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**Abstract**

The push for adopting digital modes of payment rests on three promises: increased efficiency of transactions, increased financial inclusion, and improvements in the financial well-being of low-income individuals. We experimentally test the extent to which these promises are fulfilled. We exploit the random assignment into an intervention to encourage direct deposits of recurrent government benefits into digital bank accounts in Colombia. Switching from cash to direct deposits reduces disbursement errors and increases access to benefits among eligible beneficiaries. It also increases the ownership of bank accounts, the demand for formal loans, and loan take-up among individuals without a financial history. However, we do not find evidence of improvements in financial well-being across any of our metrics.[1]

**JEL classifications:** D90, H53, I38

**Keywords:** Technology adoption, Social protection, Formal financial products

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# 1 Introduction

Governments increasingly rely on digital financial products to deliver social program payments. During 2020 and 2021, 763 million people around the globe received government-to-person (G2P) transfers digitally (Gentilini, 2022). This transition from cash to digital payments offers three promising possibilities, as digital payments may i) increase the efficiency of the delivery of G2P transfers, ii) further integrate the poorest households into the financial system, and iii) improve their financial well-being. However, there are reasons for skepticism. Not all beneficiaries can adopt digital financial products or use them intensively. Some may apply for loans but fail to obtain or pay them. For others, digital accounts may provide convenience without relaxing financial constraints or changing spending or savings.

Although these three promises are intertwined, their empirical validity has mainly been analyzed in isolation.[2] We leverage the context of a cash transfer program in Colombia implemented at scale and a rich set of administrative records to experimentally study whether switching G2P payments from cash to digital bank accounts improves program efficiency, deepens financial inclusion, and improves the financial well-being of the poorest households.

Specifically, we study the effects of a government phone campaign to encourage beneficiaries of a cash transfer program to switch from cash payments to direct deposits of their monthly transfers into digital bank accounts provided by large commercial banks. The random assignment of beneficiaries to this intervention provides us with plausibly random variation in the adoption of direct deposits holding program eligibility constant. Detailed program administrative records enable us to evaluate the impacts of the transition away from cash on disbursement frictions, and administrative records from one of Colombia's largest credit bureaus enables us to study the effects on account status, credit demand, and loan ownership. Finally, we use survey data to document how individuals use new digital accounts and the potential effects on their well-being.

Our study sample consists of beneficiaries of a cash transfer program that, starting April

[2]For example, previous studies focus on the impacts of the adoption of digital technologies by cash transfer beneficiaries on savings (Bachas et al., 2021; Banerjee et al., 2023) or spending patterns (Aker et al., 2016), but less attention is paid to the impacts on delivery efficiency. Márquez-Padilla and Parker (2024) find that delivering G2P transfers electronically increases the costs that beneficiaries incur to collect their transfers, but it is unclear whether such expenses are offset by further financial inclusion.

2020, delivered monthly payments of CPO$160,000 (USD$120 PPP) to 3 million households classified as poor or vulnerable to poverty by a proxy means test. We analyzed a sample of 17,711 program beneficiaries who were still receiving their transfers in person via bank wires by April 2021. We randomized them into treatment and control groups.[3] The treatment group received encouragement and assistance in opening simplified digital saving accounts and signing up for direct deposit of program payments into these accounts through SMS messages and phone calls.[4]

The intervention aimed at tackling important disbursement frictions. Before the intervention, there was a substantial degree of failed attempts to make payments to beneficiaries in cash in our sample. Forty-three percent of the payment attempts in cash failed, likely because beneficiaries did not pick up the transfers within three months of the payment. In addition, 23% of beneficiaries did not receive any transfers they were entitled to receive.

The intervention effectively induced the transition from cash payments to direct deposits into digital bank accounts. Using administrative records, we find that the intervention increased the probability of ever receiving a transfer payment through direct deposits into a digital bank account by 7.3 percentage points. This effect represents an increase of 73% relative to the control group. Using survey data, we find that the intervention increased ownership of bank accounts by 6.8 percentage points.

The treatment improved the efficiency of program disbursements, but modestly. Within six months of the beginning of the intervention, the probability of successfully receiving at least one transfer increased by one percentage point. This reduced-form effect is small, but the local average treatment effect (LATE) of receiving a transfer through direct deposit is economically meaningful. Using treatment status as an instrument for direct deposits,

[3]The government identified a subset of 120,000 eligible individuals whose program payments were still made in cash by October 2020. We initially drew a sample of 30,000 individuals from this subset and randomly assigned them to the treatment and control groups. The intervention was delayed until April 2021. Several households lost eligibility or already signed up for direct deposits between November 2020 and April 2021. Thus, before beginning the intervention in April 2021, the implementing government agency excluded these participants from the study. The remaining sample consists of 17,711 beneficiaries.

[4]The savings accounts targeted by the treatment had relatively common features. They enabled users to send and receive money, withdraw funds using a wide network of ATMs, request a debit card, pay for purchases at businesses, and make payments to utility companies remotely. There were no fees for maintaining accounts or making payments. They also faced similar restrictions like maximum balance amounts.

we find that switching to direct deposits due to the treatment increases the probability of successfully receiving at least one transfer by 13.9 percentage points and the number of payments successfully received by 2.3. We find a 0.04 decline in the number of cash payment attempts per transfer (a LATE of -0.6), suggesting that the intervention reduced the transaction costs of the program since the fees for cash payments are larger than for direct deposits.

We also analyze how beneficiaries accessed their transfers. The intervention increased the use of ATMs to collect transfers by 7.4 percentage points. This effect is more than 1.3 times larger than the mean of the control group and implies a LATE of 68 percentage points. Roughly 1 out of 3 beneficiaries who were induced to use ATMs to cash out their transfers made only one withdrawal, and we find no effects on an index of usage of digital bank accounts to conduct an array of transactions digitally. We find no effects on the time used to collect the transfers in general, but we find a decline in the probability of spending more than 2 hours to collect the transfers of 2.8 percentage points (LATE of -26.4 percentage points). The results suggest that switching to direct deposits encouraged the use of ATMs. However, it did so without fostering further engagement with digital payments and only reduced the time to access transfers for individuals who spent over two hours to access their transfer.

Analyzing heterogeneity in the take-up of direct deposits reveals an important policy lesson. The individuals with the largest potential benefits from adopting digital technologies may be the least responsive to low-cost scalable government interventions to encourage the take-up of such technologies. At the same time, those with the lowest *gross* returns to switching but with low switching costs may be more responsive. Younger, urban, and more educated beneficiaries respond more to the intervention. In the control group, these individuals are more likely to report that they find it easy to adopt digital technologies. They are also more likely to use digital tools in their daily activities. These patterns may explain why we find no effects on using digital bank accounts to transact digitally, as the compliers were already engaged with these tools.

In contrast, we find that individuals without a financial history were less likely to switch to direct deposits due to the intervention. Two pieces of evidence suggest that they exhibit

high gains from switching. First, without the intervention, they are more likely to experience disbursement errors and are less likely to receive program payments. Second, among switchers, beneficiaries without financial history exhibit a larger LATE of direct deposits on the share of payment attempts that failed (-33 pp), on the number of payments received successfully (4.4), and, more importantly, on the probability of losing program eligibility (-33 pp). We find no evidence of substantial LATEs on these outcomes among individuals with preexisting financial history.

We next explore whether the switch to direct deposits integrated households into formal credit markets. We find that the intervention increased the probability of having a credit inquiry in the credit bureau —a proxy for demand for formal loans— by 1.9 percentage points. This increase is larger for the subsample of individuals without a pre-existing financial history (3 pp. and a LATE of 58 pp.).

We find evidence that the intervention generated small effects on formal loans from commercial banks, but only among individuals without a financial history. Among switchers without a financial history, we find a LATE on the probability of owning a loan of 0.18, roughly 31% of the LATE on credit checks. Thus, the results imply that only 31% of loan applications induced by the switch to direct deposits were accepted. The results suggest that switching to direct deposits *can* integrate households into credit markets but that switching to direct deposits only partially relaxes credit constraints.

One explanation is that a switch to direct deposits, though convenient, does not substantially change how beneficiaries manage their savings and spending. We find no evidence of substantial or significant effects on savings, trust in financial institutions, and other measures of financial well-being, even when we focus on the subset of individuals without a pre-existing financial history. This null effect on savings and other downstream outcomes coincides with recent experimental evidence in the case of mobile-linked bank accounts in Sri Lanka (de Mel et al., 2022).

This paper contributes to understanding the role of financial technologies in improving public service delivery and relaxing financial constraints among the poorest individuals. First, a switch in the mode of delivery of G2P transfers from cash to direct deposits can increase savings (Banerjee et al., 2023) or reduce the costs that beneficiaries incur in accessing

them (Aker et al., 2016), but can also decimate the value of the transfers due to bank fees (Márquez-Padilla and Parker, 2024). We contribute to this debate by showing that in Colombia, the welfare gains of transitioning to digital payments are driven mainly by an increase in timely access to transfers stemming from efficiency gains for the implementing agency, as opposed to a reduction of non-pecuniary transaction costs for beneficiaries. In this regard, the results relate to evidence on how to build state capacity by modernizing its payroll in Afghanistan (Callen et al., 2023).

Second, there is evidence that cash transfer programs bundled with financial education, bank accounts, or debit cards can increase savings among the poor (Galiani et al., 2020; Banerjee et al., 2023; Bachas et al., 2021). Much less is known about their role as a platform for inclusion in formal credit markets. We contribute evidence suggesting that transitioning to direct deposits can integrate financially marginalized individuals into credit markets. However, the policy implications of these results are nuanced. On the one hand, direct deposits can increase access to credit without requiring low-income individuals to experiment with high-interest lending products prone to default such as credit cards or digital credit (Castellanos et al., 2018; Brailovskaya et al., 2021). On the other hand, the fact that our estimates on loan ownership are small and reflect a low approval rate also underscores the limited role of digital bank accounts from large commercial banks in solving deeper failures in credit markets.

Finally, this paper also contributes to the literature studying the adoption of digital financial technologies. Riley and Shonchoy (2021) shows that encouraging clients of a microfinance institution in Ghana to adopt mobile banking can improve their financial behavior. We study a broader population of low-income and unbanked individuals and document heterogeneity in both the adoption of direct deposits and the economic returns. Similar to Breza et al. (2020), who find that personal traits such as age, education, and financial history determine an individual's willingness to experiment with financial technologies through learning-by-doing, we find that similar traits predict the adoption of direct deposits when encouraged by the government. Further, we find that individuals without a financial history are less responsive to government encouragement, even though adopting the technology would benefit them more. These results are consistent with evidence that adopting hybrid

maize seeds in Kenya can be explained by heterogeneity in the returns and costs of adopting the technology (Suri, 2011). We contribute experimental evidence for digital bank accounts, a technology with increasing global penetration across a variety of sectors.

# 2 Context

In 2020, the government of Colombia implemented Ingreso Solidario, an unconditional cash transfer program. Households in Colombia's social registry SISBEN (in Spanish, Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales) that were classified as living in a situation of poverty or vulnerability by a proxy means test (PMT) and that were not covered by any pre-existing social program from the central government were eligible for Ingreso Solidario.[5] Ingreso Solidario delivered monthly transfers of CPO $160,000 pesos (the equivalent of USD $121 adjusting for purchasing power) to beneficiary households from March 2020 until December 2022. The program provided a steady stream of income to approximately 3 million beneficiary households for almost two years after the mobility restrictions of the COVID-19 pandemic were lifted.

Delivering recurring payments to millions of households posed implementation challenges. The government relied on digital payments to expedite the disbursement process and limit in-person transactions during the pandemic. By June 2020, 71% of beneficiaries received their first payment digitally (Gallego et al., 2021)). However, many beneficiaries still collected their transfers in cash from banks. Cash payments were wired to an assigned bank for beneficiaries to collect in-person at a bank branch.

This process was burdensome for both the government and beneficiaries. The transaction cost of each wire was CPO $2,300 ($ USD 0.58), which increased the disbursement costs by 20% per payment relative to the transaction costs of directly depositing the transfers into simplified digital bank accounts. Although enrollment in the program was automatic (based on a PMT score), important administrative frictions affected beneficiaries. Some beneficiaries were unaware that they were indeed beneficiaries or did not know the exact date when their

[5]For example, other social programs from the central government include Familias en Acción, Jóvenes en Acción, Colombia Mayor, and VAT compensation programs.

payment would be available for them to collect at a bank unless they consulted an online platform or other customer service channel provided by the implementation agency. Cashing out the benefits also required the beneficiaries to provide valid proof of identification. In addition, cash payments not collected within a specific time frame (3 months) resulted in a failed payment and reversion of the transfer. Finally, individuals could lose eligibility if they were unable to collect multiple payments.

Administrative records corresponding to the individuals who did not have contact information in the implementing agency records when they became eligible for the program (see Section 3.1) illustrate that these disbursement issues were widespread. By April 2021, each beneficiary was entitled to 12 monthly transfers. Almost all payment attempts were made in cash (98.46%). On average, there were 1.67 payment attempts per monthly transfer, and 43% of the payment attempts experienced by each household failed to be completed. These failed payments hampered the program's ability to reach beneficiaries effectively. By April 2021, 23% of beneficiary households had not received any payments.

Based on the potential gains to both beneficiaries and the government from transitioning payments from cash to electronic deposits, Colombia's Department of Social Prosperity (the implementing agency) carried out an intervention to encourage program recipients to enroll in direct deposits of their payments.

# 3 Research Design

## 3.1 Study Population, Sample, and Randomization

The study population consists of eligible households that were not located when Ingreso Solidario was launched due to a lack of contact information with the implementing agency and that did not have active bank accounts—neither traditional nor digital accounts— with partnering banks at the time of the first program payment. After intensive outreach by the government, 139,256 of these previously unreachable households were located. They were entitled to receive their first transfer, a bulk payment of arrears equivalent to five monthly payments on average, in cash in September 2020. In October 2020, these beneficiaries started

receiving their regular monthly transfers of CPO $160,000 (approximately USD $120 PPP). They continued to receive regular Ingreso Solidario payments through the end of our data collection period (March 31, 2022). Although this initial payment was made in cash, beneficiaries could open a bank account and receive their continuing transfers in the account.

To select our study population, we first ranked municipalities by the number of program beneficiaries. We restricted our sample to municipalities with a total number of beneficiaries above the median, resulting in 129,900 households. Second, due to logistical constraints, we randomly selected 29,914 beneficiaries (households) from the 129,900 unreachable beneficiaries to randomize into treatment and control groups. Third, we randomized the 29,914 beneficiaries into approximately equal-sized treatment and control groups stratified by municipality. The randomization of beneficiaries into treatment and control groups was performed by the researchers in November 2020 using Stata with misfits independently randomly assigned within strata. Specifically, 14,930 beneficiaries were randomized into the treatment group and 14,965 into the control group.

For logistical reasons, the intervention did not begin until several months after the randomization was completed. Because the intervention was implemented months later, some participants opened new bank accounts before the intervention, and some participants were no longer active recipients of Ingreso Solidario. Therefore, prior to the start of the intervention in April 2021, the study sample was restricted to active beneficiaries of Ingreso Solidario who were still receiving their transfers in cash. This resulted in a sample of 17,711 beneficiaries, with 8,888 beneficiaries in the treatment group and 8,823 beneficiaries in the control group. We consider this sample of 17,711 beneficiaries the study sample.

## 3.2 Intervention

The intervention consists of encouragement and step-by-step assistance in navigating the process of opening a free digital savings account to switch the mode of delivery for Ingreso Solidario transfers from cash to direct deposits into the new account. For participants who opened a new account, the intervention also provided basic training on the usage of key features of the account.

The intervention promoted the adoption of three different accounts. Two were offered

by large commercial banks in Colombia (*Ahorro a la mano* from Banco Bancolombia and *Daviplata* from Banco Davivienda), and the third was offered by a new FinTech company (MOVii). Although the two accounts offered by commercial banks could also be accessed through apps that required internet access, the call center operators only listed SIM-based accounts that could be opened and operated without internet access to avoid issues with download speeds and data availability. In the case of the MOVii account, the service was only available through an app for smartphones.

There were no user fees for opening any of the accounts that partnered with the government or for receiving the Ingreso Solidario transfer directly into these accounts. The bank accounts that were targeted by the intervention have three additional key features. First, account holders could deposit, withdraw, and transfer funds without a fee. Second, electronic transfers among users of the same financial institution can also be made without a fee. Third, many businesses accept payments through these accounts and users can withdraw funds using a wide network of ATMs without needing a debit card.[6]

All of the accounts had limitations in terms of the maximum monthly balance (up to 8 times the monthly minimum salary) and the maximum monthly withdrawal amount (up to 3 times the monthly minimum salary). A description and comparison of the features of each digital savings account is shown in Appendix Section B.

A call center representing the Department of Social Prosperity (DPS) contacted beneficiaries in the treatment group and encouraged them to switch their mode of payment from cash to direct deposit into a digital savings account.[7] Prior to calling beneficiaries, the call center sent an SMS message giving participants advanced notice of the call (SMS 1). During the initial call (Call 1), the DPS representative described the features of the digital products available to the beneficiary and emphasized the importance of using digital products to prevent the spread of the COVID-19 virus.

If the beneficiary decides to open a digital account, the beneficiary could open the account at that time (walking through the process with the call operator), schedule a follow-up call, request to be called again, or open an account at any time on their own. If the participant

[6]For each type of account, users could request a debit card at no cost.

[7]Although the call center called all households assigned to the treatment group, only 54% of the households were reached.

selected to open the account with assistance from the call center, the DPS representative read the menu of account options available to the participant over the telephone. The options available to the beneficiary varied depending on the location of the beneficiary and the mobile phone technology available to the beneficiary. The order in which the accounts were listed was randomized. After the beneficiary selected the financial product, the DPS representative provided personal step-by-step assistance in opening the digital account and navigating the platform to use the primary features and functionality. The new account was automatically registered in the DPS database and future Ingreso Solidario payments were deposited into the new account in the next payment cycle. The call center sent an SMS message notifying the beneficiary that their account had been registered to receive their Ingreso Soldiario payment through direct deposit (SMS 2).

