# Can Financial Technology Improve Public Service Delivery and Integrate Beneficiaries into the Formal Financial System?

Bridget Hoffmann Camilo Pecha Diego Vera-Cossio\*

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### Abstract

We use a randomized control trial to study an intervention to integrate beneficiaries of a large basic income program in Colombia into the formal financial system. Beneficiaries randomly assigned to the treatment group received a series of SMS messages and phone calls from a government representative to induce them to open digital saving accounts and receive their program benefits through direct deposit. We will use administrative and survey data to analyze the impacts of the intervention on account ownership and usage, disbursement delays and errors, and beneficiary welfare. We will utilize credit bureau data, including the universe of formal loans and credit cards in the country, to estimate effects on further take-up of formal financial products. The results will

<sup>\*</sup>Inter-American Development Bank, 1300 New York Ave., NW, Washington, DC. Vera-Cossio: diegove@iadb.org. We would like to thank Andres Bocanegra for his constant support throughout this project. We are grateful to Olga Romero, Patricia Moreno, German Briceno and the staff of Departamento Nacional de Planeacion and Direccion de Desarrollo Social in Colombia for their support in granting access to the administrative records. David Vargas and Maria Paula Medina provided superb research assistance. We also thank Juan Felipe Garcia and Innovations for Poverty Action Colombia for their support with data collection. All errors are our own. Opinions, findings, conclusions, and recommendations expressed here are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank. The randomized controlled trial was registered on the AEA RCT registry (AEARCTR-0006976) available at https://doi.org/10.1257/rct.6976-1.

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generate evidence on whether social programs and the adoption of new digital financial technologies can be the entryway into the formal financial system for lower-income individuals.

JEL Classification: D90,H53,I38

**Keywords:** Technology adoption, social protection, formal financial products

Timeline: The intervention was conducted from April to September of 2021. The analysis will use data from administrative data sets and household survey data. The household survey data collection will take place from the end of January 2022 to the end of March 2022. We had access to approximately 20 observations for survey instrument testing purposes in December 2021 and January 2022. We had access to a preliminary version of the Ingreso Solidario disbursement data approximately one month after the conclusion of the intervention. We expect to gain access to final versions of all administrative data sets (Ingreso Solidario disbursement data and credit bureau data) and household survey data at the end of March 2020 and complete the study shortly afterwards.

# 1 Introduction

Over the past decade, policy makers have sought to improve public service delivery with digital technologies. One notable example is electronic disbursement of payments from social programs directly into bank accounts. From the institutional perspective, direct deposits into bank accounts are appealing to governments and financial institutions because they may reduce program implementation costs and integrate beneficiaries into the formal financial system, promoting the use of other financial products. From the beneficiaries' perspective, providing access to savings accounts and direct deposits of program payments may be appealing since it could increase their welfare, for example, through lower transaction costs, savings, and consumption smoothing. However, there is little evidence on these positive effects, especially for the most vulnerable recipients, who tend to have lower digital skills.

In this paper we aim to fill these gaps by providing evidence on whether integrating beneficiaries of social programs into the formal financial system results in improvements in public service delivery, improvements in welfare for beneficiaries, and the further adoption of other financial and digital products. We study the impact of opening a digital savings account and receiving cash transfers through direct deposit in the context of Colombia's flagship basic income program, Ingreso Solidario. Ingreso Solidario was launched in April 2020 and continues to deliver an unconditional monthly payment of \$ CPO 160,000 (\$ USD 40) to over 3 million poor and vulnerable households across Colombia.

We conducted a randomized control trial in a sample of Ingreso Soliario

<sup>&</sup>lt;sup>1</sup>Some examples are biometric smartcards in India (Muralidharan et al., 2016), debit cards in Mexico (Bachas et al., 2021), payments of cash transfers by mobile money in Niger (Aker et al., 2016), among others.

beneficiaries in which the treatment group received encouragement and assistance to open simplified digital saving accounts and sign up for direct deposit of program payments into these accounts. Specifically, the intervention involved a series of SMS messages and phone calls with information about targeted accounts, step-by-step assistance to remotely open new savings accounts and enroll them in direct deposit, and assistance in using basic account features.<sup>2</sup>

In November 2020, a sample of approximately 30,000 beneficiaries was identified for the study, and one-half were randomly assigned to the treatment group. The beneficiaries in the sample did not own any bank account when they joined the program and exclusively received their initial payments in cash. Due to unforeseenlogistical reasons, the intervention was delayed until April 2021. During November 2020 and April 2021, several households lost eligibility, or opened a bank account. Thus, prior to beginning the intervention in April 2021, the sample was restricted by excluding participants who were not currently active beneficiaries of Ingreso Solidario and who now owned a bank account. The remaining sample consists of 17,711 beneficiaries with 8,888 beneficiaries in the treatment group and 8,823 beneficiaries in the control group. Therefore, the call center delivered the intervention to 8,888 households (59% of the original treatment group of 15,000).

We will combine multiple sources of administrative records, including Ingreso Soldiario program data and data from one of the largest credit bureaus in Colombia, with detailed household survey data for approximately 4,000 households to analyze the impacts of the intervention on public service delivery and beneficiaries' welfare. We will conduct our analysis using both administrative

<sup>&</sup>lt;sup>2</sup>Three financial institutions partnered with the government to allow digital account users to receive their benefits electronically. Two of the them are commercial banks of broad national coverage. The third is a recently established FinTech company.

data and household survey data in this sample of 17,711 beneficiaries, i.e., the 8,888 beneficiaries in the treatment group and the 8,823 beneficiaries in the control group who, based on their characteristics, would have received the intervention had they been randomly assigned to the treatment group.

Specifically, our analysis will proceed in five stages. First, we will analyze whether the intervention was successful in its primary objective: increasing the adoption of the digital savings accounts that can be used for direct deposit of benefits (targeted accounts), overall access to bank accounts, and account usage. Second, we will analyze whether the intervention improved the delivery of transfers and reduced beneficiaries' transaction costs of accessing and utilizing the transfer. Third, we will analyze whether the intervention, by increasing adoption of digital savings accounts and direct deposit of transfers, increased beneficiaries' welfare. In particular, we will investigate whether the intervention increased savings, changed spending patterns, and improved consumption smoothing through the payment cycle.

Fourth, we will provide novel evidence on the spillovers of financial technology adoption through two distinct channels: adoption of digital (non-financial) technologies and adoption of other formal financial products, such as loans or credit cards. Experience with digital savings accounts may increase a beneficiary's familiarity with digital technologies, such as videoconferencing, digital payments (e.g., with cards or through QR codes), and product and service promotion through social media, which may contribute to occupational change. Ownership and usage of the targeted digital savings accounts could increase access to and adoption of other formal financial products. The specific banks that offer the digital savings accounts may use recent transaction history to deduce valuable screening information for the beneficiary and decide whether to extend credit. Further, because the digital savings accounts are offered by

large, regulated financial institutions, information on account ownership and status of each beneficiary is reported to the credit bureau, which is available to all lenders. Thus, a digital savings account can be the entryway into the formal financial system for beneficiaries.

Fifth, we will investigate three potential mechanisms that could be driving our main results: trust in financial institutions, non-pecuniary transaction costs, and changes in financial habits.

Our study contributes to the literature on the modernization of social protection programs. Previous studies analyzed the introduction of digital technologies to improve service delivery and find that they reduced leakage in public programs (Muralidharan et al., 2016), affected take up of benefits (Muralidharan et al., 2020; Reyes et al., 2021), and improved food security of beneficiaries (Aker et al., 2016). We will extend the literature by analyzing whether a policy effort to integrate beneficiaries of social programs into the formal financial system through the adoption of digital financial technologies is able to achieve reductions in implementation errors and further improvements in beneficiaries' welfare. Moreover, by studying digital bank accounts that are integrated in broad banking and payment networks in a context of rapid mass adoption of digital technologies amid the COVID-19 pandemic,<sup>3</sup> we will be able to assess spillover effects on the adoption of other nonfinancial digital tools and on other formal financial products. The results will be informative for the role of public-private partnerships to increase formalization.

