The Impact of Subsidy Delivery Method on Savings Behavior:

Experimental Evidence

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Abstract[*]

We examine the impact of offering conditional cash transfer (CCT) beneficiaries the choice to receive cash transfers in bank accounts instead of cash. We investigate the effects on savings behavior and downstream outcomes such as assets and trust. We find, on average, no significant impact on overall savings or downstream outcomes. However, among individuals with nonpositive balances prior to the offering, we observe an increase in balances in savings accounts and in the transactional accounts in which the subsidies were initially deposited. These findings underscore the potential of using bank accounts to encourage savings, particularly for individuals with limited prior savings.

1. Introduction

Low savings levels are a prevalent issue faced by individuals worldwide, with 51 percent of adults not having saved in the last 12 months. This is particularly pronounced in developing countries, where the fraction of adults saving is 42 percent, compared with 76 percent in developed countries (Demirgüç-Kunt et al., 2022), and where individuals often confront limited financial resources and lack a robust safety net. Insufficient savings not only make individuals more vulnerable but hinder their ability to invest and improve their financial well-being. Furthermore, a significant portion of the global population still lacks access to formal financial services, including bank accounts. In Latin America, for instance, while there is relatively high access to the formal financial sector, with 74 percent of individuals owning a bank account, only 18 percent of them use their accounts for savings (Demirgüç-Kunt et al., 2022). These findings underscore the need to address low savings rates and promote financial inclusion.

In collaboration with the Chilean government and BancoEstado, a state-owned bank, we evaluated a governmental initiative that transformed the payment method of transfers within the Chilean conditional cash transfer (CCT) program, Programa Puente (PP). Through random assignment, participants were divided into a treatment group and a control group. The treatment group was given the option to receive its transfers in a transactional bank account (CuentaRUT). In contrast, individuals in the control group continued to receive their transfers in cash but had the opportunity to request a bank account for the cash transfer disbursement. The experiment was conducted in Santiago from October 2012 to October 2013 and included 3,210 individuals.

Using high-frequency administrative data for 12 months before and up to 33 months after the offer was made and household survey data two to three years after the intervention. The take-up rate of the program was 55 percent, and we find that the offering has no impact, on average, on savings at the partner bank nor on downstream outcomes such as assets and trust. However, among the 15 percent of participants who did not have positive account balances at the time of the offering, savings increased by a substantial US$60 in the partner bank, corresponding to 6.7–18.6 percent of total transfers received through PP. The balances increased not only in CuentaRUT accounts but in savings accounts, indicating a deliberate decision to maintain balances in the best available savings instrument.

These results are relevant in Chile, where, despite remarkable economic growth and a relatively developed financial system, in 2021 only 31 percent of the population aged 15 years or

older and 27 percent of the poorest 40 percent had saved in a financial institution (Demirgüç-Kunt et al., 2022).

In recent years, many countries have shifted their cash transfer payment systems to use bank accounts, driven by various factors that suggest potential advantages. For example, CCT programs in Brazil, Colombia, India, Indonesia, Mexico, and Peru have paid their transfers through bank accounts. Among the potential advantages of using bank accounts, the first is that paying transfers through bank accounts can enhance safety and reduce corruption risks as a step toward a secure payment infrastructure that can decrease leakage (Muralidharan et al., 2014). Second, using bank accounts can offer faster and more cost-effective processing for the government. In Chile, there is no evidence of corruption and leakage in disbursement of transfers through cashiers' offices. However, transferring them through bank accounts decreases government expenses by US$0.67 per transaction.

Third, bank account–based cash transfer payments can provide convenience to recipients and reduce travel costs. Instead of dealing with cash, beneficiaries can access their funds securely and conveniently through various banking channels, such as ATMs or online platforms. This eliminates the need to travel to payment centers (Dupas and Robinson, 2013). It also could help protect beneficiaries' savings from the demands of family or friends (Dupas and Robinson, 2013) and solve self-control problems—for example, by decreasing consumption of temptation goods (Bachas et al., 2021).

Finally, adopting bank accounts for cash transfer payments, or eventually payment of all government subsidies, can promote financial inclusion. For individuals who previously lacked access to formal financial services, receiving transfers through bank accounts serves as a gateway to accessing a range of financial services, such as savings accounts, credit, and insurance products.

The literature finds that offering financial access has no or small positive effects on savings (Bachas et al., 2021; Dupas and Robinson, 2013; Pomeranz and Kast, 2022; Prina, 2015). Furthermore, in Chile, low take-up of savings accounts has prevented evaluation of such offerings (Dupas et al., 2018). However, studies focusing on leveraging CCT programs to enhance financial outcomes (Aker et al., 2016, in Niger and Masino and Niño-Zarazúa, 2020 in Mexico) show potential positive impacts.

Other studies highlight the positive results of supplementary features to savings accounts, such as debit cards for building trust, commitment devices (Ashraf et al., 2006; Brune et al., 2017);

(Banerjee et al., 2023); (Dupas and Robinson, 2013; Somville and Vandewalle, 2018), reminders (Karlan et al., 2016), and peer groups (Kast et al., 2018).

Our paper is consistent with both sets of results. We find no overall effect on total savings when offering the transfers through bank accounts. But for the subgroup of individuals who were not actively using accounts or did not have them, receiving the transfers through a bank account had a positive effect.

We find that individuals that previously had positive bank balances increased their savings over time, independently of whether they were offered CC. But for those that did not have positive balances, only those that were offered CC increased their savings. The level of savings achieved by this group is less than a quarter of the level achieved by those that previously had savings. Furthermore, the increase in savings over time of the group with a previous positive balance is larger.

Our study makes three contributions to the literature. First, we add new evidence from Chile to the scarce literature on the effect of bundling subsidies and bank accounts. Aker et al. (2016) use a randomized control trial in Niger to evaluate the effect of changing payment from cash to m-transfers, but in a different context (per capita GDP in 2021 was US$590 in Niger but US$16,265 in Chile[1]) and without a partnering bank that offers multiple financial services. Using survey data, they evaluate results only in the receiving account. Our results, using survey and administrative data to study the intervention's impact in all bank accounts, show that incorporating a broad set of savings instruments is crucial in analyzing the program's effects. Masino and Niño-Zarazú (2020), using national survey data and a quasi-experimental design, study the effect of electronic payment in Mexico's CCT program and find a decrease in informal savings and an increase in the use of savings to cope with shocks. Our use of administrative data and a designed survey instrument to test outcomes and mechanisms allows us to document the impact on formal and total savings.