To ensure that the beneficiaries were able to access their transfers, the call center offered to schedule a follow-up call with beneficiaries who opened accounts to provide information and guidance on the use of ATMs and agents to cash out the benefits and how to check the account balance (Call 2). The script of the calls and the text of the SMS messages is shown in Appendix Section C.

If the beneficiary declined to open an account during the initial telephone call, but expressed interest in opening an account later independently, the call center sent an SMS message with a link to instructions on how to activate an account (SMS 3).[8] If the beneficiary declined to open an account during the initial telephone call and did not request to be called again or schedule another call, the call center sent a series of SMS messages (SMS 4 and 5) over the next three to four weeks. These messages informed the beneficiary that she could still open an account to access the Ingreso Solidario transfer digitally and provided a link and telephone number to access more information about receiving Ingreso Solidario payments directly into a digital account. The progression of the intervention is depicted in Appendix Figure A3.

The intervention was implemented nationwide in Colombia between April and September 2021 (see Appendix Figure A4 for details about the timeline), using the official call center

[8]Specifically, the link in the SMS message directed beneficiaries to the program's official website: `https://ingresosolidario.prosperidadsocial.gov.co/`.

of the Department of Social Prosperity. Thus, the implementation was subject to the same advantages and limitations as traditional government operations. On the one hand, the fact that the calls came from an official trusted medium may have helped increase trust among beneficiaries. It also reduced the administrative burden of enrolling in direct deposit; the beneficiaries who were successful in opening bank accounts during the call were able to enroll in direct deposit during the same call. On the other hand, due to data-security reasons, the call center personnel could only walk beneficiaries through the process of opening a bank account in real time, but they were not able to open an account directly for them, which would have implied the transmission of personal identity information.

## 3.3 Data

**Social Registry Data.** We use administrative records corresponding to Colombia's social registry (SISBEN III and IV). These administrative records include baseline information on household demographic characteristics, such as gender, age, household size, and location (urban vs. rural areas). This dataset also includes information on asset ownership, dwelling characteristics, and a proxy-means-test (PMT) score. We use these data to conduct balance tests, to control for demographic characteristics, and to perform heterogeneity analysis in key dimensions.

**Ingreso Solidario Disbursements.** We use administrative records on program disbursement for the beneficiaries in our sample up to October 2021 (see Appendix Figure A4). These records include data on each monthly disbursement attempt, including the status of each payment. This information allows us to compute two measures of the efficiency of the disbursement process: the number of payments effectively made to each beneficiary and the share of failed payment attempts for a given beneficiary, specifically cash payments that were wired to bank branches but were not collected by the beneficiary. These records also enable us to identify the mode of payment (digital simplified savings account or cash payment at a local bank branch), which we use to measure the impact of the intervention on beneficiaries' transition away from cash payments.

**Credit Bureau Records.** We use data from one of Colombia's largest credit bureaus.[9]

[9] As in many countries, multiple credit bureaus operate in Colombia. Individuals cannot choose which of

This dataset includes information on interactions between a beneficiary and formal financial institutions, including financial product ownership by product type—i.e., loans or credit cards—for each period. These records also include registries of bank accounts and their status (e.g., whether they are active), though not account balance. This enables us to measure the extent to which the intervention affected bank account ownership and access and ownership of formal loans from banks and socially oriented non-bank financial institutions (cooperatives, NGOs, or microfinance institutions). We observe these records for all the individuals in our study sample for four post-intervention periods: June 2021, December 2021, June 2022, and December 2022. In addition, data on loan status is available for three post-intervention periods: June 2021, December 2021, and June 2022.

**Household Survey Data.** We complement the administrative records with a phone survey of 4,000 beneficiaries collected in February and March 2022, approximately 10 months after the intervention.[10] The survey collected information on the adoption and usage of digital savings accounts, consumption and spending patterns, trust in financial institutions, use of digital tools, financial habits, and the time and monetary costs required to complete basic transactions.

## 3.4 Empirical Strategy

We estimate the reduced-form effects of the intervention (intention-to-treat estimates) on the outcomes of interest through the following equation:

$$Y_i = \alpha + \beta Treatment_i + \mathbf{X}_i\Sigma + \theta_m + \epsilon_i \tag{1}$$

where $Y_i$ represents the outcome of interest of individual $i$. $Treatment_i$ denotes treatment status. To increase precision, we also include a vector of control variables, $X_i$, that includes pre-determined demographic characteristics (age, gender, educational attainment,

these bureau's has their information.

[10]The fieldwork lasted 6 weeks. There were four survey attempts per participant. We randomized the order of the beneficiaries in the sample for the first contact attempt. The average duration of the survey was 30 to 45 minutes. Due to budget limitations, data collection stopped when the survey team collected 4,000 complete surveys. The survey instrument can be found in Appendix Section C.

SISEBN version, and quintiles of PMT score) and pre-intervention financial history, which takes the value of 1 if a beneficiary has records of bank accounts, loans, or credit cards at baseline (December 2020).[11] We include strata fixed effects (municipalities) to account for the study design. Following Abadie et al. (2017), we use heteroskedasticity-robust standard errors because the unit of treatment is the individual. The coefficient of interest is $\beta_1$, which captures the effect of the intervention on the outcome of interest. For outcomes from administrative data that are measured at multiple points in time, we also estimate a pooled panel specification similar to equation (1). In this case, we cluster the standard errors at the individual level to flexibly account for serial correlation. We also report sharpened q-values to control for the false discovery rate within each table following Anderson (2008).

Because not all households were able to be reached by the call center and not all treated households switched to direct deposits, we estimate the effects of switching from in-person cash payments to direct-deposit on the outcomes of interest among the individuals who switched the mode of reception of their transfers. We use the random assignment into treatment as an instrument for receiving the transfers into bank accounts. Specifically, we estimate the following two-stage least-squares model:

$$\mathrm{DD}_i = \alpha + \beta Treatment_i + \mathbf{X}_i\Sigma + \theta_m + \epsilon_i \tag{2}$$

$$Y_i = \delta_0 + \delta \hat{\mathrm{DD}}_i + \mathbf{X}_i\Gamma + \theta_m + \epsilon_i \tag{3}$$

where $DD_i$ indicates whether the beneficiary $i$ received their payments by direct deposit into their bank accounts. As in the case of equation (1), we also report standard errors clustered at the beneficiary level. The parameter of interest in this case is $\delta$, which captures the effect of receiving transfers directly into a beneficiary's bank account. To the extent that the responses to the treatment are heterogeneous across beneficiaries, $\delta$ will identify the causal effect of receiving transfers by direct deposit among the subset of beneficiaries who switched the reception mode due to the treatment, a local average treatment effect (LATE).

[11] Because the households in our sample are listed in either the third version of the social registry (SISBEN III) or the fourth version (SISBEN IV) and the PMT scores are not directly comparable, we control for quintiles of the PMT score within each version of the social registry.

We explicitly test for heterogeneity across observable pre-intervention characteristics in the first stage by estimating equation (2) across subsamples.

### 3.4.1 Balance and Attrition

Panel A of Table 1 reports means of pre-determined characteristics by treatment status for the final study sample.[12] We find no evidence of systematic differences between treatment and control groups. Panel B reports the probability of being included in the survey sample by treatment status. We find no substantial or statistically significant differences in attrition between groups.

# 4 Effects on Direct Deposits and Bank Account Ownership.

We begin by analyzing whether the intervention achieved its main objective of inducing beneficiaries to transition from cash payments collected in-person to electronic payments into their bank accounts. Column 1 of Table 2 reports the effects of treatment on the probability that the household had received at least one program payment by direct deposit by October 2021 using administrative records. The intervention increased direct deposits by 7.3 percentage points, an increase of 73% relative to the control group's mean (10 percentage points). Using survey data, column 2 shows a similar effect on the probability that a beneficiary reports receiving the last program payment directly into a bank account. Using survey data, column 3 shows that the probability of owning a bank account 10 months after the intervention started is 6.8 percentage points larger in the treatment group than in the control group. Furthermore, column 4 shows that the probability of owning a digital savings account (targeted by the intervention) is 7.9 percentage points higher for the treatment group than the control group, representing a 28 percent increase in the ownership of digital savings accounts. Finally, column 5 shows that the intervention also increased the probability of having any bank account recorded in the credit bureau records during the two years after

[12] In Appendix Table A1, we also report means by treatment status and differences between experimental groups for the original study sample.

the intervention.[13]

Appendix Figure A1 shows that the impacts on bank account ownership persist over time. These effects were small in June 2021 when the intervention was still being carried out, grew by December 2021 after the intervention ended, and persisted for up to 2 years. This pattern suggests that the encouragement intervention may not have simply accelerated the adoption of bank accounts among beneficiaries in the treatment group.

# 5 Efficiency of Public Service Delivery.

One commonly cited advantage of digital payments is that they can increase the efficiency of public sector delivery. First, digital payments may improve efficiency in the disbursement process. Direct deposit eliminates the need to inform beneficiaries about when and where they can collect their benefits and eliminates the need for the beneficiary to collect their benefits within a specific time frame. Thus, direct deposits may reduce failed payment attempts by reducing information frictions and time constraints. Second, digital payments could reduce transaction costs. From the public sector perspective, direct deposit reduces transaction costs by 21% relative to cash payment for each successful payment. The savings could be larger if direct deposits reduce the total number of failed payment attempts. From the beneficiary perspective, direct deposits may substantially reduce the costs of accessing their benefits. We use the random assignment to the intervention to test the effects of adopting direct deposit on these two dimensions of efficiency of public sector delivery.

Panel A of Table 3 suggests that the intervention improved efficiency in the disbursement process. Columns 1 and 2 of Panel A of Table 3 report the reduced-form effects of the intervention on the probability that a beneficiary effectively received at least one program payment and the number of payments received since the intervention using administrative records. The intervention increased access to the program by one percentage point. Because approximately 10% of the beneficiaries did not receive a payment within six months of the

[13] In this case, we report results on the probability of having a bank account recorded in the credit bureau. This indicator does not distinguish between new or old accounts or between active or inactive accounts. Note that the point estimate is smaller than that reported in column 3, likely reflecting differences in terms of measurement with respect to the other variables.

start of the intervention, the point estimates suggest that the intervention may have reduced the share of eligible households that had not received a transfer by one tenth. The LATE estimates in Column 1 of Panel B implies that the probability of receiving at least one transfer after the start of the intervention increased by roughly 14 percentage points among the individuals who switched to direct deposit due to the intervention. Moreover, the LATE estimates in Column 2 in Panel B imply that, on average, compliers received two extra monthly payments. We do not find impacts on the probability of losing eligibility for the program (see column (3)).

Recall that all households in our sample had received at least one program payment before the intervention, so it is unlikely that the intervention's effect was achieved by making households aware of their eligibility for the program. However, some beneficiaries may not have realized that they remained eligible or that the program transfers would continue, and the intervention may have increased awareness of these facts.

The improvements in disbursement effectiveness coincide with reductions in transaction costs for the implementing agency. Payments in cash are more expensive for the implementing agency than direct deposits. Column 4 in Panel A shows that the intervention reduced the number of cash payment attempts per payment by 0.045 (roughly 4% relative to the mean of the control group). Column 5 shows that the intervention did not significantly reduce the total number of payment attempts per transfer payment. These results imply that encouraging the switch from cash to direct deposits was mainly beneficial to the implementing agency due to a reduction in the costs of attempting to deliver each transfer as opposed to a decrease in the total number of attempts needed to complete a payment. This is confirmed by column 6, which shows no significant reductions in the number of failed payment attempts as a share of the total payment attempts.

The results suggest that switching to direct deposits reduces disbursement frictions and the direct disbursement costs incurred by the implementing agency. The reductions in disbursement frictions are consequential, as they coincide with an increase in the total number of payments received by the beneficiaries during the post-intervention period. Although the reduced-form effects of the intervention are small, the LATE estimates are substantial, implying that there are important improvements in disbursement efficiency for beneficiaries

who were induced to switch to direct deposit. Despite the improvements in disbursement efficiency, even among switchers, the intervention does not prevent beneficiaries from losing eligibility status. In Section 5.1, we explore the heterogeneity of these results.

Next, we use survey data to analyze how the intervention affected the way that beneficiaries access their transfers and the transaction costs that they incur. Column 1 in panel A of Table 4 shows that the intervention increased the use of ATMs to collect the transfers by 7.4 percentage points, a 137% increase relative to the control group. The fact that the point estimate is similar in absolute terms to the estimated reduced-form effect on bank account ownership suggests that most switchers who open a bank account due to the intervention relied primarily on ATMs to collect the transfer.

An important question is whether households used their new bank accounts for transactions beyond receiving the transfer (Breza et al., 2020) or whether those who switched to direct deposit simply replaced the collection of the entire transfer in cash with a one-time withdrawal of the transfer without any further use of the account (Dupas et al., 2018). The evidence appears to support the latter. Column 3 reports the effects of the treatment on an index of the use of bank accounts to perform different transactions,[14] We find no evidence of statistically significant effects on account use (excluding withdrawals). Instead, column 2 shows a 2.4 percentage point increase in the probability that a beneficiary makes only one withdrawal during the month preceding the follow-up survey. This effect accounts for one third of the treatment effect on ATM use for transfer collection.

We next analyze whether switching the method of collecting transfers translates into lower transaction costs for beneficiaries. Column 4 in panel A reports the impacts of the intervention on an index of pecuniary and non-pecuniary costs of collecting the transfer.[15] We find no evidence of impacts on this index. In column 5, we focus on the amount of time spent to collect the transfer, and we find a small and not statistically significant decline. This suggests that the convenience of withdrawing resources from an ATM may not have

[14]Specifically, the index includes whether the beneficiary checked their bank account online, sent/received money through the account, used it to pay for utilities, groceries, or make deposits.

[15]Specifically, the index includes the cost to access Ingreso Solidario including delays, experienced difficulty collecting the transfer (location was far or closed), suspended an activity to make time to collect the transfer, collected the transfer at a bank, spent more than 1 hour to collect the transfer, experienced long lines to collect the transfer, and the amount of money spent on public transportation.

substantially decreased the cost of collecting the transfers for beneficiaries. One potential explanation is that those induced to switch their mode of payment were more likely to be located in urban areas where multiple physical locations (bank branches) to collect the transfers in person were available (see Figure 1c). Indeed, we find evidence of statistically significant declines in the probability of spending more than 2 hours collecting the transfers (see column 7) but not in spending more than 1 hour collecting the transfers (column 6).

Put together, the results suggest improvements in disbursement efficiency and transaction costs for the implementing agency and generally no impacts on the costs of accessing the transfers for beneficiaries.

## 5.1 Selection into Direct Deposit

Among switchers, the intervention increased the number of payments received by beneficiaries but generally did not increase the use of digital accounts or reduce the costs of accessing the transfer. In this section, we explore selection into switching to direct deposit.

One would expect individuals with larger potential net benefits from adopting the technology to be more responsive to the intervention and adopt direct deposits. Individuals familiar with digital technologies may have relatively low gains from switching but may also experience lower adoption costs. In contrast, individuals with higher gains from adopting may also face higher (non-pecuniary) costs of adopting the technology that could drive their net benefits below those of individuals with low costs and gains. If this was the case, the beneficiaries who are most likely to switch would be better able to learn about digital technologies and more likely to use them routinely. In addition, individuals who experience a higher rate of failed disbursement attempts and are less likely to receive successful payments would be less likely to respond to the intervention.

Three pieces of evidence support this mechanism. First, heterogeneity in the probability of switching to direct deposits across demographic characteristics suggests that switchers consider the costs and benefits of switching. Figure 1 assesses the extent to which the impacts of the intervention on transitioning to direct deposits are heterogeneous based on pre-determined categories such as age, education, location of the beneficiary (urban or rural), quintiles of PMT scores, the sex of the head of household, and whether the household head

had any records of a loan, credit card or bank account in the credit bureau (financial history). The figure shows evidence of heterogeneous effects based on education, sex, location, age, and financial history. The fact that younger, more educated beneficiaries and beneficiaries with a financial history are more likely to switch is consistent with the idea that familiarity with digital technologies reduces switching costs and increases willingness to experiment with these technologies (Breza et al., 2020). The fact that the intervention was more effective in urban areas suggests that connectivity constraints or a sparse network ATMs may affect a beneficiary's ability to use digital financial products (Londoño-Vélez and Querubín, 2021), which would reduce the gains from switching. In contrast, individuals without a financial history were less responsive to the intervention, even though they were the target population of the intervention.

Second, survey data suggests that switchers are more likely to have low switching costs than high switching benefits. Table 5 provides suggestive evidence that the beneficiaries who were more responsive to the intervention are more familiar with digital technologies, likely reducing their switching costs. Using survey data corresponding to the individuals in the control group, column 1 shows that higher levels of education and lower age predict a greater ease of learning digital technologies.[16] Higher education levels also predict higher levels of engagement with digital technologies at work (column 2) and a higher probability of receiving salaries in a payroll account (column 3).

At the same time, Table 5 suggests that the potential benefits of switching to direct deposits are particularly large among a subgroup less likely to switch: beneficiaries without a financial history at baseline. Although they were less responsive to the intervention than those with a financial history, beneficiaries without a pre-existing financial history appear more likely to experience higher disbursement frictions and transaction costs. Using survey data, column 4 shows that not having a financial history at baseline predicts a longer time spent collecting the transfers. Using administrative records, columns 5 and 6 show that not having a financial history predicts a higher share of failed payment attempts and a lower probability of receiving program benefits at all.

[16] We measure ease of learning digital technologies using a 5-point scale, where one means very hard, and five means very easy.

