# Retirement Savings Laboratory



# Call campaign to increase voluntary retirement savings for low-income populations selected using Big Data



#### WHAT IS IT?

This intervention studies how to encourage voluntary retirement savings among independent and low-income workers and was carried out with the support of Colpensiones and GBA Latam.

There are multiple reasons that limit voluntary long-term savings in low-income populations. On the one hand, low experience with the financial sector and lack of knowledge regarding the program (which in some cases can lead to mistrust) may steer many to prefer saving in other financial instruments they consider familiar, such as investing in their home, even if the return on these investments may be lower and volatile. On the other hand, psychological biases, among which lack of attention stands out, reduce the individual's willingness to save.

To both motivate BEPS program affiliates who were not saving (inactive) to start doing so and encourage those who were saving (active) to save more, a high-contact calls and text messages campaign strategy was conducted, on selected segments with an estimated high propensity to save according to big data analysis. To study the impact of the campaigns, 24,000 people enrolled in the program were randomly assigned to the treatment or control groups. Both control and treatment groups consisted of 6,000 active and 6,000 inactive affiliates. Since the participants were randomly selected, it was possible

#### **IMPACT**

Among active affiliates, those assigned to the treatment group had a 14% higher probability (18.41 pp vs 16.14 pp of the control group) of making contributions in one month and saved 9.4% more per month (approx. \$2.34 vs. \$2.13 for the control group). Thus, among active affiliates, the treatment generated 1.6 dollars of savings for every dollar invested.

Among inactive affiliates, although those assigned to the treatment group had a 41% higher probability (0.86 pp vs 0.61 pp of the control group) of making contributions in one month and saved 46.9% more per month (\$0.13 vs. \$0.09 for the control group), the differences were not significant. That is, among inactive affiliates, the treatment did not generate significant savings.

to evaluate the impact of the call campaign on the total number of affiliates.

People in the treatment group with information regarding their cell phone number received three SMS text messages. Additionally, within this group, and as a result of big data analysis (unconventional statistical analysis that uses a lot of data or, as in this case, many variables to predict who has a high savings potential), 2,892 affiliates were selected between active (1,358) and the other inactive (1,534), with high savings potential. These people were subjected to a campaign involving multiple phone calls that sought to establish a close relationship with them. The high level of contact was intended to resolve doubts, promote the identification of those enrolled to the program, and promote voluntary savings in BEPS.

#### TITLE

Call campaign to increase voluntary retirement savings for low-income populations selected using Big Data.

#### MESSAGE

A campaign of frequent and unstructured calls, for informational purposes and to make voluntary savings closer to the affiliate, increases the proportion of savers and the amount of voluntary savings for the retirement of low-income populations. However, given the high costs of calls and the limited reach on the total population of affiliates, this type of campaign has a limited cost-effectiveness.

#### **TOPIC OF STUDY**

Long-term retirement savings.

#### **SUB-TOPIC**

Information, Smart marketing.

#### **YEAR**

2019.

#### **AUTHORS**

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#### **AUTHOR OF THE SUMMARY**

Gustavo Caballero.

#### **OBJECTIVE**

Increase voluntary retirement savings for low-income people using targeted high-contact telephone campaigns.

#### **TOOL**

Telephone calls, SMS and big data to segment program affiliates.

### **EXECUTING AGENCY**

Colombian Pensions Administrator – Colpensiones (state agency).

#### **TARGET POPULATION**

Adults enrolled in the Beneficios Económicos Periódicos (BEPS) program.

#### **MECHANISM**

Calls and SMS.

#### **SAMPLE SIZE**

24,000 adults enrolled in the BEPS program.

#### **EVALUATION DESIGN**

Randomized Controlled Trial (RCT).

#### **FINANCING**

BID Lab and MetLife Foundation.

#### COST

Calls: US\$ 2725 in total. SMS: US\$ 270 in total.



# CHALLENGE

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.

To improve the coverage of this population, in 2015 the Colombian government created the voluntary pension savings program, Beneficios Económicos Periódicos (BEPS). When designing the intervention, in June 2018, BEPS had 1107 383 affiliates, of which 352,192 (31.8%) had saved at least once in the program. In addition, only 19% of those who saved did so constantly: either they had saved at least 147,500 Colombian pesos in 2017 (approx. 115 PPP dollars), or they had made more than six contributions in that year, requirements to access life insurance subsidized by the program in 2018.

