

# THE IMPACT OF EMERGENCY CASH ASSISTANCE IN A PANDEMIC: EXPERIMENTAL EVIDENCE FROM COLOMBIA

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**Abstract**—We study the impact of money on households during the COVID-19 pandemic. In March 2020, Colombia rolled out a new unconditional cash transfer (UCT) to 1 million households in poverty worth US\$19 (PPP US\$55.6) and paid every five to eight weeks. Using a randomized control trial and linked administrative and survey data, we find the UCT had positive (albeit modest) effects on measures of household well-being (e.g., financial health, food access). Moreover, the UCT boosted support for emergency assistance to households and firms during the crisis and promoted social cooperation. Finally, we explore the bottlenecks in expanding mobile money during a pandemic.

## I. Introduction

THE COVID-19 pandemic has profoundly affected millions of citizens across the world. The welfare impacts are predicted to be particularly devastating in the developing world, where informality is pervasive and governments face tight budgetary constraints and a limited capacity to reach their most vulnerable citizens. Governments around the globe have responded to the crisis by providing emergency assistance to households, with cash transfers representing most social assistance interventions (Cejudo, Michel, & de los Cobos, 2020; Gentilini et al., 2020).

Understanding the effects of money on household welfare in the context of a pandemic is critical as they may differ from normal times. Theoretically, even small amounts of money may have a sizable impact on households in extreme poverty (diminishing marginal utility of income) and households suffering income, health, or consumption shocks might benefit from receiving cash. In a pandemic, however, disruptions in markets and supply chains may dampen the effectiveness of money on households' consumption and food security (Hanna & Olken, 2020). Moreover, given the urgency to reach and provide relief to households, many governments have sought to improve their delivery of transfers by turning to digital cash, which may have differential welfare impacts during a pandemic by, for instance, influencing households' compliance with social distancing.

This paper studies the impact that emergency cash assistance has on poor households during the COVID-19 pan-

demic. We leverage an unconditional cash transfer (UCT) program for 1 million households in poverty rolled out a week after Colombia declared a national quarantine to contain the spread of the disease. The lump-sum transfer, paid roughly every five to eight weeks, is relatively small: it is worth US\$19 per household—US\$55.6 at purchasing power parity (PPP) in 2019 or 8% of the monthly minimum wage—or less than US\$0.18 per adult per day. A subset of beneficiaries from Colombia's main conditional cash transfer (CCT) program living in extreme poverty was randomly selected to be part of a randomized control trial (RCT), which we use to identify the causal effects of the additional cash. We use linked administrative and household survey data collected by phone in June 2020, soon after the second payment was made.

We find that the coronavirus pandemic had devastating effects on these households that were already living in precarious conditions prior to the crisis. In our context of widespread informality, 57% of individuals who worked before the pandemic no longer had paid work by the time we surveyed them and 58% reported having to eat less during the quarantine. Despite its small size, the UCT had positive though economically modest effects on households' well-being during this period: it improved their financial health by 0.055 standard deviations ( $\sigma$ ) and parents' investment in children's education by 0.032 $\sigma$ , and it had positive but noisily estimated effects on psychological well-being. The money improved food access by 6.1%, and over 90% of households reported spending the UCT on food, although we are not able to detect impacts on food security.

In addition, we document widespread support for the government's measures to cope with the coronavirus crisis among these extremely poor households that despite receiving CCTs are clearly suffering from the pandemic. The additional UCT boosted support for emergency assistance and promoted social cooperation. Moreover, we report a high level of trust in the government and strong support for the quarantine (possibly reflecting the fact that even control households receive social assistance in the form of CCTs)—yet unlike support for government aid, neither of these measures is influenced by money received during the national quarantine.

To quickly distribute cash in a manner compliant with social distancing, Colombia achieved a record-time expansion of mobile money. Unfortunately, Colombia's relatively less-developed digital payments ecosystem in which very few merchants accept mobile money, coupled with technology adoption costs, resulted in many people being induced to leave their home despite the quarantine to cash out at a mobile money agent. We discuss the bottlenecks in quickly delivering mobile money in the context of a pandemic and in

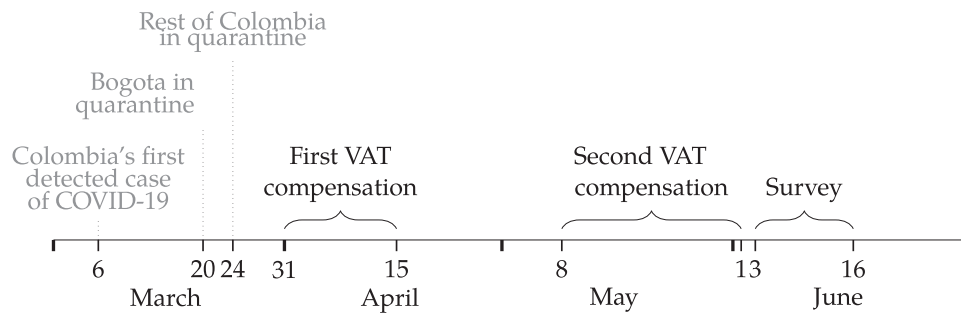
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FIGURE 1.—TIMELINE: COVID-19, QUARANTINE, CASH TRANSFER PAYOUTS, AND SURVEY DATA COLLECTION