Third, the treatment effects suggest that the beneficiaries without a baseline financial history, who are less likely to switch, have larger gains from switching. Even though they are less likely to respond to the intervention, the reduced-form effects on disbursement efficiency among this group (see Panel A of Appendix Table A2) appear at least as large as those for the entire sample. Specifically, the intervention reduced the probability of losing eligibility for the program by 1.7 percentage points (a 31% decline with respect to the control group mean within this group). The fact that we find similar (or larger) reduced-form effects for a subgroup with relatively lower response to the intervention suggests that they may experience substantial benefits from switching.

Figure 2 confirms this hypothesis by analyzing the local average treatment effects of switching to direct deposit for beneficiaries with and without a financial history. The magnitude of the difference in the treatment effects of switching to direct deposits on program reception, the number of transfer payments, and loss of program eligibility are larger in magnitude in the case of individuals without a financial history. Switching to direct deposits increases the number of payments received for individuals without financial history by 4.4, which is over 2 times larger than the effect observed for individuals with a financial history. These improvements in disbursements are related to reductions in the share of failed payment attempts, which are substantially higher for individuals without financial history. Together, these effects suggest that switching to direct deposits is particularly beneficial for individuals without a financial history.

Overall, the results have important implications for the efficiency of delivering transfers. The welfare gains for beneficiaries due to a change in the mode of payment do not appear to come from a reduction in transaction costs related to the collection of the transfer. Instead, they are related to an increase in the probability of receiving at least one transfer and the number of payments received (see Table 3). To the extent that the program's social benefit is a function of the number of beneficiaries who effectively receive the transfers, the intervention may have increased the social value of the program by reducing failed cash disbursements, increasing the number of beneficiaries who successfully receive the payments, as well as the number of payments received by the beneficiaries. In addition, because the per-transfer cost to the government of direct deposits is a fraction of that of in-person payments, the increase

in the social value of the program coincides with a decline in implementation costs, implying that the net social value of the program increased. These cost reductions may be larger considering the recurrent nature of the payments.

At the same time, because the individuals who were ex ante marginalized from financial markets and had higher potential gains from switching were less likely to respond to the intervention, the economic gains from improving program delivery were small overall.

However, the results do not suggest that a move towards digital payments of cash transfers has limited gains. Instead, they suggest that relaxing underlying constraints affecting these marginalized households may have important social returns. Our LATE estimates suggest that there are substantial efficiency gains from switching to direct deposits. In particular, the gains from switching to direct deposit are especially large for financially marginalized individuals. Therefore, the results suggest that achieving substantial efficiency gains requires lowering the costs and barriers to switching for these beneficiaries. In the Colombian setting, offering assistance and information to individuals to encourage the adoption of novel technologies – an easily scalable approach – may not necessarily induce switching to direct deposit of transfers for individuals without experience with financial products, the population that was the primary target of the government. Considering the role of heterogeneity in response to light-touch interventions across subgroups with different gains is crucial for policy effectiveness, particularly in settings where consumer choice is important and where governments are not willing or able to impose a technology on beneficiaries.

# 6 Effects on Financial Inclusion

It is possible that opening new bank accounts and switching to direct deposits enabled beneficiaries to demonstrate records of a steady stream of income or prudent financial management that can be used to signal creditworthiness. Likewise, digital bank accounts often serve as a platform that financial institutions use to offer lending products. These two features may enable switchers to obtain credit. We test whether this is the case in our setting by analyzing the effects of the intervention on access to credit, specifically for beneficiaries without financial history.

Our setting is particularly useful for testing this hypothesis. First, the targeted bank accounts are offered mainly by large commercial banks, which typically rely on credit bureau records to acquire *hard* information on potential repayment behavior. Second, our detailed administrative data allow us to test whether the intervention affected account ownership, credit inquiries, and finally loan ownership. This last feature enables us to analyze the effects of direct deposits throughout the process of accessing credit.

The population we study might have particularly high demand for credit because the individuals in our study sample are quite financially fragile. In the survey data that were collected almost two years after the onset of a severe recession, only 10% of beneficiaries in the control group report having any savings and only 43% report being able to cover a week's worth of expenses in case of an emergency. Using administrative records, we find that 21% of the households in the control group have outstanding debts with utility companies during the post-period. Their incomes may also be volatile since 86% of the beneficiaries in our study work informally.

To demonstrate the financial fragility of these households more formally, we exploit random variation in the survey interview date to test if key consumption patterns are responsive to the *timing* of the last program payment.[17] Column 1 of Appendix Table A3 shows that beneficiaries who received their last transfer payment 4 or more weeks before the survey interview are 18 percentage points more likely to report having fully spent the transfer. Columns 2 and 3 show that the consumption of essentials such as food is quite sensitive to the timing of the transfer payments. Having received the last transfer 4 or more weeks ago increases the number of weeks since the last time a beneficiary went grocery shopping (column 2). Likewise, it reduces the time elapsed since the last time a beneficiary had to reduce their food intake due to lack of resources (column 3). These results illustrate how liquidity constrained these households are since the timing of the program payments should

[17]Specifically, we estimate the following specification:

$$Y_i = \gamma_0 + \gamma_2 \textit{Four weeks or more since last payment}_i + \mathbf{X}_i\Sigma + \theta_m + \epsilon_i \tag{4}$$

Here, *Four weeks or more since last payment* is an indicator of whether the beneficiary reports having received their last program transfer 4 or more weeks before the interview date. The parameter of interest is $\gamma_2$, which captures the sensitivity of the outcome with respect to the time elapsed since the last program payment.

not predict changes in consumption in the absence of liquidity constraints.

The financial fragility of the households in our sample implies that they may benefit from greater access to credit. Therefore, we test the extent to which switching the mode of delivery promotes a deeper integration of program beneficiaries into the formal credit market. Using data from the credit bureau, we compute the probability that a beneficiary has a bank account registered as active in the credit bureau at least once during the two years of post-intervention data. Similarly, for the same period of time, we calculate an indicator of whether a beneficiary has a record of a credit inquiry in the credit bureau. We interpret this variable as a proxy for credit demand under the assumption that banks run a credit check when evaluating a loan application. Finally, for the same time period, we create a set of indicators of whether a beneficiary has recorded loans from traditional banks or socially-oriented financial institutions (e.g., cooperatives or microfinance institutions), credit cards, and consumption loans with retail stores. We interpret the ownership of loans from traditional banks as a measure of direct effects as traditional banks are the providers of the digital accounts promoted by the intervention. We interpret ownership of loans from other lenders as measures of spillovers to other financial products.

Recall that the intervention increased the ownership of bank accounts. Column (1) of Panel A in Table 6 shows that it also increased the probability of having an *active* savings account in the credit bureau. This suggests that the recursive direct deposits from the program transfers helped individuals maintain the active status of their accounts, likely providing lenders with valuable information on cash inflows. Indeed, Appendix Figure A2 shows that this effect appears to persist over time. Consistent with the finding that individuals without a financial history at baseline were more responsive to the intervention, the effect is larger among this subgroup (see column 1 in Panel B).

Column 2 in Panel A suggests that the intervention increased the probability of having a credit inquiry. This effect is greater in the subsample of individuals without a financial history (see Panel B), representing a 17% increase relative to the control group mean. Particularly for beneficiaries without a financial history, the intervention may have changed beneficiaries' beliefs about the probability that their loan application would be successful by increasing the adoption of digital bank accounts and creating records for beneficiaries in the credit bureau.

This change in beliefs about the probability of success may have induced demand for formal loans, especially among beneficiaries who did not appear in the credit bureau records prior to the intervention.

Columns 3 to 7 analyze the impacts of the intervention on the probability of obtaining different types of formal lending products. Column 3 shows that there are neither substantial nor significant impacts on the probability of having a loan from a formal financial institution (either a bank or other socially-minded lenders). This reduced-form effect remains small even when we restrict the sample to beneficiaries without a financial history in the credit bureau.

Columns 4 and 5 distinguish between the two types of formal lenders, traditional commercial banks (those that provided the digital savings account) and non-bank lenders (e.g., cooperatives or microfinance institutions). Using the overall sample, the effects are small and not significant for both measures. Using the sample of beneficiaries without a financial history, we find suggestive evidence of a 1 percentage point increase in the probability of having a loan from a traditional bank (a 25% increase relative to the control group mean for this subgroup), though this effect is only significant at the 10% level. We do not find impacts when we analyze loans with socially-minded institutions. In addition, there are no impacts on credit card ownership, or consumption debt with retailers. The results suggest that inducing the adoption of digital bank accounts can increase access to loans, but that such effects are small and unlikely to generate spillover effects on loans from other lenders.

To further explore the magnitude of the effects of switching to direct deposits on loan ownership, Appendix Table A4 reports results from a specification that uses the random assignment into treatment as an instrument for switching to direct deposits. The estimates in Panel B suggest that, among the beneficiaries who did not have a credit history before the intervention, switching to direct deposits due to the intervention increases the probabilities of having an active account and of registering credit inquiries by 65 and 58 percentage points, respectively. Further, switching to direct deposits increases the probability of borrowing from a commercial bank by 18 percentage points. Comparing the effects on loans to those on credit inquiries suggests that beneficiaries who were induced to switch their mode of delivery due to the treatment have a 30% success rate for loan applications.

Figure 3 compares the effects of direct deposits into digital savings accounts along the process of accessing credit for beneficiaries with and without a financial history. The effects of direct deposits on maintaining an active account and on credit inquiries are approximately 3.5 higher in the case of beneficiaries without a financial history, albeit the difference in the effects is only significant at 10% in the case of the former outcome. A similar pattern is observed when we analyze effects of direct deposits on loans from traditional banks. The probability of obtaining a loan increases by 5 percentage points for switchers with a pre-existing financial history (not statistically significant), but it increases by 18 percentage points in the case of switchers without a financial history (p-value<0.10).

These results are consistent with our previous findings related to the efficiency of program delivery. The intervention generated only small overall effects on financial inclusion. However, there seems to be substantial effects of direct deposits among switchers without any pre-exiting financial history. The fact that the estimates imply a loan application success rate of only 30% suggests that cash transfer programs can be a tool to further integrate individuals into credit markets, but that a mere push to direct deposits will not necessarily solve deeper financial failures in credit markets such as moral hazard or adverse selection.

# 7 Effects on Financial Well-Being

The results presented in the previous sections suggest that a move away from cash and towards direct deposits into digital savings accounts increases the efficiency of G2P transactions and, at least among the beneficiaries who switch their mode of payment, can increase ownership of bank accounts and loans to low-income individuals. In this section, we test the extent to which receiving recurring deposits into bank accounts affects individuals' overall financial situation.

We focus on four types of outcomes: savings, purchases of durables, patterns of consumption (discretionary spending vs. spending on necessities), and financial stress. Table 7 reports reduced-form effects using survey data. Columns 1 and 2 in Panel A show that there are no effects on the probability that a beneficiary reports having savings or on the total amount of savings (transformed using the inverse hyperbolic sine). In both cases, the point

estimates are small. Column 4 shows that the intervention did not generate effects on the purchase of durable goods. Columns 5 to 7 show no effects on total spending, spending on necessities (e.g., groceries, housing, utilities, medical bills, education, etc.) or discretionary spending (e.g., alcoholic beverages and cigarettes, going out for meals, toys and gifts, on vacation travel, etc.). Finally, columns 8 and 9 show no impacts on financial stress[18] or food security proxied by whether a beneficiary had to reduce the size of meals due to lack of food.

Across the board, we do not find evidence that the intervention improved the financial well-being of the program beneficiaries. This remains true even when restricting the sample to individuals without a financial history prior to the intervention (see Panel B of Table 7) and when we estimate our IV strategy to capture the effects of switching to direct deposits due to the intervention (see Appendix Table A5).

Switching the mode of payment may enable households to smooth consumption even if it does not change households' overall financial situation. Panel B of Appendix Table A3 uses the variation in the time elapsed since the last payment of the program's benefits and the survey interview date (randomly assigned) to test if the intervention reduced the sensitivity of food consumption to the timing of the program's disbursement. As discussed before, an increase in the time elapsed since the last payment increases the likelihood that beneficiaries have fully spent the transfer (column 1) and the time since the last grocery purchase (column 2), and it reduces the time since a beneficiary had to reduce the size of their meals (columns 3). None of these effects is attenuated by the intervention.

Even though the switch to direct deposits improved the efficiency of program delivery and expanded access to loans among the beneficiaries without a pre-existing financial history, the fact that we do not find evidence of substantial improvements in their overall financial situation suggests that such integration in the financial system was not enough to change financial habits or relax savings constraints. This lack of effects on downstream outcomes echoes other findings in the literature on the effects of adopting mobile-linked bank accounts (de Mel et al., 2022), or digital mobile-money credit (Bharadwaj et al., 2022; Brailovskaya et al., 2021).

[18] If they felt anxiety, worry or stress about a household financial obligation in the last 30 days.

# 8 Conclusion

We study the effects of encouraging beneficiaries of a large-scale cash transfer program to receive their benefits through direct deposit into digital bank accounts on three key dimensions: the efficiency of delivering transfers, inclusion in credit markets, and financial behavior. Our results provide a nuanced view of the potential benefits of these interventions.

The results suggest that switching G2P payments from cash to direct deposit into digital bank accounts partially fulfills the promises of digital finance enthusiasts. We find evidence of small reductions in disbursement frictions. Specifically, among switchers without a pre-existing financial history, the switch appears to substantially reduce disbursement errors, increase the probability of receiving transfers, and decrease the probability of losing eligibility for the program. However, these gains do not coincide with significant or substantial reductions in the costs that beneficiaries incur to collect their transfers. We also find modest improvements in financial inclusion. For individuals without a financial history, switching to direct deposits helps them integrate into credit markets. However, there is no evidence of changes in savings or spending patterns.

Our results reveal two important considerations for policy design. First, the individuals with the largest gains to direct deposits may not be those who are most responsive to encouragement interventions. We detect small, welfare-increasing reduced-form effects of the intervention and more substantial effects among compliers (LATEs). One explanation is that the response to the intervention was very heterogeneous. Individuals who were more familiar with digital tools were more likely to adopt direct deposits. In contrast, financially marginalized individuals were less responsive, even though they were subject to more disbursement frictions and would have benefited more from being integrated into the financial system. One important policy implication is that light-touch interventions to encourage individuals to adopt financial technologies may not be effective for individuals who face high barriers to financial technology adoption, despite their larger potential gains from adopting these technologies. To the extent that implementing agencies cannot impose a default mode of payment (which can be beneficial (Blumenstock et al., 2018)), the use of low-cost encouragements to adopt technologies may need to be complemented with other

policy tools to reduce barriers to adoption for digital financial technologies.

Second, switching program payments away from cash *can* integrate ex ante financially marginalized individuals into credit markets but the effects are limited. The magnitude of the effects on loan ownership and on credit inquiries suggest that only one-third of credit inquiries induced by the switch to direct deposit resulted in approved loans from commercial banks and there was no spillover to other financial products. This suggests that simply changing the mode of payment of cash transfer programs or opening a savings account is unlikely to solve deeper issues of adverse selection of borrowers and moral-hazard concerns for lenders.

# References


Abadie, A., S. Athey, G. W. Imbens, and J. Wooldridge (2017, November). When should you adjust standard errors for clustering? Working Paper 24003, National Bureau of Economic Research.

Aker, J. C., R. Boumnijel, A. McClelland, and N. Tierney (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.

Anderson, M. L. (2008). Multiple inference and gender differences in the effects of early intervention: A reevaluation of the abecedarian, perry preschool, and early training projects. *Journal of the American Statistical Association 103*(484), 1481–1495.

Bachas, P., P. Gertler, S. Higgins, and E. Seira (2021). How debit cards enable the poor to save more. *The Journal of Finance 76*(4), 1913–1957.

Banerjee, A., C. M. A., and E. Puentes (2023, June). The Impact of Subsidy Delivery Method on Savings Behavior: Experimental Evidence. Working Papers wp548, University of Chile, Department of Economics.

Bharadwaj, P., W. Jack, and T. Suri (2022). Fintech and Household Resilience to Shocks: Evidence from Digital Loans in Kenya. *Journal of Development Economics forthcoming*.

Blumenstock, J., M. Callen, and T. Ghani (2018, October). Why do defaults affect behavior? experimental evidence from afghanistan. *American Economic Review 108*(10), 2868–2901.

Brailovskaya, V., P. Dupas, and J. Robinson (2021, December). Is digital credit filling a hole or digging a hole? evidence from malawi. Working Paper 29573, National Bureau of Economic Research.

Breza, E., M. Kanz, and L. F. Klapper (2020, December). Learning to navigate a new financial technology: Evidence from payroll accounts. Working Paper 28249, National Bureau of Economic Research.

Callen, M., J. Blumenstock, A. Faikina, S. Fiorin, and T. Ghani (2023). Strengthening fragile states: Evidence from mobile salary payments in afghanistan. *Working Paper*.

Castellanos, S. G., D. J. Hernández, A. Mahajan, E. A. Prous, and E. Seira (2018, July). Contract Terms, Employment Shocks, and Default in Credit Cards. NBER Working Papers 24849, National Bureau of Economic Research, Inc.

de Mel, S., C. McIntosh, K. Sheth, and C. Woodruff (2022, 03). Can Mobile-Linked Bank Accounts Bolster Savings? Evidence from a Randomized Controlled Trial in Sri Lanka. *The Review of Economics and Statistics 104*(2), 306–320.

Dupas, P., D. Karlan, J. Robinson, and D. Ubfal (2018, April). Banking the unbanked? evidence from three countries. *American Economic Journal: Applied Economics 10*(2), 257–97.

Galiani, S., P. Gertler, and C. Navajas Ahumada (2020, February). Trust and saving in financial institutions. Working Paper 26809, National Bureau of Economic Research.

Gallego, J., B. Hoffmann, P. Ibarraran, M. P. Medina, C. Pecha, O. Romero, M. Stampini, D. Vargas, and D. A. Vera-Cossío (2021). Impactos del programa ingreso solidario frente a la crisis del covid-19 en colombia. IDB Technical Note IDB-TN-2162, Washington, DC.