Our study is also related to the literature on the adoption of digital financial

<sup>&</sup>lt;sup>3</sup>There are several existing studies that analyze the impacts of the adoption of mobile money or interventions to encourage it (Aggarwal et al., 2020; Suri, 2017). We study the adoption of digital saving accounts. These financial technologies shares several features of mobile money such as enabling transfers but are offered by traditional banks and are thus part of a wider network of financial services.

technologies. Much of the existing literature focuses on previously banked entrepreneurs—e.g, clients of microfinance institutions or rural banks (Riley and Shonchoy, 2021)— or beneficiaries of social programs who already owned a regular bank account (Bachas et al., 2021). In contrast, our study focuses on beneficiaries of social programs who were previously unbanked. This is a subpopulation who are likely to have high potential gains from adopting a digital bank account but are also likely to face higher barriers to adoption. Further, due to low incomes and savings levels, this subpopulation is unlikely to be pursued as clients by large financial institutions, demonstrating a key role for public-private partnerships in expanding use of the formal financial system to low-income households.

# 2 Context

The government of Colombia designed the Ingreso Solidario (IS) program as an unconditional cash transfer to help poor and vulnerable households cope with the negative impacts of the covid-19 crisis. The IS program was designed to expand coverage of the social safety net to approximately 3 million households in a situation of poverty or vulnerability that were not covered by any other social program from the central government.<sup>4</sup> Ingreso Solidario provides beneficiaries with a regular monthly transfer of \$160,000 pesos (approx. USD \$40).

The ministry of planning (in Spanish, Departamento Nacional de Planeación or DNP), in cooperation with other central government institutions, was responsible for defining the IS beneficiary master dataset. DNP utilized the

<sup>&</sup>lt;sup>4</sup>For exmaple, other social programs from the central government include Familias en Acción, Jóvenes en Acción, Colombia Mayor, and VAT compensation programs.

SISBEN social registry (in Spanish, Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales) and other administrative datasets in the health, labor, and social sectors housed in other central government institutions to define the IS beneficiary master dataset. The SISBEN system has been implemented since the 1990s, and it is the most important tool for selecting beneficiaries of social programs. The SISBEN collects socioeconomic information of every individual with a valid ID who has asked to be registered or has been framed by the different rounds of data collection completed at the municipal level. Finally, the dataset of potential beneficiaries was merged with Asobancaria, the commercial banks association, to determine if potential beneficiaries owned bank accounts for the digital transfer of program payments.

The government used several different channels to locate beneficiaries. First, the government used the location and telephone numbers stored in SIS-BEN to locate and notify beneficiaries. Second, the beneficiaries who remained unlocated were merged with the mobile operator dataset (Asomovil). With the updated telephone numbers, DNP was able to inform the beneficiaries of their eligibility and of IS program funds deposited in the identified bank account through SMS message. For beneficiaries who did not own a bank account, DNP, in association with the Department for Social Prosperity (in Spanish, Departamento para la Prosperidad Social), sent the potential beneficiaries instructions to set up a digital savings account through SMS message.

As of June 2020, 71% of beneficiaries received their first payment electronically into bank accounts. While some beneficiaries were banked prior to the launch of Ingreso Solidario, the introduction of the program increased the ownership and usage of digital saving accounts (Gallego et al., 2021).<sup>5</sup>

 $<sup>^5\</sup>mathrm{A}$  vast majority of these accounts are offered by two large banks in Colombia with national coverage.

# 3 Research design

# 3.1 Study population, sample, and randomization

The study population consists of beneficiaries who were eligible for Ingreso Solidario but were not located at the time the program was launched and did not have bank accounts—neither traditional nor digital accounts— when they received their first program payment. These beneficiaries did not receive their first five monthly transfers from the program according to the regular schedule because they could not be reached and notified. After intensive outreach by the government, 139,256 of these unbanked and previously unreachable households were located and received their first transfer, a bulk payment of arrears, in cash in September 2020.<sup>6</sup> In October 2020, these beneficiaries started receiving their regular monthly transfers of 160,000 pesos (approx. USD \$40) and will continue to receive regular Ingreso Soldiario payments through the end of our data collection period (March 31, 2022). Starting in October 2020, our study population could receive their monthly transfers through digital modes. The objective of the government and banks cooperating with the program was to transition as many payments as possible to direct deposits into digital accounts.

First, we ranked municipalities by the target population and restricted our sample to municipalities with target population above the median, resulting in 129,900 households. Second, due to logistical constraints, we selected a random sample of approximately 30,000 beneficiaries (households) from the 129,900 unbanked beneficiaries to randomize into treatment and control groups. Specifically, we randomly selected 23% of the beneficiaries in each municipality result-

<sup>&</sup>lt;sup>6</sup>Specifically, the beneficiaries picked up the payments from local bank branches.

ing in 29,914 beneficiaries. Third, we randomized the 29,914 beneficiaries into approximately equal-sized treatment and control groups stratifying 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, 14,949 beneficiaries were randomized into the treatment group and 14,965 into the control group. All study participants were unbanked when the study population was compiled in November 2020.

Due to 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 remained unbanked. 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 will conduct our analysis using both administrative data and household survey data in this sample of 17,711 beneficiaries, i.e., the 8,888 beneficiaries in the treatment group and the 8,823 beneficiaries in the control group who, based on their characteristics, would have received the intervention had they been randomly assigned to the treatment group.

### 3.2 Intervention

The intervention consists of encouragement and step-by-step assistance in navigating the process of opening a free digital saving account to switch the mode of delivery for Ingreso Solidario transfers from cash to direct deposit 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 progression of the intervention is depicted in figure 1. The intervention was conducted nation-wide in Colombia between April and September 2021.

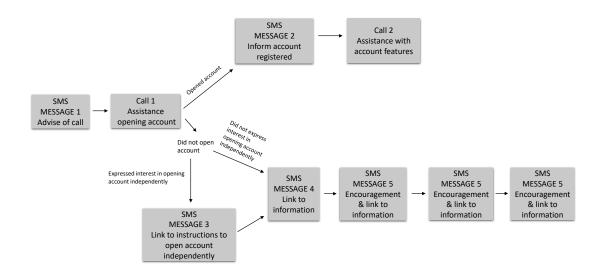


Figure 1: **Progression of the intervention** 

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

There were no fees for opening any of the accounts that partnered with the government or for receiving the Ingreso Solidario transfer directly into these accounts. The intervention promoted the adoption of three different accounts; two of them offered by two large commercial banks in Colombia (Ahorro a la mano from Banco Bancolombia and Daviplata from Banco Davivienda), while one was offered by a new FinTech company (MOVii). Although the menu of the former two accounts also included 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 latter account, the service was only available through an app for smartphones.

The bank accounts that were targeted by the intervention have three key features. First, two of the accounts can be accessed through the SIM card menu of any cellphone, even without access to an internet connection, which reduces transaction costs and increases access to accounts. Second, transfers among users of the same bank can be made without a fee through a mobile phone. Third, several businesses accept payments through these accounts and users can withdraw funds using a wide network of ATMs, without the need of a debit card.<sup>7</sup> A description and comparison of the features of each digital savings account is shown in Appendix Section A.

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. Prior to calling beneficiaries to encourage and assist them in opening a digital savings account, 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 decided 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 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

<sup>&</sup>lt;sup>7</sup>Users could request one at no cost in all cases.

available to the beneficiary vary 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 B.

