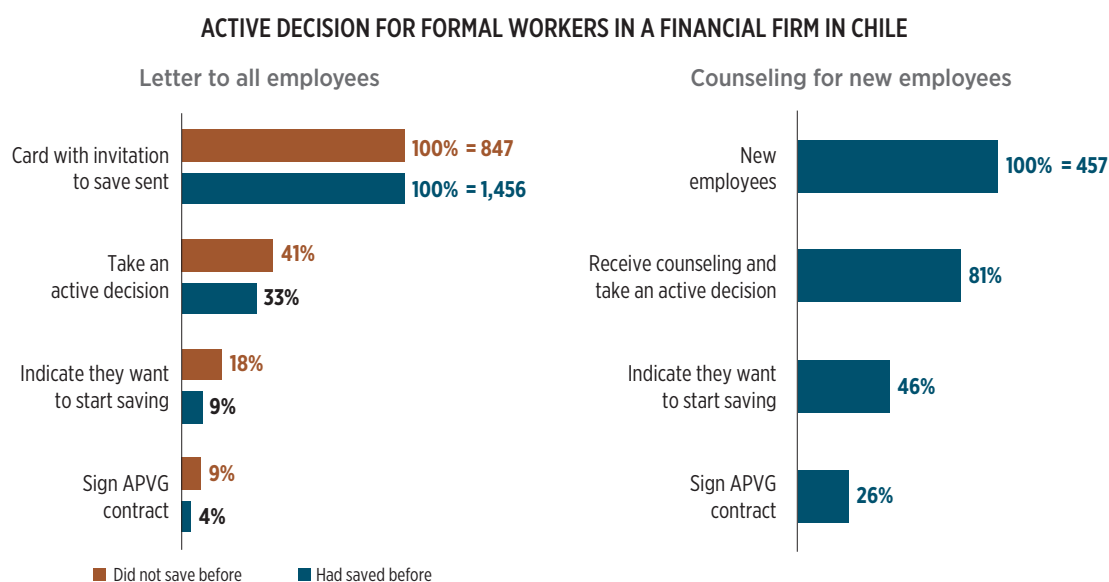
20. Throughout the document, we present figures at constant 2019 prices, converted into US dollars with the World Bank's Purchasing Power Parity conversion factor (Peru 1.7, Mexico 9.3, and Colombia 1,349.0). Due to this conversion, the figures presented in this report may slightly differ from other publications on the same pilot projects.

21. Gonzalez, S. (2020).

22. Gonzalez, S. (2020).

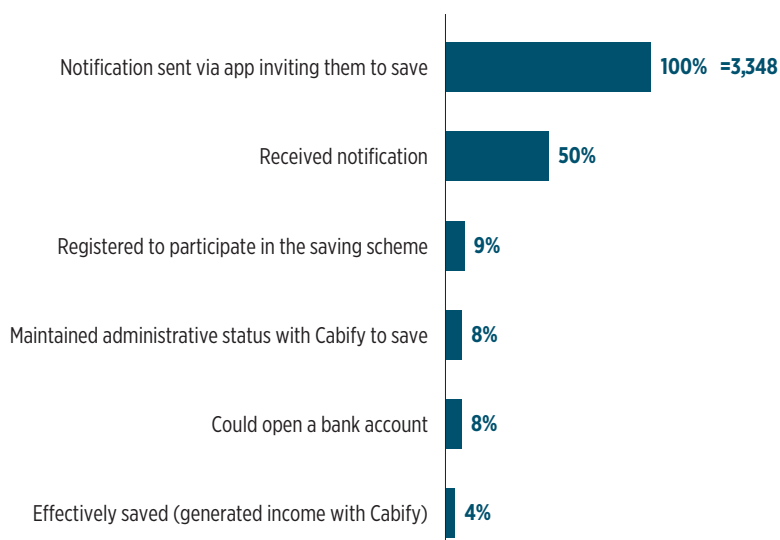
23. Guerrero and Silva-Porto (2020).

FIGURE 6. STEP-BY-STEP: FROM NOTIFICATION TO ACTION



ACTIVE DECISION FOR PLATFORM WORKERS IN PERU

Notification sent to drivers through the Cabify app



Source: Authors' elaboration.

Note: For the Cabify pilot, the saving notification was sent to 3,348 drivers, but only 1,682 received it because many drivers changed cell phones or were no longer active on the platform. The enrollment fee reported in this report is calculated based on the drivers who did receive the saving notification.



In sum, solutions based on automatically setting aside a fraction of income towards a savings program—mimicking what compulsory savings systems do—significantly increase voluntary savings.

Although not easy to implement for the self-employed, the initiative with Cabify drivers shows that technology provides increasing avenues to do so. A great opportunity is on-demand digital labor platforms. However, bringing these types of tools to the entire low-income population remains a major challenge.

LESSON 2. Reminders are easy to scale and cost-effective, but they have little influence on retirement savings and do not always work.

A second goal of the Retirement Savings Laboratory is to understand the potential of reminders to increase long-term savings. Building on the evidence that reminders can help savers keep their focus on saving in the short term, we sought to understand the persistence of their effects in the long term. Some of the questions to be answered are as follow: Do reminders help generate a saving habit? What content works best? With which type of savers do they work best? Do they work in all contexts? Are they a cost-effective policy instrument? Are they easy to implement?

To answer these questions, the Retirement Savings Laboratory launched nine pilot initiatives through which more than a million and a half people were sent nudges encouraging them to save.

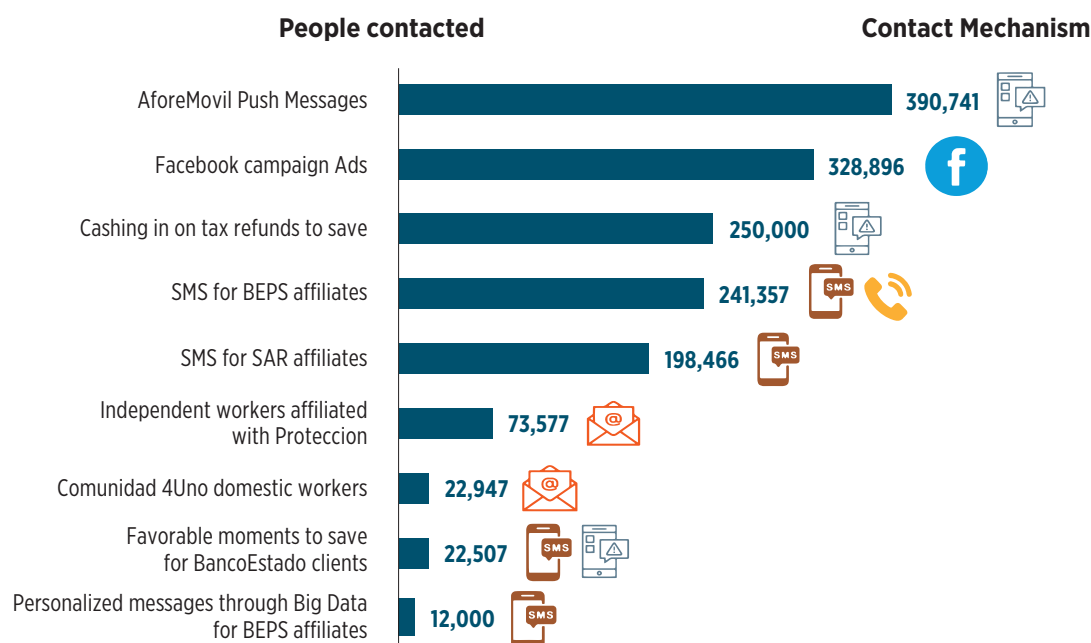
Various contact mechanisms were used, such as text messages, emails, notifications from mobile applications, and social media campaigns (see Figure 7). Through nine initiatives, the Retirement Savings Laboratory appeared on more than 17 million Facebook feeds²⁴ and sent more than 7 million text messages (SMS), 6 million push notifications²⁵ and pop-up messages²⁶, and half a million emails, in addition to almost 100,000 calls. These messages were specially designed to inform and overcome the psychological barriers that make saving difficult.

24. This content appears when a user enters their account on Facebook.

25. These are messages directly sent from a server to mobile devices, such as smartphones, tablets, and desktop applications.

26. These windows suddenly open in a web navigator.

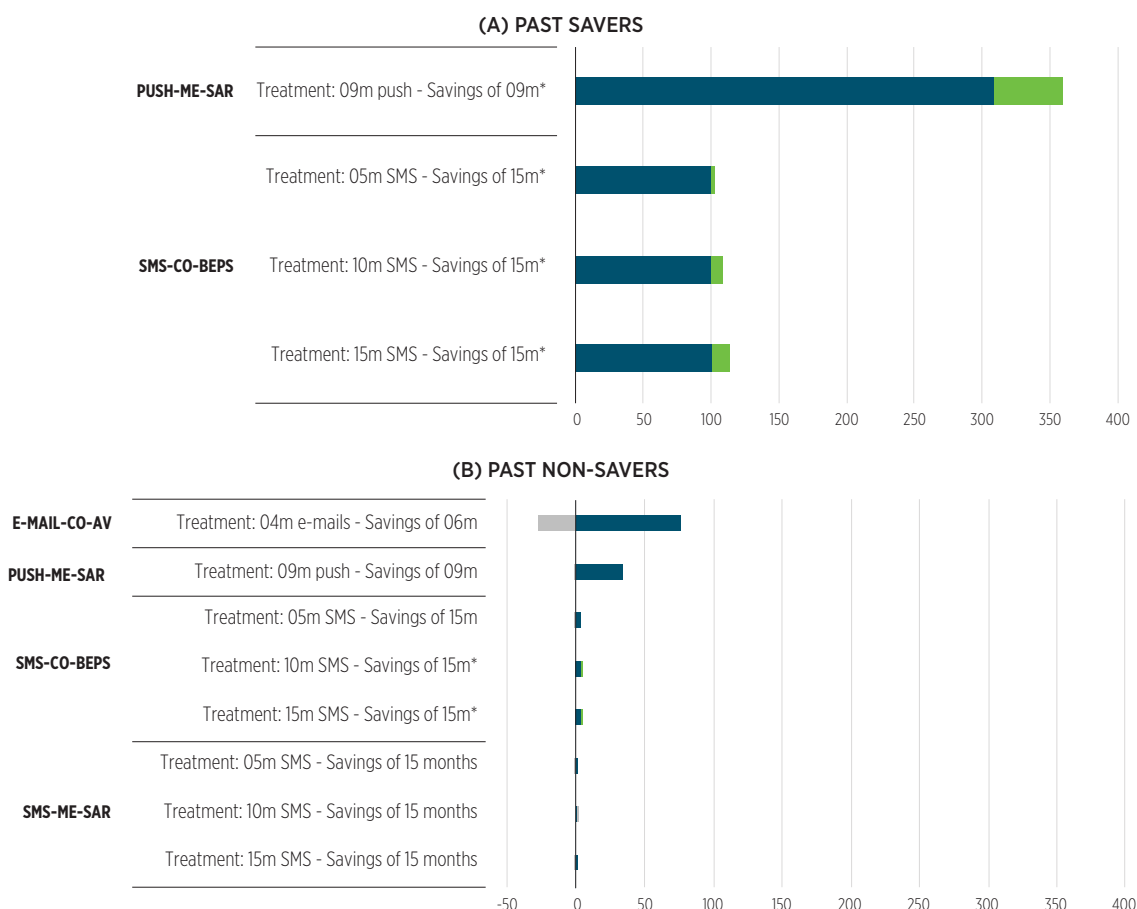
FIGURE 7. NUDGING PILOTS' REACH AND CONTACT MECHANISMS



Source: Author's elaboration, based on pilots conducted by the Retirement Savings Laboratory.

The various contact mechanisms have pros and cons in terms of the ability to reach people, the type of workers they reach, the ability to convey information, and costs. One-way SMS messages have the advantage of being easy to implement, although they are quite limited in the information they can communicate. Emails offer a greater wealth of content options at a lower cost. However, in Latin America and the Caribbean, many people, and especially those with low incomes, do not use email. Phone calls can be very persuasive, but they are very expensive. Additionally, phone calls, emails, and text messages require up-to-date affiliate databases, which in practice represents a challenge for all pension fund managers and regulators. An advantage of online social networks is that citizens can be reached in a massive way, at low cost, and without the need for an updated database. However, from an evaluation perspective, social media offers less control over the audience that receives the message.

FIGURE 8. MESSAGES GENERATE SIGNIFICANT INCREASES IN AMOUNTS SAVED, PRINCIPALLY FOR THOSE WHO WERE ALREADY SAVING



Note: These figures show (a) the average amounts saved by the treatment groups (in blue) and (b) the effect on the treatment group in different colors, depending on whether the effect was significant at a confidence level of 95%. Negatively significant effects are shown in red, non-significant effects in gray, and positively significant effects in green. Significant effects are also marked with an asterisk in the description of the intervention.

* In this figure, the pilots are arranged by (i) the means through which messages are delivered, including push messages (PUSH), text messages (SMS) or emails (E-MAIL); (ii) the country, with the options being Colombia (CO) or Mexico (ME); and a reference to the type of incentivized savings in BEPS, the Retirement Savings System (SAR) or in Voluntary Savings (AV)

A first result is that reminders help those who have already been saving to save more. In the pilot that sent messages to BEPS affiliates, it was observed after 15 months that affiliates who had been saving before the intervention saved 14.1% more than the control group. The number of transactions and the probability of making at least one transaction also increased by 12.5% and 7.4%, respectively²⁷.

27. Caballero, G. (2018c). "SMS to increase voluntary retirement savings in low-income populations," Retirement Savings Laboratory, Inter-American Development Bank.

BOX 3. REMINDERS AND FORMAL EMPLOYMENT: THE CASES OF MEXICO AND PERU

Reminders have also shown their effectiveness in increasing compliance with labor law and social security enrollment:

- In Mexico, although the Tax Incorporation Regime (RIF) successfully registered small businesses and their owners with the Mexican tax authority, the level of compliance with tax and social security obligations was low²⁸. In 2016, through an experimental intervention, SMS text messages were sent with different types of nudges—applying the principles of deterrence, ease and reciprocity—requesting that employers (who were also self-employed workers) submit their tax returns. A few months later, through another intervention aimed at those employers with hired workers, formal letters were sent with nudges (dissuasion and social norms) to encourage registering these employees for social security. The pilots were successful. SMS text messages increased the number of declarations by 39% and the tax payment by 18% after four months. After three months, the letters increased worker registration in social security by 14%.
- In Peru, the national Labor Inspection Superintendence sent letters to formal companies with more than 50 workers to encourage compliance with worker social security contributions. Two types of letters were sent: one with a punitive message, in which the payment of contributions was encouraged, highlighting the fines for non-compliance, and another with a moral message in which the benefits of compliance and how it translates to productivity increases were highlighted. One year after the letters were sent, the number of workers registered with social security significantly increased (9.8% on average)²⁹. Only the punitive message had a significant impact, and only for large companies.

Reminders were found to have the greatest impact on people with relatively higher incomes, who were over 45 years old, and who had joined a savings program more recently. While the entire target population for reminders was low-income, there were differences in income levels. In the pilot that sent messages to BEPS affiliates, workers with higher incomes were observed to save 11.9% more than those with lower incomes did. As might be expected, this indicates budget constraints are an issue and workers with higher incomes have more room to save. Reminders also have a greater impact on the people who had joined the program most recently (within the last three months). This indicates it is important to be highly proactive from the time of enrollment to activate savings early on, when the enrollment process and potential benefits of long-term savings are still salient. People between age 45 and retirement age saved 8.5% more than younger workers. This result may imply that people face different barriers to saving during different stages of life and that the younger population in particular could have a greater bias towards the present. Motivation to save for retirement could be affected by a distant perception of the future, and the messages may have a more limited effect.

28. Hand, A. (2017). "Application of behavioral sciences to formalize workers in Mexico: tax compliance and social security." Retirement Savings Laboratory, Inter-American Development Bank.

29. Gonzalez, S. (2019). "Letters to improve compliance with the social security contributions and the employment quota for people with disabilities." Retirement Savings Laboratory, Inter-American Development Bank.

“Why am I going to give money to the government if I’m still young? I think that 45 is a good age to begin to contribute.” (Daniel, 32 years old, independent worker. Focal group participant in Colombia).

However, SMS reminders have little influence on converting people who have not saved into new savers.

BEPS affiliates who had not been saving before the intervention and received SMS messages for five months did not save more than the control group. For those who received messages for 10 or 15 months, there is greater saving compared to the control group (14% and 12.4%, respectively)³⁰. These results show that the messages can be effective in the intensive margin, moving people from an active state of saving to a higher frequency and amount of savings, but they do not seem as effective in the extensive margin (i.e., moving people from saving nothing to saving a little).

Exploring alternatives to convert non-savers into savers was tested with telephone calls and, although they have modest effects, they can be more cost-effective than SMS, if the calls are prerecorded and automated. A short campaign of calls is almost as effective as 15 months of SMS in increasing the likelihood that inactive affiliates make at least one deposit. In fact, calls are more effective than 10 or 5 months of SMS messaging. Combining calls with messages does not increase the probability of making at least one more deposit than each of the strategies makes independently.

In terms of the messages’ content, reminders that propose goals are particularly effective. Across the different pilots, standard reminders were compared to messages aimed at combatting psychological barriers. In particular, the messages sought to make savings salient, show that saving was common in the program, provide information about the number of people already enrolled, and reduce a feeling of loss by letting people know about the short-term benefits of saving in a particular program. Differences in addressing a single psychological barrier or several barriers and proposing savings goals were also evaluated. Of all the variations in the content of the messages, only messages that suggested a savings goal consistently performed better than a standard reminder.

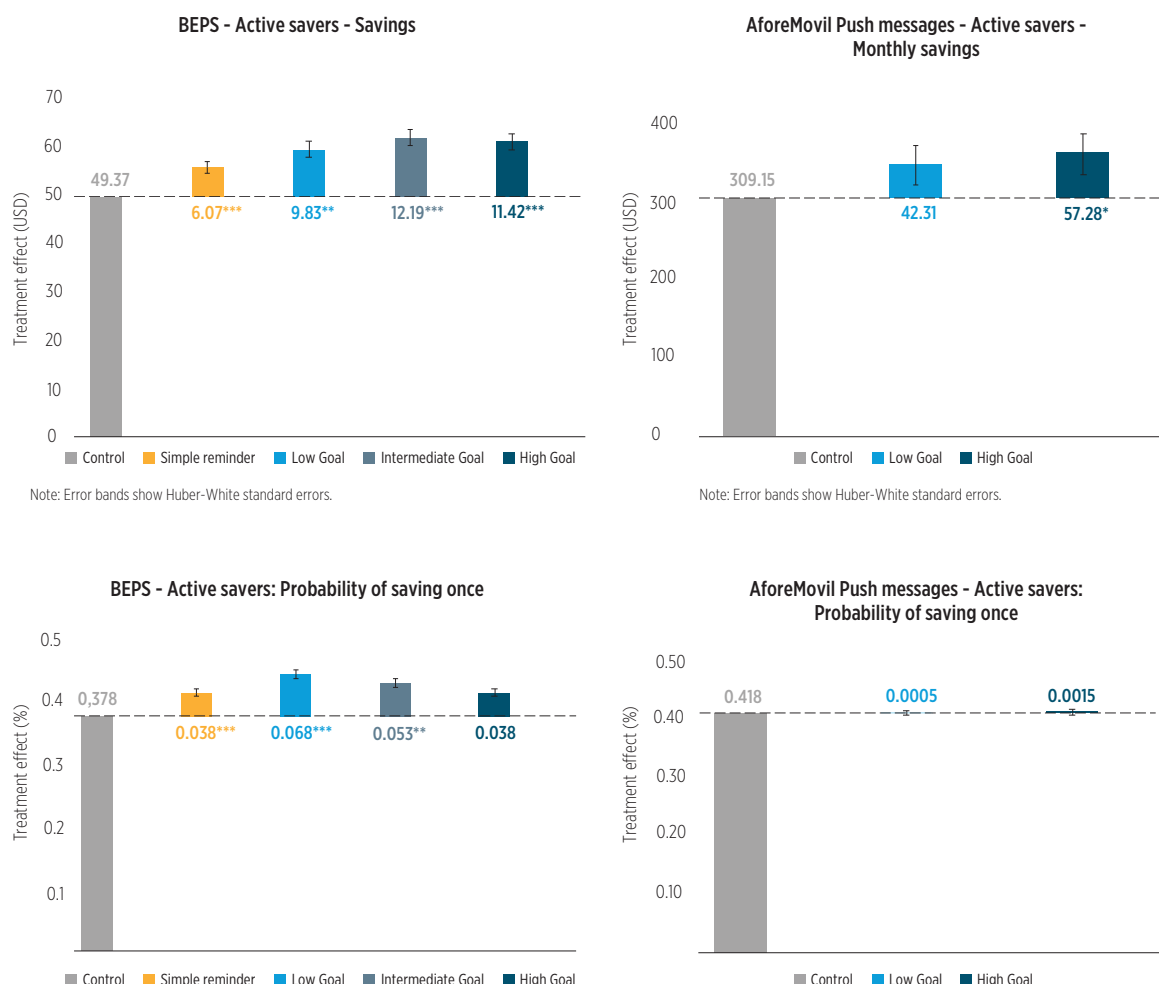
Monthly goals performed better than annual goals, low goals increased the probability of saving, and medium and high goals increased the amount saved. In the pilot that messaged active BEPS account holders, low goals, framed in monthly terms, increased the probability that an active affiliate would make a transaction compared to a standard savings reminder. Intermediate and high goals, framed in monthly terms, increased the amount saved by 6.53 and 5.70 dollars, respectively, in addition to the effect of the standard savings reminder (6.47 dollars)³¹. Similarly, in the pilot in which we sent notifications (push messages) through AforeMovil in Mexico, the high goal had a greater influence on increasing voluntary savings³². However, contrary to results from BEPS affiliates, the higher goal had a greater and significant impact on increasing the probability of making a voluntary contribution (see Figure 9).

30. Caballero, G. (2018c).

31. Ibid.

32. Hand, A. (2019). “SMS to promote voluntary retirement savings in Mexico.” Retirement Savings Laboratory, Inter-American Development Bank.

FIGURE 9. SUGGESTING GOALS FAVORS LONG-TERM SAVING



Source: Authors' elaboration.

Note: In the *AforeMovil* pilot, the low goal was 10.74 dollars per month and the high goal was 53.71 dollars³³. These values were determined based on the historical behavior of savers where the low goal corresponds to the amount saved by a person who had saved more than 60% of savers, and the high goal was the amount saved by someone who had saved more than 90% of savers. In the BEPS pilot, the suggested goals were annual and established in relation to the savings deposited the previous year. The low goal sought an increase of 10%, the medium goal 60%, and the high goal 300%, up to the allowed limit. For those who had not saved the previous year, the goals were a low goal equivalent to saving the minimum allowed by the program, or 45.92 dollars per year, an average goal of 68.87 dollars per year and a high goal of 122.44 dollars per year³⁴.

33. Hand, A. (2019).

34. BEPS gives account holders subsidized life, funeral, and disability insurance for whomever makes at least six deposits or saves more than 122.44 dollars annually.



Reminders can help generate savings habits and receiving more messages had a greater impact. In the pilot that sent messages to BEPS affiliates, savings increased in the group that received messages for five months due to savings that happened only during that timeframe, since the effect disappeared after a couple of months without the group receiving messages. Those who stopped receiving SMS messages after 10 or 15 months continued to save more than the control group did once they stopped receiving messages, creating a savings habit beyond the intervention³⁵. In fact, the 10-month group, which was saving 0.38 dollars more per month during the 10th month, was still saving 0.18 dollars more per month than the control group in the 17th month. Affiliates who continued to receive SMS messages during the 15 months saved more than those who stopped receiving messages did after 10 months. The observed effects translate into savings increases of 10.71, 17.36, and 15.87 dollars for every dollar invested in SMS during the 5, 10, or 15 months, respectively.

While the effects are statistically significant, they are small from an economic point of view. After 15 months, active BEPS account holders who received messages for just five months accumulated 2.45 dollars more in savings than the control group (86.29 dollars)³⁶. Active account holders who received messages for 10 months increased the total amount saved by 7.98 dollars, and active account holders who received messages for 15 months increased their savings by 12.14 dollars. In the pilot that sought to increase the voluntary pension savings of independent workers affiliated with AFP Proteccion in Colombia, the voluntary savings rates increased from 2 per 1000 people to 4 per 1000 people and from 6 per 1000 to 8 per 1000, depending on the reminder campaign³⁷. Promotional campaigns through Facebook in Mexico had an impact on the number of contributions from relatively larger municipalities (with more than 50,000 inhabitants in the target population). Within this group, the municipalities that received Facebook ads showed a 56% increase in the number of contributions, compared to the municipalities that did not receive campaigns, although this was not enough to increase the total amount saved in a municipality³⁸. This suggests that the savings from these campaigns are small.

Another finding is that reminders don't always work. In a pilot in Chile, reminders were sent to BancoEstado clients who were close to or had finished paying off a loan to encourage them to use their "free" budget to save with a voluntary savings instrument³⁹. No difference was found in the probability of saving, nor in the amounts saved by clients who received the reminder. Another pilot in Chile encouraged independent workers to contribute to their pensions using their tax refunds. During one tax season, half of the workers who completed their tax refund process on time received a message on their screens reminding them that by not contributing, they were failing to prepare for their retirement, which

35. Caballero, G. (2018c).

36. Ibid.

37. Caballero, G. (2018b). "Sending emails to independent workers to increase their contributions to the pension system." Retirement Savings Laboratory, Inter-American Development Bank.

38. Caballero, G.; Hand, A. and Keller, L. (2018). "Promoting Retirement Savings via Social Networks: Using a Facebook Ad Campaign to Encourage Voluntary Pension Savings in Mexico." Retirement Savings Lab, Inter-American Development Bank.

39. Cofre, F. (2018). "Promoting Retirement Savings among clients of BancoEstado Personas." Retirement Savings Laboratory, Inter-American Development Bank.

did not have an impact on the probability of saving⁴⁰. In Mexico, a pilot that sent e-mails to pension-fund account holders who likely had domestic workers, encouraging them to enroll their domestic workers in an insurance program with a retirement savings component, was also unsuccessful⁴¹.

BOX 4. REMINDERS TO PROMOTE RETIREMENT SAVINGS: EVIDENCE FROM MEXICO

The nonprofit, Ideas42, carried out a series of pilot initiatives in recent years to test the effectiveness of reminders to incentivize retirement savings in Mexico. Methods included letters, text messages, informational brochures, and information provided by retirement saving promoters. Ideas42 found evidence that the redesign of account statement envelopes to include a message of support from the retirement fund administrators or a message with a sense of urgency significantly increased the percentage of account holders making voluntary contributions by 0.19 percentage points. However, this was not the case for all types of redesigns Ideas42 piloted. Account statements are another mechanism that can incentivize savings. The same study found that regardless of the information included in the account statement, the percentage of account holders with voluntary contributions increased between 0.3 and 0.41 percentage points. A third mechanism is sending text messages, although only one of the five types of messages was found to have a positive and statistically significant effect on increasing saving by 0.22 percentage points. The mixed results shed light on the fact that even though these types of mechanisms are promising for incentivizing savings, the context in which they are implemented should be carefully considered.

The results of two pilots, identical at first glance, suggest that the context in which the message strategy is implemented seems to be decisive. In Mexico and Colombia, reminders were sent via text message to low-income workers to save for retirement. In both cases, the duration of the reminders and the content of the messages were identical. However, whereas in Colombia the results showed promising effects, in Mexico there was no effect on retirement savings. Further analysis reveals significant differences in the sample, the quality of the contact details, and the characteristics of the savings programs. In Mexico, the participants in the pilot were younger, because the sample in this pilot was restricted to individuals 45 or younger due to the introduction of the current Retirement Savings System (SAR) in 1997⁴². In Colombia, the upper age limit was 69 years old, leading to a study population that was older on average⁴³. Moreover, the contact data in Colombia was higher quality, so it is reasonable to assume that a higher percentage of the sample actually received the reminders. Likewise, more people

40. Cofre, F. (2018). "¿How to increase the effectiveness of automatic enrollment? Tax refunds and retirement savings in Chile." Retirement Savings Lab, Inter-American Development Bank.

41. Retirement Savings Lab (2020). "The challenge of getting domestic workers to save for their old age." Inter-American Development Bank.

42. Hand, A. (2019).

43. Caballero, G. (2018c).



had recent registrations in the BEPS program in Colombia because it is more recent than the Mexican Retirement Savings System. Finally, the BEPS savings scheme provides additional benefits such as life and funeral insurance, as well as prizes and lotteries, elements that significantly increase the incentive to save for retirement.

Annex 1 summarizes the average impacts on the probability of saving from the various reminder and active choice initiatives discussed in the previous section. Reminders can have significant but small economic impacts. Still, they can be cost-effective strategies for driving long-term savings and generating goal-based saving habits. The active choice and automatic debit initiatives are highly significant and have significant impacts economically since they generate recurring savings. Thus, the impacts of these initiatives could be even greater if some administrative procedures in signing up for savings programs were eliminated or if automatic registration programs were established. Making saving easy and automatic requires well-informed workers who know the rules of the game for pension systems and the consequences of their decisions throughout their entire career, a topic discussed later in this publication.