Gentilini, U. (2022). Cash transfers in pandemic times : Evidence, practices, and implications from the largest scale up in history. Technical report, The World Bank.

Londoño-Vélez, J. and P. Querubín (2021, 03). The Impact of Emergency Cash Assistance in a Pandemic: Experimental Evidence from Colombia. *The Review of Economics and Statistics*, 1–27.

Márquez-Padilla, F. and S. Parker (2024). The leaky bucket: Transition costs from cash to deposits in a mexican transfer program. *Economic Development and Cultural Change Forthcoming*, null.

Riley, E. and A. Shonchoy (2021). A National Information Campaign Encouraging Financial Technology Adoption in Ghana. Mimeo.

Suri, T. (2011). Selection and comparative advantage in technology adoption. *Econometrica 79*(1), 159–209.

Table 1: Balance in Baseline Characteristics

| *Panel A: Balance* | Control | Treatment | Difference | p-value |
|---|---|---|---|---|
| Age | 42.32 | 42.71 | 0.43 | 0.10 |
| Female | 0.61 | 0.60 | -0.01 | 0.43 |
| Education | | | | |
| Less than Primary School | 0.15 | 0.15 | 0.00 | 0.49 |
| Completed Primary School | 0.49 | 0.49 | -0.01 | 0.36 |
| Completed High School | 0.33 | 0.34 | 0.00 | 0.54 |
| Technical or University degree | 0.02 | 0.02 | 0.00 | 0.62 |
| Rural | 0.44 | 0.45 | 0.00 | 0.48 |
| Version of SISBEN (SISBEN IV=1) | 0.58 | 0.59 | 0.01 | 0.10 |
| SISBEN Score (deciles) | 5.20 | 5.18 | -0.03 | 0.54 |
| No financial history | 0.34 | 0.34 | 0.00 | 0.52 |
| Formal employee | 0.14 | 0.13 | 0.00 | 0.56 |
| *Panel B: Attrition* | Control | Treatment | Difference | p-value |
| In survey sample | 0.25 | 0.24 | -0.01 | 0.24 |
| N | 8,779 | 8,839 | | |

**Notes**: The table reports means by treatment status, based on administrative records using the final study sample. P-values corresponding to the test of the null hypothesis that the difference in means is zero are based on standard errors that are robust to hetoreskedasticity.

Table 2: Effects on Direct Deposits and Bank Account Ownership

| | (1) Direct Deposit | (2) Digital Payment | (3) Any Account | (4) Digital Savings Account | (5) Savings Account |
|---|---|---|---|---|---|
| Treatment | 0.073*** | 0.107*** | 0.068*** | 0.079*** | 0.016*** |
| | (0.005) | (0.012) | (0.015) | (0.014) | (0.004) |
| N | 17595 | 4275 | 4291 | 4272 | 17595 |
| Control Mean | 0.100 | 0.123 | 0.425 | 0.285 | 0.728 |
| Source | Admin | Survey | Survey | Survey | Credit bureau |

**Notes**: The table reports OLS estimates of the effects of the treatment on various outcomes using the specification in equation (1). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 3: Effects on Disbursements

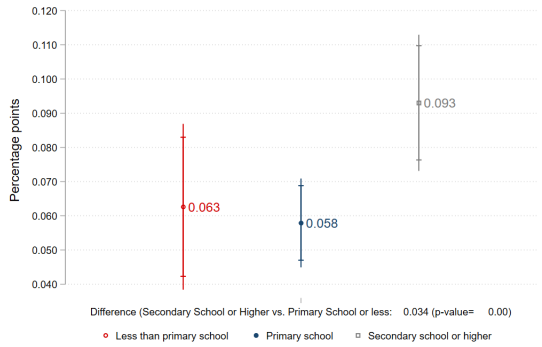
| | Received At Least One Payment (1) | Count of Received Payments (2) | Loss Program Eligibility (3) | Attempts Per Payment Cash (4) | Attempts Per Payment Total (5) | Share of Failed Attempts (6) |
|---|---|---|---|---|---|---|
| *Panel A: Reduced-form effects* | | | | | | |
| Treatment | 0.010** | 0.172*** | -0.000 | -0.045*** | -0.004 | -0.007 |
| | (0.004) | (0.031) | (0.003) | (0.008) | (0.007) | (0.004) |
| *N* | 17,595 | 17,595 | 17,595 | 17,595 | 17,595 | 17,595 |
| Control Mean | 0.907 | 4.581 | 0.050 | 1.192 | 1.271 | 0.236 |
| q-value | 0.018 | 0.001 | 0.433 | 0.001 | 0.254 | 0.093 |
| *Panel B: IV* | | | | | | |
| Direct Deposit | 0.139** | 2.370*** | -0.005 | -0.626*** | -0.062 | -0.097 |
| | (0.056) | (0.372) | (0.044) | (0.093) | (0.092) | (0.060) |
| *N* | 17,579 | 17,579 | 17,579 | 17,579 | 17,579 | 17,579 |
| F-Stat (First Stage) | 210.733 | | | | | |
| q-value | 0.017 | 0.001 | 0.433 | 0.001 | 0.254 | 0.090 |
| Source | Admin | | | | | |

**Notes**: The table reports reduced-form estimates of the effects of the treatment on various outcomes using the specification in equation (1) in Panel A and the effects of signing up for direct deposit using the instrumental variable specification in equation (3) in Panel B. All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

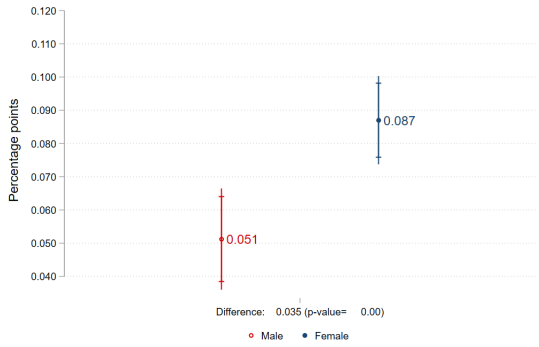
Table 4: Effects on ATM Use and The Costs of Collecting Transfers (Survey Data)

| | Used ATM To Collect Transfer (1) | One Withdrawal (2) | Usage Index[1] (3) | Cost Index[2] (4) | Time spent to Collect Transfer (IHS) (5) | Spent more than 1h (6) | Spent more than 2h (7) |
|---|---|---|---|---|---|---|---|
| *Panel A: OLS* | | | | | | | |
| Treatment | 0.074*** | 0.024*** | 0.040 | 0.016 | -0.043 | -0.023 | -0.028** |
| | (0.009) | (0.009) | (0.032) | (0.032) | (0.031) | (0.016) | (0.014) |
| *N* | 4,270 | 4,262 | 4,294 | 4,178 | 4,106 | 4,148 | 4,148 |
| Control Mean | 0.054 | 0.069 | 0.000 | 0.000 | 4.953 | 0.489 | 0.259 |
| q-value | 0.001 | 0.020 | 0.165 | 0.307 | 0.155 | 0.155 | 0.076 |
| *Panel B: IV* | | | | | | | |
| Direct Deposit | 0.689*** | 0.226*** | 0.341 | 0.142 | -0.360 | -0.220 | -0.264** |
| | (0.068) | (0.080) | (0.286) | (0.293) | (0.291) | (0.152) | (0.131) |
| *N* | 4,209 | 4,182 | 4,214 | 4,103 | 4,034 | 4,076 | 4,076 |
| F-Stat (First Stage) | 85.178 | 83.498 | 84.870 | 80.803 | 77.214 | 75.409 | 75.409 |
| q-value | 0.001 | 0.015 | 0.185 | 0.368 | 0.185 | 0.173 | 0.079 |
| Source | Survey | | | | | | |

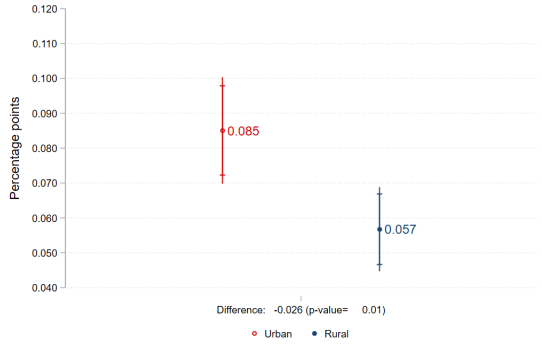
**Notes**: The table reports OLS estimates of the effects of treatment on various outcomes using the specification in equation (1) in panel A and the effects of signing up for direct deposit using the instrumental variable specification in equation (3) in Panel B. All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include fixed effects of municipalities. [1]Anderson Index includes whether the beneficiary checked their bank account online, sent/received money through the account, used it to pay for utilities, groceries, or make deposits. [2]Anderson Index of cost to access Ingreso Solidario includes delays, experienced difficulty collecting the transfer (location was far or closed), suspended an activity to make time to collect the transfer, collected the transfer at a bank, spent more than 1 hour to collect the transfer, experienced long lines to collect the transfer, and the amount of money spent on public transportation. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.



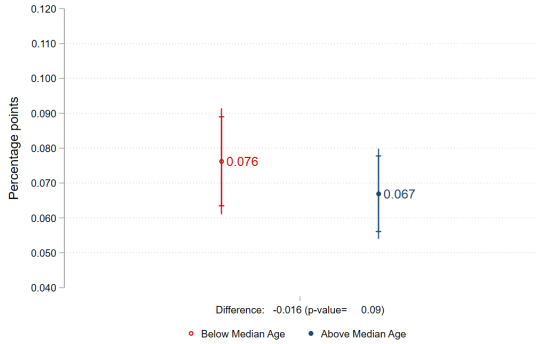

(a) Education



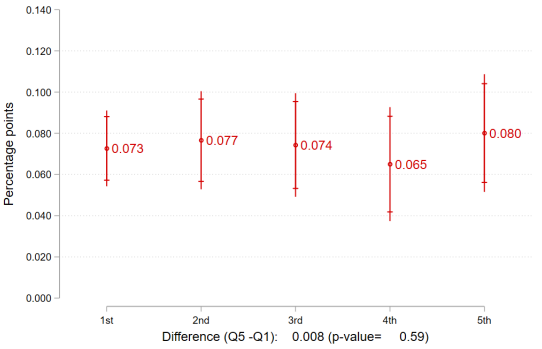

(b) Gender



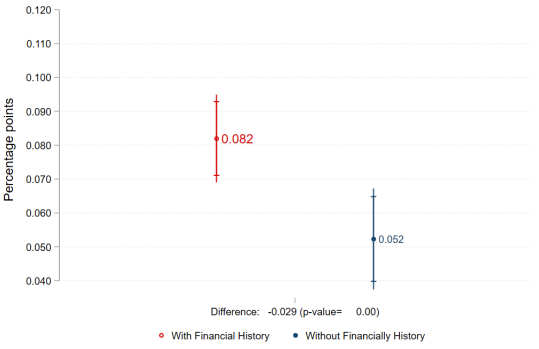

(c) Rural




(d) Age




(e) PMT Score (Quintiles)




(f) Financial History

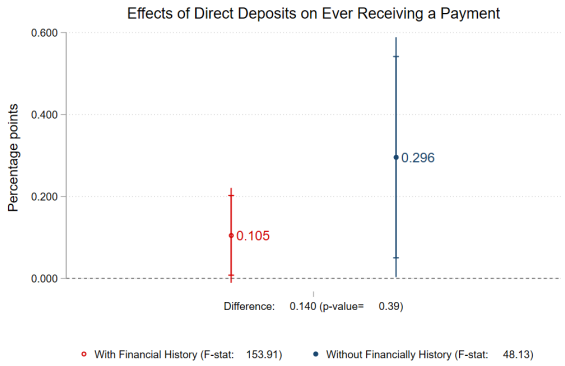
Figure 1: Heterogeneous Reduced-Form Effects on Direct Deposits

**Notes**: The figure reports OLS estimates of the effects of the treatment on the probability of having received at least one program payment by direct deposit by key subgroups using equation (1). The 95% confidence intervals are based on heteroskedasticity-robust standard errors.

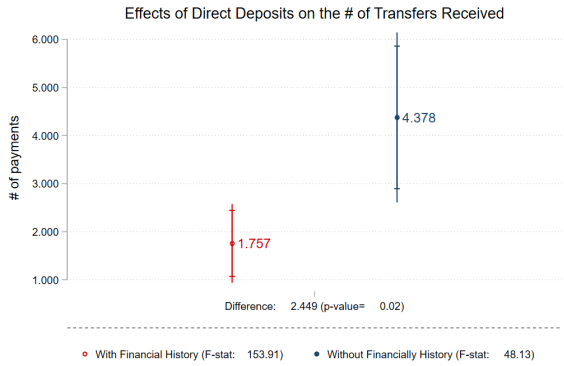
Table 5: Correlates of Baseline Characteristics, Familiarity with Digital Technologies, and Disbursement Efficiency (Control Group)

| | Easy to Learn Digital Tech (1) | Digital Tools (Index) (2) | Has a Payroll Account (3) | Minutes Collecting Transfer(IHS) (4) | Share Failed Payments (5) | Received at least One Payment (6) |
|---|---|---|---|---|---|---|
| Age > Median Age | -0.70*** | -0.10 | 0.01 | -0.05 | 0.04*** | -0.02*** |
| | (0.06) | (0.08) | (0.03) | (0.05) | (0.01) | (0.01) |
| Primary School | 0.51*** | 0.06 | -0.04* | -0.07 | -0.01 | 0.00 |
| | (0.07) | (0.10) | (0.03) | (0.06) | (0.01) | (0.01) |
| High-school or Higher | 1.11*** | 0.34*** | 0.10*** | -0.04 | 0.00 | 0.00 |
| | (0.08) | (0.11) | (0.03) | (0.07) | (0.01) | (0.01) |
| Female | -0.18*** | -0.04 | -0.06** | -0.01 | -0.03*** | 0.03*** |
| | (0.06) | (0.08) | (0.03) | (0.06) | (0.01) | (0.01) |
| PMT Score - Q2 | -0.04 | 0.06 | 0.01 | 0.04 | 0.01 | 0.00 |
| | (0.09) | (0.13) | (0.04) | (0.08) | (0.01) | (0.01) |
| PMT Score - Q3 | -0.12 | 0.04 | 0.02 | -0.03 | 0.02 | -0.01 |
| | (0.08) | (0.12) | (0.04) | (0.08) | (0.01) | (0.01) |
| PMT Score - Q4 | -0.12 | 0.00 | 0.00 | -0.10 | 0.00 | 0.01 |
| | (0.09) | (0.13) | (0.04) | (0.08) | (0.01) | (0.01) |
| PMT Score - Q5 | -0.08 | 0.07 | 0.05 | -0.07 | 0.02 | 0.00 |
| | (0.09) | (0.13) | (0.04) | (0.08) | (0.01) | (0.01) |
| No financial history | -0.02 | -0.10 | -0.05* | 0.15*** | 0.06*** | -0.03*** |
| | (0.06) | (0.09) | (0.03) | (0.06) | (0.01) | (0.01) |
| Rural | -0.03 | -0.12 | -0.02 | 0.42*** | 0.02** | 0.00 |
| | (0.06) | (0.10) | (0.03) | (0.06) | (0.01) | (0.01) |
| N | 2114 | 1188 | 1180 | 2073 | 8767 | 8767 |
| Source | Survey | Survey | Survey | Survey | Admin | Admin |

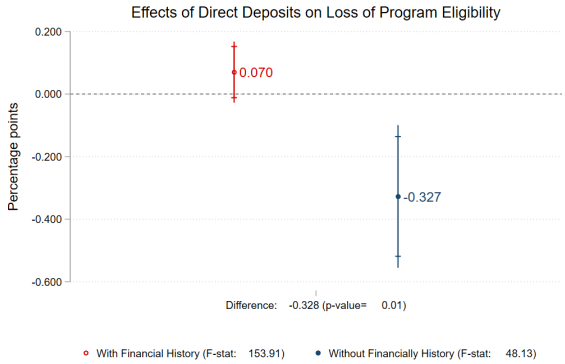
**Notes**: The table reports regression coefficients from a regression of the dependent variable (in each column) on gender, age, education category, rural/urban, financial history, and quintiles of SISBEN score. All regressions include municipality fixed effects. All regressions are estimated using data from the individuals in the control group. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.



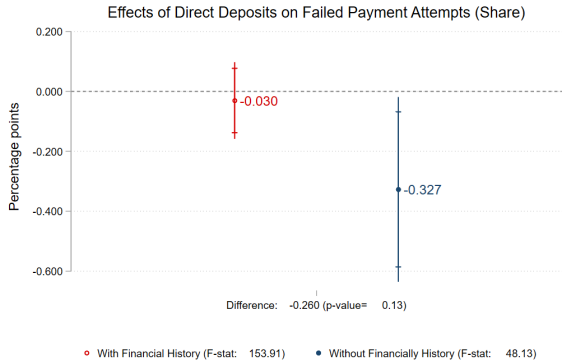

(a) At Least One Payment




(b) # of Payments Received




(c) Loss Program Eligibility




(d) Share Failed Payment Attempts

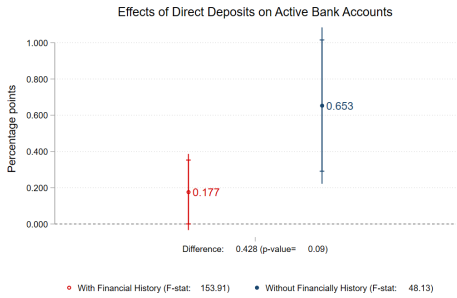
Figure 2: Heterogeneous Effects of Direct Deposits on Disbursement Efficiency

**Notes**: The figure reports IV estimates of the effects of direct deposits on the probability of having received at least one program payment through direct deposit by key subgroups using equation (3). The 95% confidence intervals are based on heteroskedasticity-robust standard errors.