Our second contribution concerns the scalability of savings-incentives interventions. We analyze an intervention based on a bank account and transfers that already existed. The program only used them in a cost-effective way. It did not increase costs to the government but in fact decreased them and may have decreased participants' transportation costs, making it scalable and sustainable.

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[1] World Development Indicators, current US$.

Third, we collected survey data to test different outcomes suggested in the literature. We find no effect of the program on informal savings, trust in the implementing bank, financial knowledge, expenditures on temptation goods, or fear of theft. We observe an increase in knowledge of bank account costs.

The paper is divided into five sections. The next section describes the intervention, the third describes the empirical strategy, the fourth presents the results, and the fifth concludes.

2. The Intervention and Experiment Design

2.1 The Chile Cuenta Program

In collaboration with the Chilean government and BancoEstado, we studied the impact of changing the cash transfer disbursement method in Chile. Our evaluation focused on PP, which targets the ultrapoor. Prior to our experiment, beneficiaries received their transfers in cash, which were distributed by Cajas de Compensación, private nonbanking institutions affiliated with the Chilean social security system. Beneficiaries had to go to the institution each month.

PP is a 24-month program that provides psychosocial support and monetary subsidies. Beneficiary families receive visits from a professional, who provides psychosocial assistance and connects the family with a wider network of social support. The monetary subsidies vary throughout the program duration. During the first 6 months, the transfer is set at US$16. From month 7 to month 12, the transfer is US$12. From month 13 to month 18, it is US$9. For months 19 to 24, families receive the Subsidio Unico Familiar (Family Subsidy), which was US$16 per month in 2017. After completing the program, families that meet predetermined goals continue to receive a monthly transfer for 36 months, equal to the transfer received during months 18 to 24 of PP. Participating families also have preferential access to other subsidies. Consequently, the total received transfers may surpass those specified by PP.

In collaboration with the Ministry of Social Development, a pilot program of Chile Cuenta (CC) was conducted prior its widespread implementation. The program's objective was to enhance access to the formal financial sector for the vulnerable population and in turn improve budgeting practices, savings, responsible borrowing, and investment among participants. Our research team partnered with the ministry to randomize the program's offering and analyze its outcomes.

As part of CC, PP beneficiaries were given the option to receive their transfers through direct deposit into their *CuentaRUT* accounts instead of receiving cash. Eligibility criteria for CC

were receiving cash transfers from PP, being at least 18 years of age, presenting a copy of their identity card, and signing a consent form to change their payment method and open a CuentaRUT account if they did not have one. All of CC participant's subsidies (not only PP subsidies) were received in a CuentaRUT account if they accepted the offer to participate in CC. The CuentaRUT accounts, which were opened for beneficiaries who did not already have one, do not involve any interest or opening cost. However, there are transactional costs associated with them.[2]

2.2 Experimental Design

For the evaluation, the research team, in collaboration with the Ministry of Social Development, chose five municipalities[3] in greater Santiago based on two criteria: i) sufficient physical capacity in BancoEstado's branches to accommodate customers and ii) enough families participating in PP to allow us to implement the evaluation.

The treatment group was provided with the option to receive transfers through a bank account, whereas control group participants had to request this option if they desired it. We stratified the sample on age,[4] social security index score (SSI),[5] duration of program participation, and municipality. Stratifying by age addressed concerns related to older beneficiaries' familiarity with banking systems, while SSI indicated vulnerability and potential financial access. The duration of program participation reflected the remaining transfer period, and municipality addressed variations in banking facilities' availability across locations.

The research team randomly selected individuals to participate in CC. Selected beneficiaries were visited by *apoyos familiares* at their home or workplace. These visits aimed to provide information about the program, emphasize the benefits of having a bank account, and explain the advantages of receiving transfers in a bank account.

The program offering spanned 13 months, from October 2012 to October 2013 (detailed monthly offering data can be found in Appendix Table 1).

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[2] CuentaRUT accounts are provided by BancoEstado, the largest financial institution in Chile and one known for its broad coverage and focus on serving low-income populations. These accounts have per-transaction costs, varying based on the type and location of the transaction. The fee structure can be found at https://www.bancoestado.cl/bancoestado/inteditorformularios/genera.asp?datos=167. To alleviate these transaction fees, the government provided a monthly subsidy of Ch$700 (approximately US$1.5) during the program. In this case, participants had to consent to opening a bank account, visit a bank branch to pick up the account card, and sign the final documents.

[3] Conchalí, Maipú, Peñaflor, Puente Alto, and San Bernardo.

[4] Three age groups were defined: under 30 years, 30 to 44 years, and over 44 years.

[5] The social security index measures household vulnerability and is the government main targeting instrument.

A total of 3,210 individuals participated in the study, with 803 assigned to the control group. In Table 1, we see some contamination in the control group, with 36 individuals being offered CC (4.5 percent) and 32 of them accepting the offer (4.0 percent). In the treatment group, the program was offered to 2,130 individuals (88.5 percent), and 1,315 chose to enroll in CC, resulting in a take-up rate of 55 percent. Columns (3) and (4) show the figures for groups with and without savings balances at baseline (zero balance throughout the pre-offering period). Take-up is higher for those with prior savings balances (56 percent vs 45 percent). The main reason for not accepting CC was a preference for cash withdrawals (31.2 percent), followed by concerns about the charges associated with CuentaRUT (21.4 percent) and lack of information on how and where to use CuentaRUT (10.7 percent).

2.3 Data and Descriptive Statistics

We use a combination of administrative data from BancoEstado, a follow-up household survey, and baseline demographic data from the Ministry of Social Development. The bank data cover November 2011 to February 2016, including one year before the intervention and three years following its implementation. We have 29 months of administrative data after the intervention for the entire sample and 33 months of data for 91 percent of the participants. As mentioned, the households that graduated from PP could receive subsidies until 36 months after the intervention, so our analysis considers ongoing transfer receipt for these households.