This figure plots a timeline of events taking place between March 1, 2020, and June 30, 2020. The first case of COVID-19 was detected in Colombia on March 6. On March 20, Bogota went into quarantine, and the rest of the country followed on March 24. The first VAT Compensation was paid out starting March 31. The second transfer was paid out starting May 8. The survey data collection began on June 3 and ended June 16.

a setting with low levels of digital financial platforms and incomplete coverage of the cell phone network.

Our findings contribute to the literature on the impacts of cash transfers (Bastagli et al., 2016; Handa et al., 2018; Hanna & Olken, 2018) and, more specifically, the effects of cash programs in emergency settings in the developing world (Aggarwal et al., 2020; Banerjee et al., 2020; Doocy & Tappis, 2017). We offer one of the first estimates on the effects of cash transfers during the coronavirus pandemic. Recently Banerjee et al. (2020) showed that Kenya's Universal Basic Income (UBI) had positive (albeit economically modest) impacts on household well-being. We complement their findings in two ways. First, we present evidence on the effects of a transfer worth less than one-fourth the size of Kenya's UBI. Insofar as our results inform about the returns to an additional dollar spent during the pandemic, they may be particularly relevant to tightly budget-constrained governments in the developing world dealing with the crisis. Second, we explore the implications of putting in place quickly deployable programs of social assistance during a pandemic. Unlike Kenya's UBI, which had been running for several years and paid using a widely used technology (Suri & Jack, 2016), Colombia boosted the use of mobile money in the middle of the crisis, which influenced households' experience with the transfer and their subsequent behavior.

## II. Context

### A. The Coronavirus Pandemic in Colombia and Emergency Cash Transfers

The first case of COVID-19 in Colombia was detected on March 6, 2020. The first death associated with COVID-19 followed on March 16 (see figure 1). On March 17, Bogotá announced a quarantine starting March 20. The entire country went into quarantine on March 24, which lasted until September 1. The lockdown was augmented with additional restrictions on mobility, including the closing of all schools and shifting to online instruction.

To help low-income households cope with the economic consequences of the coronavirus pandemic and the national

quarantine, the government distributed additional cash payments of *Familias en Acción*, the main CCT program, benefiting roughly 2.7 million households, and *Colombia Mayor*, the noncontributory pension scheme benefiting 1.7 million low-income senior citizens.<sup>1</sup> Every “extraordinary” payment was made at the same time as the programs' recurrent payments—which, during our period of study, took place in April, May, and July—and was of the same amount as the household's ordinary payment (e.g., on average COP\$145,000 or US\$35.1 for *Familias en Acción*). Recipients were notified of this through an SMS, and these extraordinary transfers were expected to last until at least the end of 2020.

In April, both (ordinary and extraordinary) payments of *Familias en Acción* were deposited in recipients' bank accounts from Banco Agrario, Colombia's state bank, where virtually all households already had an account. In a public procurement decision that preceded the coronavirus crisis, in May the government switched its contractor to Davivienda, the third-largest bank in Colombia. For all but five of Colombia's 32 departments, CCT beneficiaries received the transfer via Davivienda's mobile money service, Daviplata, if they had an account associated with their cell phone number or SIM card. To cash out, recipients generate a code through the Daviplata app (this requires cellular connection) and present it at a Davivienda bank or one of its correspondents within the hour. Recipients who do not have an account with Daviplata are sent physical cash to a local bank or money transfer agency, which they can withdraw by presenting their national identification card. Unlike the mobile money transfer, which in theory gives recipients more flexibility to visit the mobile money agent since the money remains in their account, physical cash reverts to the government until the next transfer cycle if it is not collected after a certain period of time. Otherwise, the infrastructure available for mobile money and cash recipients to withdraw their money is remarkably similar.

In addition, the government rolled out two new UCT programs in late March and early April for households in poverty. First, *Compensación del IVA*, a value-added tax (VAT)

<sup>1</sup>Moreover, over 200,000 *Jóvenes en Acción* beneficiaries, Colombia's CCT for low-income youth attending postsecondary institutions, received an additional payment.

compensation, benefited 1 million poor households already enrolled in Familias en Acción, Colombia Mayor, or both. Second, Ingreso Solidario was created for poor households not enrolled in either Familias en Acción, Colombia Mayor, nor Jóvenes en Acción. We focus on the VAT Compensation, described below.