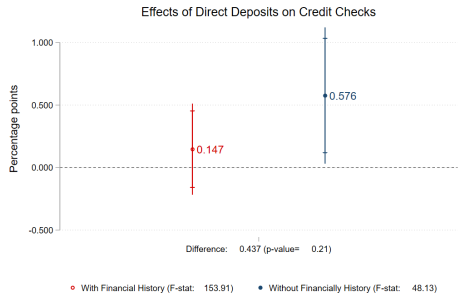
Table 6: Reduced-Form Effects on Access to Credit (Credit Bureau Records)

| | Active Bank Account (1) | Credit Inquiry (2) | Formal Loan (3) | Loan from Banks (4) | Loan from Non-bank (formal) (5) | Credit Card (6) | Debt Retail (7) |
|---|---|---|---|---|---|---|---|
| *Panel A: All Observations* | | | | | | | |
| Treatment | 0.019*** | 0.019* | 0.003 | 0.004 | -0.000 | 0.002 | -0.005 |
| | (0.007) | (0.011) | (0.006) | (0.006) | (0.003) | (0.005) | (0.006) |
| *N* | 17,595 | 17,595 | 17,595 | 17,595 | 17,595 | 17,595 | 17,595 |
| Control Mean | 0.449 | 0.288 | 0.272 | 0.249 | 0.049 | 0.114 | 0.235 |
| q-value | 0.040 | 0.352 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| *Panel B: Beneficiaries Without Financial History* | | | | | | | |
| Treatment | 0.034*** | 0.030** | 0.008 | 0.009* | 0.000 | 0.001 | 0.007 |
| | (0.011) | (0.014) | (0.006) | (0.005) | (0.002) | (0.003) | (0.009) |
| *N* | 5,945 | 5,945 | 5,945 | 5,945 | 5,945 | 5,945 | 5,945 |
| Control Mean | 0.449 | 0.288 | 0.272 | 0.249 | 0.049 | 0.114 | 0.235 |
| q-value | 0.017 | 0.122 | 0.222 | 0.152 | 0.631 | 0.631 | 0.381 |
| Source | Credit bureau | | | | | | |

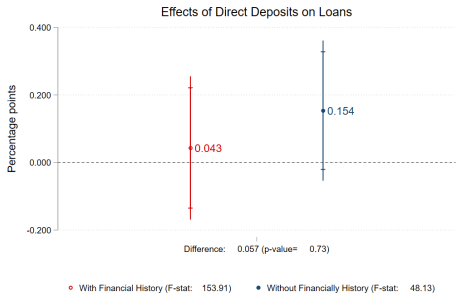
**Notes**: The table reports OLS estimates of the effects of treatment on various outcomes using the specification in Equation (1). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.



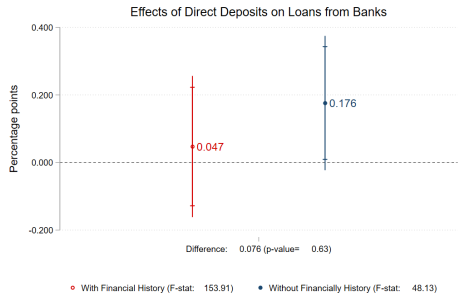

(a) Active Bank Account




(b) Credit Check




(c) Any Loans




(d) Loans from Commercial Banks

Figure 3: Heterogeneous Effects of Direct Deposits on Access to Finance (Credit Bureau Data)

**Notes**: The figure reports OLS estimates of the effects of the treatment on the probability of having received at least one program payment through direct deposit by key subgroups using equation (1). The 95% confidence intervals are based on heteroskedasticity-robust standard errors.

Table 7: Reduced-Form Effects on Financial Well-Being

| | Has Savings (1) | Total Savings (2) | Trust Index[1] (3) | Durable Goods (4) | Total Spending (5) | Discretionary Spending (6) | Spending on Necessities (7) | Financial Stress (8) | Reduced Meals (9) |
|---|---|---|---|---|---|---|---|---|---|
| *Panel A: All Observations* | | | | | | | | | |
| Treatment | 0.005 | 0.051 | 0.017 | -0.005 | 0.017 | 0.226 | 0.000 | 0.008 | -0.011 |
| | (0.010) | (0.126) | (0.033) | (0.014) | (0.038) | (0.170) | (0.030) | (0.016) | (0.014) |
| *N* | 4,277 | 4,241 | 4,278 | 4,294 | 4,292 | 4,245 | 4,248 | 4,287 | 4,292 |
| Control Mean | 0.103 | 1.241 | -0.000 | 0.255 | 12.453 | 4.917 | 12.400 | 0.600 | 0.747 |
| q-value | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| *Panel B: Beneficiaries Without Financial History* | | | | | | | | | |
| Treatment | -0.017 | -0.223 | 0.046 | -0.026 | 0.012 | -0.081 | -0.031 | 0.003 | 0.002 |
| | (0.020) | (0.257) | (0.070) | (0.029) | (0.072) | (0.371) | (0.060) | (0.031) | (0.034) |
| *N* | 1,278 | 1,270 | 1,278 | 1,283 | 1,283 | 1,271 | 1,273 | 1,282 | 1,280 |
| Control Mean | 0.099 | 1.190 | -0.081 | 0.265 | 12.431 | 5.070 | 12.365 | 0.724 | 0.612 |
| q-value | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Source | Survey | | | | | | | | |

**Notes**: The table reports OLS estimates of the effects of treatment on various outcomes using the specification in Equation (1). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Total Savings, and Spending categories are measured using the inverse hyperbolic sine transformation. [1] Anderson Index includes and indicators of whether the respondent somewhat trusts or absolutely trust banks or financial institutions, they feel comfortable leaving 150,000 COP in a bank for 30 days, and feel comfortable making a 150,000 COP electronic payment and receiving 150,000 COP electronically. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

# Online Appendix

# A Appendix Tables and Figures

Table A1: Balance: Initial Study Sample (Administrative Records)

| | Control | Treatment | Difference | p-value |
|---|---|---|---|---|
| Age | 42.04 | 42.22 | 0.19 | 0.35 |
| Female | 0.61 | 0.61 | 0.00 | 0.58 |
| Education | | | | |
| Less than Primary School | 0.13 | 0.13 | 0.00 | 0.73 |
| Completed Primary School | 0.46 | 0.46 | 0.00 | 0.75 |
| Completed High School | 0.37 | 0.37 | 0.00 | 0.93 |
| Technical or University degree | 0.03 | 0.03 | 0.00 | 0.99 |
| Rural | 0.36 | 0.36 | 0.00 | 0.27 |
| Version of SISBEN (SISBEN IV=1) | 0.55 | 0.56 | 0.01 | 0.31 |
| SISBEN Score (deciles) | 5.38 | 5.36 | -0.02 | 0.58 |
| Formal employee | 0.15 | 0.15 | 0.00 | 0.61 |
| $N$ | 14,930 | 14,918 | | |

**Notes**: The table reports means by treatment status, based on administrative records, using the final study sample. P-values corresponding to the test of the null hypothesis that the difference in means between the treatment and control groups is zero are based on standard errors that are robust to heteroskedasticity. We do not report differences in baseline financial history as these data are only available for the final study sample (reported in table 1).

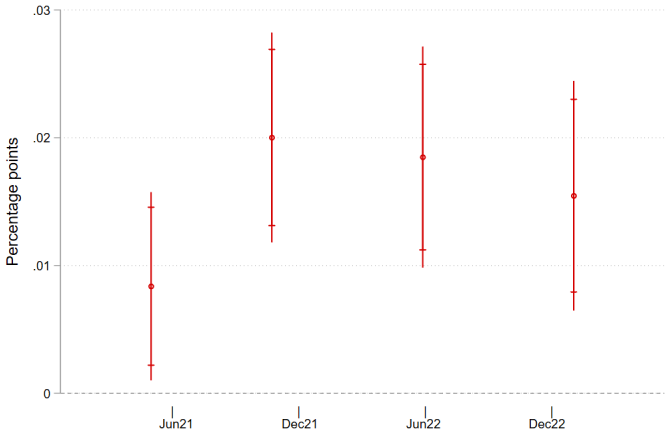



Figure A1: Effects on Bank Account Records in the Credit Bureau

**Notes**: The figure reports OLS estimates of the effects of the treatment on the probability of having a bank account in the credit bureau records at each point in time using equation (1). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. The 90 and 95% confidence intervals are based on heteroskedasticity-robust standard errors.

Table A2: Effects on Disbursements - Beneficiaries without Financial History

| | Received At Least One Payment (1) | Count of Received Payment (2) | Loss Program Eligibility (3) | Attempts Per Payment Cash (4) | Attempts Per Payment Total (5) | Share of Failed Attempts (6) |
|---|---|---|---|---|---|---|
| *Panel A: Reduced-Form Effects* | | | | | | |
| Treatment | 0.015** | 0.229*** | -0.017*** | -0.042*** | -0.012 | -0.017** |
| | (0.008) | (0.055) | (0.006) | (0.014) | (0.013) | (0.008) |
| *N* | 5,945 | 5,945 | 5,945 | 5,945 | 5,945 | 5,945 |
| Control Mean | 0.887 | 4.328 | 0.055 | 1.264 | 1.319 | 0.270 |
| q-value | 0.030 | 0.001 | 0.006 | 0.006 | 0.062 | 0.029 |
| *Panel B: IV* | | | | | | |
| Direct Deposit | 0.296** | 4.378*** | -0.327*** | -0.802*** | -0.232 | -0.327** |
| | (0.149) | (0.902) | (0.116) | (0.244) | (0.247) | (0.157) |
| *N* | 5,885 | 5,885 | 5,885 | 5,885 | 5,885 | 5,885 |
| F-Stat (1st Stage) | 48.126 | | | | | |
| q-value | 0.030 | 0.001 | 0.007 | 0.003 | 0.062 | 0.030 |
| Source | Admin | | | | | |

**Notes**: The table reports reduced-form estimates of the effect of the treatment on various outcomes using the specification in equation (1) in Panel A and the effect of signing up for direct deposit using the instrumental variable specification in equation (3) in Panel B. All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

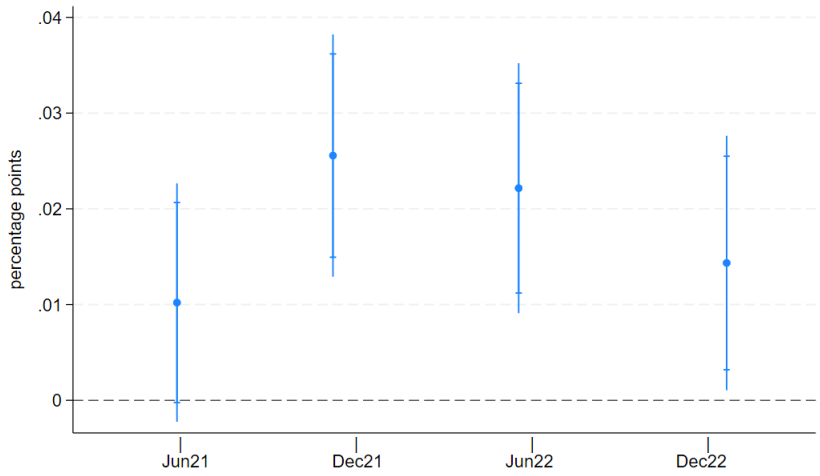



Figure A2: Effects on Active Bank Account Ownership - Credit Bureau

**Notes**: The figure reports OLS estimates of the effect of the treatment on the probability of having a bank account in the credit bureau records at each point in time using equation (1). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. The 95% confidence intervals are based on heteroskedasticity-robust standard errors.

Table A3: Time Since Last Program Payment and Consumption (Survey Data)

| | Fully spent transfer (1) | Weeks since last time bought groceries (2) | Weeks since meal reduction (3) | Weeks for which expenses can be covered (4) |
|---|---|---|---|---|
| *Panel A: Transfer Payment and Consumption Co-Movements* | | | | |
| Last payment $\geq$ 4 weeks ago | 0.179*** | 0.243*** | -0.205** | -0.064 |
| | (0.017) | (0.064) | (0.085) | (0.053) |
| N | 4082 | 4043 | 4055 | 3863 |
| Control Mean | 0.935 | 2.212 | 3.089 | 1.529 |
| *Panel B: Reduced-Form Effects on Consumption Smoothing* | | | | |
| Treatment | -0.033 | -0.116 | -0.099 | -0.159 |
| | (0.034) | (0.114) | (0.157) | (0.097) |
| Last payment $\geq$ 4 weeks ago | 0.162*** | 0.193** | -0.271** | -0.158** |
| | (0.024) | (0.093) | (0.123) | (0.075) |
| Last payment $\geq$ 4 weeks ago | 0.032 | 0.092 | 0.129 | 0.183* |
| $\times Treatment$ | (0.034) | (0.126) | (0.171) | (0.106) |
| N | 4082 | 4043 | 4055 | 3863 |
| Control Mean | 0.935 | 2.212 | 3.089 | 1.529 |
| Source | Survey | | | |

**Notes**: The table reports the relationship between having received the latest program transfer 4 or more weeks ago and key outcomes in Panel A and heterogeneous treatment effects based on the timing of the last payment (Panel B). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table A4: Effects of Direct Deposits on Access to Credit (Credit Bureau Records)

| | Active Bank Account (1) | Credit Inquiry (2) | Formal Loan (3) | Loan from Banks (4) | Loan from Non-bank (formal) (5) | Credit Card (6) | Debt Retail (7) |
|---|---|---|---|---|---|---|---|
| *Panel A: All Observations* | | | | | | | |
| Direct Deposit | 0.267*** | 0.262* | 0.044 | 0.056 | -0.002 | 0.023 | -0.072 |
| | (0.095) | (0.153) | (0.085) | (0.083) | (0.044) | (0.063) | (0.084) |
| *N* | 17,579 | 17,579 | 17,579 | 17,579 | 17,579 | 17,579 | 17,579 |
| F-Stat (First Stage) | 210.733 | 210.733 | 210.733 | 210.733 | 210.733 | 210.733 | 210.733 |
| q-value | 0.036 | 0.352 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| *Panel B: Beneficiaries without a Financial History* | | | | | | | |
| Direct Deposit | 0.653*** | 0.576** | 0.154 | 0.176* | 0.005 | 0.015 | 0.126 |
| | (0.220) | (0.278) | (0.106) | (0.101) | (0.040) | (0.052) | (0.171) |
| *N* | 5,885 | 5,885 | 5,885 | 5,885 | 5,885 | 5,885 | 5,885 |
| F-Stat (First Stage) | 48.126 | | | | | | |
| q-value | 0.022 | 0.130 | 0.226 | 0.160 | 0.631 | 0.631 | 0.381 |
| Source | Credit bureau | | | | | | |

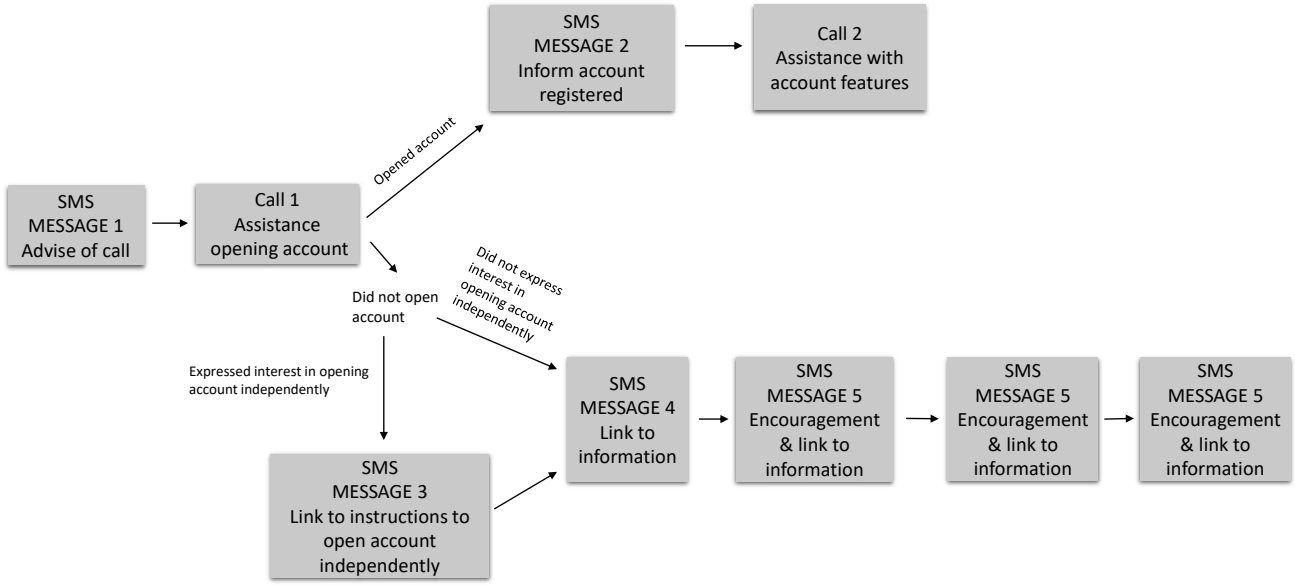
**Notes**: The table reports two-stage least squares estimates of the effects of treatment on various outcomes using the random assignment into the treatment as an instrument for receiving payments through direct deposit using the specification described in Equation (3). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A5: Effects of Direct Deposits on Financial Well-Being

| | Has Savings (1) | Total Savings (2) | Durable Goods (3) | Total Spending (4) | Discretionary Spending (5) | Spending on Necessities (6) | Financial Stress (7) | Reduced Meals (8) |
|---|---|---|---|---|---|---|---|---|
| *Panel A: All Observations* | | | | | | | | |
| Direct Deposit | 0.049 | 0.551 | -0.041 | 0.194 | 2.201 | 0.024 | -0.106 | 0.064 |
| | (0.093) | (1.182) | (0.130) | (0.347) | (1.595) | (0.286) | (0.131) | (0.147) |
| *N* | 4,197 | 4,162 | 4,214 | 4,212 | 4,163 | 4,166 | 4,212 | 4,207 |
| F-Stat (First Stage) | 83.259 | 82.681 | 84.870 | 84.977 | 82.302 | 79.360 | 85.078 | 84.116 |
| q-value | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| *Panel B: Beneficiaries Without Financial History* | | | | | | | | |
| Direct Deposit | -0.199 | -2.402 | -0.236 | 0.130 | -1.014 | -0.302 | -0.014 | 0.003 |
| | (0.202) | (2.651) | (0.291) | (0.685) | (3.568) | (0.600) | (0.300) | (0.326) |
| *N* | 1,158 | 1,150 | 1,165 | 1,165 | 1,154 | 1,153 | 1,164 | 1,162 |
| F-Stat (First Stage) | 21.316 | 19.743 | 22.036 | 22.036 | 21.991 | 21.016 | 22.242 | 21.786 |
| q-value | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Source | Survey | | | | | | | |