LESSON 3. Making saving easy must be accompanied by better personal finance and social security education.

Regulations established to protect savers are well intentioned but make the saving process complex and bureaucratic. There is a general lack of knowledge about pension systems and how they work. In Peru and Mexico, just under half of workers know something as basic as the retirement age, so it is unsurprising that less than 10% know how their pension is calculated or how much is contributed from their salary towards their pension⁴⁴. Finding effective and scalable personal finance and social security education solutions is a public policy challenge.

"I'm kind of uninformed about the topic, I'm learning now." (Andres, 30 years old, independent worker. Focal group participant in Chile)

"I don't know much about the topic and I just save my money, without contributing." (Juan, 36 years old, independent worker. Focal group participant in Peru)

"For me, not knowing about the Colombian pension model makes me not contribute." (Sebastian, 35 years old, independent worker. Focal group participant in Colombia)

44. Bosch et al. (2013)

La literatura sobre educación financiera indica que las intervenciones más exitosas para transformar los conocimientos en acciones conducentes a una mejor salud financiera y previsional combinan algunos de los siguientes elementos⁴⁵:

- **Simple and actionable:** They link financial concepts to real-world situations, to facilitate their understanding and their application to participants' financial decisions.
- **Personalized information:** They adapt financial education to the needs of individuals or the individuals' financial situations, which increases the probability that the interventions will end up influencing the individuals' behavior. When lessons are relevant to people's lives, people will be more likely to pay attention, learn, retain material, and apply lessons learned when they make a decision.
- **Timely:** If the timing of financial education coincides with or takes place shortly before financial decisions, it will provide an opportunity for people to apply the knowledge directly.
- **Convenient and entertaining:** Educational programs must be made accessible as a part of every-day activities taking place in homes, schools, or work, allowing people to access them whenever convenient. Making programs entertaining helps to keep participants engaged.
- **Focus on young people:** It is easier for youth to learn financial concepts and good habits from which they can benefit throughout their lives.

Building on this evidence, the Retirement Savings Laboratory developed three interventions that combine elements of personal finance and social security education with elements of simplifying processes to save or making decisions that will improve people's financial health.

The first intervention utilized a traditional classroom education model and involved evaluating the impacts of the Chilean *Ahorra desde Ahora* (Save Starting Now) workshop looking at high school students' knowledge of, and confidence in, the Chilean pension system⁴⁶. This workshop, in which more than 3,500 students from 98 schools participated, combined an hour of online learning with half an hour during which a moderator discussed the concepts. The workshop had a positive and significant impact on students' financial and pension knowledge, and it improved their perception of the pension system. The students who attended the workshop answered, on average, 6.1 questions correctly (out of a total of 13), while the group that did not attend the workshop only answered 4.6 questions correctly. In other words, after the workshop, the students correctly answered an average of 1.5 more questions, which is equivalent to 0.45 standard deviations. The workshop also significantly increased students' confidence in the pension system and in pension fund managers. Although this intervention incorpo-

45. IPA (2018).

46. Gonzalez, S. (2018). "Financial and pension education in Chile: Impact evaluation of the *Ahorra desde Ahora* (Save Starting Now) workshop." Retirement Savings Laboratory, Inter-American Development Bank.



rates several elements of success (simple, entertaining, convenient, and focused on young people), it has the disadvantage of not being timely or personalized since young students are not thinking about their pensions or doing anything to work towards creating one.

To make financial education timelier and more personalized, a second intervention in Colombia was intended to teach pension system affiliates what key information they should review in their account statement⁴⁷. To this end, the account statement was redesigned to make information simpler and more understandable and to encourage three specific actions by the account holders: first, reviewing the total periods they had contributed to the system; second, checking in detail the contributions they made during the previous year; and third, reviewing their personal data, with clear instructions on what to do in case they found any inconsistencies. In addition, an effort was made to personalize the account statements with a greeting addressed to each recipient, and the minimum contribution threshold to gain the right to a pension was made explicit (1,300 weeks of contributions and having turned 62, for men, or 57, for women)—elements that usually generate confusion.

The results of a telephone survey indicated the important effects of redesigning account statements on the account holders' understanding of some key variables of the pension system⁴⁸. First, the redesign of the account statements increased the probability that the account holders found the information on the number of weeks of contributions needed to reach the retirement threshold by between 14 and 22 percentage points. Second, the redesign affected the probability of finding the total number of weeks contributed, but these changes were inconsistent and inconclusive (some groups of account holders were more likely to find it than others were). Third, there were no significant changes in the probability that the affiliates would find details about the contributions they made in 2017, check their personal data, or find errors that they had not identified before in their account statement. Administrative data indicate that the redesigned statement led to a significant 0.4-0.5 percentage point increase in the proportion of members who made at least one request to review corrections.

A third intervention in Mexico explored the possibilities of combining financial education with access to simple savings mechanisms. To promote the use of retirement savings channels in convenience stores (see Box 5 for information on savings through convenience stores), the Retirement Savings Laboratory partnered with *Yastas* to train and provide informative material for 1,077 shopkeepers on the Mexican pension system and its operation⁴⁹. In addition, to encourage shopkeepers to ask their clients if they were registered in the pension system and encourage the clients to save, shopkeepers and business advisers could access an attractive rewards program with gift cards if they reached certain voluntary retirement saving deposit goals.

47. Caballero, G. (2018a). "How much time do you have left to receive your pension? Redesigning pension contribution account statements to improve their understandability." Retirement Savings Laboratory, Inter-American Development Bank.

48. Ibid.

49. Retirement Savings Laboratory, "Leveraging commercial networks to facilitate pension savings." Inter-American Development Bank.

Workshops for shopkeepers on the Mexican Retirement Savings System (SAR), informative materials, and awards did not have any impacts on increasing voluntary pension savings through the Yastas network⁵⁰. Four months into the campaign, when analyzing the administrative data provided by CONSAR, no significant differences were found in voluntary savings deposits collected between the shops that had received informational materials and training and the shops that did not. The main barrier identified in subsequent fieldwork was that the SAR training course was insufficient for the shopkeepers to generate a solid understanding of the system. It is difficult to promote and sell what is not understood: the promotion and sale of a product—in this case, voluntary retirement savings—requires understanding how it works and its benefits. Additionally, the prize scheme was not a sufficient incentive for shopkeepers to develop these skills and knowledge on their own.

BOX 5. SAVING AT 7-ELEVEN AND THE 10 PESITOS CAMPAIGN.

In many cases, accessing the offices of retirement fund administrators to make a voluntary savings deposit in person is not easy since most are located in large cities or state capitals, so they hardly have a presence in more remote areas or in smaller towns. If people had more places to deposit savings for their old age, would they use them?

Since 2015, Mexico has expanded its network of collection points so that anyone can make a voluntary savings contribution, starting at a little more than five dollars, to their individual retirement savings account without being charged a commission and through direct alliances with commercial networks. Currently, there is a network of more than 15,000 stores, banks, and other points of contact where this is available. The deployment of collection points in convenience stores was accompanied by a mass media advertising campaign about the access points, which served as a general reminder aimed at stimulating the public's use of these networks and saving for their retirement.

A recent study⁵¹ found that increasing access has weak effects on savings, but the combination of access and a persuasive message (in this case, the advertising campaign) can have long-lasting and cost-effective results. These results suggest that the complementarity of stimulating the use of affordable savings products, in addition to providing access, is extremely important, even when an easy mechanism for saving already exists.

50. Ibid.

51. Bosch and Rubli (2019).

The results of these initiatives suggest that a trade-off exists among the depth, scalability, and timeliness of personal finance and social security interventions. Although traditional classroom interventions can be effective in generating knowledge of and trust in the pension system, they are not very timely and are difficult to scale. Other less intensive interventions are more scalable, although they do not generate deep knowledge that translates into actions leading to better financial and pension health.

LESSON 4. Betting on voluntary retirement savings requires institutional leadership to overcome regulatory and technological barriers, as well market failures that make it difficult to implement scalable and effective savings solutions.

The evidence is overwhelming: Saving for retirement should be as simple and automatic as possible. However, in practice, the path to retirement saving involves many complicated steps due to regulatory requirements, technological constraints, and market failures, which make it difficult to implement savings solutions. These challenges can affect the scale of a savings solution (how many people can be reached), its adoption (how easy it is to save and how many people choose to do so), or its effectiveness in actually making a difference in people's pensions (how much they manage to save and for how long). In some cases, implementation challenges can be insurmountable in the short term, meaning that good ideas are never realized. Some general lessons about the impacts of these limitations on the implementation of scalable and effective savings solutions are illustrated with concrete examples from Retirement Savings Laboratory's experience in Mexico, Chile, Colombia, and Peru.

4.1. Regulatory Challenges

There is a tension between wanting to protect savers and wanting to promote retirement savings.

The countries of Latin America and the Caribbean have developed regulations precisely to protect savers from commercial abuses and to encourage informed decision-making about saving behaviors. However, these regulations can turn every saving decision into a bureaucratic process and make it difficult to promote voluntary saving. This is reflected in different ways in different countries. Some restrictions prohibit any type of monetary or in-kind incentive to encourage savings. Others require minimum contribution amounts or restrictive eligibility criteria. Others are legal loopholes—for example, no regulations in these countries address automatic enrollment or the possibility of using savable moments, such as signing a contract, to promote savings.

To ensure workers save enough and keep it in their retirement account until old age, some countries promote minimum contributions and liquidity restrictions, which, in practice, translate into entry barriers. For example, in Chile and Peru, the minimum possible contribution to pension systems is equivalent to 10% of the minimum wage. This design prevents self-employed and low-income workers from saving smaller amounts, which they would be more likely to pay. For example, in the Cabify pilot, such restrictions prevented savings from being invested into an individual retirement account since the

drivers saved a monthly average of 34.48 dollars, equivalent to half of the minimum contribution to the Peruvian pension system. Similarly, although liquidity restrictions are intended to encourage savings to be invested over a long period of time and maintained until retirement age, the attractiveness of savings is diminished by not being available for emergencies. Cabify's experience shows that 54% of drivers have no savings, not even for emergencies⁵². In this case, the main reason to save is to face unforeseen events and invest in a business or home. Having completely illiquid retirement savings products can discourage long-term savings among low-income self-employed workers.

Contrary to lessons from the behavioral sciences, which indicate that saving should be simple and timely, some restrictions prevent people from taking advantage of moments that favor saving, such as signing a new labor contract. Although Chile has no legal impediment to offering an active saving decision when an employment contract is being signed, there is also no express regulation indicating that it is allowed. In practice, this is interpreted as a prohibition. In 2017, only 57% of workers in a Chilean financial company had enrolled in a Group Voluntary Pension Savings (APVG) program that was offered by email once a worker had been employed for six months⁵³. In contrast, the Mexican subsidiary of the same company offered an active decision to save when workers were hired, and 95% of those employees registered themselves in a private pension plan. Furthermore, signing a simple APVG enrollment document lacked legal validity in Chile, so the workers had to fill out a complex official form to formalize it.

Evidence suggests that small present incentives can be effective in incentivizing long-term savings. Unfortunately, abuses and bad practices have led some countries to ban all kinds of monetary or in-kind incentives. Evidence from Mexico and Colombia shows that raffles and small incentives make the benefits of saving for retirement more tangible in the present, thus increasing contributions. In Mexico, CONSAR launched a campaign offering movie tickets to encourage registration into an automatic debit program for voluntary savings through AforeMovil, getting 5,000 people to register between December 2018 and May 2019. In Colombia, a home raffle improved both the total amount saved in BEPS and the average amount of the transactions. However, in Chile, some bad business practices led to the prohibition of all kinds of monetary or in-kind incentives for the retirement savings system. This is because a large number of new pension fund administrators entered the industry between 1991 and 1994, motivated by the high profitability, and the incumbent pension fund administrators reacted by considerably increasing their sales efforts and persuading higher-income affiliates to transfer accounts in exchange for prizes or gifts⁵⁴. The result was high commissions being charged to finance the increase in sales expenses and difficulties for the new administrators to stay in the market, which led to a wave of mergers and acquisitions. Chile strengthened its regulations in 1997 to eliminate all awards and gifts, among other things. Due to these regulations, the Retirement Savings Laboratory did not have the

52. Survey about savings behaviors of Cabify Peru drivers (2018).

53. Gonzalez, S. (2020).

54. Chilean Pension Superintendence (2019), Working Paper N° 62 (2019).



option of launching an incentive scheme in Chile to motivate students who had participated in the Save Starting Now workshop to open a simple savings account.

To avoid money-laundering problems, some countries have limited third parties' ability to make deposits into individual savings accounts and have established a minimum number of hours for each deposit to reach the account. Both restrictions have good intentions, particularly the minimum time for a deposit to reach a worker's individual account, so that saving can be invested as soon as possible for the account holder's benefit. However, these restrictions generally make it difficult to use commercial networks to expand channels for collecting voluntary retirement savings. They make it difficult for a third party other than the employer or the worker to make contributions, and they require deadlines for financial transfers that are difficult to circumvent. For example, such regulations made it difficult for the Retirement Savings Laboratory to implement a program in Peru to save voluntarily with a pension fund administrator through commercial networks.

Regulations vary between countries, but a common denominator is that no system in the region allows or regulates automatic enrollment, the most effective savings mechanism. The power of this tool lies in changing the status quo, so that workers automatically save without doing anything and must make a decision to leave the plan. In this case, inertia and laziness act in favor of saving, contrary to what happens today. Unfortunately, such regulatory restrictions limited the implementation of an automatic registration mechanism in Chile, Colombia, Mexico, and Peru.

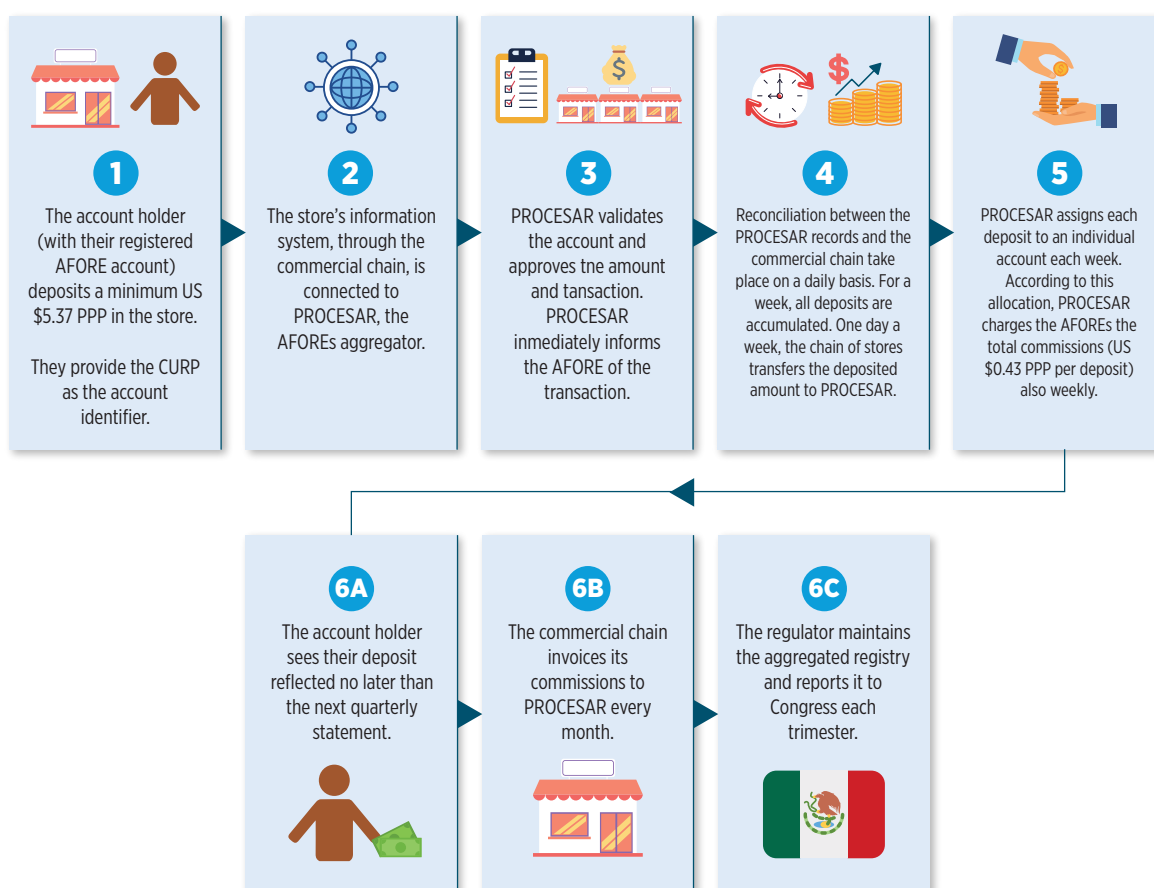
4.2. Technological Challenges

In recent years, the technological frontier has expanded, providing the ability to increase access to, facilitate, and automate retirement savings. Mexico has led this process with an unprecedented effort in the region to digitize the pension system's main processes. In 2014, CONSAR began a strategy to develop a new regulatory framework that would increase system coverage through offering more channels and electronic means; generate a single and portable electronic file throughout each saver's working life; incorporate biometric authentication as an additional guarantee of account security and improvement of services for workers; and, with this, open more channels for voluntary savings in an easy, safe, and diverse way at no cost to citizens. This has allowed the development of a favorable ecosystem for retirement savings.

In Mexico, the deposit process in shops that accept voluntary savings contributions is very simple. An account holder who has already registered their individual retirement account (that is, they have actively selected a fund administrator) can go to a shop within the CONSAR voluntary contributions collection network, provide their national identification number (CURP) as their account identifier, and deposit a minimum of the equivalent of 5.37 dollars into their account. To be part of the CONSAR collection network, the shop's computer system must be connected to PROCESAR, which manages the entire database of Mexico's retirement savings system. The shopkeeper or employee looks for the

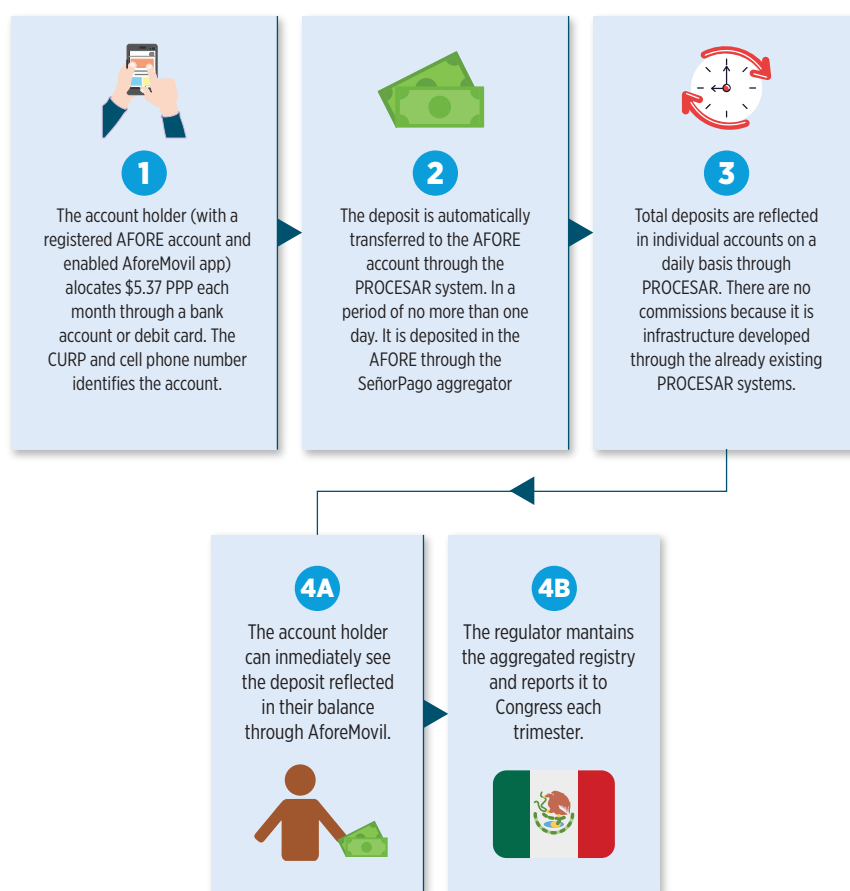
option for voluntary retirement savings and registers the CURP and the deposit. The system, through PROCESAR, immediately validates the account and approves the amount and the transaction. PROCESAR immediately informs the account holder's retirement fund administrator of the transaction. Every day, PROCESAR's records are reconciled with each commercial network that offers this functionality. Throughout the week, all deposits are accumulated, and once a week, the commercial network deposits the amount in PROCESAR. That day, PROCESAR assigns each deposit to its corresponding individual account. PROCESAR then charges the retirement fund administrators the full week's worth of commissions (0.43 US cents per deposit). Afterward, the commercial network invoices its commissions to PROCESAR each month, the regulator (CONSAR) maintains the registry in aggregate and reports it to Congress each quarter, and the account holders see their deposits reflected in their next quarterly account statement (see Figure 10).

FIGURE 10. VOLUNTARY SAVING THROUGH COMMERCIAL NETWORKS



The process of making a recurring payment through the AforeMóvil application in Mexico is even easier. An account holder who already has their account registered with AforeMóvil and enabled on their smartphone can establish an automatic debit of at least the equivalent of 5.37 dollars per month through their bank account or debit card. Their CURP and cell phone number are used as account identifiers. The deposit is automatically transferred to their individual retirement account through the same PROCESAR system. In no more than one day, the contribution is deposited to the retirement fund administrator through an aggregator, which combines payments to send them to PROCESAR through a consolidated operation. The total deposits are reflected in the individual accounts through PROCESAR on a daily basis. There are no commissions as this infrastructure was developed with the existing PROCESAR systems. Afterward, the account holder sees their deposit immediately reflected in their balance on *AforeMovil* (see Figure 11).

FIGURE 11. VOLUNTARY SAVINGS ON A SMARTPHONE



Despite these advances to massify, facilitate, and automate savings, the deployment of retirement savings solutions has two types of technological challenges—the pace of adoption of new technologies and institutional factors—which can limit the scope of the technology. The adoption pace of digital solutions varies by country. Although Mexico is on the technological forefront in terms of pensions, this is not the case in Chile, Colombia, or Peru. Yet, although Mexico is at the technological forefront, a second challenge limits the impacts of technologies that have been developed and implemented already. For example, the development of an application (app) to save for retirement will have an impact to the extent that people have smartphones, enough memory to download complex applications, and Internet access, in addition to sufficient digital literacy to harness these tools' potential. These institutional and contextual challenges may disproportionately affect the deployment of retirement savings solutions for vulnerable groups and groups of workers who are more disconnected from pension systems.

Technological adoption

Paper-based records and the lack of a single database (centralized and with all members' data) makes it impossible to expand electronic and digital mechanisms to promote voluntary savings. The cornerstone of the digital voluntary savings ecosystem in Mexico was the development of a unique electronic file system for account holders.

The lack of biometric and digital identity authentication mechanisms for financial services makes a visit to a financial institution mandatory. This visit to a bank office or a pension fund manager increases the transaction costs of opening an account and puts additional access barriers on those who live in areas without branch coverage. Minimizing the steps required to save is of utmost importance, for which biometric and digital identity authentication is essential.

Institutional and contextual factors

Although the potential universe of savers that can be reached through text messages, email, and mobile applications is huge, in practice, governments, companies, and financial institutions do not have quality contact information for their clients, workers, or affiliates. The Peruvian private pension system only has 68% of clients' telephone numbers and 50% of clients' e-mail addresses available in their databases. Furthermore, a detailed analysis revealed that only about half of the telephone numbers and email addresses are of good quality (they meet minimum criteria such as number of digits). Similarly, an analysis of the Colpensiones affiliate database in 2017 revealed that 73% have a fixed phone number, 36% have a mobile phone number, and 25% have an email address. These analyses do not consider that the data may be outdated (people change phone numbers) or incorrectly recorded. In Mexico, notifications were sent through AforeMóvil to 390,471 affiliates who had downloaded the application in the previous year. However, only half of the messages could be delivered because the affiliates may

have removed the app or changed their phone, phone number, or retirement fund administrator and did not download the app again. In some cases, the data quality is so poor that it makes sending account statements unfeasible, as is the case with BEPS in Colombia. In addition to the data quality not being ideal, corporate, governmental, and fund administrators' databases only contain information on formal workers or workers who had once been formal, but they do not allow access to low-income independent workers.

An alternative to reach a greater number of people is to contact them through utility bills, such as through water or electricity bills, since linking retirement savings with a routine process helps to overcome behavioral barriers. However, saving for retirement through service payments also faces numerous implementation challenges. A series of operational challenges must be overcome to ensure that retirement savings can be channeled through utility bill payment accurately. The first challenge is to identify the individual retirement account to which contributions should be transferred. Although water and electricity services are offered at the household level, pension systems are based on individual savings accounts. The data available for Mexico reveal that, on average, each household has 2.5 income earners or workers⁵⁵. How can each worker contribute to their own account? Additionally, a water or electricity bill is usually provided in the homeowner's name. In Mexico, for example, 33% of private homes with residents are not inhabited by the owner. The second challenge is to analyze the quality of this collection mechanism. For example, electric companies in Colombia are effectively used to sell and collect different services. However, in Mexico, services such as electricity are partially subsidized. For example, in 2014, the electricity subsidy for domestic consumption was around 60% (price/cost index 0.39). Given these price distortions, it is worth assessing whether this is a viable collection channel in the region. The third challenge is to understand if there is a business case for the service provider, which is discussed in more detail in the next section.

55. ENIGH (2016).

4.3. Market/Price-Driven Challenges

The business case for offering retirement savings solutions to low-income and self-employed workers is weak. The cost of collecting small and sporadic contributions is high, and the expected profit is small. These factors made it difficult to expand the collection networks in Colombia and Peru and have also complicated the implementation of a savings solution to bundle telephony or electricity service payments with a voluntary savings contribution. For example, Colombia's electricity service company ENEL charges an 8% commission on the amount of the contribution. However, BEPS pays a maximum fixed amount per transaction of 0.34 dollars. The maximum contribution through these means to avoid exceeding this amount would be 4.29 dollars. This makes the use of this channel as a means of collection unfeasible.

There are many barriers to retirement savings. Perhaps one of the clearest lessons from the Retirement Savings Laboratory is that including the groups most disconnected from long-term savings will not occur in an organic and natural way since institutional leadership is needed to overcome these barriers. In practice, the path to saving for retirement involves many complicated steps derived from regulatory requirements, technological restrictions, and market failures that make it difficult to implement scalable and effective savings solutions that can truly reach all segments (not just formal workers). Therefore, overcoming these technical and regulatory barriers requires institutional leadership aimed at establishing a universal, voluntary pillar for all. How this pillar can be developed and what elements it should consider are discussed in the next section.

From lessons
to action:
toward a
voluntary
savings pillar
for all

5

VISION



5. From lessons to action: toward a voluntary savings pillar for all

The lessons from the Retirement Savings Laboratory provide an implementation guide for building a voluntary savings pillar for all. Three principles must be considered to ensure that every source of income and expenses can potentially be transformed into retirement savings:

1. Create a regulatory environment favorable to voluntary savings by making it easy, accessible, and understandable. Eliminating all restrictions on retirement savings would allow for the implementation of automatic savings mechanisms and would allow stakeholders to bet on personal finance and social security education.
2. Design a long-term savings product that truly responds to the needs and reality of many workers in the region. This could be achieved, by, for example, incorporating elements of liquidity, which would allow people to access a part of their savings in case of emergencies.
3. Reach out to citizens more frequently and appropriately by leveraging technology, which allows easy and safe access to a variety of channels, to make voluntary savings for retirement easy and accessible. Technology is also an ally improving the collection of micro-contributions at low cost and making pension savings affordable.

This section discusses these elements of the design for a universal voluntary savings pillar in greater detail.

FIGURE 12. THREE PRINCIPLES OF AN INCLUSIVE VOLUNTARY SAVINGS PILLAR



Source: Authors' elaboration.



5.1. Create a regulatory environment that favors voluntary saving

One key to generating rules of the game that would favor retirement saving is to provide universal access to the pension system. As a starting point, everyone, regardless of income level, age, or employment status, should be allowed to voluntarily save for retirement. This does not happen in many countries in Latin America and the Caribbean since, to promote compulsory savings, voluntary contributions are conditioned on complying with compulsory contributions (as in Chile and Peru). However, these conditionalities often generate counterproductive results. In this sense, providing universal access to pension savings allows workers to save according to their means, in terms of both amount and frequency. It would also facilitate the implementation and promotion of savings solutions at scale by eliminating the need to verify compliance with eligibility criteria in order to save. And, importantly, it would help to build a collective vision that saving for retirement is for everyone and not just for those with formal jobs.

A second point is to establish ad hoc regulation that favors the implementation of the most effective behavioral tools such as automatic enrollment and active choices at favorable times to save.