The household survey was conducted two to three years after the offering of CC, between December 2015 and February 2016. Because of budget limitations, 1,614 individuals were randomly selected for the survey, including all 803 individuals from the control group and 811 individuals from the treatment group (Appendix Table 2). The response rate was 58 percent for the control group and 56 percent for the treatment group, with no statistically significant difference between the two. We examined whether the response rate varied based on observable characteristics and their interaction with the treatment assignment. Only the social security index score had a statistically significant effect on response (see Appendix Table 3). Consequently, we included the score in all our regression models to estimate the treatment effect.

In Table 2 we study the balance between the treatment and control groups. In Panel A we analyze the BancoEstado data before the program offering. The average monthly balances in savings accounts were US$126 for the control group and US$137 for the treatment group. For

monthly CuentaRUT balances the figures were US$15 for the control group and US$13 for the treatment group. Although we lack data on whether individuals had a CuentaRUT or a savings account before the program, we can calculate the percentage of individuals that had positive balances in CuentaRUT or savings accounts prior to the intervention (Panel B). In the control group, 54 percent of individuals had positive balances in a CuentaRUT before treatment, while in the treatment group the figure was 52 percent. Regarding savings accounts, 72 percent of the control group had a positive balance, compared to 73 percent in the treatment group. We also calculated the number of individuals who had positive balances in CuentaRUT or savings accounts prior to the offering, which was 85 percent for both the treatment and control groups. All these figures are balanced across treatment and control groups.

Analyzing the administrative data from the Ministry of Social Development (Panel C in Table 2), we observe that, on average, 85 percent of the sample consists of female participants who are around 36 years old and the average household size is 3.7 members. These variables are balanced between the treatment and control groups, except for the number of children aged 0 to 5 years. Consequently, we include this variable in all our estimations presented in the subsequent section. Finally, we conducted an F-test of differences for all variables, and the results indicate no statistical differences between these two groups across all variables (Panel D in Table 2). This further supports the comparability and balance of the two groups.

3. Empirical Strategy

Our empirical strategy relies on the random allocation of eligible individuals to the treatment or control group. To analyze the intervention's impact, we employ a basic regression model based on the following equation:

$$Y_i = b_0 + b_1 T_i + b_2 Y_{i,pre} + S_i + \varepsilon_i, \tag{1}$$

Here, Y_i is the outcome of interest (for example, savings, debt) for individual i; T_i is a binary variable indicating treatment assignment; $Y_{i,pre}$ is the average of the dependent variable before the treatment began (if available); and S_i represents strata fixed effects, offering date, calendar-month fixed effects, and the unbalanced variable (that is, the number of children aged 0 to 5 years).

Additionally, we include SSI, as it predicts attrition.[6] Robust standard errors are reported. The treatment parameter can be interpreted as an intent-to-treat effect. We also use equation (1) to perform a monthly balance test using administrative data for the 12 months before the offering. In this case, we exclude $Y_{i,pre}$ from the estimation.[7]

To examine potential variations in treatment effects based on baseline bank balances, we extend equation (1) by adding an indicator variable for positive balances at baseline and its interaction with the treatment assignment. The coefficient of the treatment assignment interacted with the positive balance indicator is of particular interest in this analysis.[8]

The analysis is conducted based on the offering date. However, we have the actual offering date for only 81 percent of the treatment group. For the remaining individuals in the treatment group who either exited the program or relocated before the offering, we imputed the offering date using the median offering date of individuals from the same municipality and the same PP cohort.[9] A binary dummy variable indicating whether the offering date was imputed is included in all regression models.

4. Results

4.1 Average Effects

First, we analyze the impact of offering direct deposit payment using the household survey, which provides a broader range of variables compared to the administrative data. These variables include informal savings, retail debt, investment, and trust. The results are presented in Table 3. In Panel A, we find that the treatment group showed a 12-percentage point (pp.) increase in individuals with CuentaRUT compared to the control group, of whom 75.4 percent had a CuentaRUT account.

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[6] The strata consider four groups of SSI. We also control for the SSI index, a continuous variable. This variable provides information within each strata cell.

[7] We perform the analysis without including the average of the dependent variable before the offering and the results are similar and available upon request.

[8] Individuals without prior balances tended to be older, more likely to be male, and resided in larger households compared to those who had balances before the intervention.

[9] If no one from the same cohort and municipality was offered the program, we did not impute an offering date. There are 15 individuals from the treatment group who were excluded from the analysis for this reason. Similarly, for the control group, using the same procedure we imputed an offering date that participants would have had if they had been in the treatment group. We could not impute an offering date for 7 individuals in the control group, and they were also excluded from the analysis.

Furthermore, individuals in the treatment group reported more frequently receiving subsidies in their account than individuals in the control group, with a difference of 31 pp. In the control group, 19 percent reported receiving subsidies in their CuentaRUT accounts, which could be because the survey took place two to three years after the intervention, so some individuals in the control group may have been offered the option to receive subsidies in bank accounts after the intervention ended. Overall, we find that the treatment was implemented correctly.

The analysis in Table 3, Panel B reveals no significant impact on savings. The treatment group shows a nonsignificant decrease of US$8 in formal savings compared to the control group, along with a nonsignificant increase of US$1 in informal savings. When considering total savings (formal and informal), the effect is also nonsignificant: a decrease of US$5. These effects are also economically small, considering that the average savings in the control group were US$157.9.[10] We also examine the effect on having retail card debt, which is the most common type of debt in this population, with 43.3 percent of the control group having it. Although the treatment group exhibits a slightly higher probability of having retail card debt, there is no significant difference between the treatment and control groups, and the coefficient is relatively small.

The finding that the treatment does not reduce informal savings or increase formal savings contradicts previous research indicating that similar interventions decrease informal savings (Masino and Niño-Zarazúa, 2020) and runs counter to the expected result that this type of intervention could also increase formal savings. Nonetheless, we show below that the program does increase savings for individuals who had no prior account balances before the intervention.