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).<sup>8</sup> 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 informing the beneficiary that she could still open an account to access the Ingreso Solidario transfer digitally and providing a

<sup>&</sup>lt;sup>8</sup>Specifically, the link in the SMS message directed beneficiaries to the program's official website: https://ingresosolidario.prosperidadsocial.gov.co/.

link and telephone number to access more information about receiving their Ingreso Solidario payment directly into a digital account.

### 3.3 Data and processing

### 3.3.1 Administrative data

We will use three sources of administrative records matched to individuals in our sample.

First, we will use data corresponding to Colombia's social registry (SISBEN IV). These administrative records include baseline information on household demographic characteristics, such as gender, age, household size and location. This dataset also includes information on asset ownership, dwelling characteristics, and a proxy-means-test (PMT) score. This score was used by the government to select beneficiaries of the program. We will use these data to conduct balance tests, to control for demographic characteristics to increase power, and to conduct heterogeneity analysis in key dimensions.

Second, we will also obtain access to administrative records on program disbursement for the beneficiaries in our sample. This dataset will include data on each monthly disbursement attempts before and after the intervention that will allow us to identify problems with disbursements and the mode of payment: regular bank accounts, digital simplified savings accounts and cash payments at local bank branches. This will enable us to document transitions in the mode of payment of the transfers from cash to bank accounts without relying on self-reported information. In addition, the dataset will have information on the financial institution through which the payments are made, which we will use to understand consumer choice responses to the intervention. We will complement the administrative records with data on the availability

of branches and ATMs for each targeted financial institution by municipality,<sup>9</sup> which will enable us to test how the effects of the intervention vary based on the pre-existing supply of financial services in each area.

Third, to understand whether the intervention induced spillovers to other non-targeted financial products, we will use data from one of Colombia's largest credit bureaus. This dataset will include observations corresponding to each interaction between a beneficiary and a formal financial institution, including outstanding debt and debt status by product type —i.e., loans or credit cards—for each period. These records are available only for the months of June and December of each year.

### 3.3.2 Household survey data

We will complement the administrative data with household survey data collected via telephone. Data collection is scheduled from the end of January 2022 to March 2022, approximately 9 months after the intervention. We will collect a random sample of 4,000 responses from a total of 17,711 study participants. The survey will collect information about adoption and usage of digital savings accounts, consumption and spending patterns, trust in financial institutions, use of digital tools, financial habits, and time and monetary costs to complete basic transactions.

The fieldwork for the data collection is expected to last 6 weeks. There will be four survey attempts per participant.<sup>10</sup> We randomized the order of the beneficiaries in the sample for the first contact attempt. The expected

<sup>&</sup>lt;sup>9</sup>We will use publicly available records from the Superintendency of Finance which can be accessed from https://www.datos.gov.co/Econom-a-y-Finanzas/Inclusi-n-Financiera/ptgf-ywrb

<sup>&</sup>lt;sup>10</sup>Due to logistics, we anticipate that a random set of approximately 20% of completed surveys could receive up to five contact attempts. We will verify that these observations are balanced across treatment and control groups and do not differ on observable characteristics.

duration of the survey is 30 to 45 minutes. Data collection will stop when the survey team collects 4,000 complete surveys or when they have made 16,000 contact attempts, whichever happens first. The preliminary survey instrument can be found in Appendix Section B.

# 4 Theory of change, hypotheses and outcomes

# 4.1 Theory of change

Digital financial products can benefit the most vulnerable segments of the population by reducing the costs of conducting basic transactions. However, lack of information and familiarity with digital technologies and mistrust in financial products can limit the adoption of these products. We study an intervention designed to tackle these issues and encourage the adoption of digital savings accounts and the reception of cash transfers through these accounts. As individuals in the study sample were ex ante unbanked, the intervention may also increase the overall ownership of bank accounts.

Account ownership may not necessarily translate into usage (Dupas et al., 2018). Although the accounts targeted by the intervention can reduce the costs of conducting basic transactions, not all individuals will have the digital skills and confidence needed to operate the accounts.<sup>11</sup> Likewise, direct deposit into bank accounts has the potential to simplify the program's delivery process and reduce delivery costs, but may increase the costs of accessing and using the transfers for individuals who are unfamiliar with technology and are likely to

<sup>&</sup>lt;sup>11</sup>Users can conduct several popular transactions from the SIM menu of their cellphones without the need to be connected to the internet (e.g., payments of utility bills, transfers to and from other households, or payments for purchases at supermarkets). See Appendix Section A for a detailed description of the features of the accounts targeted by the intervention.

be the most vulnerable. Thus, the effects of the intervention on account usage and program delivery are ex ante ambiguous.

The intervention may yield important changes in spending patterns and savings and investment by preventing discretionary spending. By lowering the transaction costs of accessing the transfer, direct deposit into targeted accounts may reduce the likelihood of cashing out the transfer in one lump sum. This may increase consumption smoothing through the month (i.e., the transfer payment cycle) and could allow the targeted accounts to function as substitutes for commitment devices: less cash on hand may reduce the temptation to make discretionary, unplanned purchases.<sup>12</sup> Overall, the expected changes in spending patterns may increase resilience to shocks and enable individuals to save for the purchase of lumpy goods or for starting or scaling up businesses.

Ownership of and experience with a targeted account may spillover to other formal financial products and digital tools through digital skills and confidence, increased trust in financial institutions, and personal or household experience with a formal digital account. For many users, activating a new digital bank account will be their first experience with formal financial products and their first immersion in the digital economy. In addition, by using the accounts to conduct transactions, users may leave a digital footprint with valuable information for formal lenders. As the accounts that we study are provided by two of the largest commercial banks in Colombia, it is possible that the intervention eased access to formal financial products which can provide liquidity at lower interest rates than those of informal loans. Similarly, by using their accounts, the users may develop digital skills or gain confidence that could translate to other digital tools that can be used in their occupations.

<sup>&</sup>lt;sup>12</sup>Individuals often pay a premium to adopt commitment devices such as infrequent payments (Casaburi and Macchiavello, 2019; Brune et al., 2021; Schilbach, 2019).

Changes in spending patterns are likely related to several mechanisms. We study a context in which all study participants receive a monthly basic income which, in the case of adopters, implies the usage of the account on a monthly basis. The intervention may have increased trust in financial products, either directly as in (Galiani et al., 2020) or indirectly through repeated interaction as in (Bachas et al., 2021). Repeated interaction may have also helped users develop new spending and savings habits as in Breza et al. (2020) or Schaner (2018).

# 4.2 Hypotheses and outcomes

### 4.2.1 Primary hypotheses

### A. Take-up and use of bank accounts

**Hypothesis 1**: The intervention will increase ownership of targeted digital savings accounts and bank accounts overall, increase reception of program payments into targeted digital savings accounts, and increase the usage of targeted digital savings accounts.

We will use survey data to compute two dichotomous variables: one capturing whether any household member owns a targeted account and another to capture whether any household member owns any bank account.<sup>13</sup> We will also use the credit bureau's administrative records to compute an indicator that takes the value of 1 if the household has a bank account in the credit-bureau records.<sup>14</sup> We use both survey data and administrative data on account ownership to validate our survey data and because the credit bureau data does

 $<sup>^{13}</sup>$ The Ingreso Solidario transfer could be directly deposited into a targeted account owned by any household member.

 $<sup>^{14}</sup>$ Due to Colombian's bank confidentiality laws, the balance on bank accounts was not disclosed by the credit bureau.

allow us to distinguish the type of savings account.

Using Ingreso Solidario's administrative records, we will define a dichotomous variable that takes the value of 1 if the last program payment was directly deposited into the beneficiary's bank account and zero otherwise. We will also code a dichotomous variable denoting whether the beneficiary received at least one program payment directly in her account up to the last program payment.