The effectiveness of automatic enrollment in generating pension savings is overwhelming and can be adapted to different groups of workers. For formal workers, a default option of voluntary savings can be established through payroll mechanisms, in addition to mandatory savings. For the self-employed or workers who are more detached from formal arrangements, the spaces in which they consume or receive income can be taken advantage of, as can savable moments such as tax refunds. In all cases, workers who do not want to contribute voluntarily can opt out of such savings programs.

To make the regulatory environment favorable to savings, it is essential to offer better personal finance and social security education. Greater awareness of the importance of saving and a broad knowledge of the rules of the game for pension systems must form the basis of a voluntary savings pillar. Financial education and social security should raise awareness about the importance of saving for old age, to complement other sources of income such as a business or a rental property. This should also encourage informed decision-making that contributes to achieving one's pension objectives. Unfortunately, often due to ignorance, pension system affiliates make decisions that go against their own interests. Understanding how pension systems work is the key to optimizing consumption levels throughout life. A regulatory framework that includes greater agility and less cumbersome paperwork would lend itself to promoting savings, but reducing this bureaucracy requires more informed and empowered citizens.

5.2. Design a long-term savings product that is truly for everyone

Bringing voluntary long-term savings products to market with the pretense of being for everyone does not mean that they will generate acceptance among independent or lower-income workers.

Banks in the region have not been successful in selling savings products to lower-income populations. According to the World Bank's Global Findex, only 54.4% of the population in Latin America had a bank account in 2017, but this percentage drops to 41.9% in the two lowest income quintiles, and the percentage of the population that claims to use a bank account to save is even lower (12.2%). Additionally, few households maintain an emergency savings fund to smooth their consumption in the face of income shocks. According to information from surveys conducted by the IDB in Brazil, Chile, Mexico, and Peru, people who do not have retirement savings in pension systems also have less savings in other vehicles, either formal or informal, on average⁵⁶. This reality has manifested itself during the COVID-19 pandemic because, in the face of pressure from affiliates to access their pension savings to face the economic and health crisis, provisions have been approved for the partial withdrawal of funds (25% in Peru and 10% in Chile).

The needs and reality of workers in the region must be taken into account so that voluntary savings products are universally accessible in the long term. This means designing and marketing simple savings products that are well understood and easily purchased and have convenient contribution points, such as at non-banking locations or merchant payment terminals. It also means designing savings products that have some liquidity after a minimum period or if the funds are needed for authorized reasons such as home purchases, medical expenses, or loss of income due to unemployment (see Box 6). It will also be important to frame commercial products as investment options that must capture the interest of a population that often does not have a bank account and often sees formal savings as unprofitable and as a way to keep money idle.

56. BID (2017).

BOX 6. LIQUIDITY MECHANISMS IN LONG-TERM SAVING

Based on international experience, three models of access to pension funds can be identified during the accumulation stage. The first is permanent withdrawal, which allows members to access their fund in case of dire need without having to return them (as in the cases of Australia, Denmark, the United States, Mexico, and New Zealand). The second is a loan-and-repayment option, which gives account holders the option to borrow from their own fund with the obligation to replace it (such as 401(k) plans in the United States and mortgage loans in Australia and Switzerland). Finally, some models allow the creation of a more flexible solution that combines liquid savings products and (illiquid) pension savings in a single individual account made up of several subaccounts (such as Lifetime ISA plans and, potentially, NEST's Sidecar Savings product in the UK as well as the case of Singapore).

Particularly interesting for its behavioral science-inspired design, the Sidecar Savings product complements the National Employment Savings Trust (NEST) self-enrollment scheme. In a Sidecar Savings structure, contributions above the automatic enrollment minimum are managed through a mechanism called Jars, which is designed to create an optimal level of liquid savings while maximizing long-term savings. How does the Jars mechanism work?

- If an account holder wishes to participate, they register through a portal, where they select the amount to save for each “jar” and its saving objective (editable default values are offered as a starting point).
- Savers open a new instant access savings account. This is their “emergency savings jar,” which is next to their “pension savings jar.”
- Their pre-selected contribution is deducted from their salary each pay period. Initially, their contributions go to the emergency savings jar.
- Once the savings goal is reached, the salary deduction is sent to the saver's pension, in addition to their normal self-enrollment pension contributions.

The saver can withdraw money from their “emergency savings jar” as often as they wish. Every time the balance falls below the savings target, contributions begin to enter the “emergency jar” again.

Having a simple long-term savings product with a liquidity component that is offered by default can help to promote voluntary savings. Contrary to what is sometimes thought, less is more when it comes time to choose. For many people, choosing a savings product can be an overwhelming decision that prompts inaction. For this reason, it is important to have a base or default voluntary savings product through which to channel people's voluntary savings, unless they actively indicate another preference.

If this base savings product is not generated naturally by the market, then the state may play a more active role in its provision. An alternative is for the state to only regulate that a base voluntary savings product must exist that meets certain characteristics and leave its provision to private actors. This is the example of Mexico, where each Afore has a short-term voluntary savings product (that is, with some liquidity) through which voluntary contributions from the collection network are channeled. The state may participate more directly by developing its own base savings product. This is the case of the National Employment Savings Trust (NEST) in the United Kingdom, which establishes a base savings product, and 90% of the workers enrolled in NEST stay with it. In Colombia, the state—through BEPS—developed a voluntary savings product for low-income people and actively participates in its promotion and management.

5.3. Reach citizens more frequently and appropriately through technology

Technology allows easy and secure access to a variety of channels and can make voluntary retirement savings easy and accessible. Providing greater access means being able to make contributions through multiple channels such as automatic debit, bank branches and retirement fund administrators, mobile applications, or commercial networks (supermarkets, pharmacies, and gas stations). Thus, technology can help to create an omnichannel ecosystem of voluntary retirement savings. For this, it is essential that countries access the technological frontier in addressing pension matters. A starting point is establishing a single digital file and biometric authentication method, to establish the backbone of a single digital authentication system that would allow a fast and secure connection between a variety of actors and any individual pension savings account, thus generating an accessible voluntary savings ecosystem.

A pillar of voluntary savings for all should also allow small contribution amounts, to make pension savings affordable. This means that the system should allow contributions of small amounts and at the frequency that best suits the affiliate, which requires reducing the costs of collecting small contributions. Technology is an ally in improving the collection of small contributions at low cost. For example, in Mexico, the Retirement Savings System uses aggregators to group various small transactions into a single block, thus reducing the unit cost of each contribution. This has allowed the collection network to expand at low cost, allowing contributions that begin at 5.37 dollars.

The state can play a fundamental role in the successful deployment of these technologies to promote voluntary savings. It can establish regulatory incentives for adopting these technologies. In addition, given that some technology investments can be costly, regulators can coordinate different actors to reduce costs and implement improvements to the retirement savings system.

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Annexes

Annex 1. Behavioral economics tools by effectiveness (from most to least effective) in promoting participation in retirement savings plans and increasing savings (where applicable)—international evidence at the beginning of 2016

MECHANISM	IMPACT ON PARTICIPATION IN RETIREMENT SAVINGS PLANS	IMPACT ON ADDITIONAL SAVINGS	EXAMPLES OF THE ADDRESSED BEHAVIORAL BIASES
Automatic enrollment	+50 pp. for new hires in a company (<15 months after entry) ⁵⁷ . Minimum +42–59 pp. at six months, 16–28 pp. at 36 months after hire ⁵⁸ .	N/A	Present bias, social preferences
Enrollment through active choice	+41 pp. at 3 months; +17 pp. at 24 months; +5 pp at 42 months after hire ⁵⁹ .	The active-choice cohort contributed 4.8% of their income, on average, at 9 months and 5.5% of their income at 48 months from hiring, as compared with 3.6% and 4.8% at 9 and 33 months, respectively, for the standard enrollment cohort.	Limited attention, social preferences
Simplification	+10–20 pp. with a simplified program-enrollment process with preselected parameters ⁶⁰ .	N/A	Limited attention
Planning support and reminders	Financial planning support resulted in +12–21 pp. for new company employees ⁶¹ .	People who received SMS reminders had a +3% probability of reaching their savings goal and +6% more savings than the group that did not receive messages ⁶² .	Limited attention
Subsidies	On average, +2–4 pp. per 10 pp. increase in the contribution rate matched at the first dollar ^{63, 64–65} .	Changes in the match rate to the first 6% of income from 65% to 150% to 139% to 0% changed the contribution rates from 5.0% to 5.3% to 5.2% to 4.9%, respectively ⁶⁶ .	Present bias

57. Madrian and Shea (2001).

58. Choi *et al.* (2004).

59. Carroll *et al.* (2009).

60. Choi *et al.* (2011) and Beshears *et al.* (2013).

61. Lusardi *et al.* (2009).

62. Karlan *et al.* (2010).

63. Clark and Schiebler (1998).

64. Engelhardt and Kumar (2007).

65. Dworak-Fisher *et al.* (2011).

66. Kusko *et al.* (1998).

Annex 2. Summary of the Retirement Savings Laboratory initiatives

MESSAGES AND REMINDERS					
DELIVERY CHANNEL	PROJECT WITH LINK TO ONE-PAGER	COUNTRY	BENEFICIARIES	OBJECTIVE AND MECHANISM	DESIGN
SMS	SMS for SAR Affiliates	México	198,466 low-income workers	To motivate account holders in the Mexican Retirement Savings System (SAR) who had not been saving (inactive) to start saving, and to encourage those who had been saving (active) to save more. A strategy of sending SMS reminders was used to achieve this objective.	Three groups of eight Mexican AFOREs were assigned to receive two SMS per month for four months, eight months, and 12 months, respectively. Every four months, their progress was reviewed, and new strategies proposed for the remaining participants who continued to receive the SMS. The remaining participants were randomly selected after each cut-off to stop receiving the reminders. Administrative data on individual-level savings were used to measure the campaign's impacts, using the probability of making a deposit, the number of transactions, and the amount saved as indicators.
	SMS for BEPS affiliates	Colombia	241,357 BEPS affiliates	To motivate the BEPS affiliates who had not been saving (inactive) to start saving and those who had been saving (active) to save more. A strategy of providing SMS reminders was used to achieve this objective.	A group of BEPS members were assigned to receive a text message every two weeks for 5, 10, or 15 months. To study the capacity of SMS to generate savings habits, groups were chosen that would stop receiving the messages on different dates. The messages were adjusted every five months depending on the performance of the different contents. Administrative data on individual-level savings were used to measure the impacts of the campaigns, using the probability of making a deposit, the number of transactions, and the amount saved as indicators.
	Personalized messages through Big Data for BEPS affiliates	Colombia	12,000 BEPS affiliates	Incentivize voluntary savings for self-employed and low-income workers for retirement using smart marketing—in other words, marketing focused on segments of affiliated people identified by a big data analysis. SMS and personal call strategies were designed to incentivize savings.	First, an unsupervised segmentation exercise was conducted on all of the people affiliated with BEPS who had saved once, using a database fed by secondary data. The exercise identified seven segments, which were then applied to the group that had not saved to identify their savings potential. This analysis was complemented by a recency frequency and monetary value (RFM) segmentation. Then, a sample of 24,000 affiliated people were taken and randomly assigned to a control or a treatment group. The treatment group received a general strategy with SMS reminders, and groups were chosen to receive a phone call strategy for two months, customized to these segments, to incentivize savings.

Emails	Comunidad 4Uno Domestic Workers	Mexico	22,947 people contacted	Promote voluntary savings among informal domestic workers by sending emails promoting Comunidad 4Uno products to a sample of AFORE SURA Mexico customers, specifically those who were most likely to employ such workers	AFORE SURA Mexico customers with e-mail addresses who agreed to receive information from AFORE SURA or affiliated companies at some point were randomly selected. They were divided into five groups: four treatment groups (which received communications via e-mail) and one control group (which did not receive mail at all). Messages emphasizing different messages were designed for each of the four treatment groups. Thus, the expectation was that the SURA clients would purchase protection products from Comunidad 4Uno for their domestic workers and register them with the AFORE. The number of clients who offered protection products to their clients after the information was sent, the number of new AFORE SURA accounts in the domestic work segment, and the impact on SURA's voluntary savings were analyzed to measure the impacts.
	Independent workers affiliated to Protección	Colombia	73,577 independent workers	Increase voluntary savings for independent workers' retirement through email campaigns: 1. Common savings 2. Social Comparison	Each campaign had different content. The first campaign challenged the belief that self-employed workers generally do not contribute to their pensions. The second campaign highlighted the expected differences in income in old age for those who do and do not save (or do not save enough). Three emails were sent over the course of five months to 16 groups of independent workers, with the content of the campaign varying depending on whether they were making their obligatory contribution or not, and by the four income/wealth segments to which they were affiliated, as determined by the AFP. To measure the impacts, savings behavior was studied during the campaign and over the following three months.
Social Media Campaigns	Facebook Campaign Ads	Mexico	328,896 Facebook users	Motivate Facebook users in Mexico to decide to voluntarily save for retirement through a motivational message campaign on Facebook	The Facebook ads had two types of content: one with informative content and another that tried to make the user aware of behavioral biases. Each ad (eight ads in total) was advertised twice for five days each time, at a two-week interval (32 campaign weeks). The users were between 15 and 45 years old and were located in 1,064 municipalities in Mexico. The impacts of voluntary savings made through commercial networks, AforeMovil downloads, and voluntary savings made through AforeMovil were measured, to compare the municipalities where the campaign was carried out with those where it was not.

Push Messages	AforeMovil Push Messages	Mexico	390,741 AforeMovil app users	Motivate account holders who had downloaded AforeMovil to start using the application and voluntarily save for their retirement. For this purpose, a push message campaign was planned within the AforeMovil app.	Push messages were sent based on carefully selected holidays in Mexico. The messages provided a direct link to the savings channel available to workers within the application. Nearly 400,000 AforeMovil users, who were affiliated with AFOREs, were randomly selected to receive push messages, either 1) a message about savings related to the scheduled holiday or 2) a behavioral message about savings. In addition, some campaign messages set specific monthly savings goals. Administrative data on individual savings were evaluated to measure the campaigns' impacts, using the probability of making a deposit, the number of transactions, and the amount saved as indicators.
Emails, SMS, pop ups	Favorable moments to save for BancoEstado clients	Chile	22,507 BancoEstado Personas clients	Attract BancoEstado clients who were about to complete their credit payments or who had recently paid off their loans to participate in a voluntary social security savings plan and take advantage of their available liquidity. To do so, invitations were sent to contract some APV products with BancoEstado using SMS, e-mail, and a banner on each client's personal web page at the bank.	Invitations (sent in two rounds) were sent to BancoEstado clients who shared the following characteristics: (1) they had recently completed or were close to completing a consumer loan with the institution and (2) were not eligible for new credit offers. The impacts of the interventions were measured through the probability of contracting any APV products at any time between February and November 2018.

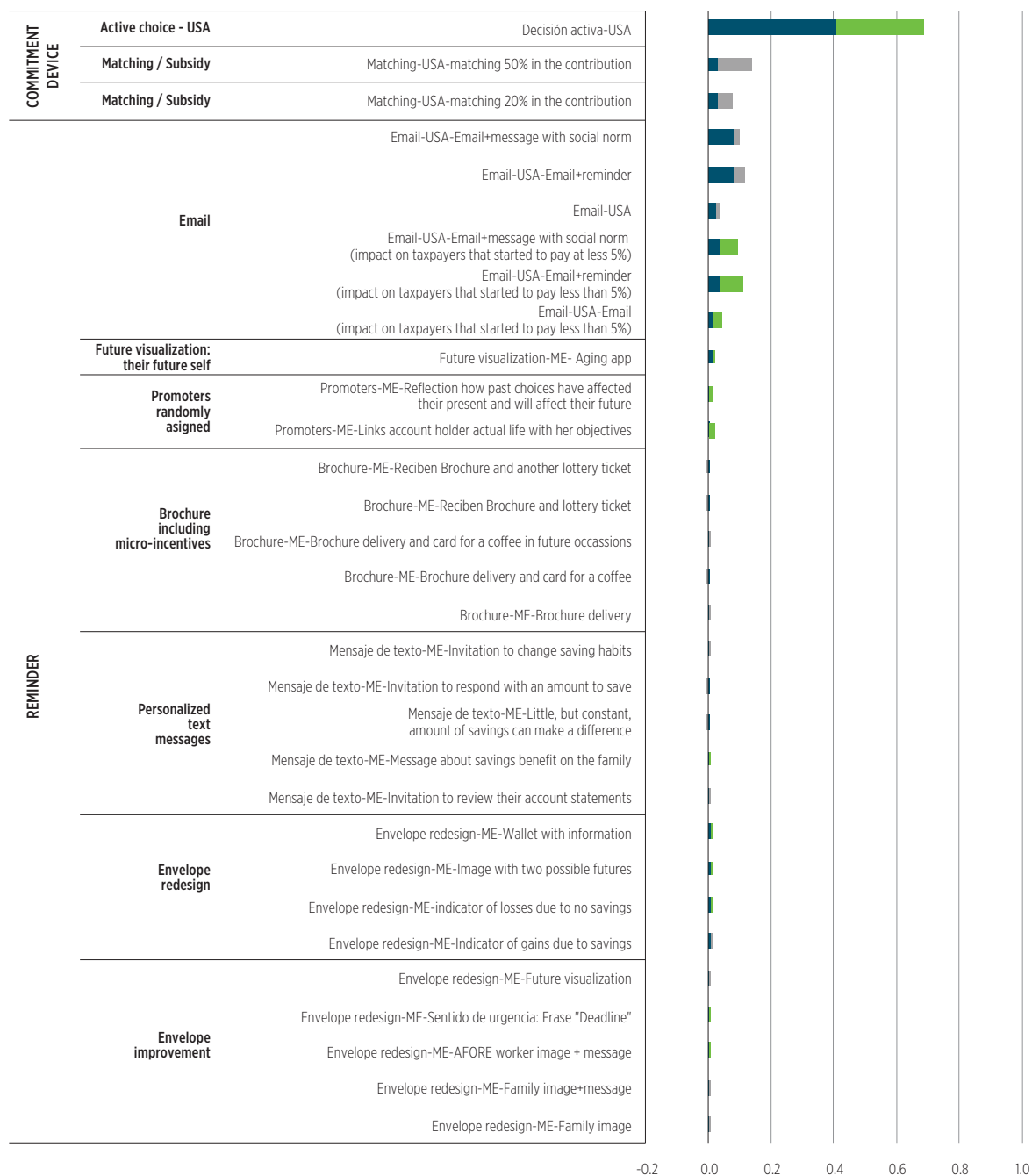
ACTIVE DECISION TO AUTOMATIC DEBIT					
DELIVERY CHANNEL	PROJECT WITH LINK TO ONE-PAGER	COUNTRY	BENEFICIARIES	OBJECTIVE AND MECHANISM	DESIGN
Information on Website	Cashing in on tax refunds to save	Chile	250,000 independent workers	Motivate self-employed workers not to opt out by transferring their tax returns to their individual savings accounts. To this end, an information strategy was used that included adding a paragraph on the Internal Revenue Service's (SII's) website about the implications of the decision to contribute or not to one's old-age savings account during the tax-filing period.	The SII tax-refund mechanism was taken advantage of because for self-employed workers who issue fee slips, the SII automatically deposits their tax refund into their individual account. However, they were given the option to express their desire not to contribute (to opt out). The treatment assignment was random and depended on whether the individuals' ID number ended in an even or odd number. The impacts were measured through the probability of waiving the obligation to contribute, comparing the decisions of the treatment versus the control groups.
Push Messages and Pop-ups	Digital Savings for Cabify Drivers	Peru	1,682 drivers	Encourage voluntary savings by workers on on-demand platforms. To this end, two automatic savings plans were designed and offered through the Cabify application, which were sent through push and pop-up messages.	The first plan was the automatic emergency savings plan, which allowed drivers to save 2% of their weekly income. The second was the Smart and Flexible Savings plan, which considers income variations among the independent workers. In this plan, drivers saved 3% of their income on "good weeks" when their weekly income was above a predetermined threshold and saved nothing when their income was below that threshold. The impacts were measured by analyzing the take-up of savings plans, contributions, and accumulated savings in each of the savings plans, based on Cabify's weekly deposit reports, which included information on deposits, withdrawals, balances, and savings (measured as the amount permanently held in the account).
Letter	Active decision for SURA employees: Phase 1	Chile	2,303 workers	To increase workers' participation in a provisional voluntary savings plan offered by the company SURA AM. For this purpose, workers in SURA AM were invited to save through a letter sent during an administrative process performed by HR every six months.	Four types of randomly assigned letters were sent out, with variations in the suggested minimum amount per contribution and the format in which the company's contribution information was presented. Workers could voluntarily submit a signed letter selecting their savings preference or their decision not to save. However, a positive response to the letter was not binding because a final step was required: visiting the human resources department and signing and completing additional forms. To measure the impacts of the letters, the participation rate after six months was analyzed for each letter, as was the average savings amount in each case.

Asesorías	Active decision for SURA employees: Phase 2	Chile	457 workers	To increase workers' participation in a voluntary social security savings plan offered by the company SURA AM. For this purpose, an individualized counseling session was carried out.	During the counseling session, the benefits of APVG were presented to the workers, and support was provided to formalize their participation if they agreed to the proposal. This was done as part of the regular induction of new employees. An attempt was made to minimize the number of forms that workers had to fill out in order to facilitate their participation. A counselor processed these forms immediately to discount the following month. Once the worker met the seniority and contract criteria, the company's subsidy was activated. To measure the impacts of the counseling session, different cohorts of new entrants were analyzed, as were their participation and amount of savings after the intervention.
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SIMPLIFICATION AND ACCESS FINANCIAL EDUCATION					
DELIVERY CHANNEL	PROJECT WITH LINK TO ONE-PAGER	COUNTRY	BENEFICIARIES	OBJECTIVE AND MECHANISM	DESIGN
Training and Awards	Incentives at Yastás Stores	Mexico	1,077 shop owners	Promote and incentivize greater savings for retirement in a simplified way in stores. To this end, training was organized for independent shopkeepers in the Yastás network on retirement savings measures, and a reward and incentive scheme was designed to promote savings among customers in their stores.	In total, 1,077 shopkeepers from the Yastás store network were trained on the most important issues regarding pension savings. The scheme to encourage shopkeepers to encourage their clients to save utilized attractive prizes such as gift cards, which shopkeepers and business advisors could access when the clients reached certain voluntary retirement savings deposit goals. The campaign went on for three months. The impacts of the campaigns and incentives were measured using administrative data on savings captured from each store within the Yastás network.
Information in account statement	Redesign of pension contribution statement for Régimen de Prima Media	Colombia	48,072 affiliates to the pension benefit system (public)	Simplify the information in Colpensiones account statements to improve understanding and encourage workers to verify and correct it, if necessary. To do so, the annual account statement sent by Colpensiones (the public administrator of the defined benefit pension system) to its affiliates was redesigned.	The redesign consisted of simplifying the language, limiting the content, dividing information into segments, using positive and motivating language, and including instructions. Of the affiliates included in the intervention, a sample of three groups was taken: employees, independent workers, and a low-income group that receive a 75% subsidy from the state to pay their contributions. A group of affiliates received the redesigned statement. The rest were sent the standard account statement. To measure the impacts, telephone interviews were conducted with members of the treatment and control groups.

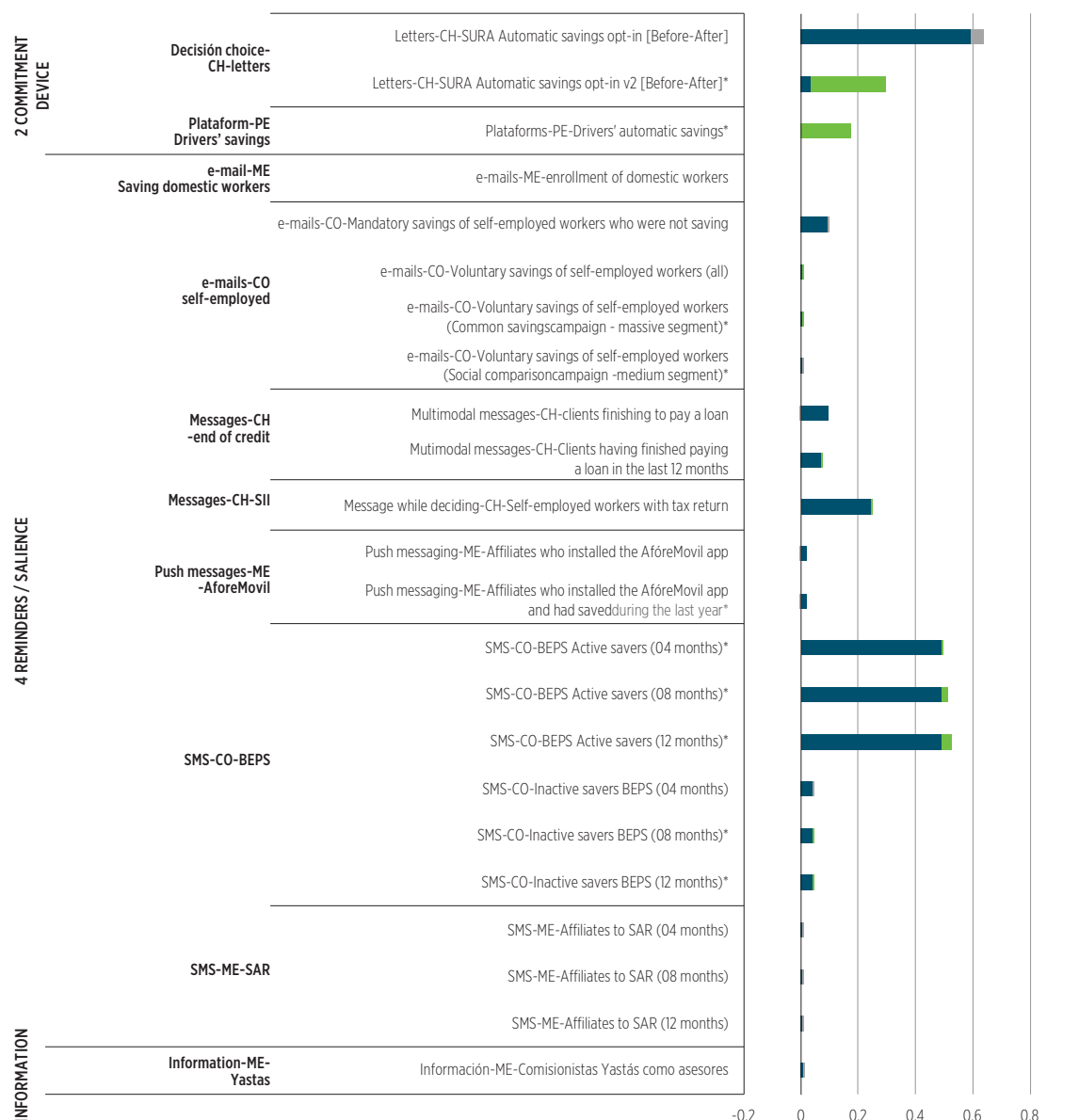
FINANCIAL EDUCATION					
DELIVERY CHANNEL	PROJECT WITH LINK TO ONE-PAGER	COUNTRY	BENEFICIARIES	OBJECTIVE AND MECHANISM	DESIGN
Workshop/ training	Financial education at technical high schools	Chile	5,940 technical high school students	Increase the financial and pension knowledge among students and evaluate how the information influences their perceptions of, awareness of, and confidence in the pension system and the AFPs. For this, the "Save from Now" workshop was held, created by the AFPs association.	The workshop combined an hour of online pedagogical materials with half an hour during which a moderator delved into the presented concepts. To evaluate the intervention, 98 schools were randomly assigned to the treatment group, which received the workshop, and 103 were assigned to the control group, which received materials to carry out two trials of the University Selection Test (PSU). The results were measured in two visits, during which surveys were applied to measure the workshop's impacts on the perceptions of, awareness of, and confidence in the pension system and the AFPs among the young people.

Annex 3. International evidence: Impact on probability of saving



Source: Authors' elaboration based on international evidence.

Annex 4. Summary of the average impacts on the probability of saving



Note: This figure shows the mean of the control groups in blue and the difference between the treatment groups in green (if significant at a 5% level) or gray (not significant at a 5% level), in absolute values. The difference of having been assigned to the treatment (or the intention-to-treat effect) is shown, without correcting for the lack of delivery of messages to many of the individuals in the treatment groups (which, in some cases, was measured) or because the information likely could have reached people in the control groups in some of the pilots. In addition, in several pilots, variations in the messages were evaluated, grouped here in a single category of "treatment" when we did not find significant differences between the variations. Comparisons of the randomly assigned groups (RCTs) are presented for 12 of the studies. In two studies, identified as [Before After], it was not possible to select a control group, so the results during the intervention period were compared with historical averages from comparable data.



Annex 5.

Summary of Interventions

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Retirement Savings Laboratory



Promoting Retirement Savings among clients of *BancoEstado Personas*

WHAT IS IT?