We now consider the program's effects on downstream outcomes in Table 3, Panel C. Considering potential effects on investment, while we observe a decrease in total assets (US$25), the effect is nonsignificant. This finding aligns with the previous finding of no effect on total savings.

We also examine whether the program influenced trust in BancoEstado, in light of the argument by Bachas et al. (2021) that debit cards can enhance trust in bank accounts for CCT beneficiaries. We employ a dummy variable, with 1 indicating high trust in BancoEstado and 0 indicating little or no trust. Our findings suggest that the program had no impact on trust, with a small and nonsignificant coefficient. Notably, BancoEstado already enjoys relatively high

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[10] Since the amounts of savings presents large variances, we also study the impact on the probability of having positive balances and likewise find no impact.

trust, with 39 percent of the control group expressing trust in the institution, compared to 11 percent for other banks.

In addition, we examine whether the program affected participants' fear of theft. Treated individuals no longer need to withdraw and carry large amounts of cash, which could reduce their fear of theft. In the follow-up survey, participants who entered the CC program were asked about their favorite aspect of it. The primary response was the enhanced sense of security, particularly the reduced risk of being robbed by not receiving resources in cash.[11] We use a dummy variable for which 1 indicates high fear of being robbed and 0 indicates low or no fear. We do not find a significant impact of the program on participants' fear of theft.

We investigate the program's impact on temptation-related expenses, following the finding of Bachas et al. (2021) of reduced expenses with debit card monitoring. Our results indicate a small, nonsignificant negative impact. Additionally, we examine the effect of direct transfers to CuentaRUT on transportation costs, as participants no longer needed to visit a branch for withdrawals. Although our findings suggest a potential 13 percent decrease in transportation costs, this effect lacks statistical significance.

Finally, we investigate the impact of the program on financial knowledge, considering the potential enhancement resulting from access to financial products (Hilgert et al., 2003). We find that 13 percent of individuals in the control group mistakenly believe that CuentaRUT does not have associated costs, while this figure decreases by 5 pp. in the treatment group. This indicates improved knowledge of CuentaRUT rules among treated individuals. However, when assessing knowledge of compound interest, we find no significant effect.[12] These results suggest that the program enhances only aspects of financial knowledge directly related to the account used.

Next, we estimate the effect of CC using data from BancoEstado. In Figure 1, we present the effects of CC on CuentaRUT balances (Panel A), savings account balances (Panel B), and the combined balances of both account types (Panel C). We observe that these variables were balanced before the program offering.

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[11] Among all respondents, 41.3 percent mentioned the enhanced sense of security, 31 percent indicated more convenience in withdrawing cash from various locations, and 11.1 percent appreciated the faster access to money without waiting in queues. The least liked aspect of the program was the charges for transfers and balance inquiries, mentioned by 63 percent of participants.

[12] The variable, *Compound interest*, is a binary variable indicating a preference for an annual interest rate of 24 percent over a monthly interest rate of 2 percent.

We find a positive impact on CuentaRUT balances (Figure 1, Panel A). This effect is partially mechanical, as participants in the treatment group who accepted the offer received their subsidies through direct deposit in these accounts. The effect remains statistically significant over the 24-month period following the program's offering, ranging from US$10 to US$20. This range is similar to the CuentaRUT account balances at baseline and aligns with the monthly PP transfer amount, which varies between US$9 and US$16 depending on the month.[13] As mentioned, after the 24 months of the PP program, households had the opportunity to receive transfers for an additional 36 months. Using survey data, we find that 53 percent of households received this additional transfer. The lower transfer rate, compared to the 100 percent at baseline, and the fact that 19 percent of individuals in the control group receive transfers in a CuentaRUT account at the endline may explain the diminishing effect of the program beyond 26 months after the offering.

For savings accounts (see Figure 1, Panel B), we observe similar results to the survey data. The effects on saving balances are close to zero for the first 9 months after the offer and then become negative, ranging from US$2 to US$15, although these effects are not statistically significant. When considering the combined balances for all accounts (Panel C), we find a positive but nonsignificant effect for the first 12 months and from months 21 to 30 after the program was offered. These results suggest that the direct deposit did not lead to higher overall savings and that the effect on the account receiving the deposit disappears in the long term. Both the treatment and control groups show a consistent increase in savings balances over time. Balances gradually rise from approximately US$170 around the time of the offering to approximately US$230 around 33 months after the offering.[14]

We also investigate how the treatment affected individual transactions, focusing on the number of withdrawals from and deposits to CuentaRUT and savings accounts. In Figure A1, Panel A, we observe that treated individuals had more withdrawals from CuentaRUT. These effects are mostly significant for up to 27 months after the offering, with an average of 0.4 more withdrawals compared to the control group. This outcome may be partly mechanical, as transfers

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[13] We cannot identify the cash transfer in our data, but we can approximate the mechanical effect using the take-up rates. Since the differences in take up is 50 percent, balances should increase between US$ 5 and US$ 8 due to the transfers. This mechanical effect constitutes less than half of the total effect.

[14] We analyzed the remaining time in the cash transfer program to investigate whether increased income (attributed to the number of transfers) or habit formation impacted the results. Larger effects were observed for individuals closer to completing the program, indicating that income or habit formation effects do not significantly influence our findings.

go directly to CuentaRUT, requiring individuals to make withdrawals to access their transfers. Nonetheless, if individuals already made withdrawals before the offering, any increase might be in the amount withdrawn rather than the frequency of withdrawals.[15] Regarding CuentaRUT deposits (Figure A1, Panel B), we generally find a small positive effect, although it is smaller than the effect on withdrawals and significant in fewer instances. These findings suggest that the receipt of transfers through CuentaRUT primarily stimulates increased usage through more withdrawals rather than more deposits.