Using the survey data, we will report the results using an index of targeted account usage following the methodology described in Section 5.2 that includes the following components. First, we will compute a set of dichotomous variables that capture usage of the basic features of the targeted accounts described in the call center script. These variables take a value of 1 if any household member digitally checked the balance of their targeted accounts, used their targeted account to send or receive transfers, pay for basic utilities, and make purchases at grocery or retail stores. Second, to proxy for the role of the accounts as a savings device for non-transfer income, we will compute a dichotomous variable denoting whether the respondent made at least one deposit into targeted accounts during the month preceding data collection. Third, we will also compute two dichotomous variables related to withdrawals: one denoting whether the respondent made at least one withdrawal during the past month and other denoting whether the respondent made more than one withdrawal during the past month.

**Hypothesis 2:** The intervention will reduce the transaction costs of accessing and utilizing the program's transfers.

To measure effects on program delivery we will first use administrative records to compute a dichotomous variable denoting whether the recipient experienced at least one failed disbursement attempt. We will also compute an index variable to capture the costs of accessing the transfer using survey data. Specifically, the components of the index will be dichotomous variables denoting whether the respondent experienced delays in the disbursement of their transfer, whether the respondent reported having problems accessing a bank branch or local bank agents to receive the transfer, whether the respondent had to suspend their daily activities to receive the transfer, whether the respondent had to travel or commute outside of her neighborhood to receive the transfer, and whether the time spent to retrieve the transfer was greater than 1 hour.

### 4.2.2 Secondary hypotheses

### A. Welfare

**Hypothesis 3:** The intervention will increase savings and investment and reduce discretionary spending and increase spending in necessities.

We will use survey data to capture savings levels and investment in durables and household businesses. We will use two variables to capture savings. First, we will compute a dichotomous variable denoting whether the household currently has savings, and second, we will use the reported current level of household savings. To capture investment, we will compute dichotomous variables denoting whether the household purchased durable goods (computers, tablets, smartphones, televisions, radios, home appliances, bicycle, automobile, motorcycle, and furniture) or opened a new business.

We will use survey data to measure consumption spending. Consumption spending will be computed as the sum of total consumption spending in necessities (i.e., food to be consumed at home, utilities, rent, health and education), and discretionary purchases. Discretionary spending will include purchases in the following categories: snacks, meals and non-alcoholic beverages consumed

outside the home, alcohol and cigarettes for consumption inside or outside the home, beauty products and services, clothing, entertainment, travel, and toys and gifts. We will report results for total consumption spending, spending on necessities and discretionary purchases.

**Hypothesis 4:** The intervention will increase consumption smoothing of necessities.

We will use survey data to capture whether the household withdrew their full Ingreso Solidario transfer in one withdrawal. Next, we will exploit the quasi-random date of the survey interview to study consumption smoothing of necessities. First, we will measure whether households have fully spent their monthly program transfers by the date of the survey interview. Second, we will measure resilience using an indicator of whether the household reports being able to cover an unexpected expense equivalent to 150,000 pesos and an indicator of whether the household has enough resources to cover more than a week worth of expenses. Third, we will use the value of food consumption over the past week to capture smoothing of food consumption. Fourth, we will compute two indicators of whether a household had to reduce meal sizes due to lack of food and whether a household has experienced anxiety due to their financial situation in the week preceding data collection.

### **B.** Spillovers

**Hypothesis 5:** The intervention will increase household ownership of non-targeted bank accounts, the use of the formal financial system, and the use of other digital tools.

We will use survey data to compute two variables to capture spillovers of bank account ownership within the household. First, we will compute an indicator of whether more than one household member owns a bank account, and second, we will compute an indicator of whether the survey respondent owns a traditional bank account (as opposed to a targeted digital savings account).

We will use the following four variables to measure effects of the invention on the adoption of other financial technologies. First, we will use survey data to compute an indicator of debit or credit card ownership. Second, we will use the administrative data from the credit bureau to compute the following three variables: an indicator of whether at least one lender conducted a credit check for the respondent (which is a proxy for loan applications), an indicator of whether the respondent has any outstanding loan with a formal financial institution, and an indicator of whether the respondent has an active credit card registered in the credit bureau's records.

We will use survey data to compute two variables to measure usage of other digital platforms. First, we will report results of an index computed of dichotomous variables denoting whether the respondent utilizes online applications (such as, videoconferencing, email and instant messaging, online platforms to connect with colleagues, clients, providers, and costumers, online platforms to promote their products/services, conduct purchases or sales online) in their main occupation. Second, we will also analyze whether the respondents report using QR codes and bank accounts to receive their salaries or payments from their businesses.

### C. Mechanisms

**Hypothesis 6:** The intervention will increase trust in financial products, reduce the transaction costs of conducting basic transactions, and induce

<sup>&</sup>lt;sup>15</sup>The digital accounts that we study offer the option of obtaining a debit card, but the intervention did not target the take-up and usage of debit cards.

changes in financial habits.

To measure effects on trust, we will show the results using an index composed of the following four variables computed from survey data: an indicator of whether the respondent reports somewhat trusting or absolutely trusting banks and financial institutions and three indicator variables denoting whether the respondent feels comfortable keeping 150,000 pesos in a bank account or digital wallet for at least 30 days, making a payment worth 150,000 pesos using a bank account or digital wallet, and receiving a payment of 150,000 pesos in a bank account or digital wallet.<sup>16</sup>

We will use survey data to compute an index variable that captures the non-pecuniary costs of conducting basic transactions. The index will be based on the following variables: an indicator of whether the respondent reported leaving the house to pay for basic utilities during the month preceding the survey interview, an indicator of whether the respondent had to commute to a different neighborhood to pay for basic utility bills, and an indicator of whether the respondent had to suspend their daily activities for at least one hour to pay their utilities in person.

Finally, we will compute an index variable capturing five dimensions of financial habits. Using survey data, we will code indicators denoting whether the respondent reports saving regularly, whether the household keeps a budget for its expenses, whether the household uses savings to finance the purchase of durable goods, whether the respondent considers herself a saver or a spender,<sup>17</sup> and whether the respondent compares prices across stores before making a

 $<sup>^{16}\</sup>mathrm{We}$  will collect survey data on overall trust in banks and financial institutions using a 5-point Likert scale.

<sup>&</sup>lt;sup>17</sup>Following (Bruhn et al., 2016) we will ask the respondent to specify whether she is a spender, more or less a spender, neither a spender nor a saver, more or less a saver and a saver.

purchase.

# 4.3 Identification strategy

Our basic methodological framework will be a randomized control trial (RCT). By randomly assigning program recipients into a treatment and a control group, a simple comparison across these groups will capture the intention-to-treat effects of the intervention and eliminate concerns regarding endogeneity.

To study the effect of the intervention on consumption smoothing, we will leverage random variation at the household-level in the number of days between the survey date and the date of the most recent Ingreso Solidario transfer. To ensure that beneficiaries' attributes are uncorrelated with the survey date, we will randomly vary the date of the first survey contact attempt. Program transfers are paid during the first weeks of the month. Therefore, some beneficiaries will be interviewed earlier in the month (just after when their transfer has been paid) while others will be interviewed later in the month (just before their next transfer will be paid). This procedure will generate random variation in the amount of time since the last transfer's pay date. We will then combine this source of variation with random variation in exposure to the intervention to estimate the effects of the intervention on consumption smoothing, namely whether high-frequency proxies for food consumption vary with respect to the Ingreso Solidario disbursement cycle.