In Chile, the Pension Fund Administrators (AFP, for their Spanish acronym) and other authorized institutions such as insurance companies, securities brokers and banks can offer voluntary pension savings plans. This presents an opportunity to promote voluntary pension savings among low-income workers through financial intermediaries with whom these workers have greater interaction and trust, through the channels that best meet their needs. This is the case of *BancoEstado* in Chile, which serves most of the population, with an emphasis on middle- and low-income consumers. As the focus of global financial inclusion has for decades been to facilitate access to credit and loans for lower income households, many workers in this segment have a consumer loan through *BancoEstado*. In order to promote retirement savings, this intervention seeks to take advantage of both factors: the high penetration in the middle- and low-income segments of *BancoEstado Personas* and the greater liquidity these clients have upon finishing a loan repayment, which contributes to decreasing the feeling of loss that occurs when saving.

IMPACT

There is not a statistically significant (5%) difference between treatment and control groups in any of the subgroups considered.

However, the campaign does seem to reduce the outstanding mortgage debt of those individuals whom we remind about the increased liquidity to come. This could indicate that individuals decided to save in the long term, but using a financial vehicle other than the one proposed.

TITLE

Promoting Retirement Savings among clients of *BancoEstado Personas*.

TAGLINE

In theory, the end of a loan repayment period is an ideal time to start saving for retirement. As a person's liquidity temporarily increases, they have more funds available to contribute to their pension and are also less likely to experience the sense of loss commonly felt through saving. Through SMS, e-mail and browser pop-ups, we invited customers of *BancoEstado* about to complete a loan repayment to enroll in a voluntary retirement savings plan. Signing up for the voluntary retirement savings plan did not increase as a result of our intervention. However, individuals who received the invitations reduced their mortgage debt, suggesting that clients decided to save in the long term, but using a financial vehicle other than the one proposed.

FIELD OF WORK

Pensions and long-term savings.

SUBTOPICS

Retirement savings.

YEAR

2018

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Fabian Cofre.

AIM

The aim is to attract clients of *BancoEstado Personas* about to complete payment of a loan or who recently did so, to participate in a voluntary retirement savings plan, taking advantage of their increased liquidity and reduced loss sensation.

BEHAVIORAL TOOLS

Invitations to save in voluntary retirement savings products, taking advantage of a "savable moment".

EXECUTING AGENCY

BancoEstado Personas.

TARGET POPULATION

BancoEstado Personas clients.

DELIVERY MECHANISM

Text messages, emails and browser pop-ups on *BancoEstado*'s website.

SAMPLE SIZE

20,724 individuals.

EVALUATION DESIGN

Randomized Controlled Trial (RCT).

FUNDING SOURCE

IDB Lab and MetLife Foundation.

COST

Approximately 20 Chilean pesos (CLP) per SMS sent. The total cost of the intervention was less than CLP \$470,000, or approximately US \$700.



CHALLENGE

Voluntary Retirement Savings (APV, for its Spanish acronym) is a retirement savings mechanism that allows Chilean workers to save voluntarily for retirement, in addition to the mandatory savings contributions in the Chilean pension system, which are currently 10% of pre-tax income. APV can be an important supplement to mandatory savings, given the relatively low contribution rate and low mandatory contribution densities.

Despite low replacement rates (20% without and 40% with state subsidies), most workers in Chile do not voluntarily save for their pensions. According to the 2015 Social Protection Survey, only 13% of salaried workers and 8% of self-employed workers have made voluntary pension savings. For low-income workers, this percentage is even lower: among those in the third quintile of the income distribution, this figure does not exceed 4%, and it is even lower if the first and second quintiles are considered, among which voluntary pension savings is below 3%.

There are multiple reasons for these low voluntary retirement savings rates. On one hand, workers, especially low-income workers, perceive that they have limited capacity to save. There are also certain psychological and behavioral biases that can lead a person who wants to save to not do so. These biases range from loss aversion, to inaction in the face of the uncertainty of old age, to delaying the decision to save because of a lack of willpower. Additionally, people have limited attention spans, which makes them focus on more immediate issues.

The messages and the intervention were designed to counteract psychological biases that can limit long-term savings. Specifically, messages sent at a time of greater availability of liquidity, such as after finishing a loan repayment, seek to reduce the role of willpower problems and the sense of loss that usually conspire against the intention to save.

INTERVENTION DESIGN

The intervention consisted of sending invitations to enroll in an APV plan with *BancoEstado*, sent by the bank through different mechanisms: text messages (SMS, both unidirectional and bidirectional), emails, and a banner (a notification within the personal web space of the client on *BancoEstado*'s website). These invitations were sent to bank customers who shared the following characteristics: (1) they recently finished paying off a consumer loan with *BancoEstado* or were close to completing it, and (2) they were not eligible for new loan offers. Excluded from the analysis were those clients who had already signed up for an APV product at *BancoEstado* before the intervention, and clients within five years or less of the legal retirement age (that is, men over 60 and women over 55).

To give an example of messaging contents, the email was the following: “*Name*, after paying off your loan at *BancoEstado*, it may be the moment save for your future. Sign up for an APV with us 100% online or through the *BancoEstado* service network”.

After the intervention, APV enrollment was monitored until November 2018. At the beginning of the study, 20,724 people

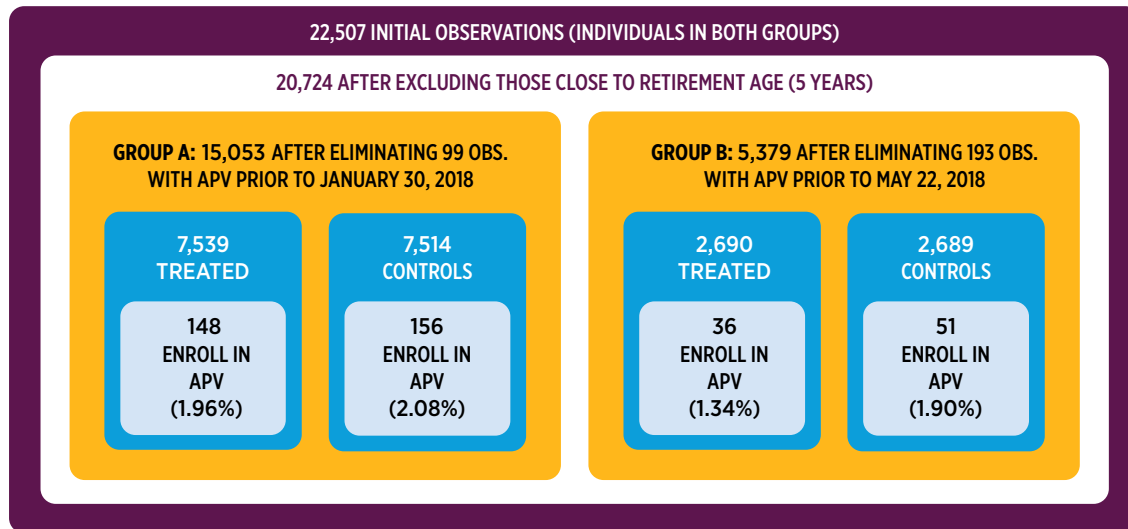
who met the above conditions were randomly assigned to a control group and a treatment group. The individuals were divided into two groups: group A, which corresponds to individuals whose loans expired between January 2017, and February 2018, and group B, which includes those with loans that expired between March and June 2018. The invitations were sent in two rounds: the first, on January 22, 2018, and the second, on May 22, 2018. Individuals in group A received invitations in both rounds, while those in group B received them only in the second round.

The impact of the interventions was measured through the probability of purchasing any APV product at any time between February and November 2018. For group A, the impact was measured in the periods from February to May 2018, from June to November 2018 and from February to November 2018. In the case of group B, only the effect on the probability of enrolling in an APV plan between June and November 2018 was measured. Figure 1 shows the distribution of people in the different groups and the APV enrollment rate.

1. Benavides and Valdes (2018), “*Pensiones en Chile: Antecedentes y Contornos para una Reforma Urgente*”, Escuela de Gobierno, Universidad Católica de Chile.



FIGURE 1
INDIVIDUALS BY GROUP
(APV observed until November 2018)



IMPACT

Message campaigns had no effect on APV enrollment. No statistically significant (5%) difference was found between the control and treatment groups or in any of the sub-groups considered. This could be explained by both groups having been exposed to other types of communication or advertising interventions. In this context, it should be noted that *BancoEstado* increased its sales of APV products by 130% between 2017 and 2018, so its standard strategy of promoting savings products through conventional service desks could have been more effective in selling APV, which could have blurred any messaging effect.

However, we find evidence consistent with our hypothesis that completing the repayment of a loan is a good moment to offer savings products. Specifically, we show that the probability of enrolling in an APV plan is higher for those clients whose loan is closer to expiring. That is, receiving a message just before the loan ends (when liquidity increases) is more effective than receiving one months earlier.

Finally, we found an unexpected effect. Although it was not possible to motivate customers to sign up for APV, those who received messages were more likely to save in other

long-term vehicles. In particular, the intervention had an impact in reducing both the amount and presence of customers' outstanding mortgage debt (group B). It is possible that the intervention reminded message recipients of their increased liquidity, and they took the opportunity to make a larger mortgage payment or to contract fewer loans, or for smaller amounts. Specifically, the treated individuals show a decrease of CLP \$238,000 (CLP \$581,000 among the clients closest to loan repayment) in mortgage debt (US \$300 or US \$734, respectively). Likewise, a decrease of 0.7 percentage points (1.8 percentage points among clients closest to loan repayment) is observed in the probability of having a mortgage debt. This comes, in part, from a lower probability of taking out new loans among those who did not initially have this type of debt (0.8 percentage points lower likelihood to contract among nearby customers). There is also a lower probability of remaining in debt among those who had this type of liability at the beginning of the intervention (11.2 percentage points less likely to have debt at the end of the period between "close" treated individuals and controls).



POLICY LESSONS

The results of the intervention suggest that there was no positive effect on the probability of enrolling in an APV plan. In fact, in some cases, the effect seems to be negative, although not statistically significant. Moreover, the probability of enrolling in an APV plan (either as a result of our intervention or the general campaign of *BancoEstado*) is higher among individuals whose loans expire close to the time of the intervention. This is consistent with the hypothesis that an anticipated spike in liquidity after finishing paying a loan is a positive factor in savings decisions.

We believe that, by calling the client's attention to the availability of recent or imminent liquidity, the intervention may have led to treated individuals reducing their mortgage debt levels, partially in detriment to an enrollment in an APV plan. It is important to mention that the intervention was carried out in the context of a broader campaign by *BancoEstado* to promote their APV products through their general commercial channels. This alternative route, while costlier, but with more direct contact with the clients, could have overshadowed any possible effect of our informative intervention.

It is key, among other actions, to continue to promote voluntary pension savings, so that workers can contribute for a period or amount, and with an administrative institution, of their choice. These and other measures would have direct implications on the level or adequacy of pensions, allowing benefits to increase in a sustainable manner. One of the most important elements is to maintain informational and educational campaigns over time, instead of promoting retirement savings through isolated or time-limited interventions. A cultural change is required regarding this issue, which can only be achieved through long-term efforts. Another essential element to consider is the life stage of a recipient who receives this information, with younger people being more receptive to messages promoting pension savings than older individuals. A final fundamental element is the increased involvement of APV administrators, employers and the state in delivering information about pension savings as well as about relevant tax incentives, in an effort to improve people's long-term savings decision-making.

Retirement Savings Laboratory



How to increase the effectiveness of automatic enrollment? Tax refunds and retirement savings in Chile

COUNTRY



CHILE

WHAT IS IT?

For many years, self-employed workers in Chile have not been subject to obligatory pension contributions. A recent set of reforms has tried to incorporate them gradually.

Since 2008, Chilean independent workers who issue invoices have an automatic savings mechanism through the Chilean Internal Revenue Service (SII, for its Spanish acronym). If these workers do not opt out explicitly, their tax refund goes directly to their individual retirement savings accounts. Contrary to expectations, the vast majority (around 80%) opt out. This intervention provided relevant information using various principles of behavioral economics at the time of seeking to opt out to motivate independent workers to stay in the default option of saving for retirement through their tax refund.

IMPACT

No statistically significant (5%) difference was found between the treatment and control group in aggregate or in any of the sub-groups considered.

TITLE

How to increase the effectiveness of automatic enrollment? Tax refunds and retirement savings in Chile.

TAGLINE

In Chile independent workers who issue invoices have an automatic savings mechanism through their annual tax refund. If workers do not explicitly opt out, the tax refund goes directly to their individual retirement savings accounts. This intervention provides relevant information to taxpaying independent workers at the time of seeking to opt out, to motivate them not to resign. The results show no impact of the intervention.

FIELD OF WORK

Pensions and Savings.

SUBTOPICS

Retirement Savings.

YEAR

2018

AUTHORS

Eduardo Fajnzylber; Andrea Repetto; Mariano Bosch; Fabian Cofre; Gustavo Caballero; Lukas Keller and Maria Teresa Silva-Porto.

SUMMARY AUTHOR

Fabian Cofre.

AIM

Motivate independent workers not to opt out of depositing their tax refund to their individual retirement savings accounts, by presenting

information just when the independent worker is seeking to opt out on the website of the Chilean Internal Revenue Service.

BEHAVIORAL TOOLS

Information provision, nudges.

EXECUTING AGENCIES

Inter-American Development Bank (IDB), Chilean Internal Revenue Service (SII), Chilean Pension Superintendence.

TARGET POPULATION

Taxpayers who issue invoices and who are eligible by law to opt out of the obligation to contribute to their pension.

DELIVERY MECHANISM

Text with specific information on the SII website, delivered to taxpayers when they seek to opt-out of the default option to deposit their tax refund into their retirement savings account.

SAMPLE SIZE

714,000 taxpayers.

EVALUATION DESIGN

Randomized Controlled Trial (RCT).

FUNDING SOURCE

IDB Lab and MetLife Foundation.

COST

Practically null, since it only meant adding a paragraph to the message on the SII web page that self-employed workers see when deciding whether to contribute to their pension.



CHALLENGE

In 2008 a pension system reform stipulated that independent, self-employed workers who issue invoices would be required to contribute to the obligatory retirement savings systems starting in 2012, a date that was later postponed several times until the provision came ultimately into effect in 2019. During the transition period, lawmakers created an automatic voluntary retirement savings mechanism through the SII. For those independent workers who issued fee-based invoices, the SII deposited their tax refund (in case they were eligible for one) automatically into their individual retirement savings account. This default savings mechanism is based on behavioral economics that predicts that inertia should cause the majority workers to let the tax refund be transferred to their individual account. These independent workers had the option of expressing their desire not to contribute through a digital affidavit before the SII.

Contrary to expectations, the vast majority of independent workers opted out of the automatic savings mechanism, meaning that they expressed their explicit desire to not contribute, so that their taxes would be refunded to them directly. This is the main challenge that motivated this intervention. The objective of the intervention was to reduce the probability that an independent worker who issues invoices would choose not to contribute. To do this, these workers were shown information at the moment they tried to perform the opt-out which combined elements of behavioral economics and psychology, based on hypotheses proposed in their respective literatures.

INTERVENTION DESIGN

The intervention was carried out during the 2018 tax declaration period, between January and April 2018, and consisted of adding a paragraph informing taxpayers about the implications of their decision to not contribute for their pension savings.

The text was placed on the website of the SII, in the section where the person must express their willingness to opt out. In it, the benefits of contributing were detailed, and a link was included to access the Pension Superintendence web page. Specifically, the text read as follows: *“Keep in mind that your future pension will depend on the contributions made during your working life, among other factors. Therefore, by selecting the option of “willing to not contribute,” you will be missing out on the opportunity to increase your pension fund. For more information on independent workers’ obligation to contribute, we invite you to visit the Pension Superintendence’s web site, through the following link [Pension Superintendence](#).”*

This message, received by workers in the treatment group, has four components that contain aspects associated with the academic literature on behavioral economics, in its application to voluntary savings. First is the framing of not contributing as a loss (“you will be missing out on the opportunity to increase your pension fund”) as the loss aversion literature suggests.

Second is the access to easily understandable information regarding the benefits of contributing, helping to overcome cognitive limitations that make it difficult to understand the problem of saving for the future. Third is that the message was highlighted in red letters (in contrast to the black letters of the rest of the text), in order to direct attention and generate a feeling of importance. Finally, the message comes from a highly credible public entity, the SII. As such, taxpayers may have perceived the message as expert advice.

The modified web page was randomized among taxpayers who entered the SII’s website. Taxpayers with an identity number (RUT) ending in an even number were exposed to the original web page, without additional information, while those ending in an odd number were shown the modified web page providing access to this information.

A total of 357,000 workers were exposed to the modified web page (treatment group) and a similar amount were exposed to the original web page.

Impact was measured through the probability of a worker opting out of their pension contribution and comparing the decisions of the workers in the treatment and control groups.

No statistically significant (5%) difference was found between treatment and control groups in aggregate or in any of the

subgroups considered; that is by sex, age group, income level and previous accumulation level in the pension system.

POLICY LESSONS

The Chilean experience with an automatic savings mechanism through the tax system is revealing. Despite the relatively low rate of adherence to this mechanism that motivates this intervention, it is important to remember that facilitating the contribution through the tax return ensures that 20% of independent workers that issue invoices voluntarily contribute for retirement, a high figure compared to any other mechanism that encourages voluntary savings and one with a relatively low cost.

However, this intervention shows that reducing the percentage of independent workers who opt out of automatic savings can be a difficult task. Contributing means forgoing the tax refund now, which means access to immediate liquidity. It is possible that workers have a use for the refund that they value more

than putting it towards retirement (with or without myopia regarding their future). In addition, it is possible that they face limited liquidity and that, therefore, the marginal utility of consumption associated with the funds that are returned or the additional resources that they must come up with to contribute are particularly high. They may also wish to save in vehicles other than their individual pension fund account.

One lesson of this study is that policymakers must conceive of interventions that are more impactful and timelier. While this initiative was ambitious in reaching more than 700,000 independent workers, only one paragraph could be communicated at a very late stage in the worker's decision-making process (just before opting out of saving). Thus, the intervention was "too little, too late."

Randomized Controlled Trial (RCT).



CHALLENGE

In Chile, there is a generalized lack of financial education and knowledge of basic aspects of the pension system. According to data from the Social Protection Survey (EPS, 2015), 82% of Chilean workers affiliated to the pension system do not know how their pension will be calculated, and almost half of those who claim to know give an incorrect description. Additionally, 74% of the population does not know what percentage of their taxable income is contributed to the pension system (i.e. a worker's monthly contribution) and 87% does not know the Pension Fund Administrators' (AFPs') commission for managing this money. Furthermore, Chileans also show poor

financial planning practices: less than 10% of the EPS sample actively plans financially (Fuentes et al., 2017).

Lack of financial and pension knowledge is a major challenge considering the context of an individual capitalization system, such as the Chilean one, in which the final pension a worker receives is the result of a set of decisions that must be made throughout one's working life. Examples of these important decisions are how much to save, in which AFP to register, and in which fund to invest savings. Therefore, early investment in financial and pension education is key to ensuring that pensions are consistent with workers' expectations.

INTERVENTION DESIGN

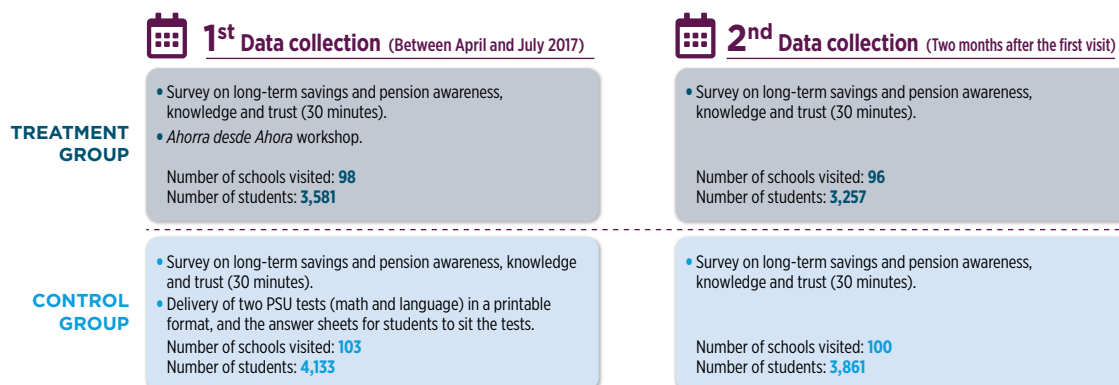
The evaluation consisted of measuring the impact of the *Ahorra desde Ahora* (Save Starting Now) workshop on senior year technical high school students' knowledge of some financial and pension concepts, as well as their confidence levels and perceptions of the Chilean pension system.

Ahorra desde Ahora is part of an initiative of the Association of AFPs in Chile, which seeks to improve the financial and pension knowledge of young people. The workshop combines one hour of online teaching materials with half an hour in which a moderator elaborates on the concepts presented, following best practices to ensure that financial education interventions are successful. These best practices include: 1) that the concepts are easy to understand and apply, 2) that they are personalized and appropriate to the needs and situations of each person, 3) that they are accessible and entertaining, and 4) that they are focused on groups at a stage more conducive to learning, that is, children and teenagers.

For the intervention's evaluation, 98 schools were randomly assigned to the treatment group, which received the *Ahorra desde Ahora* workshop, and 103 to the control group, which received materials to conduct two sessions of the University Selection Test (PSU, for its Spanish acronym). Data collection was carried out at two different moments. The first was executed between April and July 2017 with the aim of establishing a baseline. On this visit, researchers applied a survey on long-term savings and pension awareness, knowledge and trust, followed by the workshop, which only the students in the treatment group attended. The second visit was a follow-up, and took place eight weeks later, from June to September 2017. In this visit, the same survey was given again.

In total, 7,714 students were evaluated in the first round, while 7,118 students participated in the second round. In total, 5,940 students participated in both rounds.

FIGURE 1. PHASES OF THE EXPERIMENTAL DESIGN



Source: Authors' elaboration

Retirement Savings Laboratory



Informational letters and subsidies to promote voluntary savings

What is the problem that motivated this intervention?

The vast majority of workers in Chile do not voluntarily save for their pension. According to 2017 statistics from the Pensions Superintendent, only 16% of workers with individual accounts in Chile have contributed to their Voluntary Retirement Savings (APV), which conversely make up only 1.6% of the total of pension funds in the country. APV allows workers to improve their pensions by complementing their mandatory contributions.

Among the multiple reasons that limit long-term voluntary savings, there are psychological biases that can cause a person who wants to save to not do so. These biases range from having a limited attention span (and, therefore, people tend to focus on more immediate issues), and overconfidence in their ability to continue working in old age (or to be able to generate income some other way), to inaction when facing the uncertainty of aging, and therefore postponing the decision to save for old age.

This intervention studies the role that employers can play in helping their workers overcome some of these biases and promote retirement savings. To this end, we gave workers at SURA Asset Management Chile (SURA AM Chile), a multinational company in the field of pensions, saving, and investment, the decision to save in a simple way through an administrative process that the company already manages. This attempts to confront one of the most important psychological biases that impedes making a decision that we really want to make: procrastination.

Considering that SURA AM is a financial services company, whose workers have upper middle-class incomes, it is not surprising that an important proportion of its workers (much higher than

the national average) already voluntarily save. 57% of SURA AM Chile's workers contribute to the company's Group Voluntary Retirement Savings (APVG) program, which gives a subsidy, or match, of 50%, of the contribution of each worker with a maximum limit of 5,000 Chilean pesos. However, these numbers are below the Mexican SURA subsidiary, where 95% of employees participate in a private pension plan (which is offered when a worker joins the company). Additionally, the amounts that are saved are relatively small. On average, they only represent 1.85% of a worker's salary.



COUNTRY: CHILE

FINANCING: MIF

TARGET POPULATION:

Middle-income formal workers

BEHAVIORAL BIAS:

Present bias, limited attention span, loss aversion, reference dependent preferences

More about

The Retirement Savings Laboratory

The Retirement Savings Laboratory is an initiative that seeks innovative ways to get the population of Latin America and the Caribbean to save for its old age. To do this, it experiments with interventions based on behavioral economics and the use of new technologies.

Retirement Savings Laboratory



Four informational letters with behavioral elements

With the goal of increasing participation in the APVG program and the amount saved, SURA AM Chile invited its employees to save through four informational letters that were included in an annual administrative process that each worker must participate in to adjust his or her salary for inflation. In the letters, different behavioral economics tools were combined: presenting an active savings option, simplifying the decision through suggestions, and reminding that an action is necessary.

These letters were randomly assigned to the more than 2,300 employees of SURA AM Chile and were differentiated by the magnitude with which the APVG match was highlighted, as well as the minimum amount suggested as a savings option.

What were the results two months later?

- 36% of employees answered the letters, making an active decision. Of these, 33% said they would save with the proposed mechanism, of which 51% were new savers in the APVG program.
- Only 27% of those who wanted to save in the APVG program had completely formalized their savings (the letter on its own did not take a contract into consideration, and there was an additional administrative process to do).
- The most effective letter had information about the match highlighted in the body of the letter, and, as the first saving option, the amount that maximized the subsidy.
- Reference amounts had a clear effect to anchor the saving level: 40% of employees who decided to save did so for the minimum amount presented in the letter.
- The percentage of workers who contributed to APVG through this intervention increased by 3 percentage points (pps), going from 57% to 60% of all SURA employees (approximately half of the new savers).
- The amount saved as a percentage of salary increased from 1.85% to 2.3%, in other words, 0.45 pps.

Lessons learned

Although participation in the APVG program increased without an additional cost for the company, the results are modest. In the United States, a similar intervention that offered a saving program when a worker signed a new contract found that 95% of new employees made an active decision and increased the percentage of new employees saving by 28 pps (Carrol et al, 2005).

The fact that only 36% of employees answered the letter reflects the importance of the mechanism through which a savings option is presented. Furthermore, considering that only 27% of those who wanted to save formalized their intention, the importance of retirement savings being an easy process, as automatic as possible, becomes clear.

Based on these lessons learned, the following recommendations are offered:

RECOMENDATIONS	OBJETIVES
Offer the option to participate in the APVG program in the first formal contract.	Increase the number of workers who actively choose to participate in the APVG program.
Reduce transaction costs, simplifying the formal process to participate in APVG.	Increase the number of workers who formalize their APVG.

The vast majority of workers in Chile do not voluntarily save for their pension



PILOTS IN



COLOMBIA

The messages were adjusted every five months depending on the performance of the different content.

SMS: US\$ 36.600

A large proportion of Colombian workers do not regularly contribute to the pension system, especially those with volatile or very low incomes. As a response to this reality, in 2015 the Colombian government created the voluntary retirement savings program Beneficios Económicos Periódicos (BEPS). At the beginning of this intervention, in August 2017, BEPS had 808,000 people enrolled in the program, of which 214,716 (26.6%) were actively saving. Furthermore, only 19% of savers were regularly saving: they had either saved at least COP 147,500 (approx. US\$ 115 PPP) in 2017 or they had made more than six deposits over the course of the year, which were requirements to be able to access subsidized life insurance in 2018. This intervention studies how to create a habit of saving through SMS reminders. It was carried out with support from the Colombian Pensions Administrator (Colpensiones),

There are many factors that explain limited long-term voluntary savings. On the one hand, many people prefer to not save due to incompatibilities between their productive activities and the design of the pension system (approximately 50% of Colombian workers' income is less than one minimum wage, which is the floor to contribute to the pension system). On the other hand, there are psychological biases that can be highlighted, which range from overconfidence in the ability to continue working in old age or to generate income in other ways, to inaction when facing the uncertainty of aging, and therefore postponing the decision to save. Another important psychological bias is a limited attention span, which makes people tend to focus on more immediate matters.

In September 2017, approximately 390,000 eligible BEPS account holders were assigned to receive an SMS message every other week for a period of 9, 18, or 27 weeks (labeled as 5, 10, or 15 months). As this was a Nimble Randomized Controlled Trial, predetermined dates were established, during which a partial evaluation of results was carried out to adjust between waves of messages. In total, 150,000 program affiliates were assigned to the control group, 60,000 were assigned to receive SMS messages for 15 months, 95,000 for 10 months and 85,000 for 5 months. Of those who received the text messages, a total of 82,000 were already saving, and 158,000 did not save prior to the study initiation.

During the first wave, a standard reminder was compared against messages that sought to make retirement more tangible, show how common savings were in the program (by reporting the number of people who were already saving in the program), and decrease the feeling of loss upon saving (by letting affiliates know about the short-term benefits they

received for saving in the program.) We also assessed whether there was any difference in addressing a single or multiple psychological barrier.