We also study the impact on the use of savings accounts. As shown in Table 2, individuals tend to have larger balances in savings accounts than in CuentaRUT and are more likely to have positive balances in savings accounts than in CuentaRUT at the baseline. Panels C and D of Figure A1 show that the treatment decreased the number of both withdrawals and deposits in savings accounts. The effect on withdrawals is mostly significant between 17 and 23 months after the offering, with individuals in the treatment group making, on average, 0.1 fewer withdrawals compared to the control group. The effects of deposits on savings accounts are mostly negative, with individuals in the treatment group making on average 0.04 fewer deposits compared to the control group. The figures clearly show more activity in CuentaRUT compared to savings accounts. Furthermore, the opposite directions of transactions (fewer in savings accounts, more in CuentaRUT) suggest substitution in the use of these products.

In summary, our findings indicate that offering subsidies through debit accounts leads to increased balances within these accounts. However, this increase does not extend to balances in savings accounts, suggesting that individuals tend to retain a portion of their cash transfers in their debit accounts without major changes in their spending behavior. Consequently, we do not observe substantial changes in downstream outcomes. One possible explanation is the widespread access to financial services in Chile, which might limit the potential for further trust in the financial sector. However, as we discuss next, we observe positive effects for individuals who previously had no balances on CuentaRUT and savings accounts.

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[15] Since the difference in take-up was 50 percent, the mechanical effect should be 0.5, which is similar to the total effect. On average, 26 percent of individuals in the control group made withdrawals in any given month, which suggests that there was an increment of CuentaRUT use and not only larger withdrawals.

4.2 Effects by Baseline Use of Bank Accounts

Finally, we study how the treatment effects vary depending on individuals' prior access to the financial system. To measure use of the financial system, we define an indicator based on whether individuals had positive balances in either CuentaRUT or savings accounts, where individuals defined as having no access had zero balances for all periods before the offering. As shown in Table 2, 15 percent of the sample had zero balances in both types of accounts. This group could particularly benefit from CC, as having their subsidies deposited in CuentaRUT could nudge them to start using bank accounts, especially if they did not have one before.[16] Individuals with no previous balances were older, male and lived in households with older adults.

The results are presented in Figure 2, differentiating between participants' baseline balance statuses. Panel A shows a positive effect on CuentaRUT balances for both groups (with and without positive balances before the offering). This effect is statistically significant for up to 24 months after the offering but not beyond that period. Panel B reports no significant differences in the effect on CuentaRUT balances between the two groups.

Turning to savings accounts, Panel C shows a positive impact of the offering on savings balances for the group without any previous balances. This effect increases over time and becomes regularly significant after 16 months after the offering, with an average increase of US$60. In contrast, the effect is not significant for the group with positive balances before the offering. Furthermore, Panel D indicates that the differences in the effects between the two groups (with previous balance minus without previous balance) are mostly significant after 15 months after the offering.

Considering all account balances (CuentaRUT and savings accounts), Panel E shows a positive effect of the offering on total balances for the group without a previous balance. This effect persists for almost 30 months, while no significant effect is observed for the group with positive balances before the offering. Furthermore, Panel F highlights that the differences in effects between the two groups are significant from 12 to 33 months after the offering.

These findings highlight the program's effectiveness in promoting savings among individuals who previously had no balances in bank accounts. The subsidies not only increased balances in CuentaRUT, which affected both groups equally and can be attributed to the automatic

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[16] Account opening dates are not available in the administrative data, and therefore we cannot distinguish between having no account and having an account with zero balance.

deposit mechanism, but also led to increased balances in savings accounts. This is particularly notable considering that the CC program did not have any automatic mechanism to deposit into or open savings accounts. Therefore, the program successfully facilitated savings for individuals previously unable to use financial instruments.

One possible explanation is that access to CuentaRUT reduces the likelihood of spending on unplanned expenses, enabling greater long-term savings (Aker et al., 2016). Another potential mechanism is the reduction of fund leakage, as family members are unaware of the timing and percentage of subsidies spent (Aker et al., 2016). In the endline survey, we asked individuals about the main advantage of receiving subsidies in CuentaRUT. Individuals mentioned the lower risk of theft as a main advantage, but only 2 percent mentioned the opportunity for more efficient expense organization. This suggests that better planning does not explain the observed increase in account balances.

The observed increase of US$60 in savings, which represents approximately 3 percent of participants' annual income based on the baseline survey, is particularly noteworthy when compared to similar interventions (Bachas et al., 2021). This savings increase represents 6.7–18.6 percent of the total transfers received throughout PP. The prolonged delivery of transfers, spanning at least 24 months and potentially up to five years, might enable individuals to convert a portion of their transfers into savings, contributing to the substantial impact observed.[17]

While significant, the increase in savings does not enable the group with no previous balances to catch up with the group that already had balances. Figure A2 shows that participants without previous balances reach a plateau in their savings levels around month 20, indicating a persistent difference. Therefore, while the CCT program allows this group to save more, it does not bring them to the same level of savings as the other group. This indicates that the savings targets or opportunities may vary among these groups. Our results suggest the potential to enhance savings for individuals and households who did not have formal savings, in particular older individuals; therefore interventions need to be tailored to different groups' needs.

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[17] Using survey data, we found a significant drop in informal savings for those with baseline balances, while those without a balance showed a positive but statistically insignificant effect. There is no statistically significant effect on total savings, despite the point estimates aligning with administrative data results. These findings suggest that the rise in savings balances identified in administrative data for those without baseline balance is not due to a decline in informal savings.

5. Conclusion

Our study used an experimental design to examine the impact of a cost-saving intervention that uses existing government monetary transfers and financial products to transition from cash payments to direct deposit into a bank account for monetary subsidies.

We showed that the program had a high take-up rate but no average effects on financial outcomes (saving and debt), investment, trust in the implementing bank, financial knowledge, expense on temptation goods, or fear of theft. We observed an increase in knowledge of the receiving account's rules. When we analyzed the treatment effect on individuals who had no previous balances in the partner bank, we observed large increases in account balances, not only in the account in which the transfer was deposited but also in savings accounts. The effects are large compared to other interventions in the literature, and the program saves money for the government. It is rare to come across interventions that not only potentially improve financial outcomes but also reduce government spending. At a broad level, our findings suggest that savings can be stimulated with financial inclusion but that several interventions need to be bundled together and need to be catered to particular contexts to be effective.