# 5 Statistical methods

### 5.1 Statistical models

### 5.1.1 Effects on main outcomes

We will focus on reduced-form estimates (intention-to-treat estimates). We will obtain estimates of the causal effect of the intervention on a variety of outcomes through the following equation:

$$Y_i = \alpha + \beta Treatment_i + X_i \Sigma + \theta_m + \epsilon_i \tag{1}$$

where  $Y_i$  represents the outcome of interest of individual i.  $Treatment_i$  denotes treatment status. To increase precision, we will also include a vector of control variables including predetermined demographic characteristics,  $X_i$ , (age, gender, educational attainment, and category of PMT score) and pre-intervention ownership of bank accounts. The PMT scores of households that are beneficiaries of Ingreso Solidario fall into one of the following three categories defined by the government: A (extreme poor), B (poor), and C (non-poor and vulnerable). We will include strata fixed effects (municipalities) to account for the study design. Following Abadie et al. (2017), we will use hetoreskedasticity-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 available at multiple points in time, we will also run a pooled panel specification similar to equation (1). In this case, we will cluster the standard errors at the individual level to flexibly account for serial correlation.

### 5.1.2 Effects on consumption smoothing

To quantify the effects of the intervention on consumption smoothing, we will estimate the following model:

$$Y_{i} = \gamma_{0} + \gamma_{1} Treatment_{i} + \gamma_{2} Time \ since \ last \ disbursement_{i}$$

$$+ \gamma_{3} Treatment_{i} \times Time \ since \ last \ disbursement_{i} + X_{i} \Sigma + \theta_{m} + \epsilon_{i}$$

$$(2)$$

where  $Y_i$  is weekly food and travel/commuting spending. Here, Time since last disbursement will be defined as the number of days between the scheduled interview date and the last program payment.  $X_i$  and  $\theta_m$  are defined analogously. The parameters of interest are  $\gamma_2$  and  $\gamma_3$ . The former captures the sensitivity of the outcome with respect to the time elapsed since the last program disbursement, which occurs toward the beginning of the month. We expect  $\gamma_2$  to be negative. The effect of the intervention on consumption smoothing is captured by  $\gamma_3$ .

### 5.1.3 Heterogeneous effects

We will test for heterogeneous effects on key dimensions using the following equation:

$$Y_i = \beta_0 + \beta_1 Treatment_i + \beta_2 Treatment_i \times Z_i + \beta_3 Z_i + X_i \Sigma + \theta_m + \epsilon_i \quad (3)$$

where  $Z_i$  captures a predetermined heterogeneity dimension that varies at the individual or municipality level. In this case, the coefficient of interest will be  $\beta_2$ , which will capture differential treatment effects of the intervention on the outcome of interest  $Y_i$ . As in equation (1), we will include a vector of control variables,  $X_i$ , and strata fixed effects (municipalities),  $\theta_m$ , and will report hetoreskedasticity-robust standard errors when analyzing cross-sectional data and standard errors clustered at the individual level when analyzing panel data.

Setting up a new account, even with assistance, can require a minimum level of familiarity with or trust in digital technologies.<sup>18</sup> Thus, we expect that the effects of the intervention on take-up of digital bank accounts will be larger when beneficiaries are more familiar with digital technologies and face lower adoption costs. We will analyze impacts by age groups (above/below the median), educational attainment (university degree or higher), and category of pre-intervention PMT score.<sup>19</sup>

In addition, take-up and use of financial technologies depends on adoption on both sides of the market: the account holder and the people or businesses with whom she is likely to transact (Higgins and Loeser, 2019). Thus, we hypothesize that the effects will be stronger for beneficiaries with more relatives, friends, and vendors in their network who are also users of the digital bank accounts targeted by the intervention, and in areas with more ATMs or vendors where the targeted digital bank accounts can be used. Specifically, we will use municipality-level data on the per-capita number of ATMs in the network of the digital bank accounts targeted by the intervention (continuous and by terciles, in order to capture possible non-linearities) to capture network density.

<sup>&</sup>lt;sup>18</sup>While the intervention provided support to open accounts, the individuals still had to open the accounts through their phones.

<sup>&</sup>lt;sup>19</sup>Households are eligible for the program if their PMT score classifies them as extremely poor (category A), poor (category B), or non poor and vulnerable households (category C).

# 5.2 Multiple outcome and multiple hypothesis testing

To prevent false positives when conducting inference, we will aggregate multiple variables in an index using Anderson (2008)'s approach. Further, in addition to reporting traditional p-values, we will also report Anderson's sharpened q-values to control for the false discovery rate within each table (Anderson, 2008).

# 5.3 Variations from the intended sample size

Non-compliance. The intervention that we study was delivered through SMS messages and phone calls. The SMS messages and phone calls were only made to beneficiaries who were randomly assigned to the treatment group. However, some beneficiaries may have changed phone numbers or did not answer the call from the call center, and thus did not receive the call. We will assess whether beneficiaries who were reached differ from beneficiaries who were not reached on key demographic characteristics: age, educational attainment, gender, and category of pre-intervention PMT score.

Attrition. We expect to collect 4,000 surveys evenly balanced between treatment and control groups. If the response rate differs by treatment status, we will report the following analysis. First, we will assess whether differential attrition coincides with differences in demographic characteristics and will report results excluding observations corresponding to categories where attrition is likely higher. Second, we will report upper and lower bounds of the estimates of the effects using Lee (2009)'s approach.

### 5.4 Balance

We will report balance between the treatment and control groups for the study sample of 17,711 beneficiaries using baseline administrative records from the SISBEN social registry. We will also report balance between the treatment and control groups for the original randomization sample of 29,914 beneficiaries. Specifically, we will assess balance on socio-demographic variables including age, educational attainment, gender, and category of pre-intervention PMT score.

# 5.5 Statistical power

Because we do not have baseline data on outcomes or data from a pilot intervention to guide the assumptions underlying our power calculations, we first turn to the literature for sample size comparisons. Although not perfect comparisons in terms of research designs, we look to three recent papers that study the impact of FinTech products to provide a benchmark for our household survey sample size. Bharadwaj et al. (2022) studies the take-up and impact of a digital loan product in Kenya and uses a sample of approximately 4,000 household surveys and administrative data. Jack and Suri (2014) use a first round sample size of 3,000 households to study the impacts of mobile money in Kenya. Finally, Aggarwal et al. (2020), which studies an intervention similar to ours to encourage mobile money usage among microentrepreneurs in Malawi, has a sample size of approximately 500.

Next, we conduct statistical power calculations for our household survey data assuming that we achieve the planned sample size of 4,000 with the sample equally split between treatment and control. We conduct power calculations for intention-to-treat effects on targeted account ownership and enrollment in

direct deposit. Our calculations are based on two-sided hypothesis tests with a 5% significance level and 80% power and common standard deviations of 1.20 We assume that 5% of the control group opens a targeted savings account and enrolls in direct deposit of transfers. We calculate that the estimated minimum treatment group mean that can be detected under our assumptions is 14% (difference between treatment and control group means of 9 percentage points). This is a plausible effect size given the findings in related studies. For comparison, in an evaluation of Ingeso Solidario conducted in late 2020, households who were just eligible for Ingreso Solidario were 14 percentage points more likely to have opened a new bank account in 2020 than households who were just ineligible for Ingreso Solidario (Gallego et al., 2021).<sup>21</sup> In Bharadwaj et al. (2022), 34% (standard deviation of .474) of households just eligible for a digital loan based on their credit score take-up the loan product relative to 21%(standard deviation of .407) in the control group.<sup>22</sup> Also, in Aggarwal et al. (2020), 56% of microentrepreneurs already had a mobile money account and 99% of microentrepreneurs who are offered a mobile money account take up the new account or continue using their existing mobile money account.

# 6 Interpreting Results

Overall, our results will provide two important policy implications related to the role of novel digital financial technologies and the delivery of social

<sup>&</sup>lt;sup>20</sup>We use the Stata power command to calculate power.