Since there were no significant differences between messages that addressed one or multiple barriers and simple reminders after the first wave, in the second wave, messages with suggested savings goals that were compared with simple reminders were introduced. These messages were maintained in the third wave and were found to be more effective than the simple reminder, which, however, was maintained to explore whether message content was also important in generating a savings habit. In the third wave, in addition to sending SMS messages, four types of calls were tested in order to encourage those who had not made any savings so far to save. The calls were prerecorded or live, with a fixed or interactive script. In prerecorded and interactive calls, the system allowed affiliates to move through different topics with the help of the telephone's numeric keypad.

```
graph LR; A[STUDY SAMPLE  
N = 390,000] --> B1[GENERIC BEHAVIORAL BARRIER MESSAGES  
9 SMS N = 240,000]; A --> B2[PURE CONTROL  
9 SMS N = 150,000]; B1 --> C1[SAVINGS GOAL MESSAGES  
9 SMS N = 155,000]; B1 --> C2[FIRST TURN-OFF  
N = 85,000]; C1 --> D1[SAVINGS GOAL MESSAGES  
9 SMS N = 60,000]; C1 --> D2[SECOND TURN-OFF  
N = 95,000];
```

The flowchart illustrates the study design, starting with a **STUDY SAMPLE** of **N = 390,000**. This sample is divided into two groups: **GENERIC BEHAVIORAL BARRIER MESSAGES** (9 SMS, N = 240,000) and **PURE CONTROL** (9 SMS, N = 150,000). The **GENERIC BEHAVIORAL BARRIER MESSAGES** group is further divided into **SAVINGS GOAL MESSAGES** (9 SMS, N = 155,000) and **FIRST TURN-OFF** (N = 85,000). The **SAVINGS GOAL MESSAGES** group is further divided into **SAVINGS GOAL MESSAGES** (9 SMS, N = 60,000) and **SECOND TURN-OFF** (N = 95,000).

WAVE 1
Sept. 2017 - Jan. 2018

WAVE 2
Feb. 2018 - Jun. 2018

WAVE 3
Jun. 2018 - Oct. 2018

STUDY SAMPLE
N = 390,000

GENERIC BEHAVIORAL BARRIER MESSAGES
9 SMS N = 240,000

PURE CONTROL
9 SMS N = 150,000

SAVINGS GOAL MESSAGES
9 SMS N = 155,000

FIRST TURN-OFF
N = 85,000

SAVINGS GOAL MESSAGES
9 SMS N = 60,000

SECOND TURN-OFF
N = 95,000

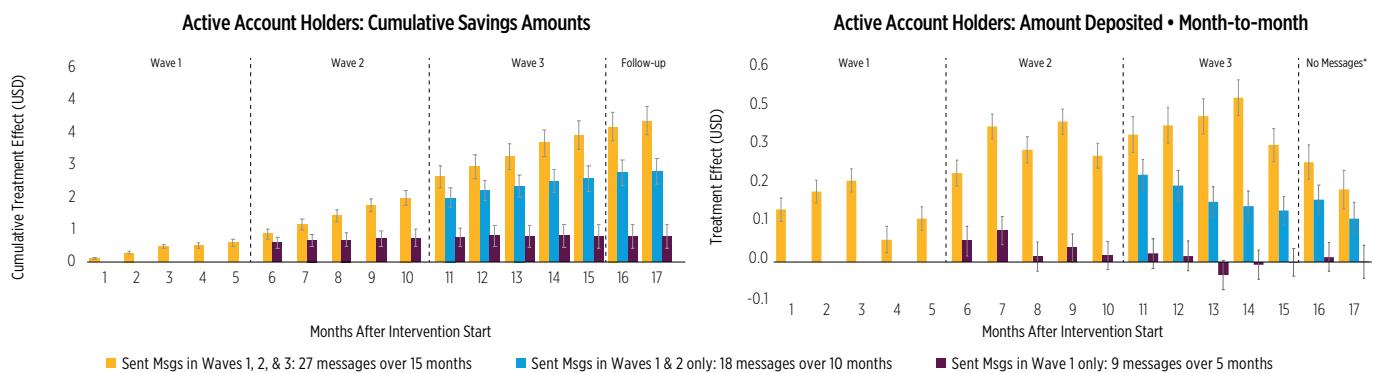


IMPACT

The messages had a significant impact on increasing the savings of those who were already saving, especially if they received messages throughout the intervention. Figure 2, on the left, shows the aggregate average effect over time of being assigned to one of the three treatment groups. On the

right, the month-to-month effects of treatment are shown. After 15 months, affiliates who had been saving before the intervention saved 2.8%, 9.3%, or 14.1% more than the control group, depending on whether they received the SMS for 5, 10, or 15 months.

FIGURE 2. EFFECTS ON THE GROUP OF ACTIVE AFFILIATES



Creating a savings habit was only possible for affiliates who were given a concrete savings goal. The increase in savings in the group that received messages for 5 months was due to additional savings made only during those months, since after a couple of months without receiving messages this group does not demonstrate any differences from the control group. However, affiliates who stopped receiving SMS reminders after 10 and 15 months continued to save more than the control group after they stopped receiving

messages (thus creating a habit of saving beyond the intervention). In fact, the 10-month group continued to do so even seven months after they stopped receiving reminders. It is worth noting that affiliates who continued receiving SMS during the 15 months saved more than those who stopped receiving messages after 10 months. The observed effects translate into savings increases of 10.71, 17.36, and 15.87 dollars for each dollar invested in SMS reminders during 5, 10, or 15 months.

FIGURE 3. EFFECTS BY SMS CONTENT, GOALS VS SIMPLE REMINDERS

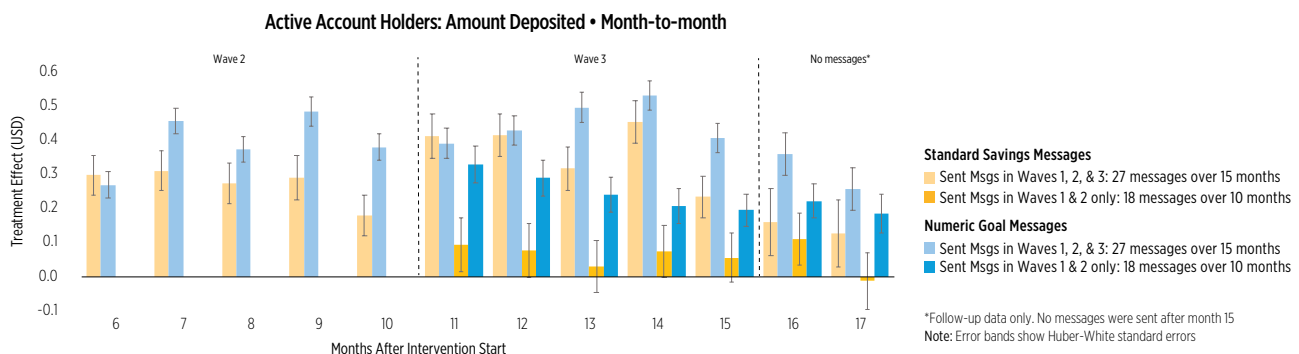
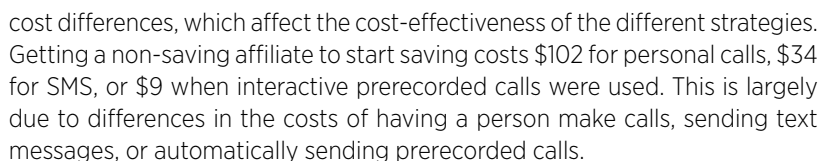


Figure 3 shows the differential effects, after the first five months, of messages with goals, and simple reminders. Affiliates who received simple reminders for 10 or 15 months stopped saving more than the control group two months after

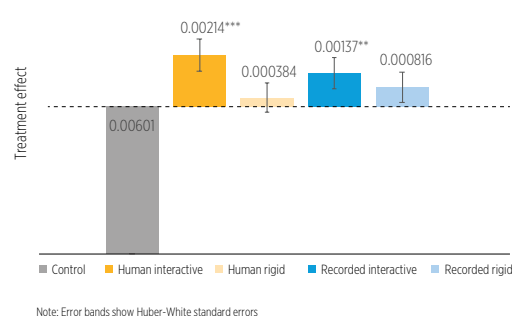
they stopped receiving the reminder. Those who received messages with suggested goals continued to save more than the control group, seven months after they stopped receiving SMS reminders.

Complementary calls to affiliates who were not saving did not have a significant effect on increasing savings, but they can be much more cost effective than SMS if they are automated calls. To the left of Figure 5, the effect of calling inactive affiliates who had received messages or those who had not received messages is observed, and its effect is compared with those who only received SMS reminders. To the right of the same figure, the effect is shown according to the type of call, compared to not having received calls, even if they received SMS reminders. As shown in Figure 5, a short call campaign is almost as effective as 15 months of SMS, in terms of increasing the probability that inactive affiliates made at least one contribution. In fact, calls are more effective than 10 or 5 months of SMS. Combining calls with messages does not increase the probability of making at least one contribution more than each of the strategies independently. However, there are important

Inactive Account Holders: Cumulative Savings Amounts



Inactive account holders: Probability of Saving Once



This study shows that text messages are a highly cost-effective tool to increase voluntary retirement savings among people who are already saving. The messages are not cost-effective for people who have not been saving. This experience also shows that the content of messages matters: Simple reminders have an immediate effect, but their effect quickly fades, and they do not seem to generate a savings habit, no matter how long they are received. In contrast, messages with suggested savings goals do have persistent effects, even after more than 6 months.

Retirement Savings Laboratory



How much time do you have left to receive your pension? Redesigning pension contribution account statements to improve their understandability

WHAT IS IT?

In Colombia, four out of five workers affiliated to the defined benefit pension system fail to obtain a pension. This low coverage rate is due, in part, to (i) low levels of productivity associated with informality; (ii) informal workers that should contribute but prefer not to, affiliates that make an error, or simply forget, thus not completing the minimum number of contributions to receive a pension; and (iii) cases in which affiliates have formally worked the required number of weeks, but not all of their contributions are registered in the system.

When this pilot started, the account statements of the defined benefit pension system in Colombia were complex and difficult to understand. Affiliates did not review the information included in the statement frequently or completely, and as a result, they found it difficult to detect and correct errors in their labor history, failing to report them on time. Therefore, this study sought to improve the clarity and relevance of the information found in the account statements so that affiliates could make better decisions.

To encourage workers to verify the registration of their contributions to the pension system and, if necessary, correct

any mistakes promptly, the account statement was redesigned incorporating insights from the field of behavioral sciences. A randomized controlled trial was then conducted in order to measure the impact of the redesigned account statement on (i) the affiliates' understanding of their account statement, measured through a telephone survey of a representative sample, and (ii) the number of corrections made in a timely manner to any mistakes found in affiliates' labor history, measured using the responses to a telephone survey as well as other administrative data.



IMPACT

The results of a telephone survey yielded the following information on the impact of the redesign of the account statements:

1. The probability of finding the information regarding the remaining number of weeks that the affiliate must contribute to the system to retire increased between 14 and 22 percentage points.
2. The probability of finding the total number of weeks that the member has contributed did not change in a consistent or conclusive way (some groups of affiliates were more likely to find the total number of weeks while others were less likely to do so).
3. The probability that the affiliate (i) finds the detail of the contributions made in 2017, (ii) reviews his data, or (iii) finds errors that he had not previously identified in his statement did not change in a significant way.

Despite the third result, **administrative data shows that:**

4. The redesigned account statement led to a significant increase of between 0.4 and 0.5 percentage points in the proportion of affiliates that requested corrections to their information.

TITLE

How much time do you have left for your pension? Redesigning pension contribution account statements to improve their understandability.

MESSAGE

Redesigning the annual account statement sent by Colpensiones (the public administrator of the Colombian defined benefit pension system) to its affiliates increased their understanding and encouraged them to request corrections, if necessary, of the information contained in the statements.

STUDY AREA

Pensions, long-term savings.

SUB-AREA

Information.

YEAR

2018

AUTHORS

Mariano Bosch, Dean Karlan, Jonathan Zinman, Jake Kendall, Dayana Tellez, Gustavo Caballero, Kyle Holloway, Maria Teresa Silva-Porto, Lukas Keller.

SUMMARY AUTHOR

Gustavo Caballero.

OBJECTIVE

Simplify Colpensiones' annual account statement to improve its affiliates' understanding of the information presented and encourage them to verify and request corrections, if needed.

TOOLS

Information simplification, including specific instructions to review and request corrections to the statement, if needed.

EXECUTING AGENCY

Colombian defined benefit pension administrator Colpensiones (State agency).

TARGET POPULATION

Adults affiliated to the Colombian defined benefit pension system.

MECHANISM

Account statements sent through a certified postal service.

SAMPLE SIZE

48,072 adults affiliated to the defined benefit public pension system.

EVALUATION DESIGN

Randomized Controlled Trial (RCT).

FINANCING

IDB Lab and MetLife Foundation.

COST

Cost of printing redesigned annual account statements in color: \$860 USD.

- Savings from not printing the old annual account statement in black and white: \$480 USD.

- Savings due to reduction of pages in the account statements: \$720 USD.

= Net savings: \$340 USD.



CHALLENGE

In Colombia, as in many other countries in Latin America and the Caribbean, workers face many barriers when it comes to saving for retirement. One of these barriers is related to the role that employers and self-employed workers have in making mandatory pensions contributions. The law requires that both the self-employed and employers make contributions to the pension system. However, errors and omissions in making these mandatory payments are common. Between October 2012 and December 2017, Colpensiones processed more than three million requests to correct information in account statements (Colpensiones, 2018), also known as labor histories. Having an incomplete labor history is especially problematic for low-income workers who often have had multiple employers and may make less regular contributions.

There are many reasons why an affiliate's labor history may be inaccurate or incomplete. On the one hand, periods worked may not appear in the records of the defined benefit regime

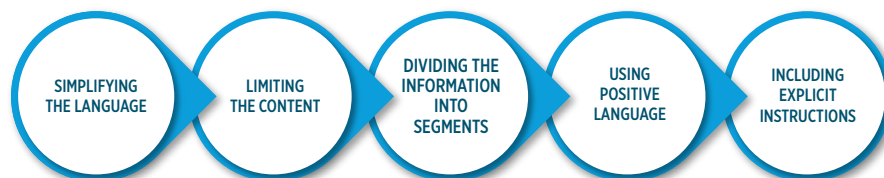
(RPM, for its Spanish acronym) as a result of an error when contributing. These errors range from mistakes when typing the identification number, to cases in which the contribution was incorrectly made to a private Pension Fund Administrator (AFP, for its Spanish acronym) and not to the RPM. On the other hand, there are also cases in which the employer simply fails to make the required contribution.

Early identification of potential errors is essential to ensure that the affiliate receives their pension on time. Most errors in the labor history can be corrected, but, depending on the complexity of the case and the time that has elapsed since the error, it can take several months or even years. The affiliate is the best person to identify incomplete periods in their labor history. Therefore, it is vital that each affiliate is able to quickly and accurately understand and verify the information provided on account statements.

INTERVENTION DESIGN

The group of researchers worked together with the Colpensiones team responsible for managing the defined benefit pension scheme to test the effect of a redesigned account statement. The redesign was based on the following guiding principles:

FIGURE 1. GUIDING PRINCIPLES USED IN REDESIGNING THE ACCOUNT STATEMENT.



Applying these principles, the new account statement aimed to encourage three concrete actions among the affiliates:

1. Revision of the total number of periods contributed to the system.
2. Detailed verification of the contributions made during the last year.
3. Verification of the affiliate's contact information, providing clear instructions on what to do in case of finding any inconsistencies.

Additionally, the statement was personalized with a directed greeting and included a reminder of the number of contributions needed to gain access to a pension (1,300 weeks and 62 years of age for men or 57 years for women), which is something the affiliates usually fail to know (Villar et al, 2015).

From the sample of all affiliates, we randomly sampled individuals from three groups: employees, independent workers,

and a low-income group that receives a 75% subsidy from the government to pay their contributions. The three random samples, of about 8,000 members each, 24,016 in total, received the redesigned statement. The rest of the affiliates were sent the standard account statement. To measure the impact of the new design on affiliates' understanding of the data, and whether they managed to identify the incorrect parameters printed on their statements, 4,000 telephone interviews were conducted (2,000 among members of the treatment group and another 2,000 of the control group). Colpensiones' administrative data regarding the frequency of requests to rectify information on the statements (contact data or contribution history) were also collected and analyzed. Figure 2 shows the first page of the original statement, the one used in the study pilot and the one finally adopted by Colpensiones. Please note that while we followed several guiding (design) principles in the redesign of statements, we were not able to test which guiding principles in particular were most useful.



FIGURE 2. OLD ACCOUNT STATEMENT (LEFT), ACCOUNT STATEMENT USED IN THE STUDY PILOT (CENTER), AND THE FINAL VERSION (RIGHT).

The figure displays three versions of the Colpensiones account statement. The leftmost version is the 'Old Account Statement', which is a dense, text-heavy form with multiple sections for personal information, employer data, and a detailed table of weekly contributions. The center version is the 'Account Statement Used in the Study Pilot', which is a more user-friendly, step-by-step guide. It includes instructions on how to verify information and a summary table of contributions. The rightmost version is the 'Final Version', which is a simplified, visually appealing statement. It features a clear header, a summary of contributions, and a table of weekly contributions with a total summary at the bottom.

IMPACT

As mentioned above, we measured the impact of the new design on three types of Colpensiones' affiliates:

- Dependent affiliates for whom an employer makes pension contributions on their behalf.
- Independent affiliates who make their own contributions to social security.
- Subsidized affiliates, who receive a subsidy from the government to pay their pension contributions.

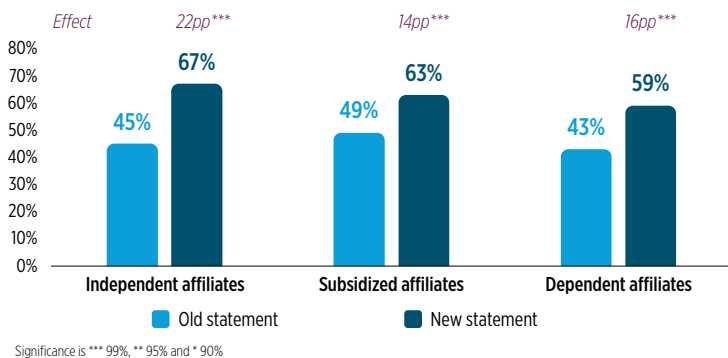
As shown in Figure 3, the results indicate a considerable impact, between 14 and 22 percentage points, on the probability an affiliate is able to identify the number of weeks remaining to retire.

On the other hand, the analysis suggests that the effect on the probability of finding the number of weeks that the affiliate has contributed so far varies by type of affiliate. Among independent affiliates, the redesigned account statement significantly increases the probability of finding the number of weeks that the affiliate has contributed so far by five percentage points. However, this probability decreases by three percentage points for subsidized affiliates and by five for employees (dependent affiliates).

As for correcting errors, the survey results indicate that those who received the redesigned account statement are less likely to find an error they did not know about. However, according

FIGURE 3. PROBABILITY OF IDENTIFYING THE NUMBER OF ADDITIONAL WEEKS THAT THE AFFILIATE MUST CONTRIBUTE TO RETIRE.

DID YOU FIND HOW MANY MORE WEEKS DO YOU HAVE TO CONTRIBUTE TO RETIRE?



to administrative data, the affiliates assigned to the treatment group requested more corrections to their data. Specifically, independent affiliates increased the probability of correcting some information by 26% (2.9% compared to 2.3% in the control group), while the effect is similar among dependent affiliates (2.3% compared to 1.8% in the control group). There is no effect on subsidized affiliates. These results are mainly determined by corrections in personal data, and not so much by corrections in labor history, as they are not statistically more frequent in the treatment group versus the control group, although, in the former, they were greater for all types of affiliates.

94

Even though in Colombia all workers are required to contribute to the social security system, in 2018, 35% of private entity employees and 67% of self-employed workers did not contribute to their pension. This is, in part, due to 44% of Colombians having incomes below the minimum wage and, therefore, the minimum contribution to the system would represent a very high percentage of their income. As they do not have a sufficient income, many Colombian workers do not have an automatic mechanism to save for old age.

This program has no cost for the beneficiary, in addition to having subsidized benefits for those who exceed minimum savings.

In this way, the two questions are related, since, with broad segmentations and little understanding of people's ability to save, communication with affiliates are not personalized. Thus, the analysis of enriched and unstructured databases would make it possible to identify affiliate segments with a high propensity to save, enabling highly personalized savings promotion campaigns to be carried out.

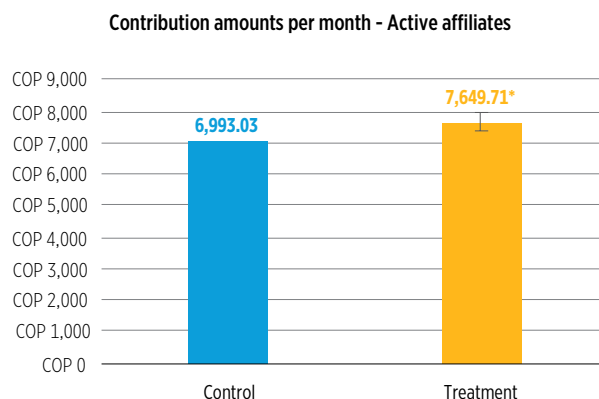
Approximately 24 000 BEPS affiliates in June 2018 (12,000 affiliates who had been saving and another 12,000 who had not been saving) were randomly assigned to the control or treatment groups. Among treatment group affiliates, the 10,834

who had cell phone information received three text messages that either provided information on the program or promoted saving in BEPS.

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graph LR; A[1,107,383 affiliates] --> B[352,192 savers]; A --> C[755,191 non-savers]; B --> D[340,192 did not participate in the experiment]; B --> E[6,000 Control]; B --> F[6,000 Treatment]; F --> G[1,358 Calls and SMS]; F --> H[4,642 Only SMS]; C --> I[6,000 Treatment]; C --> J[6,000 Control]; C --> K[743,191 did not participate in the experiment]; I --> L[1,534 Calls and SMS]; I --> M[4,466 Only SMS];
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The flowchart illustrates the sample selection process for the experiment. It begins with 1,107,383 affiliates, who are divided into 352,192 savers and 755,191 non-savers. From the savers, 340,192 did not participate in the experiment, leaving 6,000 Control and 6,000 Treatment. The Treatment group for savers is further divided into 1,358 Calls and SMS and 4,642 Only SMS. From the non-savers, 743,191 did not participate in the experiment, leaving 6,000 Treatment and 6,000 Control. The Treatment group for non-savers is further divided into 1,534 Calls and SMS and 4,466 Only SMS.

Affiliates with high and very high savings potential were selected to carry out the call campaign, which lasted for 2 months. In these calls, the call center agent helped answer affiliates' questions and sought to establish a close relationship with them, thus bringing them closer to the organization and generating greater identification with the program. In addition, all calls had a message that incentivized them to save, with an emphasis on the present benefits that can be obtained by saving in the program (for example, subsidized life insurance for those who save enough). During the first month, an average of 2,192 people were contacted, while in the second month this number was 1,522. Many of those contacted in the second month had also been contacted during the first month.



It is worth noting that the evidence indicates that this result is obtained from the calls (the main intervention) that only reached 22.6% of the treatment group for active affiliates and 25.6% for inactive affiliates. However, it is important to highlight that those contacted with calls were not randomly selected, but rather chosen using big data because of their potential to

save. Thus, the current pilot does not allow inferences to be made of the effect that would be achieved by applying the same strategy in other affiliates with less potential to save. Even so, the results presented are indicative of the total effect that can be achieved by applying a similar methodology where not all affiliates would be treated with calls.

High-contact call campaigns in selected groups, using analytical techniques and according to their potential to save, increase the savings of independent and low-income workers, such as those linked to the BEPS program in Colombia. However, its effectiveness depends on whether these workers have already saved voluntarily. Among those who had already saved, the treatment generated \$1.6 in savings for every dollar invested. Among those who had not yet saved, the treatment did not significantly generate savings.

A determining factor of cost-effectiveness in this case is the price of the calls. Focusing on affiliates with high savings potential allows to minimize the cost of calls while maximizing the potential impact. The savings potential, however, was estimated based on voluntary savings without intervention. One avenue of future research is the determination of the potential effect, which can be done with a pilot in a representative sample.

Retirement Savings Laboratory



Sending emails to independent workers to increase their contributions to the pension system

WHAT IS IT?

The Colombian pension system introduced obligatory contributions of independent workers in 2003. Despite this, in 2018, only three (3) out of five (5) independent workers with an obligation to contribute (given that they have sufficient income) were contributing to their pension. To promote pension savings of independent workers affiliated to the Protección Pension Fund Administrator, a messaging strategy aimed at motivating behavioral changes via email was developed. This intervention sought to promote mandatory savings by independent workers who had not been contributing, and voluntary savings by those who had already been making mandatory contributions, but not voluntary savings contributions. On the one hand, messages that challenged the belief that independent workers do not contribute to their pension were tested, highlighting statistics related to the number of independent workers who already performed the desired behavior and, on the other hand, messages that highlighted the expected differences between pension contributors

or non-contributors, and between employees (who contribute over 100% of their income, partly supported by the employer) and independent workers (who usually contribute 40% of their income, the minimum allowed by the system).

IMPACT

1. In the total sample, no significant effect was found on the probability of saving nor the amounts saved when using either of the two email strategies.
2. However, evidence that emails have a positive and significant effect on the probability of making voluntary contributions in some subsegments of independent workers, particularly those with medium and high income, was found.

TITLE

Sending emails to independent workers to increase their contributions to the pension system.

MESSAGE

Emails informing independent workers that compulsory contributions or voluntary contributions to pensions are common have failed to encourage those who are not contributing to do mandatory contributions, and emails that prompt social comparison of independent workers vis-à-vis employees fail to increase voluntary pension savings of those independent workers who are already making mandatory contributions.

TOPIC OF STUDY

Long term pensions savings.

SUB-TOPIC

Information.

YEAR

2018

AUTHORS

Gustavo Caballero, Maria Teresa Silva-Porto, Lukas Keller, Mariano Bosch.

AUTHOR OF THE SUMMARY

Gustavo Caballero.

OBJECTIVE

Increase voluntary retirement savings for low-income people with emails designed to help people overcome their behavioral biases.

TOOL

Messages to overcome behavioral barriers that hinder long-term savings.

EXECUTIVE AGENCY

Protección S.A., (Fondo de Pensiones y Cesantías, for its Spanish acronym).

TARGET POPULATION

Independent workers affiliated to the individual savings scheme.

MECHANISM

Emails.

SAMPLE SIZE

110 367 independent workers affiliated to Protección.

EVALUATION DESIGN

Randomized Controlled Trial (RCT).

FINANCING

IDB LAB and MetLife Foundation.



CHALLENGE

Voluntarily saving for a pension is a challenge for all individuals, especially for independent workers. In Latin America, these types of workers are generally low-income, are not integrated into the financial system, don't have a culture of saving, and prefer avoiding the fiscal costs of formalization in an environment where evading contribution obligations is relatively easy. In Colombia, in 2018, 42% of all workers were independent and only 13.15% of these were contributing to their pension—many because their income was below the minimum wage, the minimum base income for contribution—(SIMS, 2020).

Independent workers, like the general population, face various psychological biases, making voluntary pension savings difficult for them. Studies show that: many tend to follow others' behavior (doing what they believe is common) instead of consciously evaluating their particular case; others, who do evaluate their case, tend to assess their well-being relative to their reference group and not based

on their individual results, which leads to competition; and there are those who, in the face of complex processes, tend to postpone their decision. While salaried workers also exhibit these behavioral biases, having their employer automatically deduct their pension contributions helps them overcome barriers to long-term savings.

At the beginning of the pilot, in the case of *Proteccion* (the second largest Pension Fund in the country, with 30% of account holders), of its 350,171 independent workers with an account (16% of the total system), 94% were contributing an income less than or equal to four times the minimum wage, the vast majority (87%) only had savings from mandatory pensions, and even among those who made contributions to mandatory pensions, three out of five did not contribute regularly. Finally, less than 3% of account holders voluntarily saved for their pension.

INTERVENTION DESIGN

To promote pension savings of independent workers affiliated to *Proteccion*, two behavioral campaigns were developed: Common Savings and Social Comparison. The first challenged the common belief that independent workers do not contribute to their pension, particularly when it comes to voluntary savings. Although this belief could be considered incorrect when starting the pilot, this was not the case a few years ago. In 2003, contribution of independent workers to social security became mandatory in Colombia, but it was only until 2010 when the Pension and Parafiscal Unit (UGPP, for its Spanish acronym) began operating and implementing measures to control the evasion and avoidance of contributions, that the percentage of independent workers obligated to contribute and who effectively contributed grew from approximately 19.9% in 2012 to more than 62% in 2018 (UGPP, 2018). In other words, the campaign sought to change the preconceptions of independent workers' situation derived from recent changes, with the goal of increasing savings.

The second campaign highlighted the expected differences in income during old age that results from not contributing compared to contributing, or contributing only based on 40% of income - the minimum required by law and the option most independent workers select— versus those who are employees and who contribute based on 100% of their income. In the first case, the aim was to encourage obligatory contributions, while in the second, the aim was to encourage voluntary savings.

Approximately 110,000 independent workers affiliated to *Protección* in October 2018 (32% of total independent workers affiliated to *Protección*) were assigned to receive an email every two weeks for three months. In total, 36,790 account holders were assigned to the control group, 36,788 to the social comparison treatment, and 36,789 to the common savings treatment. Of those who received the emails, at the beginning of the study, a total of 75,882 account holders had already been making mandatory contributions while 34,485 had not.



FIGURE 1. EXAMPLE OF EMAILS SENT TO INDEPENDENT WORKERS: COMMON SAVINGS (LEFT) AND SOCIAL COMPARISON (RIGHT).