References

Aker, J.C. et al. 2016. "Payment Mechanisms and Antipoverty Programs: Evidence from a Mobile Money Cash Transfer Experiment in Niger." *Economic Development and Cultural Change* 65(1): 1–37. https://doi.org/10.1086/687578

Ashraf, N., D. Karlan, and W. Yin. 2006k. Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines." *Quarterly Journal of Economics* 121(2): 635–672.

Bachas, P. et al. 2021. "How Debit Cards Enable the Poor to Save More." *Journal of Finance* 76(4): 1913–1957. https://doi.org/10.1111/jofi.13021

Banerjee, A., C. Martínez, and E. Puentes. 2023. "*Better Strategies for Saving More: Evidence from Three Interventions in Chile*." Documento de Trabajo 545. Santiago, Chile: Universidad de Chile, Departamento de Economía. https://econ.uchile.cl/es/publicacion/Better-Strategies-for-Saving-More-Evidence-from-Three-Interventions-in-Chile

Brune, L. et al. 2017. "Savings Defaults and Payment Delays for Cash Transfers: Field Experimental Evidence from Malawi." *Journal of Development Economics* 129: 1–13. https://doi.org/10.1016/j.jdeveco.2017.06.001

Demirgüç-Kunt, A. et al. 2022. *The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19*. Washington, DC, United States: World Bank Publications.

Dupas, P., and J. Robinson. 2013. "Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya." *American Economic Journal: Applied Economics* 5(1): 163–192. https://doi.org/10.1257/app.5.1.163

Dupas, P. et al. 2018. Banking the Unbanked? Evidence from Three Countries." *American Economic Journal: Applied Economics* 10(2): 257–297. https://doi.org/10.1257/app.20160597

Hilgert, M., J. Hogarth, and S. Beverly. 2003. "Household Financial Management: The Connection between Knowledge and Behavior." *Federal Reserve Bulletin* 89: 309–322.

Karlan, D. et al. 2016. "Getting to the Top of Mind: How Reminders Increase Saving." *Management Science* 62(12): 3393–3411. https://doi.org/10.1287/mnsc.2015.2296

Kast, F., S. Meier, and D. Pomeranz. 2018. "Saving More in Groups: Field Experimental Evidence from Chile." *Journal of Development Economics* 133: 275–294. https://doi.org/10.1016/j.jdeveco.2018.01.006

Masino, S., and M. Niño-Zarazúa. 2020. "Improving Financial Inclusion through the Delivery of Cash Transfer Programmes: The Case of Mexico's Progresa-Oportunidades-Prospera Programme." *Journal of Development Studies* 56(1): 151–168. https://doi.org/10.1080/00220388.2018.1546845

Muralidharan, K., P. Niehaus, and S. Sukhtankar. 2014. *Payments Infrastructure and the Performance of Public Programs: Evidence from Biometric Smartcards in India*. Cambridge, United States: National Bureau of Economic Research.

Pomeranz, D., and F. Kast. 2022. "Savings Accounts to Borrow Less Experimental Evidence from Chile." *Journal of Human Resources* 0619. https://doi.org/10.3368/jhr.0619-10264R3

Prina, S. 2015. "Banking the Poor via Savings Accounts: Evidence from a Field Experiment." *Journal of Development Economics* 115: 16–31.

Somville, V., and L. Vandewalle. 2018. "Saving by Default: Evidence from a Field Experiment in Rural India." *American Economic Journal: Applied Economics* 10(3): 39–66. https://doi.org/10.1257/app.20160547

Table 1. Take-up

Survey	[1] All	[2] Total	[3] Treatment Had Balances before the offering	[4] Did not have balances before the offering	[5] Control
Total assigned	3,210	2,407	2,051	356	803
Program offering	2,166	2,130	1,811	319	36
%	66.4	88.5	88.3	89.6	4.5
Accept Offer	1,315	1,315	1,154	161	32
%	41.0	54.6	56.3	45.2	4.0

Note: Column [1] reports the number of people to which the treatment was offered and those who participated in the program. The percentages in column [1] were computed with respect to the total assigned. Columns [2] and [5] report statistics on the take-up of the program by treatment arm. Columns [3] and [4] report statistics on the take-up of the program for individuals in the treatment group depending on whether they had positive balances prior to the offering. The percentages of the program offering row in columns [2] and [5] where computed with respect to those people assigned to the treatment group. The percentages of the "accept offer" row in columns [2] to [5] were computed with respect to those people assigned to the treatment and control group, respectively.

Table 2. Summary Statistics and Balance

Product Category	[1] N obs	[2] Control	[3] Treatment	[4] p-values Treatment=Control
		Level		p-values
Panel A: Monthly average balances				
Balance in Savings accounts	3,210	125.7 (247.3)	136.7 (261,8)	0.686
Balance in CuentaRUT	3,210	14.7 (42.4)	12.8 (38.5)	0.506
Total balance (savings acc. & CuentaRUT)	3,210	147.4 (273.5)	(155.1 (283.7)	0.837
Panel B: Probability (>0)				
Balance in savings accounts	3,210	0.72 (0.45)	0.73 (0.44)	0.709
Balance in CuentaRUT	3,210	0.54 (0.50)	0.52 (0.50)	0.194
Total balance (savings acc. & CuentaRUT)	3,210	0.85 (0.36)	0.85 (0.36)	0.617
Panel C: Socioeconomic data				
Age	3,209	36.11 (10.97)	35.66 (10.92)	0.273
Gender (Male=1)	3,210	0.15 (0.36)	0.15 (0.35)	0.589
Household-head gender (Male=1)	3,210	0.13 (0.33)	0.14 (0.35)	0.192
SSI score	3,210	2471 (712.1)	2471.58 (754.9)	0.688
Children 0–5 years old	3,210	0.93 (0.75)	0.96 (0.88)	0.0155
Children 6–13 years old	3,210	0.79 (0.80)	0.74 (0.82)	0.571
Children 14–19 years old	3,210	0.47 (0.73)	0.46 (0.72)	0.754
Adults 20–29 years old	3,210	0.61 (0.67)	0.60 (0.67)	0.875
Adults 30–45 years old	3,210	0.59 (0.62)	0.60 (0.66)	0.114
Adults 46–60 years old	3,210	0.21 (0.47)	0.21 (0.48)	0.251
Adults older than 60 years old	3,210	0.06 (0.26)	0.05 (0.26)	0.214
Household size	3,210	3.67 (1.50)	3.64 (1.68)	0.232
Panel D: P-values of F-test				
Treatment vs. C		0.559		