 $<sup>^{21}</sup>$ In Gallego et al. (2021), twenty-five percent of the control group , i.e., just ineligible households, opened a new bank account. We assume a much smaller take-up rate among the control group (5%) because our sample of beneficiaries were unbanked at the start of the experiment.

<sup>&</sup>lt;sup>22</sup>Households in the control group may take-up the loan product since eligibility evolves over time.

programs.

First, failure to encourage adoption and usage of digital bank accounts will shed light on the importance of first ensuring that the most vulnerable population can overcome barriers to technology adoption. In contrast, evidence of increases in take up coupled with effects on spending patterns or financial resilience may suggest that the choice of the mode of delivery may amplify the impacts of cash transfer programs.

More broadly, our results will indicate whether digital modes of payment can improve public service delivery of basic income payments and reduce implementation costs and while increasing the beneficiaries' welfare. This discussion is important as policy makers debate a move towards broad coverage basic income programs with regular payments and hence demand higher efficiency in the delivery method.

Second, if the adoption of digital savings accounts induces further engagement in the digital economy and the formal financial sector, then the results will emphasize the central role of partnerships between governments and financial institutions to provide a pathway to formalization and modernization. Social program beneficiaries may experience significant and wide-ranging benefits of formal financial products, but because they have lower incomes and savings and are more likely to work under informal arrangements, they are less likely than better-off households to already be integrated into the formal financial system and to be offered appealing financial products.

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# A Comparison of account features

### **Comparison of Account Features and Services**

Type of	A la mano		Daviplata		Movii	
transaction/service						
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.

## B Intervention protocol and materials

## B.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."

## B.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/1tGz01J1Ip\_i-vaIHJT69zVF91DMa-L2r/view.

#### B.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:

- $+[Daviplata (Davivenda)] \rightarrow 1. Daviplata$
- $+[\mbox{Ahorro a la mano (Bancolombia)}] \rightarrow 2.$  Ahorro A<br/> 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?

$$+[Tigo] \rightarrow 1A. Tigo$$

 $+[Movistar] \rightarrow 1B.$  Movistar  $+[Claro] \rightarrow 1C.$  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 "Si" (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?

 $+[Continue] \rightarrow Ending$ 

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 of-ficial 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.

 $\rightarrow$  DONE

#### B.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?

 $+[Yes] \rightarrow 1$ . Assistance 1

 $+[No] \rightarrow 2$ . Assistance 2

+[I don't know]  $\rightarrow$  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  $\to$  1A. Ahorra A La Mano
- +[Daviplata] First of all, we should check the balance  $\rightarrow$  1B. Daviplata
- +[Nequi] First of all, we should check the balance  $\rightarrow$  1C. Nequi
- +[Movii] First of all, we should check the balance  $\rightarrow$  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]  $\rightarrow$  1A.1 Ahorro A La Mano: Check Balance
- +[Instructions on how to withdraw money]  $\rightarrow$  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]  $\rightarrow$  1B.1 Daviplata: Check Balance
- +[Instructions on how to with draw money]  $\rightarrow$  1B.2 Daviplata: With draw 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]  $\rightarrow$  1C/D.1 Nequi/Movii: Check Balance
- $+[Instructions on how to withdraw money] \rightarrow 1C.2$  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]  $\rightarrow$  1C/D.1 Nequi/Movii: Check Balance
- $+[instructions on how to withdraw money] \rightarrow 1D.2 Movii: Withdraw Money$

#### 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?

- $+[Older model] \rightarrow Basic$
- $+[Smartphone] \rightarrow Thank you very much. Do you access your account through an application o through the menu of your SIM card?$
- $+[{\rm App\ o\ application}] \to {\rm Smartphone}$

 $+[SIM card] \rightarrow Basic$ 

#### 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  $\rightarrow$  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.  $\rightarrow$  1B.2 Daviplata: Withdraw Money

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

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

- $+[Older model] \rightarrow Basic$
- +[Smartphone] → Thank you very much. Do you Access your account through an application or through the menu of your SIM card?
- $+[App \ o \ application] \rightarrow Smartphone$
- $+[SIM card] \rightarrow Basic$

#### 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?  $\rightarrow$  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?

 $+[Movistar] \rightarrow Movistar$ 

 $+[Claro] \rightarrow Claro$ 

 $+[Tigo] \rightarrow Tigo$ 

[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 with-

draw 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?  $\rightarrow$  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] \rightarrow [Operator: Select the appropriate service.]
+[Ahorro a la mano] \rightarrow 1A Ahorro A La Mano
+[Daviplata] \rightarrow 1B Daviplata
+[Nequi] \rightarrow 1C Nequi
+[Movii] \rightarrow 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.

 $+[Continue] \rightarrow Loops back to initial call content.$ 

#### 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.

 $\to {\rm DONE}$ 

# C Survey Instrument

		Questionnaire		
Table	of Contents			
Que	stionnaire			1
1.	DEM. Demographic ch	aracteristics		1
2.		d income		
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6.	Access and use of fina	ncial instruments	8	3
7.	Use of digital technolo	gies	9	)

1. DEM. Demographic characteristics		
[Surveyor, please read:] "To begin, I am going to ask you o	about characteristics about yourself and your household's	characteristics."
1.1 How old are you?	1. 2 What is your gender?  1 Man 2 Woman -666 Other -777 Doesn't answer	1.3 What is your relationship with the household head, or are you the household head? 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 Head of Household 2 Spouse/ partner of the household head 3 Child 4 Father/ mother 5 Father in law/ mother in law -666 Other
1.4 What is the highest level of education you have attained?  1 None 2 Day care center 3 Preschool 4 Elementary school 5 Secondary school/ High school 6 Technical/ technological education 7 University or more -888 Doesn't know -777 Doesn't answer	1.5 How many people, including yourself and all children/teenagers, are currently living in your household? 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?  1 Yes 2 No -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?      1 Yes     2 No	

-777	Doesn't answer	-888	Doesn't know
		-777	Doesn't answer

2. LAB. Labor market and income		
Surveyor, please read:] "Now I am going to ask you abou	t 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?  1 Yes 2 No → go to 2.5 -888 Doesn't know → go to 2.5 -777 Doesn't answer → go to 2.5	2.2 Which of the following categories best describes your role in your primary occupation?  1 Employee, day laborer or worker for businesses outside the home  2 Self-employed worker  3 Business owner  4 Helper or apprentice in the family business  5 Apprentice outside the family business or SENA  -666 Other  -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?  [Surveyor, count 30 days from today backwards]  1
2.4 During the last 30 days, on average, how many hours per day did you work in your main occupation?  [Surveyor, count 30 days from today backwards]  1 -888 Doesn't know -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?  [Surveyor, count 30 days from today backwards]  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	2.6 During the last 12 months, did you or any member of your household start a new business? [Surveyor, count the 12 months from today backwards  1 Yes 2 No -888 Doesn't know -777 Doesn't answer
2.7 During the last 12 months, did you or any member of your household close any previously owned business? [Surveyor, count the 12 months from today backwards]  1 Yes 2 No -888 Doesn't know -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?  *Mark all that apply [Surveyor, count 30 days from today backwards].  1 Video calls (e.g. zoom, teams, Google meets, WhatsApp Video)  2 Email, internet chat or instant messaging services (WhatsApp, Telegram, Signal, Facebook Messenger, etc)  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)  4 Apps on your cell phone or online to connect with your employer or customers (Rappi, uber, etc)  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  6 QR codes for charges or payments for your services and sales.  7 Online purchases or sales.  8 Payments using debit or credit cards	2.9 In general, how easy is it for you to learn to use new digital technologies?  1 Very hard 2 Hard 3 Neither easy or hard 4 Easy 5 Very easy
2.10 During the last 30 days, did you search for a job or try to work longer hours? [Surveyor, count 30 days from today backwards] 1 Yes	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? *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *	2.12 If 2.11 = -777 or -888 Again, during *[insert full calendar month precedin the interview] * of 2022, how much income did you earn from your principal occupation within the following ranges?  1 \$0 - \$450.000