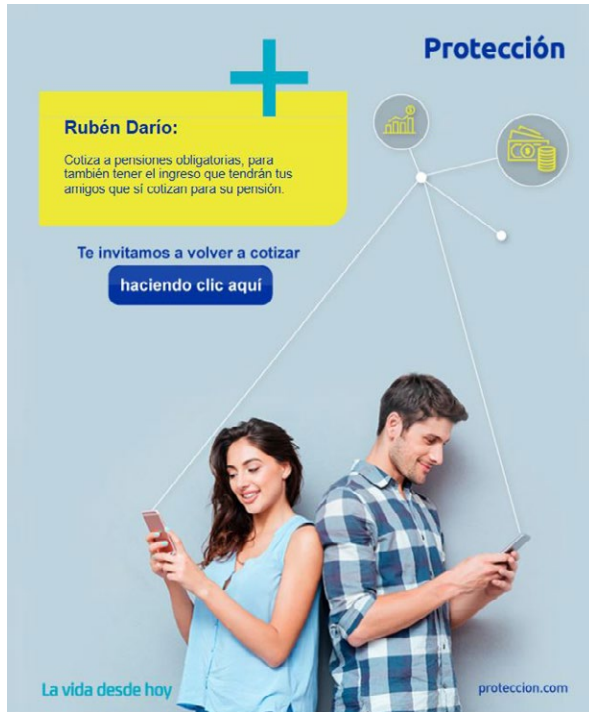
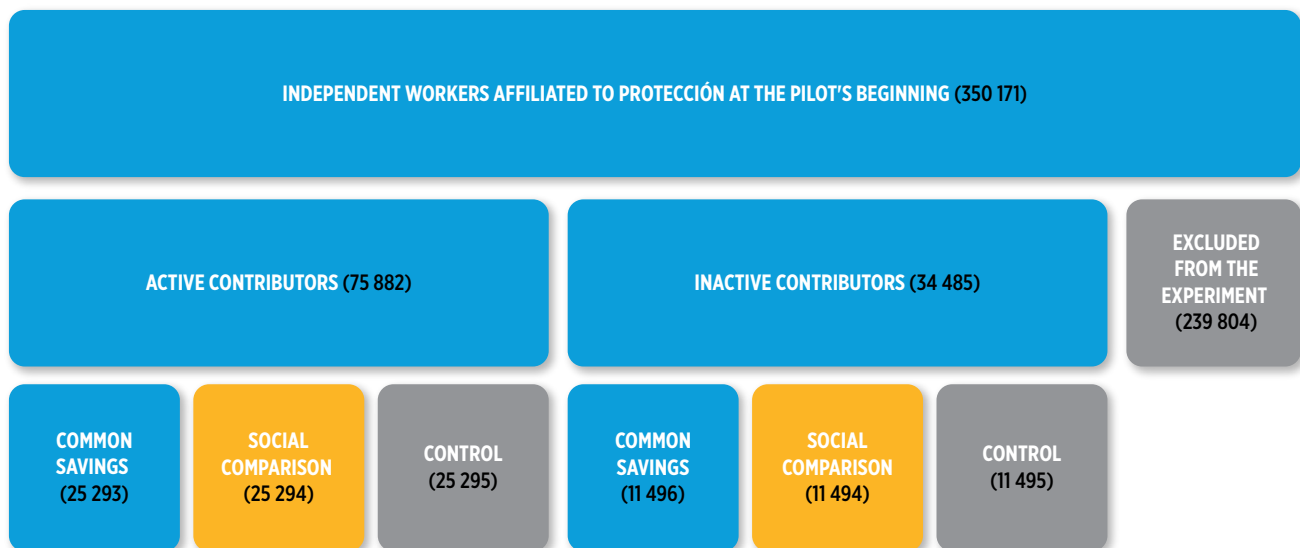


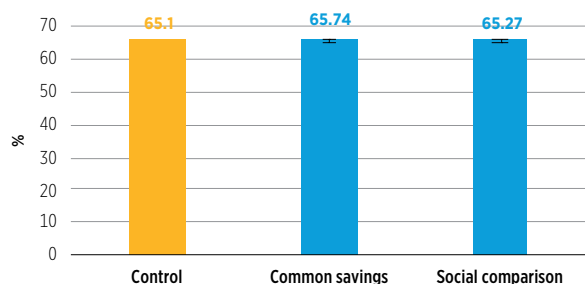
FIGURE 2. SUMMARY ASSIGNMENT OF PILOT TREATMENTS.



Although for the treatment groups there was a greater probability of making voluntary contributions among those workers who had not been making contributions, and voluntary savings among those who had only been making mandatory contributions, the differences were not significant. While 65.1% of the control group, who had not been contributing

before, were making their mandatory contributions in any given month, in the Common Savings group this percentage was 65.74%. Similarly, among those who had already been making mandatory contributions, 0.22% of the control group made voluntary contributions in any given month, while 0.26% of the social comparison group did.

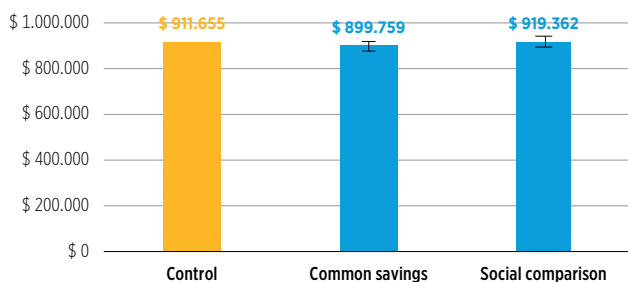
Proportion making mandatory contributions - those who previously were not contributing



Condition	Percentage of correct answers
Control	0.22
Common savings	0.23
Social comparison	0.26

thing, the treatment groups decreased their voluntary savings from 17,245 in the control group on average to 9,773 in the social comparison group, but this difference is not significant.

Monthly contribution base income reported for mandatory contributions - those who previously were not contributing



Group	Savings (\$)
Control	17,245
Common savings	12,416
Social comparison	9,773

per every thousand compared to 2.2 per thousand in the control group). On the other hand, middle-income account holders targeted with the Social Comparison campaign had an 88% higher probability of making voluntary contributions (4.2 per every thousand).



LESSONS FOR PUBLIC POLICY

These results suggest that independent workers' decision to contribute to their pension and the savings amount they choose are not based on beliefs related to the common savings behaviors that independent workers follow. They also suggest that providing information today on income differences in the future does not determine the levels of pension savings either. The latter may be because, in the present, people tend to undervalue the differences that will appear in the future. This psychological bias makes the future seem very distant, so it becomes intangible and people decide not to save.

The results of this intervention also suggest that, in aggregate, there were no significant effects in the treatment group, neither in the probability of saving nor in the amounts saved. However, the evidence collected suggests that email information campaigns could be effective in some account holder

segments. In particular, for groups of independent workers with low and middle incomes who contribute, since a greater probability of voluntary savings was found.

Even in the segments where these campaigns were effective, the effects were relatively small. This can be explained by the low effectiveness of emails. Despite counting valid email addresses for all account holders who participated in the experiment, only 20% of emails were opened (a typical email open rate), and less than 7% used the email links included in the messages. With limited open rates, observing considerable effects would require high-impact campaigns among those who actually open the emails. In this case, to obtain an effect on the target population, the campaign would have to generate approximately five times that effect among those who do open the emails and are exposed to the campaigns.



PILOTS IN



MEXICO

Retirement Savings Laboratory



COUNTRY



MEXICO

Promoting Retirement Savings via Social Networks: Using a Facebook Ad Campaign to Encourage Voluntary Pension Savings in Mexico

WHAT IS IT

There are multiple alternatives for workers in Mexico to contribute to the pension system directly and voluntarily, without the intermediation of an employer. However, only 6.8% of the individual accounts of the Retirement Savings System (SAR) have any voluntary savings.

At the same time, Mexico has more than 69 million internet users, of which 75% use at least one social network. Taking advantage of this fact, a campaign of motivational Ad messages was implemented on the social network Facebook to encourage voluntary pension savings among users of this platform. Eight ads (Facebook Ads) were created and sent to users between 15 and 45 years of age who were located in 1,064 municipalities in Mexico (532 municipalities in the treatment group and 532 in the control group). Each ad was advertised twice for five days each, at an interval of two weeks, for a total of 32 weeks.

This study investigates the effectiveness of the campaign on users' voluntary savings volumes and number of savings transactions.

IMPACT

1. There is no evidence that the campaign had an effect on voluntary savings volumes or number of voluntary savings transactions for the total sample.
2. A positive effect of the campaigns on the number of savings transactions was detected in relatively large municipalities (more than 50,000 inhabitants of the target population). According to the estimates, within this group, the municipalities to which the campaign was sent registered 56% more contributions than the municipalities where there was no campaign (control group), although there was a relatively small initial number of contributions. However, no effect on the total amount saved by municipality was detected.
3. The latter suggests that the savings resulting from these campaigns are of small amounts that could not be statistically detected.

TITLE

Promoting Retirement Savings via Social Networks: Using a Facebook Ad Campaign to Encourage Voluntary Pension Savings in Mexico.

TAGLINE

Mensajes motivacionales a través de Facebook para fomentar el ahorro pensional voluntario entre los usuarios de esta plataforma.

FIELD OF WORK

Long-term savings for retirement.

SUBTOPICS

Retirement, savings, financial education.

YEAR

2018

AUTHORS

Mariano Bosch, Gustavo Caballero, Stephanie González, Anne Hand, Lukas Keller and María Teresa Silva-Porto.

SUMMARY AUTHORS

Gustavo Caballero, Anne Hand and Lukas Keller.

COST

Total cost of Facebook Ad messages: US\$ 13,500

FUNDING SOURCE

IDB Lab and MetLife Foundation.

AIM

Motivating Facebook users in Mexico to make the decision to save voluntarily for retirement via Facebook Ads.

BEHAVIORAL TOOLS

Reminders, nudges, financial education, de-biasing tools.

EXECUTING AGENCY

Inter-American Development Bank (IDB).

TARGET POPULATION

Facebook users in Mexico between 15 and 45 years of age.

DELIVERY MECHANISM

Sending promotional messages with different educational and debiasing content as well as in different formats, such as images and video.

SAMPLE SIZE

1,064 municipalities in Mexico (532 in treatment group and 532 in control group).

EVALUATION DESIGN

Randomized controlled trial (RCT).



CHALLENGE

Despite the fact that there are multiple alternatives in Mexico to contribute to the pension system directly and voluntarily, meaning without the intermediation of an employer, the vast majority of workers in the country do not save for their pension and only 6.8% of individual accounts of the Retirement Savings System (SAR) have any voluntary savings.

In addition to the channels that each Retirement Fund Administrator (AFORE, for their Spanish acronym) offers for this purpose, individuals in Mexico can make retirement savings contributions through commercial networks and the AforeMovil mobile application. However, some informal or self-employed workers prefer not to save formally for retirement, while others, despite being formal wage earners, do not have an automatic method to contribute to their pension fund through their company. People with lower incomes are those who are most disconnected from the retirement savings systems: only one in 10 workers in this group is saving for their pension.

Among the causes of these low savings rates, a lack of knowledge and information about the SAR and behavioral biases stand out. 63% of Mexican workers are informal wage earners or self-employed, leaving them without an automatic saving mechanism based on payroll deductions. Hence, they must take proactive actions to prepare for retirement. This exposes

them to certain psychological barriers to saving documented by behavioral economics, such as inertia, in which any deviation from the current state is perceived as a loss; procrastination, thinking that “I will save tomorrow”; and over-optimism, which manifests itself in ideas like “I can certainly continue working when I am old”, among others.

This intervention, carried out with support from the National Commission of the Retirement Savings System (CONSAR, for its Spanish acronym), analyzed how to use Ad messages in social networks to motivate millions of Mexicans to save for retirement.

Reaching citizens at scale

Reminders are a promising tool to promote retirement savings, as they help people overcome limited attention biases by focusing their mind on the topic of saving. However, an important factor that in the past has limited the effectiveness of traditional means of sending reminders, such as letters, calls or text messages, has been the poor availability or quality of account holders’ contact information in national retirement savings systems. Against this backdrop, sending promotional messages through social networks, which can be done massively and without knowledge of individual contact information, represents an opportunity to overcome this problem.

INTERVENTION DESIGN

95% of social network users in Mexico have a Facebook account, which is equivalent to more than 50 million Mexicans using this platform. Taking advantage of this fact, the Retirement Savings Laboratory of the IDB conducted a promotional campaign for voluntary savings in the SAR aimed at providing users information and help them overcome behavioral barriers to preparing for their old age. To this end, eight Facebook Ad campaigns were created and sent to Facebook users who were 15 to 45 years old and located in 532 municipalities in Mexico. Each ad was promoted twice for five days at an interval of two weeks, for a total duration of the intervention of 32 weeks.

Considering the lessons of behavioral economics, the ads had two types of content. First, informative content was designed, explaining, for example, how to check the balance of one’s AFORE account or informing users about the various ways to save voluntarily for retirement. Second, content was designed that sought to make the user aware of behavioral biases that can make it difficult to save for the long term, a process also known as “de-biasing”. In addition, each ad contained a specific call to action, such as an invitation to save or download the AforeMovil mobile application.

FIGURE 1. ELEMENTS OF THE CAMPAIGN





Upon clicking on the Ads, users were redirected to a landing page, which was created specifically for each Ad. The landing pages offered more details on topics raised in the Ads and included a concrete call to action, such as to begin or resume saving for retirement. Utilizing Google Analytics, an online tracking tool, the frequency of access to the Landing Pages from any geographic area could be measured, including from the group of municipalities assigned to the control group.

To analyze the impact of the campaigns, monthly municipal-level administrative savings data provided by CONSAR was

used. Specifically, the three impact variables were (i) volume of savings in commercial networks, (ii) number of voluntary savings transactions in commercial networks; (iii) number of downloads of AforeMovil; and (iv) volume of voluntary savings made through AforeMovil. To measure the impact of the campaign, outcomes from these variables were compared between the 532 municipalities in which the campaign was carried out and those 532 similar municipalities to which the campaigns were not sent.

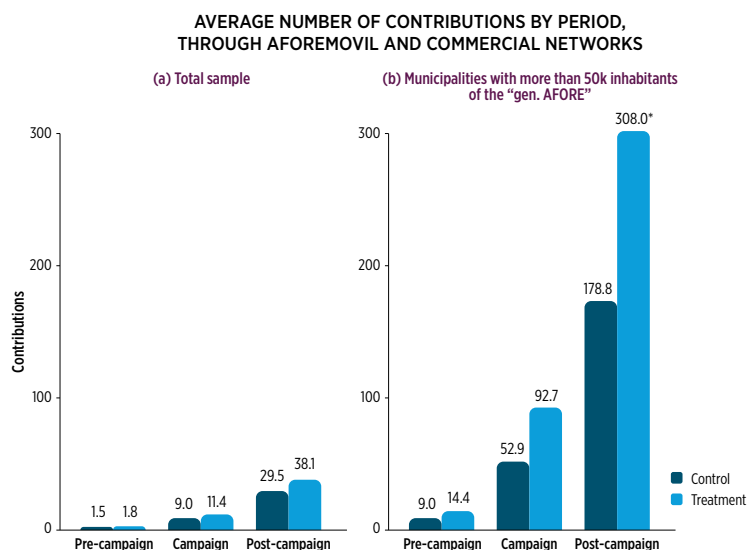
IMPACT

According to Facebook Ad estimates, overall, the Ads appeared at least once in the newsfeed of 5,668,240 different people. Of these, 157,888 made at least one click on one of the ads and, therefore, arrived at the corresponding landing page. The cost per single click (excluding multiple clicks per person) per ad was US \$0.11, on average, which places the campaign among the most efficient sent from the IDB's institutional Facebook account to users in Latin America and the Caribbean.

The impact results suggest that, for the total sample, the promotional campaigns did not have a significant effect on the contributions or on the amounts saved in the SAR. One possible explanation is that an important part of the sample was made up of small municipalities (55%), where there were no voluntary contributions before, during, or after the campaigns, which creates problems for estimating the campaigns' effect.

However, considering only the relatively large municipalities of the sample (those of 50,000+ inhabitants of the target population), the campaigns had a significant effect on the number of contributions. Specifically, within this group, municipalities that received the ads showed a 56% higher number of contributions, compared to the municipalities that did not

FIGURE 2. SIMPLE DIFFERENCES BETWEEN NUMBER OF CONTRIBUTIONS BETWEEN THE PILOT'S TREATMENT AND CONTROL GROUP, BY SIZE OF MUNICIPALITIES



Notes: The periods correspond to (i) pre-campaign: 2017/01-09, (ii) campaign: 2017/10-2018/05, and (iii) post-campaign: 2018/06-10. Significant at *10%, **5%, ***1%.

receive campaigns, although this increase was not enough to raise the total amount saved within a given municipality. The latter suggests that the additional savings resulting from the campaigns were relatively small.

POLICY LESSONS

The results of the intervention suggest that social networks can be a cost-effective tool to motivate people at scale to save for retirement. In some places (large municipalities), interest generated by ads sent through Facebook increases the number of voluntary contributions to the pension system. However, this increase does not necessarily translate into behavioral changes at the aggregate level, reflected through an absence of additional long-term savings among the population. One possibility for this finding is that the impact of the campaigns is less than what could be detected given the design of this pilot.

Another possibility is that the monetary investment in the ads was insufficient to generate a detectable impact.

To inquire about these possibilities and corroborate the results of the initial pilot, the IDB is conducting a second campaign in which half of the municipalities of the treatment and control groups will be randomly selected to change experimental groups. Moreover, more than 100 municipalities to which the commercial savings network has expanded since the first campaign were added to the sample. Finally, spending per ad in this second pilot will be increased by 50%.

Retirement Savings Laboratory



Leveraging commercial networks to facilitate pension savings

What is the problem that motivated this intervention?

In Mexico, only 1 in 10 workers in the poorest 40% of the population is saving for retirement. A lack of awareness about pension savings, as well as behavioral biases, are some of the factors that have caused informal and self-employed workers to stay away from the pension savings system.

According to data from the National Occupation and Employment Survey (ENOE, for its Spanish acronym), in the fourth quarter of 2018, 62.6% of Mexican workers worked in the informal sector, and therefore, did not have an automatic mechanism for retirement savings. This exposes them to inertia, in which any deviation from the status quo of “not saving” may be perceived as a loss; procrastination, thinking that “I will save tomorrow”; over-optimism, which manifests itself in beliefs like “I’m sure I can keep working when I’m old”; and other psychological barriers to savings that have been documented by behavioral economics. Given this scenario, proactive actions must be taken so that workers can prepare for old age.

Since 2015, the National Commission for the Retirement Savings System (CONSAR, for its Spanish acronym) has invested heavily in the expansion of voluntary deposit mechanisms for accounts managed by the Administrators of Retirement Funds (AFOREs, for their Spanish acronym). Among the many alternatives for workers to contribute to the pension system directly and voluntarily, the mobile application *AforeMóvil* (“Mobile Retirement Fund Administrator”) as well as the possibility to contribute via commercial agent networks stand out: the first for its innovation and potential to reach millions of savers with a convenient option to save, and the second, for offering the possibility of saving in more than 15,000 physical points across the country. CONSAR’s efforts have resulted in a 500% increase in voluntary savings amounts between 2013 and 2018 (CONSAR, 2018). However, despite these impressive results, only 10% of voluntary savings are collected through physical collection points and, as of the third quarter of 2018, it is estimated that less than 1 in 100 account holders has used the commercial agent network for voluntary savings.



COUNTRY: MEXICO

FINANCING:

IDB Lab & MetLife Foundation

TARGET POPULATION:

Independent workers and their clients

BEHAVIORAL BIAS:

Active choice, limited attention span, present bias and social preferences

More about the

Retirement Savings Laboratory

The Retirement Savings Laboratory is an initiative that seeks innovative ways to get the population of Latin America and the Caribbean to save for its old age. To do this, it experiments with interventions based on behavioral economics and the use of new technologies.

Retirement Savings Laboratory



In addition to expanding access to the voluntary deposit systems, it is important to identify mechanisms that promote their use. In this sense, shopkeepers who are in direct contact with their clients can serve as a communication channel to promote voluntary contributions in their stores. In a collaborative effort, the CONSAR, the Inter-American Development Bank (IDB) and the *Yastás* network implemented a pilot to train independent shopkeepers in this network in retirement savings mechanisms in Mexico, offering incentives to entice them to promote savings in their stores.

Publicizing the Retirement Savings System (SAR) and rewarding savings

Yastás is one of the fourteen commercial agent networks that facilitate voluntary retirement savings in Mexico, and it does so with a focus on financial inclusion in marginalized urban and rural areas. To this end, *Yastás* works with independent businesses, primarily small shops, whose owners live in the communities where their businesses are located.

Leveraging *Yastás*' contact with the small shop owners they serve, three main behavioral economics lessons were applied to promoting savings through collection points. First, encouraging the network's shopkeepers to present to their customers the active choice to save. Second, providing information and, third, simplifying the voluntary contribution process to minimize any difficulties that may exist when deciding to save.

To address these issues, simple and practical informational materials on retirement savings were designed and distributed in *Yastás*-affiliated shops. The information campaign was accompanied by a training for the *Yastás* sales force, which, in turn, trained 1,077 shopkeepers on the most important issues of pension savings. To encourage shopkeepers to encourage their clients to make the active choice to save, a prize scheme was designed, which included special campaign piggy banks and gift cards, which shopkeepers and promoters could win when they reached certain goals of voluntary retirement savings deposits.

What were the results?

Training shopkeepers about the Retirement Savings System, informational materials, and prizes did not have an impact on increasing voluntary pension savings through *Yastás*-affiliated shops. After the four months of the campaign, when analyzing the administrative data provided by CONSAR, no significant differences were found in the voluntary savings deposits collected by the shops that had received the informational materials and training, and the shops that did not participate in the intervention.

Lessons learned

Although there is trust between shopkeepers and their clients in a more community-based setting, a campaign with simplified materials and prizes promoting voluntary retirement savings in this context seems to be insufficient to promote behavioral changes.

To understand why this campaign had no impact, the Retirement Savings Laboratory team interviewed shopkeepers and business advisers who participated in the intervention. The main barrier identified was that the SAR training course was insufficient to generate a solid understanding of how the system worked for business advisers and shopkeepers. It is difficult to promote and sell what is not understood: The promotion and sale of a product, in this case, voluntary retirement savings, requires understanding its operation and its advantages. Furthermore, the prizes were not sufficient incentive for shopkeepers to develop those skills and knowledge on their own.

For future efforts to promote voluntary retirement savings in communities historically disconnected from pension systems and formal work, it is important to find a deeper advisory mechanism to explain how the SAR works and the benefits of retirement savings. The main challenge is developing a scalable and cost-effective mechanism for financial and pension education.

Retirement Savings Laboratory



Applying Behavioral Insights to Worker Formalization in Mexico: Tax and Social Security Compliance

WHAT IS IT

Mexico's Fiscal Incorporation Regime (RIF, per its Spanish abbreviation) has successfully registered small businesses and small business owners with the Mexican tax authority. However, among recently registered Mexican small business owners and workers, despite high initial enrollment, as well as significant tax and social security subsidies, compliance with tax and social security obligations remained low two years after the launch of the program. In this experimental intervention, SMS text messages were sent to provide different types of nudges (Deterrence, Easy, and Reciprocity) intended to prompt these workers to submit their tax declarations. A subsequent intervention, aimed at those workers who employed other people, involved sending formal letters to provide nudges (Deterrence and Social Norms) to register these employees for social security coverage.

TITLE

Applying Behavioral Insights to Worker Formalization in Mexico: Tax and Social Security Compliance.

TAGLINE

Supporting worker formalization in Mexico, specifically, compliance with fiscal and social security obligations.

FIELD OF WORK

Labor formalization.

SUBTOPICS

Tax compliance, Social security coverage and compliance.

YEAR

2016-2017

AUTHORS

Stuart Kettle, Mónica Wills Silva, Marta Garnelo, Laura Litvine (Behavioural Insights Team) David Kaplan (Inter-American Development Bank).

SUMMARY AUTHOR

Anne Hand (from material provided by Behavioural Insights Team).

COST

Not available.

FUNDING SOURCE

Inter-American Development Bank.

AIM

Increase tax and social security compliance for workers in Mexico.

BEHAVIORAL TOOLS

Reminders.

EXECUTING AGENCY

Mexican Government, Behavioural Insights Team.

TARGET POPULATION

Independent workers/business owners who recently registered to comply with a special tax regime in Mexico, and their employees.

DELIVERY MECHANISMS

SMS and letters.

SAMPLE SIZE

748,499 Mexican workers who recently registered with a special tax regime, and a subset of the sample, which consists of 7,648 workers, who employ other workers, and have more employees on payroll than are registered for social security.

EVALUATION DESIGN

Randomized Controlled Trials (RCTs).

IMPACT

1. All the SMS effectively increased the likelihood of (1) timely submission of a tax declaration and (2) tax payment.

a. The 'Deterrence' message, which demonstrated the best performance, increased the declaration rate by 9.4 percentage points (a 39% increase, or 70,500 additional declarations) over the control group, and also increased the total taxes paid by 6 MXN (.3 USD) on average per person (representing an 18% increase).

b. For each SMS sent, the tax authorities incurred a cost under 1.2 MXN (less than .05 USD): this represents a 400% return on investment which makes this intervention highly cost-effective and scalable.

2. Letters encouraging social security registration of dependent workers effectively increased employee registration in the Mexican Social Security Institute (IMSS, per its Spanish abbreviation) after 3 months. Employers in the Deterrence and the Social Norms groups were both 2.5 percentage points more likely to have registered at least one new employee than employers in the control group, corresponding to a 14% increase from the control group average.

Although these effects have a small magnitude, they are highly encouraging: Compliance with social security obligations has a clear social impact, but represents a costly commitment, especially for small businesses. As such, it is a difficult behavior to encourage through simple nudges. The success of these low-cost letters, facilitated by a novel targeting approach, is therefore promising for the future.



CHALLENGE

Crezcamos Juntos is the Mexican government's program aimed at reducing labor informality and increasing tax compliance by independent workers who earn less than approximately US\$ 50,000 per year. The program allows recently formalized workers (in non-professional fields) access to a highly subsidized tax regime, along with subsidized social security. This special tax regime, the Fiscal Incorporation Regime (RIF, for its Spanish abbreviation), was introduced in January 2014 to encourage formalization. Pursuant to this tax regime, independent workers who registered received a 100% subsidy in year one, 90% in year two, 80% in year three, and so on, for 10 years –first, to encourage the act of formalization itself, and then to establish its permanence in the formal economy.

Despite high initial enrollment, two years after the program's launch, compliance with tax obligations remained low, with 25% reporting to the tax authority. Furthermore, social security compliance, for these workers and their employees, was also extremely low.

The Inter-American Development Bank (IDB), in partnership with the Behavioural Insights Team (BIT), the Mexican Ministry of Finance (SHCP), the Mexican Tax Authority (SAT), and the Mexican Institute for Social Security (IMSS), conducted two experimental trials, using behavioral insights to encourage recently formalized entrepreneurs to: 1) comply with their new tax obligations; and 2) register their workers, if they had any, for social security.

INTERVENTION DESIGN

The first intervention studied a sample of 748,499 small businesses, that were due to declare their revenue for the previous bimonthly period (May/June) of 2016, but had still failed to do so, as of two weeks before the deadline. These businesses were randomly assigned to four groups: the first three received a behaviorally informed SMS, and the control group received no message.

There were three different variations of the messages: (1) a Deterrence message, highlighting potential fine associated to noncompliance; (2) an Easy message, outlining how to declare; and (3) a Reciprocity message, highlighting the

subsidies provided by the government. The SMS were also randomly allocated to be sent either 5 days or 12 days before the declaration deadline. The effects of the SMS on tax compliance were then calculated through rates of declaration for the tax statements due on July 31st, September 30th, and November 30th, 2016.

For the first intervention, SAT's administrative records of individuals registered with RIF provided the universe of study participants. Participants needed to have a valid mobile phone number on record to receive SMS text messages.