Note: Column [1] shows the number of observations. Columns [2]–[3] show the mean value for the control and treatment groups, respectively. Column [4] reports the p-values of the regressions of each variable on treatment assignment controlling by strata (defined by a socioeconomic index computed by the government using the Social Security Index score, municipality of residence, age ranges, and cohort) and fixed effects by offering date and municipality. Variables in Panel A are in US dollars, using the exchange rate of January 2015 (1US$=620.91 Chilean pesos). We use robust standard errors. Panel A and B data are from the partner's bank administrative-products data. Panel C data are from the Ministry of Social Development. Sample size varies because of missing values.

Table 3. Intent-to-Treat Effects of Chile Cuenta on Savings Balance (Survey data)

|	[1] Control Mean	[2] Treatment	[3] P-value	[4] Sample Size
Panel A: Mechanisms				
Has Cuenta RUT	0.754	0.116***	0.001	917
	(0.431)	(0.034)		
Has Received Subsides in Cuenta RUT	0.191	0.313***	0.000	918
	(0.394)	(0.038)		
*Panel B: Savings and Debt (*US dollars*)*				
Formal Savings	149.1	-8.148	0.775	916
	(341.1)	(28.511)		
Informal Savings	8.906	1.079	0.776	916
	(41.78)	(3.790)		
Total Savings (including informal savings)	157.9	-4.982	0.863	916
	(346.6)	(28.857)		
Debt in Retail cards	0.433	0.040	0.350	917
	(0.496)	(0.043)		
Panel C: Downstream Outcomes				
Housing and Business Assets (US dollars)	753.8	-24.999	0.853	918
	(1546)	(135.114)		
Fear of theft	0.685	0.018	0.645	917
	(0.465)	(0.039)		
Trust in Banco Estado	0.389	0.024	0.579	918
	(0.488)	(0.044)		
Expense on Temptation Goods (US dollars)	5.780	-0.376	0.723	896
	(13.34)	(1.059)		
Commuting cost to get the transfer (US dollars)	1.958	-0.254	0.289	830
	(2.728)	(0.239)		
Compound Interest	0.125	0.004	0.894	918
	(0.331)	(0.029)		
There are no costs to use Cuenta RUT	0.131	-0.051*	0.0540	915
	(0.338)	(0.027)		

Note: Column [1] reports the control group mean and standard deviation at Chile Cuenta's follow-up survey. Column [2] reports the intent-to-treat (ITT) estimate and standard error (in parentheses) of the program assignment at Chile Cuenta's follow-up survey. Column [3] reports the p-value of the null hypothesis that Treatment=Control. Variables are measured in US dollars, using the exchange rate of January 2015 (1US$=620.91. Fear of theft is a dummy variable equal to 1 if the responded answered they are very or very much afraid of being robbed and zero if they are not afraid or litter afraid. Trust in Banco Estado is a dummy variable equal to 1 if the respondent says they have very or very much trust in Banco Estado, and 0 for no trust or little trust. Expenditure on temptation goods include alcohol, cigarettes and entertainment. Compound Interest is a dummy variable equal to 1 if the respondent prefers a yearly interest rate of 24 percent to a monthly interest rate of 2 percent. There are no cost to use CuentaRUT is a dummy variable equal to 1 if the respondent says that there are no cost associated with using a CuentaRUT. Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score, municipality of residence, age ranges and cohort) and fixed effects by offering date and municipality. We also control for SSC Score, as it is a significant predictor for attrition in our sample, and a dummy to account for the number of children between 0 and five years old, which is unbalanced. We use robust standard errors. The sample size varies due to missing values. *** p<0.01, ** p<0.05, * p<0

Figure 1. Intent-to-Treat Effects Using Administrative Data from Chile Cuenta
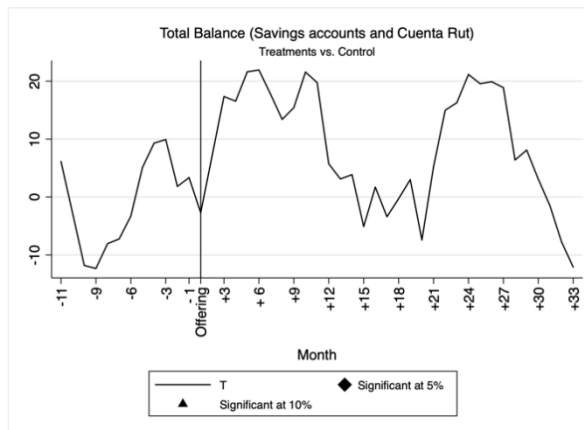
Panel A: Balances in CuentaRUT Accounts
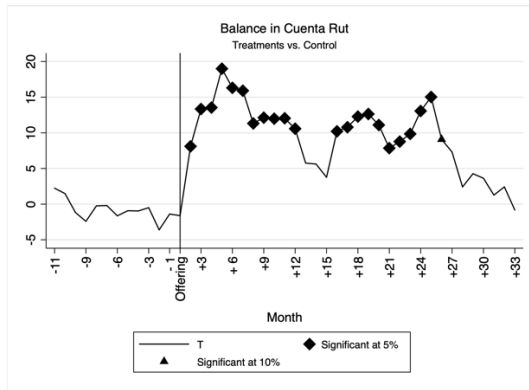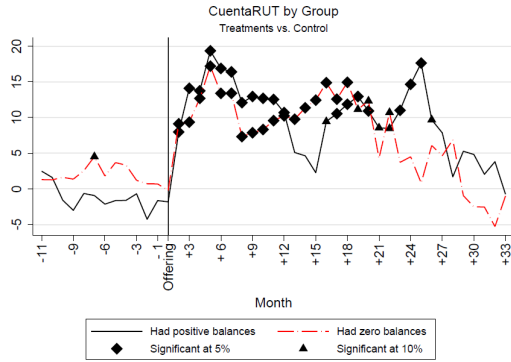
Panel B: Balances in Savings Accounts
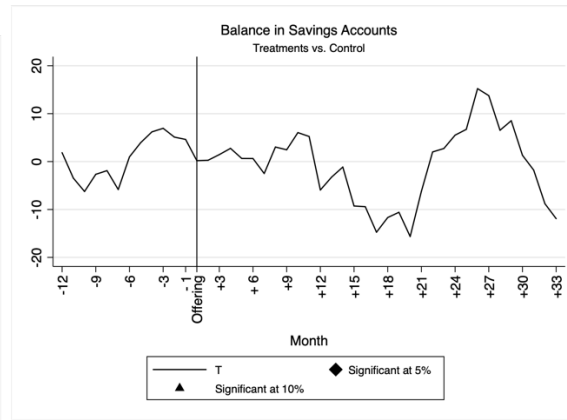
Panel C: Total Balance (Savings and CuentaRUT Accounts)