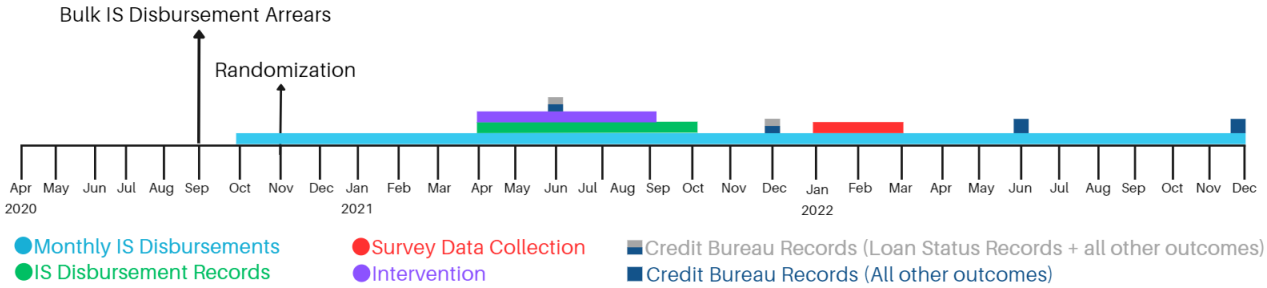
**Notes**: The table reports two-stage least squares estimates of the effect of treatment on various outcomes using the random assignment into the treatment as an instrument for receiving payments through direct deposit using the specification described in Equation (3). All regressions control for gender, age, education category, rural/urban, SISBEN decile, SISBEN III or IV, and financial history and include municipality fixed effects. Total Savings, and Spending categories are measured using the inverse hyperbolic sine transformation. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure A3: **Progression of the Intervention**




Note: The text of SMS messages and the scripts of the calls from the call center are shown in Appendix Section C.

Figure A4: **Timeline**




Note: The figure shows the timeline for the intervention and the outcomes from different data sources. The intervention occurred between April and September 2021. Survey data were collected in February and March 2022. Administrative records on Ingreso Solidario disbursements are available between April 2021 and October 2021. Credit bureau records are observed as snapshots in June 2021, December 2021, June 2022, and December 2022.

# B Comparison of Account Features

**Comparison of Account Features and Services**

| **Type of transaction/service** | **A la mano** | | **Daviplata** | | **Movii** | |
|---|---|---|---|---|---|---|
| Send money | Yes | Yes, free between accounts of Bancolombia. QR or personalized card can be used. | Yes | | Yes | Yes, free between accounts of movii. |
| Receive money | Yes | | Yes | | Yes | |
| Pay bills | Yes | Enter the number of the invoice manually. | Yes | Using a barcode. | Yes | Using a barcode or searching using distinct filters. |
| Reload cellphone | Yes | Only cellphones of the same operator. | Yes | Any operator and for phones of relatives also. | Yes | Any operator. |
| Take out credit | Yes | Immediate loan accessed using the app. | Yes | Consumer credit. | Yes | Loan access activated when the app is used. The loan can be used through the app services. |
| Consult balance | Yes | | Yes | Sent directly to mail. | Yes | |
| Receive money internationally | Yes | No fee. The money must be withdrawn with an agent or at an ATM. | Yes | | No | |
| Send money internationally | No | | No | Not directly in the app. Users must visit a branch. | No | |
| Notification mailbox | Yes | Yes, in the app, but not with SIM card activation. | Yes | Information about all transactions arrives in the mailbox. | No | |
| Locate ATMs, branches, etc. | Yes | Yes in the app, but not with SIM card activation. | Yes | | No | |
| Purchase digital content | No | Not available as a direct option but it is possible with a QR code. | Yes | A virtual card, similar to a debit card, can be accessed in the app. | Yes | Purchases are limited to options offered in the app. |
| Bet on sports | No | | No | Not available directly as an option in the app. | Yes | This is an option within the app. |
| Make donations | No | | No | Not available directly as an option in the app. | Yes | It is available with advance payment through “Ara”, a store that can send a basket of food to others. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Purchases in physical stores | No | | Yes | Payment by celular or with QR in shops marked with a sticker. | No | |
| Create a “Business Profile” | No | | Yes | It is similar to opening a virtual business. Allows organizing products, payments, etc. | No | |
| Reload“cívica” transport card | Yes | | | | No | |
| Receive salary or social transfers | Yes | Allows verification of beneficiary status and payments directly to account. | Yes | Social transfers directly to accounts. | Yes | Social transfers directly to accounts. |
| Purchase insurance: life, pet, bicycle, or car/motorcycle | No | Not available directly from the app as a bank service. | Yes | The process is completed directly in the app and debits from the Daviplata account. | | |
| Purchase and sale of cryptocurrencies | No | Not available directly from the app as a bank service. | No | Not available directly from the app as a bank service. | Yes | The producto is called “cripto” and you can buy and sell cryptocurrencies. |

# C Intervention Protocol and Materials

## C.1 Text of SMS messages

**SMS Message 1** "[NAME], you will receive a call from the Dept. of Social Prosperity to help you open a digital savings account and receive your ingreso solidario in this account. Remember that we will not request your personal information and never give information by telephone. If you have questions, call toll-free 01-8000-951100."

**SMS Message 2** "[NAME], the Dept. of Social Prosperity informs you that your account has been registered correctly. You will receive your ingreso solidario directly in this account. Remember: don't share your access password with anyone. If you have questions, call toll-free 01-8000-951100."

**SMS Message 3** "[NAME], you can open a digital savings account to receive your solidarity income. More information on how to do it here:
https://ingresosolidario.dnp.gov.co/."

**SMS Message 4** "[NAME], you can open a digital savings account to receive your ingreso solidario. More information here:
https://ingresosolidario.dnp.gov.co/, or call toll-free: 01-8000-951100. Remember that we will not request your personal information and never give your information to third parties over the telephone."

**SMS Message 5** "[NAME], you can still open a savings account and receive your ingreso solidario without leaving home. More information here: https://ingresosolidario.dnp.gov.co/, or call toll-free: 01-8000-951100. Remember that we will not request your personal information and never give your information to third parties over the telephone."

## C.2 Scripts of Calls

The following two subsections display the sections of the scripts that operators followed for the initial call that provided encouragement and assistance with opening an account and the follow-up call that provided assistance with account features. We show the branches of the script for one account and one cellphone carrier. There were small deviations to the

script in the step-by-step instructions for other accounts and cellphone carriers to match the user experience. Also, additional branches provided the scripts to operators for additional situations, such as identifying the participant, providing methods for the participant to verify the operator's identity, sending detailed instructions in case the participant does not have the necessary documents available, providing contact information for assistance directly from the financial institutions, rescheduling calls, and incoming calls. The full script is available at `https://drive.google.com/file/d/1tGzO1J1Ip_i-vaIHJT69zVF9lDMa-L2r/view`.

### C.2.1 Call 1: Assistance with Opening an Account

Good morning! My name is [FIRST NAME and LAST NAME]. I'm calling on behalf of the Department for Social Prosperity of the Government of Colombia to discuss your Ingreso Solidario (government assistance benefit). Am I speaking with [NAME of RECIPIENT]?

How are you, [FIRST NAME and LAST NAME]? This call is to tell you about what you can do to receive your Ingreso Solidario (government assistance benefit) easily and without leaving your home. Your security is a priority for the Government of Colombia, therefore I won't ask for any personal data during this call. If you have a few minutes, I'll tell you all about it.

Thank you very much for your time.

As I mentioned, this call is regarding your Ingreso Solidario benefit. On behalf of the Department of Social Prosperity, we would like to inform you that if you like, you can open an account to receive your benefits from your cell phone. It's very easy, it has many benefits and you can choose the bank. You can do it from any phone, with no need for internet access. Many recipients like you have already done it and now receive their money without having to wait in line at the bank.

Let me tell you about it:

First, there are no fees to create an account through your cell phone and it only takes a few minutes.

With an account, you can withdraw money at an ATM or correspondent bank if you like. You can pay for utilities, reload your cell phone, and much more. All from your cell phone.

Remember that the money is yours. The bank will not charge any commission nor deduct

money towards outstanding debts.

With these benefits, you save time and transfer fees, plus avoid lines and long waits at the bank. Also, you can access these services 24 hours a day including weekends and holidays.

Also, as you know, we are going through the Coronavirus pandemic. This is a serious situation, with more than a million people infected in Colombia. To avoid becoming infected or infecting others, it is important not to leave home unless absolutely necessary. Scientific studies show this is the best way to stay healthy and take care of your loved ones.

With an account on your cell phone, you won't have to leave home to get paid. If you like, I can help you do it right now, with no need to go to the bank. You only need to have your ID with you. It only takes a few minutes, and again, I won't ask for any personal data; I will only ask you questions to verify. Does that sound good to you?

Amazing! You will need to enter information from your identification document. Remember you will not give that information to me, you will only enter it by phone. Do you have your cell phone and your identity document with you?

+[Yes]

To continue, I need to verify your identity. Could you please provide the last four digits of your identification card?

[*Operator: Verify that the four numbers coincide with the records.*]

+[Verified]

Thank you. To continue you will need to remain on the line while you scroll down your cellphone menu. If you think you will have trouble in the process, you can ask one of your family members for help. I can remain on the line while you go ask for help. Otherwise, I can call you at another number immediately.

Would you like to continue or would you like me to call you now at another number?

+[Alternative number] → Please, provide an alternative number where I can call you immediately. [Operator: write down the number, repeat it to the costumer to confirm, and call immediately.]

You can choose between these two options:

+[Daviplata (Davivenda)] → 1. Daviplata

+[Ahorro a la mano (Bancolombia)] → 2. Ahorro A La Mano

**1. Daviplata**

Great, in a few more steps we will create the account. Do you have a Tigo, Movistar or Claro cell phone?

+[Tigo] → 1A. Tigo

+[Movistar] → 1B. Movistar

+[Claro] → 1C. Claro

**1A. Tigo**

**1B. Movistar**

**1C. Claro**

To begin, select "Vive tu SIM" (Live your SIM) from your cell phone's menu.

Now go to "Mis bancos" (My banks).

Select "registro de bancos" (bank registry).

Select Daviplata.

Great. Now select the type of document you will enter.

Enter the number without periods, dashes or spaces.

Now you should enter the document's date of issue, first entering the day, then the month and then the 4-digit year.

Now enter the city where it was issued without accent marks or capital letters.

Enter the first name that appears on your document.

You will be asked for a 4-digit PIN, and for your security, don't tell me what it is or share it with anyone else. If you already have a bank account with Davivenda it should be the same PIN you already use. Remember this PIN because it will be the same one you will use for the bank.

Please confirm your PIN.

Lastly, you will be asked if you accept the conditions of the contract. Accept them by hitting

"Sí" (Yes) You can review the contract on the bank's website.

Done. You have now completed the steps for creating your account.

Shortly you will receive a message welcoming you to Daviplata. I will wait on the line until you receive it, ok?

+[Continue] → Ending

**2.Ahorro A La Mano**

**Ending**

+[I already received the message]

Excellent! Your account number is your cell phone number with a 0 before it. For your security, remember not to share your password with anyone.

To finalize and receive your deposit on the next payment date, I need to register your account in the system. To ensure your data safety, I need to verify your identity again. Can you please repeat to me the last for digits of your Identification card number?

[*Operator: Verify that the data coincides with the registries.*]

+[Verified]

Do you authorize me to do this? It is not necessary to provide me any information.

+[Yes]

The process was completed successfully. You will receive the next payment on the corresponding date and you will be able to access it from your cell phone.

If you like, we can call you again in a couple of weeks to verify that you received your money and that you were able to access and use it from your cell phone.

+[YES]

Please let me know when would be a good time to call you.

[*Operator: Open calendar and find a date that corresponds with the recipient's response.*]

Ok, great, and does it work for you if we call you back [Propose date the coincides with recipient's potential dates]?

+[YES]

Excellent! We will call you back on [Repeat scheduled date].

If at any time you would like to get in touch with an Ingreso Solidario agent, you can call 018000951100 toll-free outside of Bogotá or 595-4410 within Bogotá.

You can also visit our official website
http:slash slash ingresosolidario.prosperidadsocial.gov.co/ Please note that official government websites always end in "dot gov dot co". And remember, never enter any of your information on websites you received through WhatsApp. The government will never ask you to enter information on websites.

Before I go, let me remind you that during the pandemic we must all take care of each other. It is recommended that you only leave home if absolutely necessary, and if you do, practice physical distancing and use a mask.

Thank you for your time and have a wonderful day.

→ DONE

#### C.2.2 Call 2: Assistance with Account Features

Good morning! My name is [FIRST NAME and LAST NAME]. I'm calling on behalf of the Department for Social Prosperity of the Government of Colombia to discuss your Ingreso Solidario (government assistance benefit). Am I speaking with [NAME OF RECIPIENT]?

+ [Yes]

How are you, [FIRST NAME and LAST NAME]. Can you tell me if you received your Ingreso Solidario deposit?

+[Yes] → 1. Assistance 1

+[No] → 2. Assistance 2

+[I don't know] → 2. Assistance 2

**1. Assistance 1**

I'm glad you have accessed your benefit! Would you like me to tell you how to withdraw money or check your balance? For your security, I will not ask you for any personal information.

+[Yes]

I see you have an account registered. To help you, I need to know if you opened an account...

[*Operator: Choose the appropriate option.*]

+[Ahorro a la mano] First of all, we should check the balance → 1A. Ahorra A La Mano

+[Daviplata] First of all, we should check the balance → 1B. Daviplata

+[Nequi] First of all, we should check the balance → 1C. Nequi

+[Movii] First of all, we should check the balance → 1D. Movii

**1A. Ahorro A La Mano**

*Operator: Choose the appropriate option. If help is requested with both, start with "consultar saldo" (check balance).*

+[Instructions on how to check balance] → 1A.1 Ahorro A La Mano: Check Balance

+[Instructions on how to withdraw money] → 1A.2 Ahorro A La Mano: Withdraw Money

**1B. Daviplata**

*Operator: Choose the appropriate option. If help is requested with both, start with "consultar saldo" (check balance).*

+[Instructions on how to check balance] → 1B.1 Daviplata: Check Balance

+[Instructions on how to withdraw money] → 1B.2 Daviplata: Withdraw Money

**1C. Nequi**

*Operator: Choose the appropriate option. If help is requested with both, start with "consultar saldo" (check balance).*

+[Instructions on how to check balance] → 1C/D.1 Nequi/Movii: Check Balance

+[Instructions on how to withdraw money] → 1C.2 Nequi: Withdraw Money

**1D. Movii**

*Operator: Choose the appropriate option. If help is requested with both, start with "consultar saldo" (check balance).*

+[instructions on how to consult] → 1C/D.1 Nequi/Movii: Check Balance

+[instructions on how to withdraw money] → 1D.2 Movii: Withdraw Money

**1A.1 Ahorro A La Mano: Check Balance**

**1A.2 Ahorro A La Mano: Withdraw Money**

**1B.1 Daviplata: Check Balance**

Is your phone an older model (basic) or a smartphone?

+[Older model] → Basic

+[Smartphone] → Thank you very much. Do you access your account through an applica-

tion o through the menu of your SIM card?

+[App o application] → Smartphone

+[SIM card] → Basic

Smartphone

To check your balance, you must open the bank's app and log in with your ID and password. It is not necessary to give me the data, only enter it. The balance appears as soon as the app is opened.

Do you have a balance of about 160,000 pesos?

+[Yes, they have it] While I have you on the phone, let me tell you how to withdraw your money, it will only take a minute → 1.B.2 Daviplata

Basic

One more question: Do you have Movistar, Claro or Tigo?

[*Operator: Read only the instructions that apply.*]

Movistar:

Claro:

Go to "Vive tu Sim" (Live your Sim).

go into "Mis Bancos" (My Banks).

Choose "Banca Móvil" (Mobile Banking).

Select Daviplata.

now choose "Cuanto tengo" (How much do I have?).

Now you should enter your Daviplata password. Please don't tell me, only enter it.

Tigo:

Do you have about 160,000 pesos?

+[Yes, they have it] I'm glad you received your benefit. While I have you on the phone,

let me tell you how to withdraw your money. It will only take a minute. → 1B.2 Daviplata: Withdraw Money

**1B.2 Daviplata: Withdraw Money**

Is your phone an older model (basic) or a smartphone?

+[Older model] → Basic

+[Smartphone] → Thank you very much. Do you Access your account through an application or through the menu of your SIM card?

+[App o application] → Smartphone

+[SIM card] → Basic

Smartphone:

Let me explain how to withdraw your money.

Open the Daviplata application.

Go to "sacar plata" (withdraw money).

Choose the amount from the options, or enter a multiple of 10,000 COP.