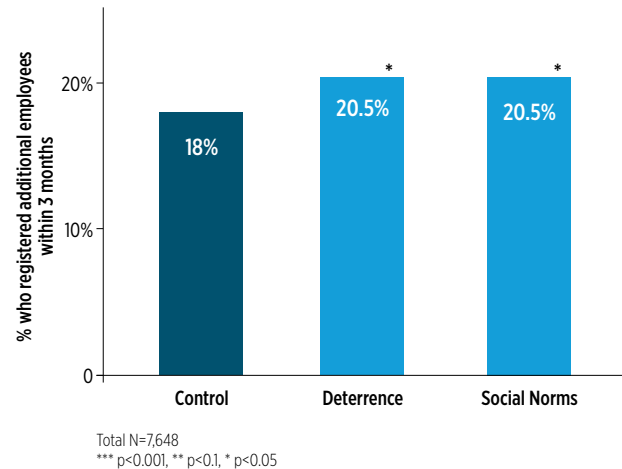
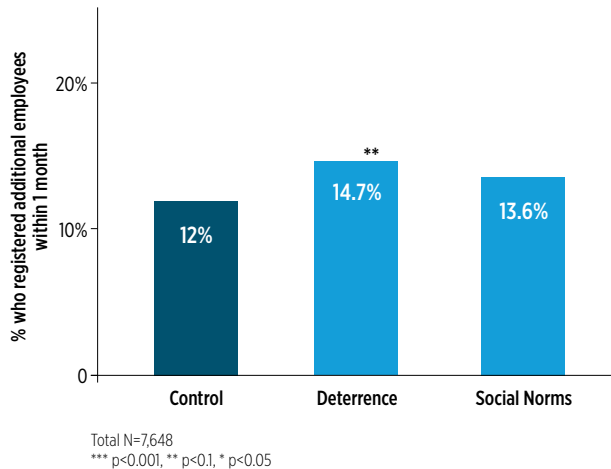


The sample for the second intervention consisted of 7,648 small businesses that were likely misreporting some of their workers. These employers had more employees registered with the tax authority (per SAT's records of their payment via electronic invoice) than were registered for social security with

IMSS; this smaller group represents approximately 10% of the total sample of small businesses. These 7,648 employers were randomly assigned to receive one of two behaviorally informed letters from IMSS, or to a control group receiving no letter.



EFFECTS OF FORMAL LETTER REMINDERS ONE MONTH (LEFT) AND THREE MONTHS (RIGHT) AFTER SENDING THE LETTER



POLICY LESSONS

This study shows that tax compliance among entrepreneurs can be increased cost effectively using simple nudges deployed by the tax authority.

The success of these low-cost SMS messages, and letters, facilitated by a novel targeting approach, is therefore promising for the future. Consistent with the literature, deterrence messages seem to be the most effective.

Although these effects are highly cost effective in encouraging small firms to comply, they are small in magnitude, and have very limited effects in the ability of tax administration to substantially increase tax collection.

Retirement Savings Laboratory



The challenge of getting domestic workers to save for their old age

What is the problem that motivated this intervention?

In Mexico there are 2.4 million domestic workers earning on average \$1,550 MXN (approximately \$70 USD) per month, of which 90% are women. It is estimated that around one million Mexican high and middle-income households employ at least one domestic worker. However, since enrolling domestic workers in social security remains voluntary, very few employers do so. This results in 97% of domestic workers in Mexico not having coverage against risks of accidents at work, illness, and old age.

Since 2015, the *Comisión Nacional del Sistema de Ahorro para el Retiro* (CONSAR, the Mexican pension regulator) has promoted massive access to voluntary deposit mechanisms in Retirement Fund Administrator (AFORE) accounts. Among multiple alternatives for workers to contribute directly and voluntarily to their pensions, the 1) *AforeMóvil* application for smartphones, and 2) fourteen commercial networks with more than 15,000 physical deposit points, stand out for their innovation. CONSAR's efforts have resulted in a 500% increase in voluntary savings between 2013 and 2018 (CONSAR, 2018).

This diversity of channels facilitates the process of saving for retirement on a voluntary basis. However, the challenge of reaching the system's most disconnected groups, such as domestic workers, remains. To reach a greater number of domestic workers, the IDB launched a project together with AFORE SURA (one of the 10 Mexican AFORES) and the Mexican social enterprise, *Comunidad 4Uno*, which promotes financial inclusion for workers excluded from formal systems.



COUNTRY: MEXICO

FINANCING:

IDB Lab & MetLife Foundation

TARGET POPULATION:

Domestic workers

BEHAVIORAL BIAS:

Limited attention span, present bias and social preferences

More about the

Retirement Savings Laboratory

The Retirement Savings Laboratory is an initiative that seeks innovative ways to get the population of Latin America and the Caribbean to save for its old age. To do this, it experiments with interventions based on behavioral economics and the use of new technologies.

Retirement Savings Laboratory



Reaching Domestic Workers through their Employers

Given the difficulty of reaching domestic workers when they are disconnected from social security systems, this initiative's strategy was to contact them through their employers. To do this, we used AFORE SURA's high and middle-income client database. We assumed that this segment had a high probability of employing at least one domestic worker. The initiative consisted of sending an email to this group of account holders, offering them the financial inclusion package of *Comunidad 4Uno*. This product is affordable for the employer, starting at a cost of \$399 MXN (approximately \$18 USD) annually, compared with social security contributions, which cost around \$11,000 MXN (approximately \$480 USD) annually, varying slightly by the income of the domestic worker. The *Comunidad 4Uno* product includes accident insurance, life insurance, a debit card, and access to an individual retirement savings account.

We selected a sample of 28,686 high and middle-income AFORE SURA account holders, at the national level, with validated emails, to participate in the pilot, which took place in 2017. We randomly divided these account holders into four treatment groups (22,947 account holders) and one control group. Considering the lessons of behavioral economics, the emails focused on different core messages about the main reasons for providing the domestic worker with social security. Each email focused on one of the following four messages:

- 1) Make the domestic worker's old age salient: Emphasis on the fact that most domestic workers do not save and will continue to work in their old age because of economic need.
- 2) Peer effects: Emphasis on the percentage (30%) of domestic workers' employers that already offer some type of social protection.
- 3) Responsibility for the worker: Emphasis on the percentage of domestic workers who currently do not save for their retirement and have no health coverage (72%).
- 4) Legal compliance (because health coverage was obligatory, even if social security coverage was not): Emphasis on Article 338.II. of Mexican Federal Labor Law, which highlights the employer's duty to provide medical coverage for domestic workers.

Additionally, each email included a link that redirected the account holder to a website dedicated exclusively to this initiative, QueBuenPlan.org. *Comunidad 4Uno* tracked the sales processes of people who came to the web platform in detail to understand the effects of messages on the indicator of main interest, new clients registering with *Comunidad 4Uno*.

72% of
domestic workers
do not save
for retirement



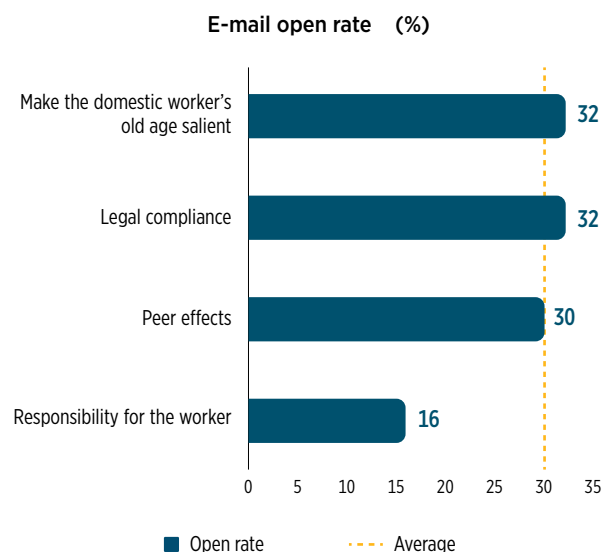
Retirement Savings Laboratory



What were the results?

Of the 22,947 emails sent, 6,884 were opened, or an average open rate of 30%. The open rates for emails with messages (1) Making the domestic worker's old age salient, (2) Peer effects (30%), and (4) Legal compliance (deterrence) (32%), were sig-

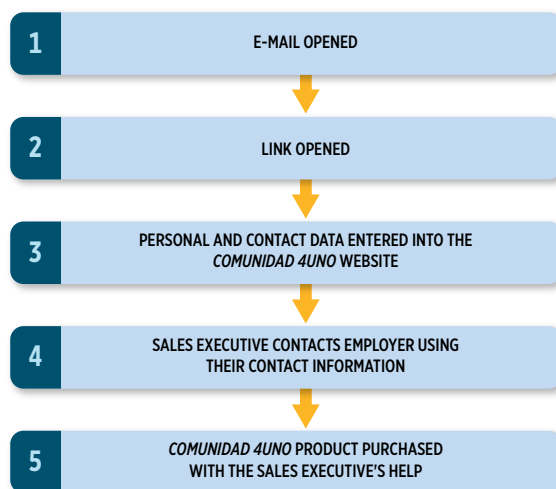
nificantly higher than the open rate for message (3) sense of responsibility for the worker (16%). The average opening rate of 30% is higher than the average rates of 20-25% for AFORE SURA mass emails.



Source: Authors' elaboration.

Of the 6,884 AFORE SURA account holders who opened an email, 1,476 visited the *Comunidad 4Uno* platform (a conversion rate of 21%). Of the 1,476 visits to the *Comunidad 4Uno* platform,

Steps for the account holder to purchase a *Comunidad 4Uno* product for their domestic worker



8 people left specific contact information for a sales executive, or a conversion rate of 0.5%. During the pilot project, no domestic workers were registered with the *Comunidad 4Uno* product.

Lessons learned

Social security coverage for domestic workers in Mexico is one of the lowest in the region. Among the most common explanations for this are the high cost of social security, the lack of payment facilities, and socio-cultural factors that result, for example, in domestic workers being seen as part of the family and not as workers, as well as the lack of obligation to register domestic workers with social security.

In this initiative we promoted a product that significantly lowered the cost of protection against accident and illness risks, provided monthly payment options, and highlighted the responsibilities of the employer with the domestic worker in their employ. Despite this, employers did not voluntarily purchase this product to increase the social protection of domestic workers. Mexico is in the process of mandating registration of domestic workers with social security, and this experiment highlights its importance.

Retirement Savings Laboratory



SMS reminders to promote voluntary savings in Mexico

WHAT IS IT?

In Mexico there are multiple ways for workers to contribute to the pension system directly and voluntarily. However, only 6.8% of individual Retirement Savings System (SAR, for its Spanish acronym) accounts have voluntary savings. Lower-income workers are especially disconnected from pension savings systems, although many have an individual account registered with a Retirement Fund Administrator (AFORE, for its Spanish acronym).

Reminders through an accessible and direct method, such as SMS messages, can minimize the role of psychological biases, especially those that act against retirement savings. However, there is still uncertainty about the persistence of the effects of reminders to help increase long-term savings.

With the dual goal of motivating AFORE account holders who were not saving (inactive) to start saving, and those who were saving (active) to save more, an SMS reminder strategy was proposed to encourage savings. To measure the impact of the campaigns, administrative data on savings at the individual level was used. Indicators were the probability of making a deposit, the number of transactions, and the amount saved.

IMPACT

No evidence was found that SMS messages motivated voluntary savings of Mexican AFORE account holders. This was the case in both the sample of low-income workers and the sample of middle-income workers.

TITLE

SMS reminders to promote voluntary savings in Mexico.

MESSAGE

A national SMS reminder campaign, applying behavioral economics strategies, did not increase voluntary retirement savings for low and middle-income workers in Mexico.

TOPIC OF STUDY

Long-term pension savings.

SUB-TOPIC

Reminders.

YEAR

2017-2019.

AUTHORS

Mariano Bosch, Dean Karlan, Jonathan Zinman, Jake Kendall, and Kyle Holloway.

AUTHOR OF THE SUMMARY

Anne Hand.

OBJECTIVE

Encourage savings through SMS messaging with the following goals:
1) Mexican Retirement Savings System affiliates who were not voluntarily saving begin to save and 2) Affiliates who were already saving save more.

TOOL

Simple reminders, messages to counter behavioral barriers to long-term savings, and suggested goals.

EXECUTING AGENCY

Innovations for Poverty Action (nonprofit organization), *Comisión Nacional del Sistema de Ahorro para el Retiro* (CONSAR, state agency)..

TARGET POPULATION

Adults affiliated with the Mexican pension system that began in 1997, colloquially known as the "AFORE Cohort".

MECHANISM

SMS.

SAMPLE SIZE

394,480 low-income adults from the "AFORE Cohort" (197,251 in the treatment group and 197,229 in the control group), and 30,000 middle-income adults from the "AFORE Cohort" (15,000 in the treatment group and 15,000 in the control group).

EVALUATION DESIGN

Nimble Randomized Controlled Trial (Nimble RCT).

FINANCING

IDB Lab and MetLife Foundation.

COST

SMS: 179,000 USD.



During the first wave, a standard reminder was tested against messages that sought to make retirement palpable, communicate that their peers were already saving for retirement, and reduce the feeling of loss that saving might induce. Differences in addressing one, or multiple, psychological barriers were also evaluated.

Upon finding no significant differences between messages that addressed a barrier or multiple barriers and simple reminders, in the second wave, messages with low, medium, and high suggested savings targets were introduced, which were compared to simple reminders.

Upon finding no significant differences between messages with suggested savings goals and simple reminders in the second wave, messages with savings goals and links to more

information on voluntary retirement savings in Mexico were introduced in the third wave.

Likewise, with preliminary results that suggested the ineffectiveness of SMS messages to promote voluntary savings for retirement in low-income Mexican populations, and considering that the account holders in the initially selected sample were mostly inactive savers, a parallel experiment was carried out with a group of 30,000 account holders from the same 8 AFOREs who met the following criteria: middle income, made a voluntary savings contribution in 2018, and registered their mobile phone number with the AFORE as of March 2015. The same messaging strategy as the third wave was used: messages with savings goals and links to more information on voluntary retirement savings in Mexico.

IMPACT

Statistical analyses of the administrative data provided by CONSAR showed that the SMS messages had no impact on increasing account holders' average savings. Furthermore:

- **Different types of messages had no impact.** Differentiated SMS messaging strategies had no impact on the voluntary savings of low and middle-income account holders.
- **Different periods of exposure to the messages had no impact.** Receiving SMS messages for 4, 8, or 12 months did not impact the voluntary savings of low-income account holders.

- **Different savings goals had no impact.** SMS messages with low, medium, or high goals did not have an impact on the voluntary savings of both low and middle-income account holders.

The behavior of all groups in the experiment was statistically identical throughout the study.

LESSONS FOR PUBLIC POLICY

This study shows that, in the case of Mexico, SMS messages were ineffective in increasing the voluntary savings of low and middle-income workers. This result is, to some extent, surprising. First, because an identical pilot designed and executed in parallel in Colombia had positive results with savings increases of up to 14% compared to the control group (for more information see <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=EZSHARE-489183581-102>). Second, because Mexico, and specifically CONSAR, has been one of the most active promoters of voluntary savings in Latin America. CONSAR has developed an extensive network of more than 15,000 savings points, digitized the relationship between account holders and the system through a mobile application, and carried out massive campaigns to promote voluntary savings.

The divergent results of two pilots, identical at first glance, suggest that the context in which the messaging strategy is implemented is a determining factor. A deeper analysis reveals that there were significant differences in the sample, quality of the contact data and the characteristics of the savings programs. In Mexico, the participants in the pilot were younger; since the AFORE system was introduced in 1997, the sample was restricted to individuals 45 years old or younger. In Colombia, the upper limit was 69 years old, which led to an older average study population. The quality of the contact data was better in Colombia, so we can assume that a higher percentage of the sample received the reminders. Also, since the savings program promoted in Colombia, *Beneficios Económicos Periódicos* (BEPs, for its Spanish acronym), is



more recent than the Mexican SAR, more people had more recent affiliations. Finally, the BEPS savings scheme provides additional benefits such as life insurance and funeral expenses,

as well as prizes and lotteries, which increase the incentive to save for retirement.

TABLE 1. COMPARING STRUCTURAL DIFFERENCES BETWEEN SMS MESSAGING PILOTS IN MEXICO AND COLOMBIA

	COLOMBIA (Beneficios Económicos Periódicos BEPS)	MEXICO (Sistema de Ahorro para el Retiro SAR)
Account holder age	<ul style="list-style-type: none"> + Average age was 47 years old. • Average age of women was 46 years old. • Average age of men was 50 years old. • Maximum age of 69 years old at the beginning of the study, which was the limit for BEPS eligibility. 	<ul style="list-style-type: none"> - Average age was 31 years old. • Average age of women was 32 years old. • Average age of men was 31 years old. • Maximum age of 45 years old at the beginning of the main study, which was the limit for the complete transition to SAR.
Female participation	+ 71% of the total sample were women.	- 44% of the total sample were women.
Time affiliated	- The BEPS program began in 2014. It is a newer program with people affiliated for a relatively short time.	+ SAR began in 1997. Some people have been affiliated for more than 20 years.
Contact information quality	+ Results of an exercise to validate account holders' mobile phone numbers found all numbers to be active.	- Results of an exercise to validate account holders' mobile phone numbers found approximately 20% of the numbers to be inactive.
Other savings benefits	+ Tangible benefits: Life insurance, funeral expenses, prizes, and lotteries.	- Intangible tax benefits.

The message for policy makers is to keep experimenting and learning about what can be effective in any given environment. Initiatives that have been successful in one context are not necessarily going to be effective in all cases and places. We know that closer communication with the affiliate (through SMS messages or other methods) is a useful tool to connect

workers with their pension systems. There is also evidence that it can be a cost-effective tool to increase voluntary retirement savings. Further experimentation on a small scale can be done that will give relatively quick results to adjust and further explore which initiatives are cost effective and should be scaled for an entire system.

Retirement Savings Laboratory



Push messages to incentivize voluntary retirement savings

WHAT IS IT?

The Mexican pension system has the *AforeMovil* app, a tool with great potential to increase the population's voluntary savings, as it is designed to help the account holder overcome several behavioral barriers to saving, such as inertia or procrastination. In addition, it is a direct and simple mechanism to contact members, considering the lack of updated data of Retirement Fund Administrator (*afore*) account holders in Mexico that makes it difficult to send users personalized messages.

Evidence shows that reminders can help savers focus on saving for retirement. In particular, key moments in a person's life have been identified, such as having children or getting married, which allow better communication with pension fund account holders and encourage interaction or commitment to the pension system. These are teachable moments (ideal moments to teach) be-

cause the person is more open to exploring ideas or behaviors on topics that they normally have low involvement with, such as active participation in saving for retirement.

This pilot sought to motivate individuals who downloaded *AforeMovil* to use the application (app) and voluntarily save for their retirement. To do this, a push message campaign was carried out through the app during teachable moments.

IMPACT

1. The study found that, among account holder who have previously been saving, push messages led to a 16% increase in accumulated savings after 9 months of the experiment (approximately USD 23). However, push messages were not effective in increasing account holders' probability of saving.
2. Push messages did not affect the probability of saving nor savings amounts among account holders who had not been saving prior to the intervention.
3. Given its low cost of implementation (virtually zero), and a relatively high delivery rate compared to other message delivery mechanisms, push messages are a highly cost-effective way to promote pension savings for people who have already demonstrated a willingness to save.
4. There is suggestive, but not conclusive, evidence that, among those who were previously saving, push messages increased the relative use of digital media to make contributions.

TITLE

Push messages to incentivize voluntary retirement savings.

MESSAGE

A reminder campaign that used push messages and behavioral economics strategies, increased both the probability of generating voluntary savings and savings amounts in Mexico.

TOPIC OF STUDY

Long-term retirement savings.

SUB-TOPIC

Reminders.

AÑO

2019-2020

AUTHORS

Mariano Bosch, Gustavo Caballero, Anne Hand and Maria Teresa Silva-Porto.

AUTHOR OF THE SUMMARY

Gustavo Caballero and Anne Hand.

OBJECTIVE

Incentivizing savings among *AforeMovil* users via push messages sent on holidays with family related content so that those who were not saving voluntarily began doing so and those who were already saving, led to an increase in their level of savings.

TOOL

Reminders, *nudges*.

EXECUTING AGENCY

Inter-American Development Bank (IDB) and the National Retirement Savings Commission (CONSAR, for its Spanish acronym).

TARGET POPULATION

AforeMovil users.

MECHANISM

Sending push messages with family related content during the holidays.

SAMPLE SIZE

488 285 National Retirement Savings System (SAR, for its Spanish acronym) account holders, successfully authenticated in CONSAR's *AforeMovil* app.

EVALUATION DESIGN

Randomized Controlled Trial (RCT).

FINANCING

IDB Lab and MetLife Foundation.

COST

At no additional cost, push messages are free within the functionalities of the *AforeMovil* app.



CHALLENGE

The vast majority of workers in Mexico do not save or save very little for retirement, particularly those who work informally or independently. Most people with lower incomes, around 40% of the total population, are disconnected from pension savings systems because they are mostly informal workers: only one in ten workers in this group is saving for their pension.

Access to savings services does not explain these low levels of savings: The Retirement Fund Administrators (AFORE, for its Spanish acronym) offer multiple alternatives for workers to contribute directly and voluntarily to the pension system, without the intermediation of an employer. Among them, the possibility of saving in commercial networks or through the *AforeMovil* app stands out, in addition to the channels that each AFORE offers for this purpose. However, as of the third quarter of 2018, when this intervention was designed, only 6.8% of the individual accounts of the Retirement Savings System (SAR, for its Spanish acronym) had received any savings contributions.

The *AforeMovil* mobile application is a tool with great potential to increase people's voluntary savings, as it is designed to help account holders overcome several behavioral barriers to savings, such as inertia or procrastination. Through the app, the account holder can save easily and recurrently in any location with wireless connectivity. In February 2019, at the end of the intervention design, *AforeMovil* had nearly half a million users (1% of total account holders) who had completed the registration process, implying that the app would be fully operational. However, only a small fraction of them used it to save money. According to figures from the

National Retirement Savings Commission (CONSAR, for its Spanish acronym) in 2018, less than 10% of users made at least one voluntary savings contribution through the application throughout the month.

Mass scale campaign with low-cost personalized messages

CONSAR and the Inter-American Development Bank (IDB) launched a campaign to study the potential of push messages (a free feature within the *AforeMóvil* application) to reach hundreds of thousands of Mexicans and motivate them to save for retirement. These messages were sent on carefully selected holidays, based on the holiday's relationship to family. Reminders through push messages can minimize the role of psychological biases that work against saving for retirement. The messages, with contents designed to counteract some of the behavioral biases, provided a direct link to the savings channel available to workers within the mobile application.

Push messages are an easy alternative to reach account holders. However, the lack of updated data of the Afore account holders in Mexico (Fertig, Fishbane, & Lefkowitz, 2018) makes it very difficult to send personalized messages addressed at account holders during personal events in their lives. Therefore, holidays or commemorative dates, moments in which people are reminded to protect their families and to prepare for unforeseen events, becomes a great opportunity to take advantage of the emotional availability of teachable moments (Blakstad, Brügger and Post, 2017). Some messages also included monthly savings goals, a strategy to make savings more achievable.

INTERVENTION DESIGN

The strategy used was based on reminders via push messages to encourage savings, thus motivating people who had already downloaded *AforeMovil* to use the app, and to save voluntarily for their retirement. In total, 488,285 SAR members who had been successfully authenticated in the CONSAR *AforeMovil* app as of December 2018, were randomly assigned to one of eight treatment groups (receiving 16 push messages for nine months) or the control group. Variations in the eight treatment groups were based on whether the messages were sent on holidays and commemorative dates related to family or on days before the holiday, whether the message alluded to the holiday or was a simple reminder, and

whether the message contained a suggested high monthly savings goal (MXN 500, or about USD 20) or a low goal (MXN 100, or about USD 5).

Holidays related to family were chosen mainly because there is international (Fischer and Montalbo, 2010) and local (Fertig, Fishbane, and Lefkowitz, 2018) evidence identifying the family as an important reason to save for old age, either in order to provide for them, when the individual is gone, or be an example of someone who takes actions that are considered desirable in his or her family. In this way, the treatments with messages related to the family (on holidays) had the purpose



of evaluating whether these messages have an effect beyond the one derived from simply receiving a push message through the app – whichever it may be— pointing out the importance of saving. On the other hand, treatment messages sent on holidays evaluated whether susceptibility to messages related

to savings increases during these teachable moments. The IDB already had evidence that the suggested goals increase the [effectiveness](#) of the messages, so all treatments were assigned to a low or high savings goal, although the goal was not included in all messages.

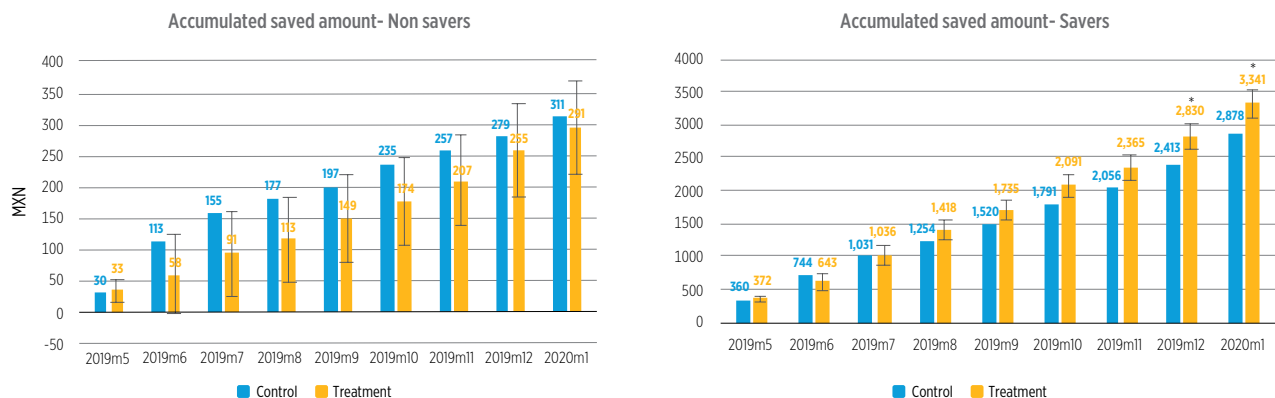
IMPACT

At the end of the 9 treatment months, the 16 push messages sent to members of the treatment groups (without distinguishing between treatment types) **did not have a significant effect on the probability of making any contribution.**

In terms of the amounts, among previous savers, sending push messages had a positive and significant effect on

the accumulated amount saved, but took a few months to become evident (figure 1). In particular, **those receiving the treatment ended up saving 16% (MXN 463, USD 23, approx.) more during the nine months of treatment. Among non-savers there was no significant effect.**

FIGURE 1. EVOLUTION OF ACCUMULATED AMOUNTS DURING THE EXPERIMENT, ACCORDING TO PREVIOUS SAVINGS STATUS.



Note: The figures show the means of the amount saved per member in each month for the control group, and for the treatment group this mean plus the estimated effect. To estimate the effect, the effects of age and gender were controlled. The bars present robust standard errors of the estimated effects. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Finally, studying the effect of the day it was sent and the contents found that, on the one hand, **a message alluding to the holiday versus a simple reminder had similar effects, and sending the messages during the holiday was not more effective than having sent the message a few days before.** Regardless, **the results show that the effect observed in the accumulated amounts was mainly due to the messages that suggested a high savings goal** (figure 2). In particular, the treatment participants with a high goal had a significant increase in the probability of saving in any given month, while those with the low goal also saved more than the control group, but the difference is not significant.

All these results, however, were limited because just over half of the treatment group members were not successfully receiving these push messages—one of the message delivery

mechanisms with the highest delivery rates—. Among the reasons that an account holder might not have received the messages include that they switched their phone, deleted the app, or turned off push messages. This suggests that, to maximize the effect of messaging strategies such as the one described, ensuring open communication channels with account holders is necessary. An account holder who does not receive a message will not change his or her behavior, regardless of the potential effect that it may have.

On the other hand, it is worth noting that this group of account holders made most of their savings digitally (via electronic transactions, Afore web or through AforeMóvil —50%—, and mainly direct debits —67%), and not sporadically in stores. This evidence is suggestive, since it does not reach statistically significant levels.



FIGURE 2. AMOUNT ACCUMULATED ACCORDING TO THE GOAL SUGGESTED IN THE MESSAGE.

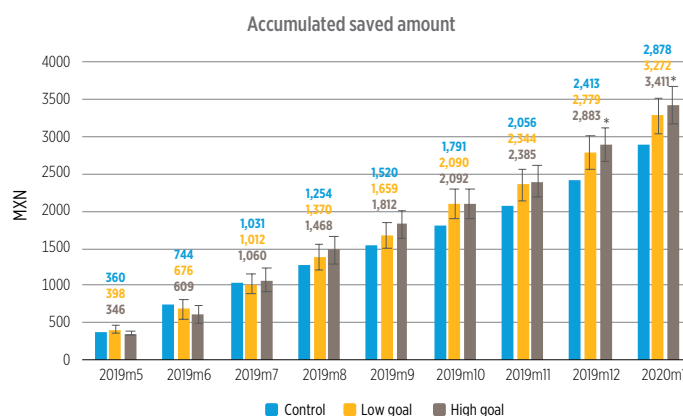
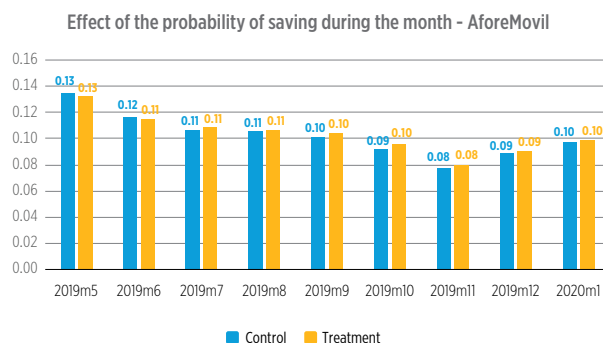
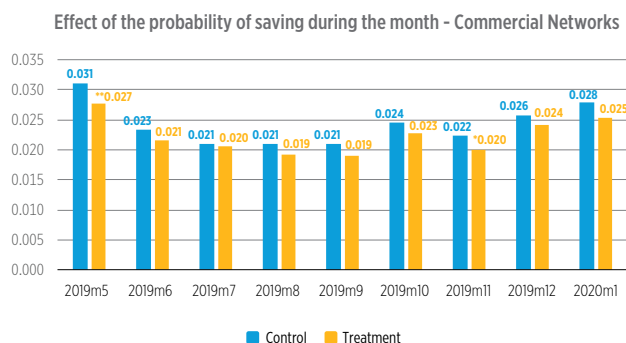


FIGURE 3. PROBABILITY OF SAVING DURING THE MONTH IN COMMERCIAL NETWORKS (LEFT) AND MOBILE APP (RIGHT), GROUP OF PREVIOUS SAVERS.