Note: The figure reports intent-to-treat coefficients using administrative bank data. Panel A reports the coefficients on balance in savings accounts; Panel B reports coefficients on balance in CuentaRUT accounts; and Panel C reports coefficients on total balance (savings and CuentaRUT accounts). All variables are measured in real US dollars using the exchange rate for January 2015. Variables are top-coded at the 99th percentile. All regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Index score, municipality of residence, age ranges, and cohort) and fixed effects for enrollment date. We also control for Social Security Index score (as a significant predictor of attrition in our sample), calendar-month fixed effects, and a dummy to account for the number of children between zero and five years old, which is unbalanced at baseline. In the case of post-enrollment regressions, we also include the baseline value of the dependent variable. We use robust standard errors.

Figure 2. Interaction by Having Balances before the Treatment
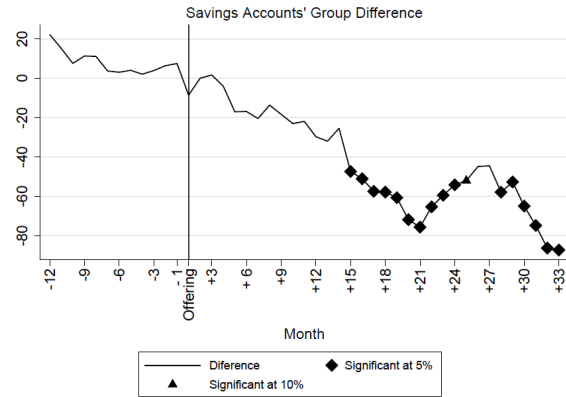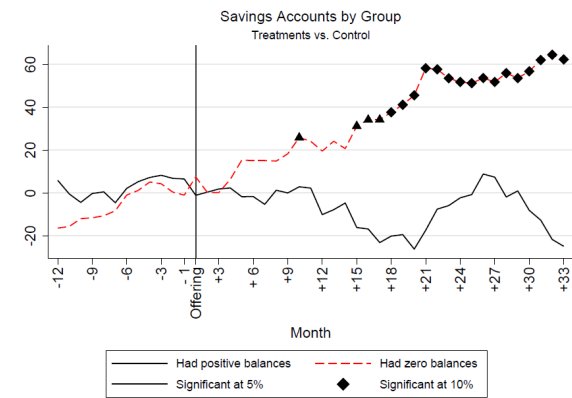
Panel A: CuentaRUT by Group
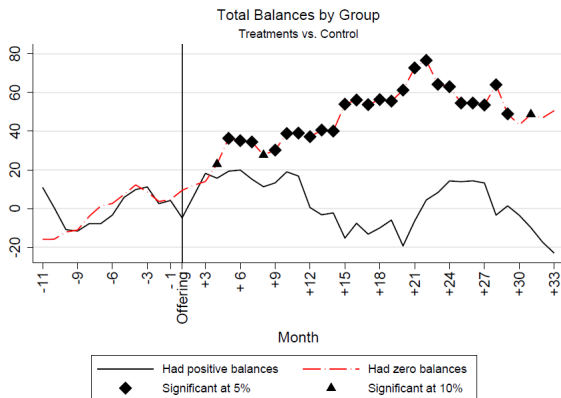
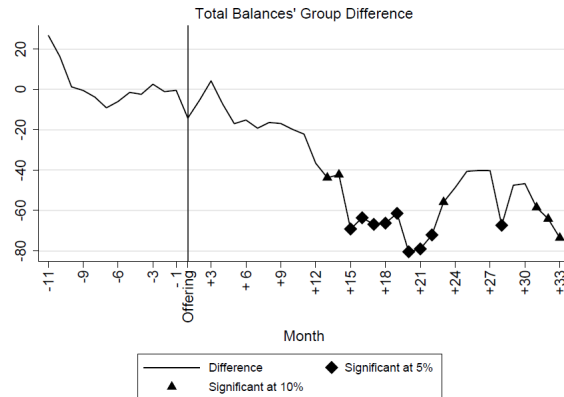Panel B: CuentaRUT Group Difference
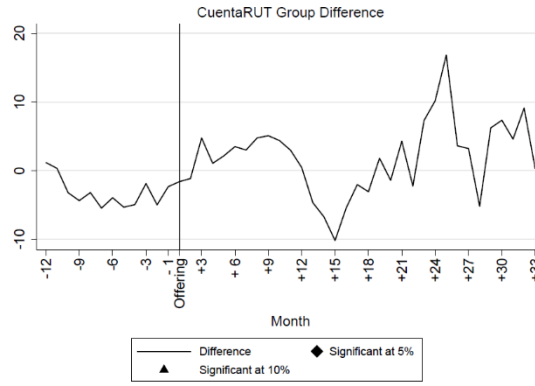
Panel C: Savings Accounts by Group

Panel D: Savings Accounts' Group Difference

Panel E: Total Balances by Group

Panel F: Total Balances' Group Difference

Notes: See notes to Figure 1.