You will be asked to confirm the amount. Do not do this yet. Make sure you are near a Davivienda ATM or a DaviPlata Point.

Once you confirm the amount you will receive a code.

Keep it in a safe place, as you will need it to make a withdrawal at an ATM or correspondent bank within your banks network.

The code is valid for 30 minutes, make sure you introduce it once you are near a Davivienda ATM or a DaviPlata Point.

Do you plan to withdraw at an ATM or a correspondent bank?

[*Operator: Read only for withdrawal at correspondent banks.*]

Excellent, Daviplata Points tend to be in Baloto, Via, Punto Red and Con Red circulars.

[*Operator: Read only for ATM.*]

Excellent, remember that you can have a maximum of 30 minutes to withdraw money after entering the code in your cell phone. To withdraw money from an ATM follow these steps:

On the ATM screen, select the "Retiros Daviplata" (Daviplata Withdrawals) option. If you can't find it, look for another ATM that is part of the Davivienda network.
Then enter the value to be withdrawn. This must match the value you entered previously on your cell phone.
Now, enter the account number. This is normally your cell phone number.
Enter the 6-digit code you generated on your mobile.

Done! Take your money and receipt.

We recommend that you do not ask strangers for help. You can call us again if you need help or ask the correspondent bank.

Do you have any other questions? → Ending

Basic:
*Operator: Ask the question only if it was not asked before or if you do not remember the carrier. If you do remember the carrier, select the appropriate one.*

Can you please tell me who your carrier was?
+[Movistar] → Movistar
+[Claro] → Claro
+[Tigo] → Tigo

[*Operator: Read only the instructions that apply.*]

Movistar:

Claro:
To withdraw money, choose the option "Vive tu SIM" (Live your SIM) in the menu of your cell phone.
then, "Mis Bancos" (My Banks).
Go to "Banca Móvil" (Mobile Banking).
Select Daviplata.
Select Withdraw money.

Enter the amount to be withdrawn, must be multiples of 10 000 COP.
You will be asked to enter the Daviplata password. Don't do it yet. Make sure you are close to a Davivienda ATM or a DaviPlata Point.
Once you do, you will see a code appear. You should keep it because you will need it to make a withdrawal at an ATM within your bank network or at a correspondent bank.

The code is valid for 30 minutes, make sure you introduce it once you are near a Davivienda ATM or a DaviPlata Point.

Do you plan to withdraw from an ATM or a correspondent bank?

[*Operator: Read only for withdrawal at correspondent banks.*]

Excellent, Daviplata Points tend to be in Baloto, Via, Punto Red and Con Red.

[*Operator: Read only for ATM.*]

Excellent, remember that you can have a maximum of 30 minutes to withdraw money after entering the code in your cell phone. To withdraw money from an ATM follow these steps:

On the ATM screen, select the Daviplata Withdrawal option. If you can't find it, look for another ATM that is part of the Davivienda network. Then enter the amount to be withdrawn. This must match the amount you entered previously on your cell phone.
Now, enter the account number. This is normally your cell phone number.
Enter the 6-digit code you generated on your cell phone.

Done! Take your money and receipt.

We recommend that you do not ask strangers for help. You can call us again if you need help or ask the correspondent bank.

Do you have any other questions? → Ending

Tigo:

**1C/D.1 Nequi/Movii: Check Balance**

**1.C.2 Nequi: Withdraw Money**

### 1.D.2 Movii: Withdraw Money

### 2. Assistance 2

I'm very sorry. Let me see if I can help you. To begin, I'm going to check if you have an account registered with your cell phone number, is that okay? You don't need to give me any information.

[*Operator: Check if there is an account with the cell number.*]

+[They have an account] → [*Operator: Select the appropriate service.*] +[Ahorro a la mano] → 1A Ahorro A La Mano

+[Daviplata] → 1B Daviplata

+[Nequi] → 1C Nequi

+[Movii] → 1D Movii

+[They don't have an account] If you like, I can help you open an account, it will only take a few minutes and there are many benefits.

Let me tell you about it:

First, there are no fees to create an account through your cell phone and it only takes a few minutes.

With the account you can withdraw money at an ATM if you like. You can pay utilities, reload your cell phone, and much more all from your cell phone.

Remember that the money is yours. The bank will not charge any commission nor deduct money towards outstanding debts.

With these benefits, you save time and transfer fees, plus avoid lines and long waits at the bank. Also, you can access these services 24 hours a day including weekends and holidays.

+[Continue] → Loops back to initial call content.

**Ending**

Ok, great. If at any time you would like to get in touch with an Ingreso Solidario agent, you can call 018000951100 toll-free outside Bogotá or 595-4410 within Bogotá.

You can also visit our official website

http:slash slash ingresosolidario.prosperidadsocail.gov.co

Please note that official government websites always end in “dot gov dot co”. And remember, never enter any of your information on websites you received through WhatsApp. The government will never ask you to enter information on websites.

Before I go, let me remind you that during the pandemic we must all take care of each other. It is recommended that you only leave home if absolutely necessary, and if you do, practice physical distancing and use a mask.

Thank you for your time and have a wonderful day.

→ DONE

# D Survey Instrument

## Questionnaire

Table of Contents



### 1. DEM. Demographic characteristics

*[Surveyor, please read:] "To begin, I am going to ask you about characteristics about yourself and your household's characteristics."*

| | | |
|---|---|---|
| 1.1 How old are you?<br>. | 1. 2 What is your gender?<br>1 Man<br>2 Woman<br>-666 Other<br>-777 Doesn't answer | 1.3 What is your relationship with the household head, or are you the household head?<br>*Surveyor, please read: Definition of household head: a household member who is recognized as having the most significant responsibility for household decisions, or contributing the most to the family budget, or simply because of cultural traditions.*<br>1 Head of Household<br>2 Spouse/ partner of the household head<br>3 Child<br>4 Father/ mother<br>5 Father in law/ mother in law<br>-666 Other _____ |
| 1.4 What is the highest level of education you have attained?<br>1 None<br>2 Day care center<br>3 Preschool<br>4 Elementary school<br>5 Secondary school/ High school<br>6 Technical/ technological education<br>7 University or more<br>-888 Doesn't know<br>-777 Doesn't answer | 1.5 How many people, including yourself and all children/teenagers, are currently living in your household?<br>*Surveyor, please read: Definition of household head: a household member who is recognized as having the most significant responsibility for household decisions, or contributing the most to the family budget, or simply because of cultural traditions.* | 1.6 Please indicate the number of members of your household who are between 18 and 40 years old |
| 1.7 Do you or does any member of your household own a computer, laptop, tablet or smartphone?<br>1 Yes<br>2 No<br>-888 Doesn't know | 1.8 Do the members of your household have access to internet at home, either from their smartphone, tablet or computer?<br>1 Yes<br>2 No | |

1

| | | |
|---|---|---|
| -777 Doesn't answer | -888 Doesn't know<br>-777 Doesn't answer | |

| **2. LAB. Labor market and income** | | |
|---|---|---|
| *[Surveyor, please read:] "Now I am going to ask you about your labor status and income."* | | |
| 2.1 During the last 30 days, did you work at least one hour for an employer for wages, as an apprentice running your own business, or helping in the family business or farm even without pay?<br><br>1 Yes<br>2 No → go to 2.5<br>-888 Doesn't know → go to 2.5<br>-777 Doesn't answer → go to 2.5 | 2.2 Which of the following categories best describes your role in your primary occupation?<br><br>1 Employee, day laborer or worker for businesses outside the home<br>2 Self-employed worker<br>3 Business owner<br>4 Helper or apprentice in the family business<br>5 Apprentice outside the family business or SENA<br>-666 Other<br>-777 Doesn't answer | 2.3 During the last 30 days, on average, how many days a week did you work in your main occupation?<br>[*Surveyor, count 30 days from today backwards]*<br><br>1 _____<br>-888 Doesn't know<br>-777 Doesn't answer |
| 2.4 During the last 30 days, on average, how many hours per day did you work in your main occupation?<br>[*Surveyor, count 30 days from today backwards]*<br><br>1 _____<br>-888 Doesn't know<br>-777 Doesn't answer | 2.5 During the last 30 days, did you or any member of your household work in any personal or family business?<br>[*Surveyor, count 30 days from today backwards]*<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 2.6 During the last 12 months, did you or any member of your household start a new business?<br>*[Surveyor, count the 12 months from today backwards]*<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer |
| 2.7 During the last 12 months, did you or any member of your household close any previously owned business?<br>*[Surveyor, count the 12 months from today backwards]*<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 2.8 During the past 30 days, which of the following digital tools did you use to perform your job or operate your business?<br>**Mark all that apply*<br>*[Surveyor, count 30 days from today backwards].*<br><br>1 Video calls (e.g. zoom, teams, Google meets, WhatsApp Video)<br>2 Email, internet chat or instant messaging services (WhatsApp, Telegram, Signal, Facebook Messenger, etc)<br>3 Apps on your cell phone or online to access or promote products (for example publications in social media, WhatsApp or Facebook related to your business or work)<br>4 Apps on your cell phone or online to connect with your employer or customers (Rappi, uber, etc)<br>5 Digital wallets or simplified savings accounts such as Daviplata, Nequi, Ahorro a la mano, Movii or Tigo Money to realize payments or charges for services and sales<br>6 QR codes for charges or payments for your services and sales.<br>7 Online purchases or sales.<br>8 Payments using debit or credit cards | 2.9 In general, how easy is it for you to learn to use new digital technologies?<br><br>1 Very hard<br>2 Hard<br>3 Neither easy or hard<br>4 Easy<br>5 Very easy |
| 2.10 During the last 30 days, did you search for a job or try to work longer hours?<br>[*Surveyor, count 30 days from today backwards]*<br><br>1 Yes<br>2 No | 2.11 During the past month of *[insert full calendar month preceding the interview] *, 2022, what was the income you earned from your principal occupation?<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br><br>$ _____ | 2.12 *If 2.11 = -777 or -888*<br>Again, during *[insert full calendar month preceding the interview] * of 2022, how much income did you earn from your principal occupation within the following ranges?<br><br>1 $0 - $450.000<br>2 $450.001 - $900.000 |

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| -888 Doesn't know<br>-777 Doesn't answer | | 3 $900.001 - $1.800.000<br>4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer |
| 2.13 Just to verify. Your income last month was *[insert value or range reported in 2.11]* Is this correct?<br><br>1 Yes → go to 2.16<br><br>2 No | 2.14 During *[insert full calendar month preceding the interview]* of 2022, how much income did you earn from your main occupation?<br><br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br><br>$ _____ | 2.15 *If 2.14 = -777 or -888*<br>Again, during *[insert full calendar month preceding the interview] * of 2022, how much income did you earn from your principal occupation within the following ranges?<br><br>1 $0 - $450.000<br>2 $450.001 - $900.000<br>3 $900.001 - $1.800.000<br>4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer |
| 2.16 When was the last time you received payments related to such income?<br>*Surveyor: Do not read the options and write down the corresponding option*<br><br>1 During the last week (last 7 days)<br>2 Two weeks ago (8 to 14 days)<br>3 Three weeks ago (15 to 21 days)<br>4 Four weeks ago or more (22 to 30 days)<br>-888 Doesn't know<br>-777 Doesn't answer | 2.17 Was this payment in cash or by electronic payments (deposits to your bank account or mobile wallet)?<br><br>1 In cash<br>2 Electronic/ digital payment (Daviplata, Ahorro a la mano, Movii, Mequi, Bank deposit, etc.)<br>3 In-kind<br>-888 Doesn't know<br>-777 Doesn't answer | 2.18 Who is the person who decides on the use of the income corresponding to your main occupation?<br><br>1 You<br>2 Your partner<br>3 You and your partner together<br>4 Another household member<br>5 You and another household member together<br>6 Another person outside the household<br>-888 Doesn't know |
| 2.19 During the last month of *[full calendar month preceding the interview]* 2022, what was the household's total monthly income? That is, the income received by all household's members either from work, rents, or transfers from the government or other persons.<br><br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br><br>$ _____ | 2.20 *If 2.19 = -777 or -888*<br>Again, during *[insert full calendar month preceding the interview] * of 2022, what was the household's total monthly income within the following ranges?<br><br>1 $0 - $450.000<br>2 $450.001 - $900.000<br>3 $900.001 - $1.800.000<br>4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer | 2.21 Just to verify. Your household income last month was *[insert value or range reported in 2.19]* Is this correct?<br><br>1 Yes → go to next section<br><br>2 No |
| 2.22 During the last month of *[full calendar month preceding the interview]* 2022, what was the household's total monthly income? That is, the income received by all household's members either from work, rents, or transfers from the government or other persons. | 2.20 *If 2.22 = -777 or -888*<br>Again, during *[insert full calendar month preceding the interview] * of 2022, what was the household's total monthly income within the following ranges?<br><br>1 $0 - $450.000<br>2 $450.001 - $900.000<br>3 $900.001 - $1.800.000 | |

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| **Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br><br>$ _____ | 4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer | |

| **3. IS. Ingreso Solidario** | | |
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| *[Surveyor, please read:] "Now I am going to ask you about the National Government's cash transfer program called Ingreso Solidario."* | | |
| 3.1 Have you or any member of your household ever received a payment from the Ingreso Solidario program?<br><br>1 Yes<br>2 No → go to next section<br>-888 Doesn't know → go to next section<br>-777 Doesn't answer → go to next section | 3.2 When did you receive your most recent Ingreso Solidario payment?<br><br>1 During the last week (last 7 days)<br>2 Two weeks ago (8 to 14 days)<br>3 Three weeks ago (15 to 21 days)<br>4 Four weeks ago or more (22 to 30 days)<br>-888 Doesn't know<br>-777 Doesn't answer | 3.3 As of today, have you already spent, in full, the resources of the last Ingreso Solidario payment?<br><br>1 Yes<br>2 No → go to 3.5<br>-888 Doesn't know → go to 3.5<br>-777 Doesn't answer → go to 3.5 |
| 3.4 How much do you have left? Please indicate the remaining value of the last solidarity income payment (in pesos).<br><br>$ _____ | 3.5 Have you had difficulties receiving Ingreso Solidario payments?<br><br>1 Yes<br>2 No → go to 3.7<br>-888 Doesn't know → go to 3.7<br>-777 Doesn't answer → go to 3.7 | 3.6 What difficulties have you experienced in the payment of Ingreso Solidario?<br>**Mark all that apply**<br><br>1 Delays in disbursement<br>2 Difficulty in enrolling/using or creating a checking account to receive a deposit/transfer like Daviplata, Nequi or Ahorro a la mano account<br>3 Location/bank where I pick up the cash is too far away<br>4 Location/bank where I pick up the cash was closed<br>5 Location/bank where I pick up the cash did not have cash<br>6 Long lines an waiting time to pick up the transfer<br>-888 Doesn't know<br>-777 Doesn't answer |
| 3.7 For the following questions consider the last Ingreso Solidario payment your household received, was this payment in cash or by an electronic payment (deposits to your bank account or mobile wallet)?<br><br>1 In cash → go to 3.12<br>2 Electronic/digital payment (Daviplata, Ahorro a la mano, Movii, bank deposit, etc.)<br>-888 Doesn't know → go to 3.12<br>-777 Doesn't answer → go to 3.12 | 3.8 Did you experience any problem accessing your Ingreso Solidario income transfer?<br><br>1 Yes<br>2 No → go to 3.10<br>-888 Doesn't know → go to 3.10<br>-777 Doesn't answer → go to 3.10 | 3.9 Which of the following problems did you experience/face?<br>**Mark all that apply**<br><br>1 Difficulty withdrawing money from an ATM<br>2 Difficulty using my savings account or mobile wallet to make business payments with my solidarity income |
| 3.10 Did you use an ATM to access your transfer from your account?<br><br>1 Yes<br>2 No → go to 3.13 | 3.11 Usually, how much do you withdraw from the transfer?<br><br>1 $ 1 to $ 40,000 pesos<br>2 $ 40,001 to $ 80,000 pesos<br>3 $ 80,001 to $ 120,000 pesos<br>4 $ 120,001 to $ 160,000 pesos<br>5 More than $ 160,000 pesos<br>-888 Doesn't know<br>-777 Doesn't answer | 3.12 Why did you not open a bank account to receive your cash transfer?<br>**Mark all that apply**<br><br>1 Lack of trust / I don't trust banks<br>2 It is easier to receive in person<br>3 I am not familiar with bank accounts<br>-666 Other, specify _____ |