LESSONS FOR PUBLIC POLICY

Push messages are a cost-effective way to increase the use of voluntary savings in Mexico. This is due to the significant effect they have on the savings of people who have already been saving, and not because more people begin saving upon receiving the messages.

Likewise, despite the hypotheses upon which this pilot was based regarding the possibility of leveraging emotional availability towards the family (through Mexican holidays) to increase savings, **no particular date or message was strong enough** to distinguishably promote voluntary retirement savings. That being said, **the higher savings goals suggested were more effective in increasing the total savings in the treatment group among those who had been saving prior to the exper-**

iment. Also, there is evidence that suggests a rearrangement in savers' savings mechanism, in which the use of commercial networks is reduced in favor of the mobile application and other means that include direct deposits.

It is important to use all available tools to promote savings. Push messages are a standard feature in mobile applications, at no additional cost, and appear to be more [effective than SMS messages](#) in increasing voluntary savings for retirement in Mexico. Although contact details constitute a challenge in this context, the possibility of adding this tool to a comprehensive communication strategy focused on the importance of pension savings appears to be promising.



PILOTS IN



PERU

Retirement Savings Laboratory



COUNTRY



PERU

Letters to Improve Compliance with Social Security Obligations and the Employment Quota for People with Disabilities

WHAT IS IT?

In Latin America, less than half of workers are registered for social security by the firms that employ them. There is empirical evidence that reminders, deterrent messages, and social and moral norms, influence the behavior of individuals in fulfilling their tributary obligations. This study analyzes the role of the perception of an increase in oversight of compliance with labor regulations in Peru through two randomized experiments in which two types of letters were sent: one with a punitive message and another focused on social commitment.

In the first experiment, the National Superintendence of Labor Inspection (SUNAFIL, for its Spanish abbreviation) sent 697 letters to formal Peruvian companies with more than 50 workers, stipulating their obligation to register their workers in social insurance systems (health and pensions). In the second experiment, a letter was sent to a different subset of a thousand formal companies stipulating their obligation to meet the employment quota for workers with disabilities.

IMPACT

1. The letters increased the number of formalized workers by 9.8% (an average of almost 12 formal workers).
2. Although sending letters did not increase the probability of a company meeting the employment quota of persons with disabilities, it increased the probability of a firm having at least one hour worked by a person with a disability by 1.5 percentage points (almost 15 additional firms).
3. Punitive letters, which highlighted fines for non-compliance with labor regulations, had a greater impact on increasing the average number of formalized workers (almost 20 workers) and the number of firms with at least one hour worked by people with disabilities (1.8 percentage points).

TITLE

Letters to Improve Compliance with Social Security Obligations and the Employment Quota for People with Disabilities.

MESSAGE

Increasing perception of oversight by sending letters improves compliance with payment of contributions to social security and increases hiring of people with disabilities. The type of letter is important: the letter that placed emphasis on fines for noncompliance had a greater impact, compared to the letter that emphasized benefits for the firm by complying with the law.

TOPIC OF STUDY

Compliance with labor regulations.

SUB-TOPIC

Social security, formalization, disability quotas.

YEAR

2019

AUTHORS

Mariano Bosch, Stephanie Gonzalez and Maria Teresa Silva-Porto.

AUTHOR OF THE SUMMARY

Stephanie Gonzalez.

OBJECTIVE

To analyze the perception of an increase in oversight in compliance with labor regulations in Peru, through two randomized experiments.

TOOL

Letters as reminders.

EXECUTING AGENCY

Inter-American Development Bank (IDB) and the Peruvian National Superintendence of Labor Inspection (SUNAFIL, for its Spanish abbreviation).

TARGET POPULATION

Formal private firms with more than 50 workers.

MECHANISM

Sending two types of letters: one showing the benefits of compliance with regulations, and another characterized by its punitive tone in the case of non-compliance.

SAMPLE SIZE

1,045 firms in the labor formalization experiment and 2,000 firms in the quota for people with disabilities experiment.

EVALUATION DESIGN

Randomized Controlled Trial (RCT).

FUNDING SOURCE

IDB.

COST

- Cost of printing and sending letters:
1. Letters for the labor formalization experiment: US \$ 6,565
 2. Letters for the employment quotas for people with disabilities experiment: US \$ 4,349



CHALLENGE

In low- and middle-income countries, generalized lack of compliance with tax obligations, social insurance and labor regulations (health and job security measures, minimum wage, employment quotas, among others) is a reality. This lack of compliance is called informality. Latin America and the Caribbean is the region with the highest levels of informality in the world based on income level. On average, 55% of workers do not contribute to social insurance systems. In the case of Peru, the informality rate is 78%, and compliance with the employment quota for people with disabilities is practically non-existent.

A possible explanation for the lack of compliance (from a tributary perspective) with labor regulations, even among relatively large and formal firms, in Peru, is the country's limited capacity to conduct labor inspections. According to data from the International Labour Organization, Peru

has 0.2 inspectors per 10,000 workers compared to 1.7 in Chile or 0.8 in Uruguay. The lack of monitoring and capacity to inspect allows, to a great extent, workers and firms to operate informally. Increasing the perception of oversight by increasing the number of inspectors or budget allocation are necessary tasks, but complex as well. Therefore, identifying instruments that can be scaled cost-effectively, and may therefore complement oversight efforts is relevant.

In the last decade, applied research in the fields of behavior and tax compliance has grown. There is empirical evidence that reminders (letters), deterrent messages and social and moral norms influence the behavior of individuals in fulfilling their tributary obligations. This evaluation seeks to measure the impact of these types of tools on compliance with labor regulations in Peru.

INTERVENTION DESIGN

The objective of the intervention is to understand whether, after receiving a letter from the inspectorate, firms perceive that the possibility of being inspected is greater and, consequently, adjust their behavior to comply with regulations. This study analyzes the impact of two types of letters. The deterrent approach is tested using a 'punitive' letter that emphasizes how failing to enroll workers in social security, or not complying with the employment quota for people with disabilities, is a serious offense, further highlighting the corresponding punishment cost (fine). To test if firms are willing to cooperate voluntarily, another letter called 'benefit or social commitment' was designed. In the labor formalization experiment, this letter, in addition to providing information on the government's formalization efforts, suggests companies review their workers' status and provides information about the process. Furthermore, it emphasizes the importance of protecting workers against health risks and accidents, as well as the potential positive impact on the firm's productivity. In the employment quota experiment, the letter emphasizes that hiring workers with disabilities contributes to reversing labor exclusion (Table 1).

Based on the list provided by SUNAFIL (which included private firms with more than 50 workers which were not going to be inspected in 2017), 1,045 firms were selected for the formalization experiment. In the case of the employment quota for people with disabilities pilot, 2,000 firms were selected from a total of 5,824 firms that were subject to the employment quota for people with disabilities in 2016 and failed to comply. Firms' participation in one experiment or the other was mutually exclusive.

The same intervention design was used in both experiments (Table 2). The sample of firms was randomly divided into three groups: control, punitive letter and benefit or social commitment letter. The letters were sent through a certified courier company. In the case of the labor formalization experiment, the letters were delivered between October 20 and December 7, 2017 (98% of them were delivered in the last 10 days of October), while the letters for the disabilities quota experiment were delivered between December 20, 2017 and January 10, 2018.



TABLE 1. LETTERS' CENTRAL MESSAGE FOR EACH EXPERIMENT

	A. Labor Formalization	B. Employment Quota for People with Disabilities
Punitive Letter	Current regulations specify that failing to register workers in payroll forms and/or not enrolling them in health and pension systems is considered a serious infringement. In order to sanction non-compliance behaviors, very severe fines are imposed as detailed below: - Microenterprise: up to 1,823 soles - Small companies: up to 18,225 soles. - Other companies: up to 91,125 soles	Current regulations specify that failing to register workers in payroll forms and/or not enrolling them in health and pension systems is considered a serious infringement. Notwithstanding this, for a private sector employer, severe implications of breaching the Employment Quota for people with disabilities would be included, all of which would lead to the imposition of significantly large fines which depend directly, among other things, on the number of affected workers.
Benefit Letter	Formalizing the employment of dependent workers by registering them on the company's payroll, in EsSalud and the corresponding pension system, in addition to protecting workers against health risks and work accidents, has the advantage of making the company more productive: The formal sector represents 80% of the aggregate Gross National Product.	The Employment Quota is intended to combat labor discrimination. There are more than 69,000 people in the Working Age Population in Peru with a disability who are either seeking a job or are discouraged by not having found one. By complying with the Employment Quota, your company contributes to reversing this situation of labor exclusion.

Source: Authors' preparation.

TABLE 2. EXPERIMENTAL DESIGN

A. Labor Formalization		B. Employment Quota for People with Disabilities	
Letters sent from October 20 until December 7, 2017		Letters sent from December 20, 2017 until January 10, 2018	
Random sample of 1,045 private firms in Peru with at least 50 workers		Random sample of 2,000 private firms in Peru with at least 50 workers	
Treatment group	Punitive letter: 348 firms Benefit letter: 349 firms	Treatment group	Punitive letter: 500 firms Benefit letter: 500 firms
Control group	Did not receive letter: 348 firms	Control group	Did not receive letter: 1,000 firms
Impact: Average difference in the number of formal workers in each treatment group and the control group		Impact: Average difference in the number of workers with disabilities in each treatment group and the control group	

Source: Authors' preparation.

IMPACT

The results show that sending letters increases firms' perception of a higher probability of inspection, which translates to an increase in workers registered for social security (through electronic forms) and the probability that a firm hires at least one person with a disability. In both cases, the letter containing the punitive message has a greater impact in incentivizing compliance with the firms' labor regulations. Furthermore, these results are robust to different specifications and assumptions about the sample studied.

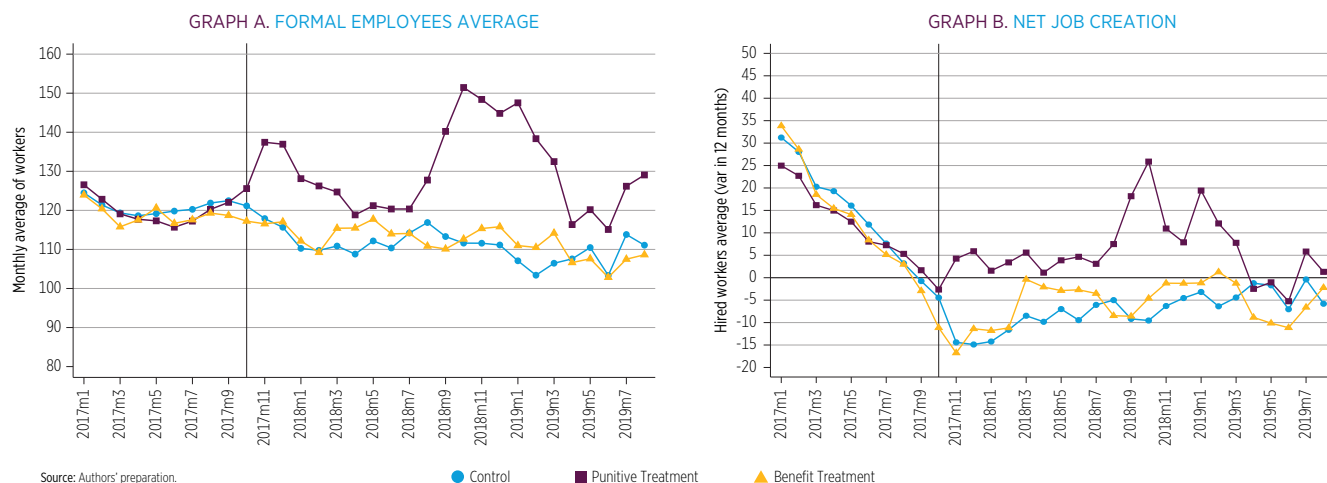
In the case of the labor formalization experiment, sending the letter had a positive average effect and was statistically significant, with almost 12 formal workers registered, which is equal to 9.8% of the average number of workers at baseline. This effect is greater when the letter is punitive: The

average number of formal workers increases by almost 20, equal to 16.7% from baseline (Graph 1.A). However, this effect is concentrated in a very small group of firms that show great variability in the number of reported workers.

The increase in the stock of formal workers occurs because the firms that received the punitive letter begin to hire (or at least report) more workers, affecting net job creation. In terms of hiring (or formalizing) workers during a 12-month span, the punitive letter led to a significant average increase of almost 17 workers (Graph 1.B). In other words, compared to the same month during the previous year, these firms had an average of 17 more formal workers than the control group. There are no differences in worker separations (outflows) between firms that received the letter and those that did not.

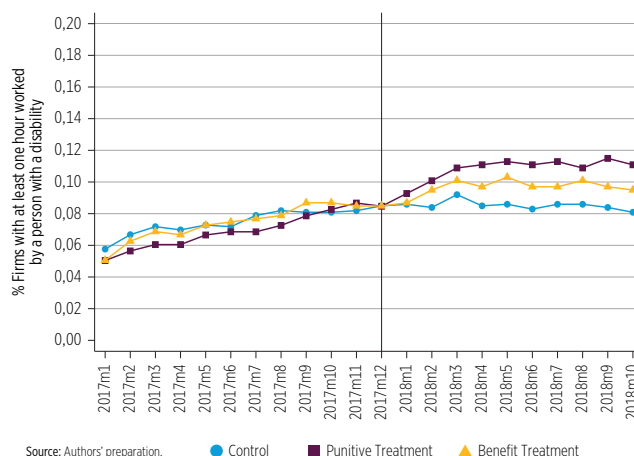


GRAPH 1. NET JOB CREATION IN FIRMS IN FORMALIZATION EXPERIMENT



In the case of the employment quota for people with disabilities experiment, sending the letter increases the probability that a firm hires a person with a disability by 1.5 percentage points, or an increase of 15 additional firms with at least one worker with a disability. In the group of firms that received the punitive letter, the probability of hiring a person with disabilities increases 1.8 percentage points, which is the equivalent of almost 4 additional firms when compared to the control group. This impact is greater in medium-sized firms, where the probability of having a worker with a disability increased by 3.6 percentage points.

GRAPH 2. FIRMS WITH WORKERS WITH DISABILITIES



LESSONS FOR PUBLIC POLICY

These results highlight the importance of continuing to strengthen the relationship between the supervisory authority and firms, seeking new approaches that go beyond traditional labor inspection. Sending letters has the potential to inform firms about their labor obligations and the consequences of non-compliance. A challenge to overcome is reaching a greater number of firms at a low cost. Information technologies can

help systematize notifications to firms, opening permanent and effective communication channels. Likewise, to ensure that the effectiveness of using alternative channels, such as letters and notifications, is sustainable, the perception of a greater probability of being inspected should be accompanied by greater oversight actions by the authorities, thus preventing the threat from losing credibility over time.

Retirement Savings Laboratory



Digital savings for on-demand platform workers

WHAT IS IT?

Capitalizing on the potential that digital platforms workers have, such as high levels of bank penetration and digital literacy, we designed an intervention that seeks to promote voluntary savings for workers registered with on-demand platforms. Based on the findings from behavioral economics, the project seeks to provide drivers affiliated with Cabify Peru with access to an automatic savings option through the digital platform, including

a bonus for opening their account, and receiving reminders to encourage their savings.

Two savings plans were randomly offered. One was an Emergency Savings Plan in which drivers could save 2% of their weekly earnings to cover emergencies. The other was a Flexible and Smart Savings Plan that offered the driver the option to save 3% of their weekly earnings each time they exceed a threshold, which the driver themselves determined.

IMPACT

1. After 8 weeks sending the invitation to save, 18% of drivers who received the invitation and were eligible to participate in the savings scheme enrolled. The simplest plan turned out to be the most attractive, the enrollment (take-up) of the Emergency Savings Plan was 20%, while that of the Flexible and Smart Savings Plan was 15.9%.
2. In line with what the international evidence shows, the automatic debit is sticky since the rate of opting out of the savings scheme was only 3.3% after four months.
3. After four months, the average savings through the platform was USD 29.
4. The Emergency Plan generates a higher density of savings, but the Flexible and Smart Plan generates a greater amount of average savings. Over the course of 20 weeks, drivers enrolled in the Emergency Plan saved approximately 12 weeks, while those in the Flexible and Smart Plan saved 8 weeks. However, the average total amount saved in the Emergency Plan was USD 22, while in the Flexible and Smart Plan it was USD 35.
5. Since the BCP Digital Account has no liquidity restrictions, an additional point of analysis is to understand how drivers use this additional account. Surprisingly, we found that drivers deposited, on average, 260% more money into their account than they saved with Cabify. Likewise, they withdrew, on average, 81% of the resources saved, leaving an average total net saving of USD 17.

TITLE

Digital savings for on-demand platform workers.

MESSAGE

Using on-demand work platforms is an effective way to increase the participation of independent workers in formal savings schemes.

TOPIC OF STUDY

Formal savings.

SUB-TOPIC

Active decision, automatic debit.

YEAR

2020.

AUTHORS

Noelia Bernal, Mariano Bosch, Brigitte Madrian, and Oswaldo Molina.

AUTHOR OF THE SUMMARY

Natalia Guerrero and Maria Teresa Silva-Porto.

OBJECTIVE

Increase the formal voluntary savings of self-employed workers registered with digital on-demand work platforms, taking advantage of the potential of their high digital literacy and bank access, to offer them an automatic savings debit.

TOOLS

Pop-up/push messages in the Cabify mobile application, active choice, and automatic debit.

EXECUTING AGENCY

Inter-American Development Bank (IDB) and Universidad del Pacifico.

TARGET POPULATION

Independent workers in the collaborative economy.

MECHANISM

Active choice (opt-in) and automatic debit.

SAMPLE SIZE

5,022 drivers affiliated with the Cabify Peru platform.

EVALUATION DESIGN

Randomized Controlled Trial (RCT).

FINANCING

IDB Lab and MetLife Foundation.

COST

Total Cost: USD 4,036. This includes the cost of monetary incentives, (USD 3,745), web site (USD 154), and sending communications to drivers (USD 137).



CHALLENGE

Unexpected events can affect the livelihood of a self-employed worker or worker in the informal sector. Informal workers, who represent 72.6% of all workers in Peru, usually manage their income and expenses in short periods, such as days or weeks. In these cases, saving systematically, even for short-term needs, is extremely difficult, and saving for retirement is often not even an option. However, this group of workers is more vulnerable, since they are not contributing to a pension for their future. Therefore, it is key that, despite the high variability of their income, these workers begin to save for their future as soon as possible.

At the same time, Latin America has recently experienced a growing impact of the digital world in different areas of the economy and society, driven by an increase in connectivity and technological innovation. With these changes, digital

platforms that connect consumers with independent workers in the on-demand platform economy, such as Glovo, Cabify or Task Rabbit, enjoy great popularity among users.

The digital economy offers something innovative to informal workers: a simple and inexpensive way to generate savings. Since their income comes through a platform, they can save a portion of that income through the platform, which is similar to what happens with formal workers, who automatically save part of their payroll income. The goal of this intervention is for drivers to start saving little by little, with a short-term focus. Thus, they will be able to incorporate the idea of saving into their plans and start saving not only in the present, but also in the medium and long term.

INTERVENTION DESIGN

There is evidence that planning, using technology, automatic debits, and adapting products to meet the needs of different types of workers, are effective in promoting medium and long-term savings. Among the most famous is the success of the Save More Tomorrow (SMarT) plan, which seeks to increase workers' retirement funds by saving "extra" or "additional" income, in order to minimize the feeling of loss in the present (Thaler and Bernartzi, 2004).

Based on these lessons, two savings plans were designed that were offered to drivers through the Cabify mobile application:

- **Emergency Savings Plan:** Through this plan, drivers would be able to save 2% of their weekly income to cover emergencies. This plan is labeled for emergencies, since the literature has shown that labels help individuals maintain their savings when they have a purpose.
- **Flexible and Smart Savings Plan:** This plan offers the driver the option to save 3% of their weekly earnings each time they exceed a specific threshold chosen by the driver. The driver would be able to choose between one of the following earnings thresholds: USD 30, USD 75, and USD 150. If the driver has a "good week", that is, if their earnings exceed the chosen limit, the driver will automatically save. Otherwise, they would not.

In both cases, the savings product was a BCP Digital Account, which does not charge a commission, does not require a minimum balance, allows small deposits, and provides availability of funds to drivers with no restrictions. The purpose of this account is to help drivers label these funds as savings by putting it in a separate account to help them resist the temptation to use these resources to pay for their everyday expenses.

The savings plans were randomly assigned to a total of 3,348 drivers who were independent workers, under the age of 70, and who had actively used the Cabify platform for at least 3 months. Half of the drivers were invited to save with the Flexible and Smart Savings Plan through a push message in the Cabify application. The other half were invited to save in the Emergency Savings Plan using the same push message mechanism. Enrollment in savings plans was open for 8 weeks, and 15 messages were sent to drivers, reminding them of the opportunity to save, and that upon registering they would receive a bonus of USD 10. The push message with the invitation to save contained a link to a web page with information about the savings product and a short online form that the driver had to fill out to sign up for the savings plan. In other words, enrollment consisted of a fully digital process, which freed drivers from a bureaucratic process and from having to visit a bank branch.

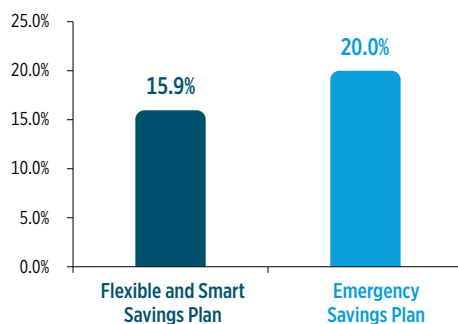


IMPACT

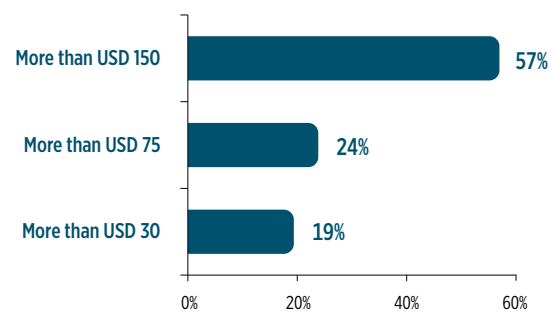
After 8 weeks of sending the invitation to save, 18% of drivers who received the invitation and were eligible to participate in the savings plan enrolled. The simplest plan turned out to be the most attractive, the enrollment (take-up) in the Emergency Savings Plan was 20%, while the Flexible and Smart Savings Plan was 15.9%. One possible explanation

is that the Flexible and Smart Savings Plan is a bit more complex and includes one more decision: choosing at which income threshold drivers wish to begin saving. Among drivers who enrolled in the Flexible and Smart Savings Plan, the majority (57%) chose the threshold of USD 150, that is, they set a higher income goal, before considering saving.

GRAPH 1. DRIVERS REGISTERED BY SAVINGS PLAN (% OF TOTAL)



GRAPH 2. DRIVERS REGISTERED BY RANGE IN THE FLEXIBLE AND SMART PLAN (% OF TOTAL)

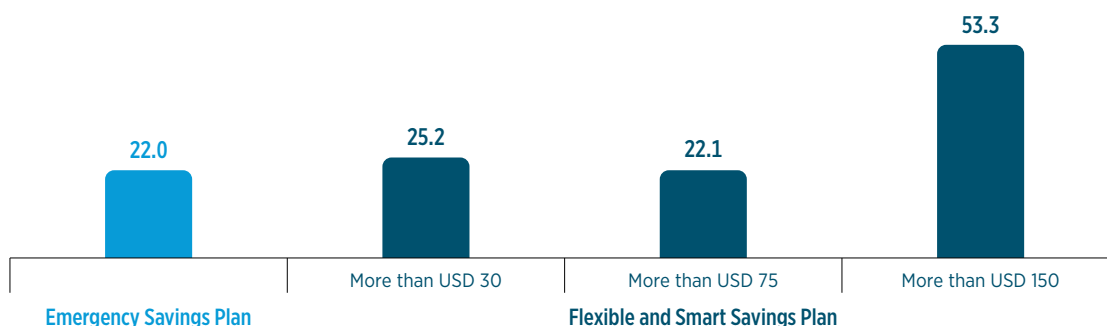


Source: Authors' elaboration.

In line with what the international evidence shows, the automatic debit is sticky, since the opt-out rate to the savings scheme is only 3.3%. In other words, after four months, only 10 of the drivers asked to leave the savings plan. However, an additional 40 drivers who had signed up for a savings plan could not continue because they changed the way they worked with the platform. Either they stopped using it, or their administrative records did not allow the savings account to be opened.

A challenge for generating savings is the nature of independent work. After four months of being enrolled in a savings plan, only 70% (213 drivers) had saved at least once. This is because saving required them to work using the Cabify platform and, since it is, by definition, a flexible and independent job, some drivers use it sporadically to supplement their income.

GRAPH 3. ACCUMULATED AVERAGE CONTRIBUTION IN DOLLARS BY SAVINGS PLAN AND THRESHOLD. DATA FROM NOVEMBER 2019 TO MARCH 2020.



Source: Authors' elaboration using Cabify administrative data.

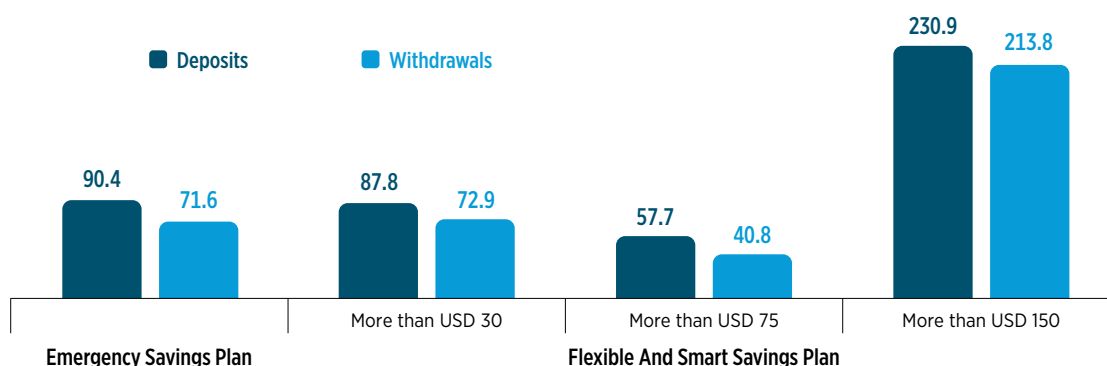


After four months, the average savings generated by drivers on the platform was USD 29. The Emergency Savings Plan generates a higher density of savings, but the Flexible and Smart Savings Plan generates a greater amount of average savings. Drivers participating in the Emergency Savings Plan saved approximately 12 weeks out of a total of 20, while those in the Flexible and Smart Savings Plan saved 8 weeks. Among those drivers that saved at least once, the vast majority signed up for the Emergency Savings Plan (70%), which does not require a minimum threshold of earnings. However, those in the Flexible and Smart Savings Plan contributed a total of USD 25.2, USD 22.1 and

USD 53.3, for thresholds of USD 30, USD 75 and USD 150 respectively, higher amounts than the accumulated average contribution of the Emergency Savings Plan.

Since the BCP Digital Account does not have liquidity restrictions, an additional point of analysis is to understand how drivers use this additional account. Surprisingly, drivers deposited, on average, 260% more money into their account than they had saved with Cabify. Likewise, they withdrew, on average, 81% of the resources saved, leaving an average total net saving of USD 17.

GRAPH 4. AVERAGE ACCUMULATED DEPOSITS AND WITHDRAWALS IN DOLLARS BY SAVINGS PLAN AND THRESHOLD.
DATA FROM JANUARY 2020.



Source: Authors' elaboration with bank account data.

LESSONS FOR PUBLIC POLICY

Solutions that significantly increase voluntary savings are based on automatically setting aside a proportion of income towards a savings program (mimicking what compulsory savings systems do). Although it is not easy to implement for independent workers, this project shows that technology increasingly provides us with more avenues to do so. This intervention shows that a great opportunity to reach

independent workers is through digital on-demand work platforms. In Peru, through the Cabify application, we invited drivers to voluntarily save part of their income, with 18% signing up for an automatic savings debit. However, how to implement these types of tools for the entire low-income population remains a major challenge.