-888 Doesn't know -777 Doesn't answer		3 \$900.001 - \$1.800.000 4 \$1.800.001 - \$2.700.000 5 \$2.700.001 - \$3.600.000 6 \$3.600.001 - \$5.400.000 7 \$5.400.001 - \$7.200.000 8 \$7.200.001 - \$9.900.000 9 \$9.900.001 - \$13.500.000 10 \$13.500.001 or more -888 Desn't know -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?  1 Yes → go to 2.16  2 No	2.14 During *[insert full calendar month preceding the interview]* of 2022, how much income did you earn from your main occupation?  *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *  \$	2.15 If 2.14 = -777 or -888 Again, during *finsert full calendar month preceding the interview) * of 2.022, how much income did you earn from your principal occupation within the following ranges?  1 \$0 - \$450.000 2 \$450.001 - \$900.000 3 \$900.001 - \$1.800.000 4 \$1.800.001 - \$2.700.000 5 \$2.700.001 - \$3.600.000 6 \$3.600.001 - \$5.400.000 7 \$5.400.001 - \$5.200.000 8 \$7.200.001 - \$9.900.000 9 \$9.900.001 - \$1.500.000 10 \$13.500.001 or more -888 Doesn't know -777 Doesn't answer	
2.16 When was the last time you received payments related to such income?  Surveyor: Do not read the options and write down the corresponding option  1 During the last week (last 7 days) 2 Two weeks ago (8 to 14 days) 3 Three weeks ago (15 to 21 days) 4 Four weeks ago or more (22 to 30 days) -888 Doesn't know -777 Doesn't answer	2.17 Was this payment in cash or by electronic payments (deposits to your bank account or mobile wallet)?  1 In cash 2 Electronic/ digital payment (Daviplata, Ahorro a la mano, Movii, Mequi, Bank deposit, etc.) 3 In-kind -888 Doesn't know -777 Doesn't answer	2.18 Who is the person who decides on the use of the income corresponding to your main occupation?  1 You 2 Your partner 3 You and your partner together 4 Another household member 5 You and another household member together 6 Another person outside the household -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.  *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *	2.20 If 2.19 = -777 or -888  Again, during *[insert full calendar month preceding the interview] * of 2022, what was the household's total monthly income within the following ranges?  1 \$0 - \$450.000 2 \$450.001 - \$900.000 3 \$900.001 - \$1.800.000 4 \$1.800.001 - \$2.700.000 5 \$2.700.001 - \$3.600.000 6 \$3.500.001 - \$5.400.000 7 \$5.400.001 - \$5.400.000 8 \$7.200.001 - \$9.900.000 9 \$9.900.001 - \$13.500.000 10 \$13.500.001 or more -888 Doesn't know -777 Doesn't answer	2.21 Just to verify. Your household income last month was *finsert value or range reported in 2.19] Is this correct?      1 Yes → go to next section     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 Again, during *[insert full calendar month preceding the interview] * of 2022, what was the household's total monthly income within the following ranges?  1 \$0 - \$450.000 2 \$450.001 - \$900.000 3 \$900.001 - \$1.800.000		

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

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

3.13 For what reason did you open a bank account to receive your cash transfer?  *Mark all that apply*  1 I am familiar with these accounts because my family or friends use them 2 It is easier to receive money in my account because I save time avoiding line 3 To avoid the spread of COVID-19 4 I am familiar with digital technologies -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?  1 Yes 2 No -888 Doesn't know -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.  *0 if the person says he/she received the money automatically in his/her account and didn't go to an ATM*  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?  1 Yes 2 No -888 Doesn't know -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?  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	3.18 Who is the person who decides on the use of transfers from the lingreso Solidario program?  1 You 2 Your partner 3 You and your partner together 4 Another household member 5 You and another household member together 6 Another person outside the household -888 Doesn't know
3.19 How often would you prefer to receive your solidarity income?  1 On a weekly basis. That is, 40,000 pesos each week. 2 On a biweekly basis. That is, 80,000 pesos every two weeks. 3 On a monthly basis. That is, 160 000 pesos per month. 4 Quarterly. That is, 480 000 pesos every three months. 5 On a semi-annual basis. That is, 640 000 pesos every six months.		
REM. Remittances and transfers  (Surveyor, please read:) Now I am going to ask you about	remittances or transfers the household has made or receiv	ved
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? [Surveyor, count 30 days from today backwards.]  1 Yes 2 No → go to 4.3 -888 Doesn't know → go to 4.3 -777 Doesn't answer → go to 4.3	4.2 What is your relationship with the people who provided you with assistance or gifts?  *Mark all that apply*  1 Friends in Colombia 2 Friends abroad 3 Colleague, boss or employer 4 Relatives in Colombia 5 Relatives abroad 6 Personal moneylenders or "gota a gota - 666 Other	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? [Surveyor, count 30 days from today backwards.]  1 Yes 2 No → go to next section -888 Doesn't know → go to next section -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?  1 Friends in Colombia 2 Friends abroad 3 Colleague, boss or employer 4 Relatives in Colombia 5 Relatives abroad -666 Other		

5. CON. Consumption and saving pa	itterns			
[Surveyor, please read:] "Now I am going to ask you about household consumption and savings patterns."				
,.,, , , ,		T		
5.1 In general, how often do you go to the supermarket for buying groceries for your household?  1 Daily 2 Weekly 3 Biweekly 4 Monthly -666 Other frequency 6 Never -888 Doesn't know -777 Doesn't answer	5.2 When was the last time your home went to market?  1 A week or less ago 2 Between one and two weeks 3 Between two and three weeks 4 Between three and 4 weeks 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.  *Write the amount in pesos, -777 If the surveyed does not know or -888 If the surveyed does not answer *  \$		
5.4 If 5.3 = -777 or -888 Again, the last time you went to the supermar how much did you spend on food within the following ranges? Please exclude alcoholic beverages, cleaning products and cigarettes fit this value.  1 \$0 - \$450.000 2 \$450.001 - \$900.000 3 \$900.001 -\$1.800.000 4 \$1.800.001 -\$2.700.000 5 \$2.700.001 -\$3.600.000 6 \$3.600.001 -\$5.400.000 7 \$5.400.001 -\$7.200.000 8 \$7.200.001 -\$9.900.000 9 \$9.900.001 -\$13.500.000 10 \$13.500.001 or more -888 Doesn't know -777 Doesn't answer	value or range reported in 5.3]* on food, is this correct?	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.  *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *  \$		
5.7 If 5.6 = -777 or -888 Again, how much did you spend on food the latime you went to the supermarket within the following ranges? Please exclude alcoholic beverages, cleaning products and cigarettes fit this value.  1 \$0 - \$450.000 2 \$450.001 - \$900.000 3 \$900.001 - \$1.800.000 4 \$1.800.001 - \$2.700.000 5 \$2.700.001 - \$3.600.000 6 \$3.600.001 - \$5.400.000 7 \$5.400.001 - \$7.200.000 8 \$7.200.001 - \$7.200.000 9 \$9.900.001 - \$1.3500.000 10 \$13.500.001 or more -888 Doesn't know -777 Doesn't answer	st 30 days.  *Note: For 2, if utilities are included in the rent enter 0.*  *Write down the amount in pesos, -999 if do not know or  Express court 20 days for today by the persons for 1991.	the household spend on  \$		
30 days.  *Write down the amount in pesos, -999 if do not [Surveyor, count 30 days from today backwards.		5.10 Please, indicate which of the following purchases you made during 2021.  *Mark all that apply*  1 Computer, tablet, laptop or smartphone 2 Television or radio 3 Refrigerator, microwave, stove, vacuum cleaner or other appliance for your home 4 Bicycle, car or motorcycle		