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

Incentivizing voluntary retirement savings among self-employed and low-income workers is challenging. In a context of limited resources, a first challenge is to identify which affiliates your promotion efforts should focus on. In other words, you need to identify who is most interested in saving and determine their savings potential. Traditionally, affiliates are often segmented according to certain socioeconomic characteristics, including age, gender, income level (or similar variables) and place of residence. Although many of these variables suggest different ways of addressing the affiliate, the segmentations are still very broad and are not necessarily associated with the savings potential of each individual. A second challenge is identifying the best way to communicate with workers. While there is evidence of the broad benefits of contacting them through personalized messages and plans (Azevedo et al., 2019), there is a clear trade-off between the scope of a campaign and the level of closeness with the saver that can be achieved.

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.

## INTERVENTION DESIGN

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.

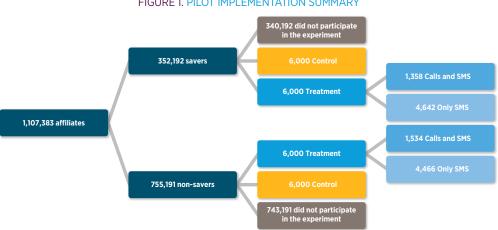


FIGURE 1. PILOT IMPLEMENTATION SUMMARY



Then, using an analytical model to segment the affiliates, savers profiles with a high or very high saving disposition were identified, a segmentation that was then applied to the group of non-savers to identify those who also had a high or very high savings potential. In this profiling, in addition to unconventional groupings according to geographic variables (going beyond commonly used regions), it was found that affiliates with high savings potential were those who had joined the program more recently and had relatively few financial obligations, even though they were already active users of the formal financial system (98% had a savings account and three out of four had a credit card).

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.

# **IMPACT**

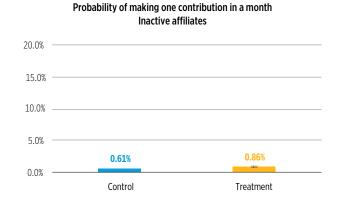
Being assigned to the treatment group is significantly related to a greater number of savers and greater savings amount. The effects, however, are limited to active affiliates. Among active affiliates during the 2 treatment months, while 16.1% of control group participants made a contribution in an average month, in the treatment group 18.4% made a contribution (14% more).

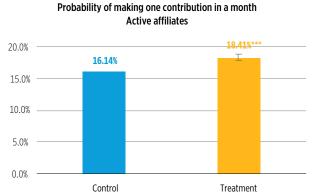
Unlike other similar experiments carried out by the <u>Retirement Savings Laboratory</u>, the additional savings are enough to find a significant effect on the amounts saved. The treatment group

saved COP 7,650 (USD 2.34, approx) per month on average, while the control group saved COP 6,993 (USD 2.13, approx) per month, on average.

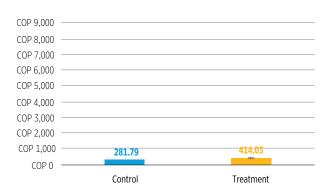
Among inactive affiliates, those assigned to the treatment group had a 41% higher probability of making contributions in one month and saved an additional 46.9% per month. However, the differences found are not significant from a statistical point of view.

FIGURE 2. SUMMARY OF THE TREATMENT'S MONTHLY IMPACTS

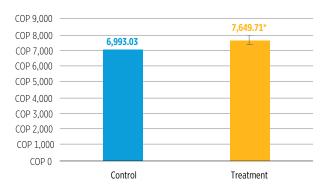




#### Contribution amounts per month - Inactive affiliates



#### Contribution amounts per month - Active affiliates



**Note:** These figures show the average per month of each variable, for the control group during the pilot, and for the treatment group, the average of the control group plus the estimated effect of the treatment, after controlling for the effects of age and gender. For the amount of contributions, the variable was winzorized to 99%, reducing the influence of atypically high values. \* p < 0.00, \*\* p < 0.01, \*\*\* p < 0.001

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.

# LESSONS FOR PUBLIC POLICY

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.