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| 3.13 For what reason did you open a bank account to receive your cash transfer?<br>**Mark all that apply**<br><br>1 I am familiar with these accounts because my family or friends use them<br>2 It is easier to receive money in my account because I save time avoiding line<br>3 To avoid the spread of COVID-19<br>4 I am familiar with digital technologies<br>-666 Other, specify _____ | 3.14 Considering the last Ingreso Solidario payment that your household received, did you have to suspend your daily activities, at least for an hour, to assist in collecting your transfer?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 3.15 Considering the last Ingreso Solidario payment that your household received, how long did it take you to collect your transfer from Ingreso Solidario? Please include time spent on transportation from your home to the location/bank facility or ATM and time spent waiting in lines.<br>**0 if the person says he/she received the money automatically in his/her account and didn't go to an ATM**<br><br>HH MM |
| 3.16 Considering the last Solidarity Income payment that your household received, did you have to travel to another neighborhood, municipality or town to collect your transfer or access an ATM to withdraw your transfer?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 3.17 Considering the last Ingreso Solidario payment that your household received, did you have to spend on transportation to get to the point of payment or ATM to withdraw your transfer?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 3.18 Who is the person who decides on the use of transfers from the Ingreso Solidario program?<br><br>1 You<br>2 Your partner<br>3 You and your partner together<br>4 Another household member<br>5 You and another household member together<br>6 Another person outside the household<br>-888 Doesn't know |
| 3.19 How often would you prefer to receive your solidarity income?<br><br>1 On a weekly basis. That is, 40,000 pesos each week.<br>2 On a biweekly basis. That is, 80,000 pesos every two weeks.<br>3 On a monthly basis. That is, 160 000 pesos per month.<br>4 Quarterly. That is, 480 000 pesos every three months.<br>5 On a semi-annual basis. That is, 640 000 pesos every six months. | | |

| **4. REM. Remittances and transfers** | | |
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| *[Surveyor, please read:] Now I am going to ask you about remittances or transfers the household has made or received* | | |
| 4.1 During the last 30 days, did you or any member of your household receive help or gifts from other people who are not members of your household?<br>*[Surveyor, count 30 days from today backwards.]*<br><br>1 Yes<br>2 No → go to 4.3<br>-888 Doesn't know → go to 4.3<br>-777 Doesn't answer → go to 4.3 | 4.2 What is your relationship with the people who provided you with assistance or gifts?<br>**Mark all that apply**<br><br>1 Friends in Colombia<br>2 Friends abroad<br>3 Colleague, boss or employer<br>4 Relatives in Colombia<br>5 Relatives abroad<br>6 Personal moneylenders or "gota a gota<br>-666 Other _____<br>-888 Doesn't know<br>-777 Doesn't answer | 4.3 During the last 30 days, did you or any member of your household give monetary assistance or gifts to persons other than members of your household?<br>*[Surveyor, count 30 days from today backwards.]*<br><br>1 Yes<br>2 No → go to next section<br>-888 Doesn't know → go to next section<br>-777 Doesn't answer → go to next section |
| 4.4 What is your relationship with the people to whom you gave aid or cash gifts?<br><br>1 Friends in Colombia<br>2 Friends abroad<br>3 Colleague, boss or employer<br>4 Relatives in Colombia<br>5 Relatives abroad<br>-666 Other _____ | | |

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| -888 Doesn't know<br>-777 Doesn't answer | | |

| **5. CON. Consumption and saving patterns** | | |
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| *[Surveyor, please read:] "Now I am going to ask you about household consumption and savings patterns."* | | |
| 5.1 In general, how often do you go to the supermarket for buying groceries for your household?<br>1 Daily<br>2 Weekly<br>3 Biweekly<br>4 Monthly<br>-666 Other frequency _____<br>6 Never<br>-888 Doesn't know<br>-777 Doesn't answer | 5.2 When was the last time your home went to market?<br>1 A week or less ago<br>2 Between one and two weeks<br>3 Between two and three weeks<br>4 Between three and 4 weeks<br>5 More than 4 weeks ago | 5.3 The last time you went to the supermarket, how much did you spend on food? Please exclude alcoholic beverages, cleaning products and cigarettes from this value.<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br>$ _____ |
| 5.4 *If 5.3 = -777 or -888*<br>Again, the last time you went to the supermarket, how much did you spend on food within the following ranges? Please exclude alcoholic beverages, cleaning products and cigarettes from this value.<br>1 $0 - $450.000<br>2 $450.001 - $900.000<br>3 $900.001 - $1.800.000<br>4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer | 5.5 According to your previous answer, the last time you went to the supermarket you spent *[insert value or range reported in 5.3]* on food, is this correct?<br>1 Yes → go to 5.8<br>2 No | 5.6 How much did you spend on food the last time you went to the supermarket? Please exclude alcoholic beverages, cleaning products and cigarettes from this value.<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br>$ _____ |
| 5.7 *If 5.6 = -777 or -888*<br>Again, how much did you spend on food the last time you went to the supermarket within the following ranges? Please exclude alcoholic beverages, cleaning products and cigarettes from this value.<br>1 $0 - $450.000<br>2 $450.001 - $900.000<br>3 $900.001 - $1.800.000<br>4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer | 5.8 Now I will read you a list of items and I want you to answer me your approximate expenditure in the last 30 days.<br>**Note: For 2, if utilities are included in the rent enter 0.**<br>**Write down the amount in pesos, -999 if do not know or -888 if do not answer. If not spent 0**<br>*[Surveyor, count 30 days from today backwards."]*<br><br>During the last 30 days, approximately how much did the household spend on ...<br>5.8.1 Rent or housing credit $ _____<br>5.8.2 Utilities (water, electricity, gas and/or administrative expenses) $ _____<br>5.8.3 Cell phone and internet access $ _____<br>5.8.4 Medical care? (hospital visits, medical consultations or surgery expenses) $ _____<br>5.8.5 Medications/vitamins or food supplements $ _____<br>5.8.6 Transportation / Gasoline $ _____<br>5.8.7 Debts and non-mortgage financial expenses $ _____<br>5.8.8 Education / School supplies $ _____ | |
| 5.9 Now I will read you a list of items and I want you to answer me your approximate expenditure in the last 30 days.<br>**Write down the amount in pesos, -999 if do not know or -888 if do not answer. If not spent 0**<br>*[Surveyor, count 30 days from today backwards."]*<br><br>It is often normal to spend to treat yourself. During the past 30 days, approximately how much did the household spend on ..... | | 5.10 Please, indicate which of the following purchases you made during 2021.<br>**Mark all that apply**<br>1 Computer, tablet, laptop or smartphone<br>2 Television or radio<br>3 Refrigerator, microwave, stove, vacuum cleaner or other appliance for your home<br>4 Bicycle, car or motorcycle |

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| 5.9.1 Attendance/organization of parties or other entertainment events $ _____<br>5.9.2 Purchase of clothing and other apparel $ _____<br>5.9.3 Alcoholic beverages and cigarettes (please include consumption inside and outside your home $ _____<br>5.9.4 Going out for dinner, drinking coffee or similar (e.g., in restaurants or in a shopping mall) $ _____<br>5.9.5 Purchase of toys or gifts for family or household members $ _____<br>5.9.6 Beauty items or services such as hairdressers, stylists, makeup and cosmetics $ _____ | | 5 Furniture |
| 5.11 During 2021, did you or any member of your household make improvements to your home?<br>** Surveyor can give examples: change the carpeting on the floors, paint the walls, make repairs **<br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 5.12 Currently, could your household cover an unexpected expense of 150,000 pesos?<br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 5.13 Now, imagine that your household loses all of its income sources. In that case, your household would have enough resources to cover your basic needs for the next:<br>1 0 days<br>2 1 – 3 days<br>3 4 – 7 days<br>4 2 weeks<br>5 Between 3 weeks and 1 month<br>6 More than 1 month |
| 5.14 Currently, does your household have savings?<br>1 Yes<br>2 No → go to 5.21<br>-888 Doesn't know → go to 5.21<br>-777 Doesn't answer → go to 5.21 | 5.15 Where do you keep your savings? Please identify all that apply.<br>1 In a savings or checking bank account<br>2 In a mobile wallet or simplified savings account (Ahorro a la Mano, Daviplata, Movii, etc)<br>3 In investment funds or pension fund administrators<br>4 In cash<br>5 In other informal savings mechanisms such as savings chains, family savings funds or other group savings | 5.16 Approximately, how much does your household have in savings?<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br>$ _____ |
| 5.17 *If 5.16 = -777 or -888*<br>Again, approximately how much does your household have in savings within the following ranges?<br>1 $0 - $450.000<br>2 $450.001 - $900.000<br>3 $900.001 - $1.800.000<br>4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer | 5.18 For verification purposes, you answered that your household savings are *[insert value or range reported in 5.16]* Is this number correct?<br>1 Yes → go to 5.21<br>2 No | 5.19 Approximately, how much does your household have in savings?<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br>$ _____ |
| 5.20 *If 5.19 = -777 or -888*<br>Again, approximately how much does your household have in savings within the following ranges?<br>1 $0 - $450.000<br>2 $450.001 - $900.000<br>3 $900.001 - $1.800.000<br>4 $1.800.001 - $2.700.000<br>5 $2.700.001 - $3.600.000<br>6 $3.600.001 - $5.400.000<br>7 $5.400.001 - $7.200.000<br>8 $7.200.001 - $ 9.900.000<br>9 $9.900.001 - $13.500.000<br>10 $13.500.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer | 5.21 In the last 30 days, did you or any member of your household have to reduce the number of meals or the size of portions eaten in a day due to lack of sufficient food?<br>*[Surveyor, count 30 days from today backwards."]*<br>1 Yes<br>2 No → go to 5.24<br>-888 Doesn't know → go to 5.24<br>-777 Doesn't answer → go to 5.24 | 5.22 How often did this happen?<br>*[Surveyor, count 30 days from today backwards."]*<br>1 Once or twice in the last 30 days<br>2 3 to 10 times during the past 30 days<br>3 More than 10 times in the last 30 days<br>-888 Doesn't know<br>-777 Doesn't answer |
| | | |

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| 5.23 When was the last time this happened?<br><br>1 1 week ago or less (1-7 days)<br>2 One to two week ago (8-14 days)<br>3 Between two and three weeks ago (15-21 days)<br>4 Between three to four weeks ago (22-28 days)<br>5 More than 4 weeks ago (more than 28 days ago)<br>-888 Doesn't know<br>-777 Doesn't answer | 5.24 During the past week, approximately what was the value in pesos of all the food consumed by your household?<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br><br>$ _____ | 5.25 *If 5.24 = -888 or -777*<br>Again, during the past week, approximately what was the value in pesos of all the food consumed by your household within the following ranges?<br><br>1 $0 - $40.000<br>2 $40.001 - $100.000<br>3 $100.001 - $140.000<br>4 $140.001 - $180.000<br>5 $180.001 - $200.000<br>6 $200.001 - $250.000<br>7 $250.001 - $300.000<br>8 $300.001 - $ 365.000<br>9 $365.001 - $475.000<br>10 $475.001 or more<br>-888 Doesn't know<br>-777 Doesn't answer |
| 5.26 During the last 30 days, did you feel any anxiety, worry or stress about meeting your financial obligations and those of your household members?<br>*[Surveyor, count 30 days from today backwards."]*<br><br>1 Yes<br>2 No → go to next section<br>-888 Doesn't know → go to next section<br>-777 Doesn't answer → go to next section | 5.27 How often did this happen?<br><br>1 Once or twice in the last 30 days<br>2 3 to 10 times during the past 30 days<br>3 More than 10 times in the last 30 days<br>-888 Doesn't know<br>-777 Doesn't answer | 5.28 When was the last time this happened?<br><br>1 1 week ago or less (1-7 days)<br>2 One to two week ago (8-14 days)<br>3 Between two and three weeks ago (15-21 days)<br>4 Between three to four weeks ago (22-28 days)<br>5 More than 4 weeks ago (more than 28 days ago)<br>-888 Doesn't know<br>-777 Doesn't answer |

| **6. Access and use of financial instruments** | | |
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| 6.1 Currently, do you have a traditional bank account (savings or checking account), simplified savings account or digital wallet such as Ahorro a la Mano, Daviplata, Nequi or MOVii?<br><br>1 Yes<br>2 No → go to 6.3<br>-888 Doesn't know → go to 6.3<br>-777 Doesn't answer → go to 6.3 | 6.2 Currently, do you have a savings account, simplified savings account or digital wallet such as savings on hand, Daviplata, Nequi, or MoVii?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 6.3 Excluding you, does any other member of your household currently have a traditional bank account (savings or checking account), simplified savings account or digital wallet such as Ahorro a la Mano, Daviplata, Nequi or MOVii?<br><br>1 Yes<br>2 No → go to 6.5<br>-888 Doesn't know → go to 6.5<br>-777 Doesn't answer → go to 6.5 |
| 6.4 Excluding you, does any other member of your household have a simplified savings account or digital wallet such as savings at hand, Daviplata, Nequi, or MoVii?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 6.5 Do you or any member of your household currently have a debit, credit or prepaid card?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 6.6 During the last 30 days, did you or any member of your household use any of the following means of payment to pay for basic services (such as water, electricity, smartphone or internet), purchase of food or market payment, or payment for other goods and services?<br>**Mark all that apply**<br><br>1 Simplified savings accounts or electronic wallets (ahorro a la mano, daviplata, nequi, movii)<br>2 Debit or credit or prepaid card<br>3 Payments by cell phone (Movistar Money, Giros Claro)<br>4 Payments by cash, checks or money order<br>-888 Doesn't know<br>-777 Doesn't answer<br>7 None of the above |
| 6.7 During the last 30 days, did you or any member of your household use any of the following means of payment to make the purchase of food or market payment, or payment for other goods and services? | 6.8 During the last 30 days, did you or any member of your household use any of the following means of payment to send or receive money to or from other people outside your home? | 6.9 *If 6.2 = 2*<br>During the past 30 days, did you or any member of your household use a simplified savings account or |

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| **Mark all that apply**<br>1 Simplified savings accounts or electronic wallets (ahorro a la mano, daviplata, nequi, movii)<br>2 Debit or credit or prepaid card<br>3 Payments by cell phone (Movistar Money, Giros Claro)<br>4 Payments by cash, checks or money order<br>-888 Doesn't know<br>-777 Doesn't answer<br>7 None of the above | **Mark all that apply**<br>1 Simplified savings accounts or electronic wallets (ahorro a la mano, daviplata, nequi, movii)<br>2 Debit or credit or prepaid card<br>3 Payments by cell phone (Movistar Money, Giros Claro)<br>4 Payments by cash, checks or money order<br>-888 Doesn't know<br>-777 Doesn't answer<br>7 None of the above | mobile wallet (ahorro a la mano, daviplata, nequi, movii) to save or save money for at least one day?<br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer |
| 6.10 *If 6.2 = 2*<br>During the last 30 days, did you or any member of your household use your smartphone or the internet to check the balance of your simplified savings account or mobile wallet?<br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 6.11 *If 6.2 = 2*<br>During the last 30 days, did you or any member of your household make a deposit to your digital savings account?<br>1 Yes<br>2 No → go to 6.14<br>-888 Doesn't know → go to 6.14<br>-777 Doesn't answer → go to 6.14 | 6.12 How many times?<br>☐☐ |
| 6.13 What was the amount in pesos of the last deposit that you or someone in your household made to your account?<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br>$ _____ | 6.14 *If 6.2 = 2*<br>During the last 30 days, did you or any member of your household make any withdrawals from your digital savings account?<br>1 Yes<br>2 No → go to next section<br>-888 Doesn't know → go to next section<br>-777 Doesn't answer → go to next section | 6.15 How many times?<br>☐☐ |
| 6.16 What was the amount in pesos of the last deposit that you or someone in your household made to your account?<br>**Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer **<br>$ _____ | | |

| **7. Use of digital technologies** | | |
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| 7.1 Thinking about the last time you did each of the following activities. Did you have to suspend your usual activities, at least for an hour, to carry out the following activities?<br>**Mark all that apply**<br>1 Collection of money corresponding to your salary<br>2 Collection of money corresponding to government benefits / transfers<br>3 Collection or receipt of remittances from abroad<br>4 Collection or reception of transfers from the interior of the country<br>5 Purchases of food, necessities and market<br>6 Payment of basic services (electricity, water, smartphone, internet or gas)<br>7 Assistance to your source of work | 7.2 Thinking about the last time you did each of the following activities. Did you have to spend on transportation to carry out the following activities?<br>**Mark all that apply**<br>1 Collection of money corresponding to your salary<br>2 Collection of money corresponding to government benefits / transfers<br>3 Collection or receipt of remittances from abroad<br>4 Collection or reception of transfers from the interior of the country<br>5 Purchases of food, necessities and market<br>6 Payment of basic services (electricity, water, smartphone, internet or gas)<br>7 Assistance to your source of work | 7.3 Thinking about the last time you did each of the following activities. How many hours and minutes did he dedicate to each activity? Please include transportation time and waiting in line and window, if applicable.<br>**Mark all that apply**<br>1 Collection of money corresponding to your salary<br>2 Collection of money corresponding to government benefits / transfers<br>3 Collection or receipt of remittances from abroad<br>4 Collection or reception of transfers from the interior of the country<br>5 Purchases of food, necessities and market<br>6 Payment of basic services (electricity, water, smartphone, internet or gas)<br>7 Assistance to your source of work |
| | 7.5 Would you feel comfortable leaving 150 000 pesos in a bank account or digital wallet for 30 days? | 7.6 Would you feel comfortable making the payment of an important transaction for an amount of 150 |

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| 7.4 How much do you trust in the institutions that provide financial services such as banks, mutuals and cooperatives?<br><br>1 I am totally suspicious<br>2 I have some mistrust<br>3 I neither trust nor distrust<br>4 I have some confidence<br>5 I absolutely trust | *Note: examples of digital wallets are Ahorro a la Mano, Daviplata, Nequi and MOVii. They are simplified savings accounts that can be operated from a cell phone, even without internet access.*<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 000 pesos electronically using a bank account or digital wallet?<br>*Note: examples of digital wallets are Ahorro a la Mano, Daviplata, Nequi and MOVii. They are simplified savings accounts that can be operated from a cell phone, even without internet access.*<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer |
| 7.7 Would you feel comfortable receiving a payment of 150 000 pesos electronically in your bank account or digital wallet?<br>*Note: examples of digital wallets are Ahorro a la Mano, Daviplata, Nequi and MOVii. They are simplified savings accounts that can be operated from a cell phone, even without internet access.*<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 7.8 Do you save even a little each month?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 7.9 Thinking about your household expenses. Do you or any member of your household have a pre-established budget to manage your expenses?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer |
| 7.10 Thinking about the last purchase of high cost items such as appliances, televisions, computers or cell phones made by your household, how do you finance that purchase?<br>**Mark all that apply**<br><br>1 Savings<br>2 Spending cuts in other categories<br>3 Loans<br>4 Additional income | 7.11 Before making purchases, in general, do you compare prices of the same item in different businesses or stores?<br><br>1 Yes<br>2 No<br>-888 Doesn't know<br>-777 Doesn't answer | 7.12 Which of the following categories best describes your spending and saving patterns?<br><br>1 In general, I am a spender<br>2 I don't consider myself a person, neither a spender nor a saver<br>3 In general, I am a person committed to saving |