-888 Doesn't know -777 Doesn't answer

Attendance/organization of parties or other events     P.9.2 Purchase of clothing and other apparel     Alcoholic beverages and cigarettes (please in consumption inside and outside your home Going out for dinner, drinking coffee or siming restaurants or in a shopping mall)     Purchase of toys or gifts for family or house Beauty items or services such as hairdresse makeup and cosmetics	\$	5 Furniture
5.11 During 2021, did you or any member of your household make improvements to your home?  * Surveyor can give examples: change the carpeting on the floors, paint the walls, make repairs *  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	5.12 Currently, could your household cover an unexpected expense of 150,000 pesos?  1 Yes 2 No -888 Doesn't know -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:  1  0 days 2  1 - 3 days 3  4 - 7 days 4  2 weeks 5  Between 3 weeks and 1 month 6  More than 1 month
5.14 Currently, does your household have savings?  1 Yes 2 No → go to 5.21  -888 Doesn't know → go to 5.21  -777 Doesn't answer → go to 5.21	5.15 Where do you keep your savings? Please identify all that apply.  1 In a savings or checking bank account 2 In a mobile wallet or simplified savings account (Ahorro a la Mano, Daviplata, Movi, etc)  3 In investment funds or pension fund administrators  4 In cash  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? *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *  \$
5.17 If 5.16 = -777 or -888 Again, approximately how much does your household have in savings within the following ranges?  1 \$0 - \$450.000 2 \$450.001 - \$900.000 3 \$900.001 - \$1.800.000 4 \$1.800.001 - \$2.700.000 5 \$2.700.001 - \$3.600.000 6 \$3.600.001 - \$5.400.000 7 \$5.400.001 - \$7.200.000 8 \$7.200.001 - \$7.200.000 9 \$9.900.001 - \$7.3500.000 10 \$13.500.001 or more -888 Doesn't know -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?  1 Yes → go to 5.21 2 No	5.19 Approximately, how much does your household have in savings? *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *  \$
5.20 If 5.19 = -777 or -888 Again, approximately how much does your household have in savings within the following ranges?  1 \$0 - \$450.000 2 \$450.001 - \$900.000 3 \$900.001 - \$1.800.000 4 \$1.800.001 - \$2.700.000 5 \$2.700.001 - \$3.600.000 6 \$3.600.001 - \$5.400.000 7 \$5.400.001 - \$7.200.000 8 \$7.200.001 - \$9.900.000 9 \$9.900.001 - \$13.500.000 10 \$13.500.001 or more -888 Doesn't know -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?  [Surveyor, count 30 days from today backwards.*]  1 Yes 2 No → go to 5.24 -888 Doesn't know → go to 5.24 -777 Doesn't answer → go to 5.24	5.22 How often did this happen? [Surveyor, count 30 days from today backwards."]  1 Once or twice in the last 30 days 2 3 to 10 times during the past 30 days 3 More than 10 times in the last 30 days -888 Doesn't know -777 Doesn't answer

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

6. Access and use of financial instruments	<u> </u>	
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?  1 Yes 2 No → go to 6.3 -888 Doesn't know → go to 6.3 -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?  1 Yes 2 No -888 Doesn't know -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?  1 Yes 2 No → go to 6.5 -888 Doesn't know → go to 6.5 -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?  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	6.5 Do you or any member of your household currently have a debit, credit or prepaid card?  1 Yes 2 No -888 Doesn't know -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?  *Mark all that apply*  1 Simplified savings accounts or electronic wallets (ahorro a la mano, daviplata, nequi, movil) 2 Debit or credit or prepaid card 3 Payments by cell phone (Movistar Money, Giros Claro) 4 Payments by cash, checks or money order -888 Doesn't know -777 Doesn't answer 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 During the past 30 days, did you or any member of your household use a simplified savings account or

*Mark all that apply*  1 Simplified savings accounts or electronic wallets (ahorro a la mano, daviplata, nequi, movii)  2 Debit or credit or prepaid card  3 Payments by cell phone (Movistar Money, Giros Claro)  4 Payments by cash, checks or money order -888 Doesn't know -777 Doesn't answer  7 None of the above	*Mark all that apply*  1 Simplified savings accounts or electronic wallets (ahorro a la mano, daviplata, nequi, movii)  2 Debit or credit or prepaid card  3 Payments by cell phone (Movistar Money, Giros Claro)  4 Payments by cash, checks or money order  -888 Doesn't know  -777 Doesn't answer  7 None of the above	mobile wallet (ahorro a la mano, daviplata, nequi, movii) to save or save money for at least one day?  1 Yes 2 No -888 Doesn't know -777 Doesn't answer
6.10 If 6.2 = 2 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?  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	6.11 If 6.2 = 2  During the last 30 days, did you or any member of your household make a deposit to your digital savings account?  1 Yes 2 No → go to 6.14  -888 Doesn't know → go to 6.14  -777 Doesn't answer → go to 6.14	6.12 How many times?
6.13 What was the amount in pesos of the last deposit that you or someone in your household made to your account?  *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *  \$	6.14 If 6.2 = 2 During the last 30 days, did you or any member of your household make any withdrawals from your digital savings account?  1 Yes 2 No → go to next section -888 Doesn't know → go to next section -777 Doesn't answer → go to next section	6.15 How many times?
6.16 What was the amount in pesos of the last deposit that you or someone in your household made to your account?  *Write the amount in pesos, -777 if the surveyed does not know or -888 if the surveyed does not answer *  \$		
7. Use of digital technologies		
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?  *Mark all that apply*  1 Collection of money corresponding to your salary  2 Collection of money corresponding to government benefits / transfers  3 Collection or receipt of remittances from abroad  4 Collection or reception of transfers from the interior of the country  5 Purchases of food, necessities and market  6 Payment of basic services (electricity, water, smartphone, internet or gas)  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? *Mark all that apply*  1 Collection of money corresponding to your salary 2 Collection of money corresponding to government benefits / transfers 3 Collection or receipt of remittances from abroad 4 Collection or reception of transfers from the interior of the country 5 Purchases of food, necessities and market 6 Payment of basic services (electricity, water, smartphone, internet or gas) 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.  *Mark all that apply*  1 Collection of money corresponding to your salary  2 Collection of money corresponding to government benefits / transfers  3 Collection or receipt of remittances from abroad  4 Collection or reception of transfers from the interior of the country  5 Purchases of food, necessities and market  6 Payment of basic services (electricity, water, smartphone, internet or gas)  7 Assistance to your source of work
	7.5 Would you feel comfortable leaving 150 000	7.6 Would you feel comfortable making the payment of an important transaction for an amount of 150

7.4 How much do you trust in the institutions that provide financial services such as banks, mutuals and cooperatives?  1 I am totally suspicious 2 I have some mistrust 3 I neither trust nor distrust 4 I have some confidence 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.  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	000 pesos electronically using a bank account or digital wallet?  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.  1 Yes 2 No -888 Doesn't know -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? 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.  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	7.8 Do you save even a little each month?  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	7.9 Thinking about your household expenses. Do you or any member of your household have a preestablished budget to manage your expenses?  1 Yes 2 No -888 Doesn't know -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?  *Mark all that apply*  1 Savings 2 Spending cuts in other categories 3 Loans 4 Additional income	7.11 Before making purchases, in general, do you compare prices of the same item in different businesses or stores?  1 Yes 2 No -888 Doesn't know -777 Doesn't answer	7.12 Which of the following categories best describes your spending and saving patterns?  1 In general, I am a spender 2 I don't consider myself a person, neither a spender nor a saver 3 In general, I am a person committed to saving