### B. Colombia's VAT Compensation

To “promote equality in the VAT system,” Colombia’s most recent tax reform, approved by Congress in December 2019, created a VAT compensation program for households living under poverty (Article 21 of Law 2010/2019).<sup>2</sup> Unlike VAT refunds, which reimburse the amount households pay in VAT, Colombia’s compensation program does not take into account the VAT paid by households—VAT refunds require higher digitalization of payments, banking penetration, and better control capacity (OECD, 2020). Instead, Colombia’s program was designed as a recurring UCT of a fixed amount paid to households living in poverty and extreme poverty. As such, it can simply be thought of as an expansion of cash transfers and income support for the poor.

The government had originally proposed piloting the VAT Compensation in 2020 using the transfer schemes in place for Familias en Acción and Colombia Mayor, and subsequently expanding the program to households off welfare in 2021 (Documento CONPES 3986, 2020). The pilot would prioritize municipalities with a high poverty incidence—based on the Multidimensional Poverty Index (MPI) using Colombia’s 2018 census—and benefit recipients of Familias en Acción and/or Colombia Mayor living in extreme poverty. To determine poverty levels, Colombia’s main proxy-means testing instrument, SISBEN, is used. The eligibility cutoff was defined as having either a “level A” score from Colombia’s freshly minted SISBEN IV or a score below 10 from its older version, SISBEN III.<sup>3</sup> Therefore, the program aimed to reach roughly the poorest 6% of households in Colombia.

The coronavirus crisis forced the government to expedite the VAT compensation to assist the extreme poor.<sup>4</sup> Starting March 31, 2020, VAT compensations were sent to 700,000 household recipients of Familias en Acción over the following two weeks. Starting April 6, 300,000 additional transfers were sent to individuals in Colombia Mayor’s prioritization list (beneficiaries of both Familias en Acción and Colombia Mayor could claim only one VAT compensation). A second payment started May 8, 2020. A third payment started July

17, and these transfers were expected to last until at least the end of 2020. Each transfer is worth COP\$75,000 (US\$19 or PPP US\$55.6) and sent using the technology of the existing Familias en Acción and Colombia Mayor programs, but payments are made at separate times to enhance the salience of the VAT Compensation. The fiscal cost of the VAT Compensation is estimated at COP\$2 trillion or PPP US\$1.5 billion between 2020 and 2022. We henceforth interchangeably refer to the VAT Compensation as “the UCT.”

Eligible households were informed via an SMS text message. Households could also verify their eligibility online using the government website, <https://devolucioniva.dnp.gov.co/>, with their national identification number. To distribute cash to citizens as soon as possible in a manner that would foster compliance with social distancing, the government massively expanded digital payments (as for the CCT, beneficiaries with a Daviplata account received mobile money, while those without received physical cash). We discuss the implications of Colombia’s unprecedented expansion of digital payments in section V.

### III. Methodology, Data, and RCT Validity

The experiment on which we build is an RCT originally designed by Colombia’s Department of National Planning (DNP) to evaluate the medium- and long-term impacts of the VAT Compensation. A total of 3,642 eligible households—that is, households receiving Familias en Acción whose SISBEN score places them under the extreme poverty threshold—from 53 randomly selected municipalities were randomly assigned to be part of the RCT sample: 1,730 households were assigned to treatment and 1,732 to control (for a detailed description, see appendix B).<sup>5</sup>

The RCT allows us to compare treated and control households to establish a causal relationship between the UCT and the outcomes we measure. We estimate the impacts of the UCT using the following OLS specification:

$$y_i = \alpha + \beta T_i + X_i' \Gamma + \epsilon_i, \quad (1)$$

where  $y$  is the outcome for household  $i$ ,  $T$  is the treatment dummy that equals 1 if the household was randomly selected to receive VAT Compensation,  $X$  is a vector of baseline controls (e.g., municipality fixed effects), and  $\epsilon$  is an idiosyncratic error term. Standard errors are clustered at the household level (the unit of randomization). Our analyses were specified in a preanalysis plan (see <https://www.socialscienceregistry.org/trials/5970/>).

Our data come from three main sources. First, we use administrative data from the DNP’s Sistema de Identificación de

<sup>2</sup>Politically, the full implementation of the VAT compensation might allow Colombia to abolish or limit the large range of preferential VAT regimes in future tax reforms (OECD, 2020). See also *The Economist* (2020).

<sup>3</sup>SISBEN III was based on government census enumerators who conducted door-to-door visits between 2009 and 2011 and generated a score ranging from 0 (poorest) to 100 (wealthiest). To update and improve the scoring methodology, the government created SISBEN IV, reconducting door-to-door visits between December 2017 and December 2019. The new methodology regenerated scores and categorized households into groups ranging from A (poorest) to D (wealthiest). It also established the procedure for calculating the MPI (Documento CONPES 3877, 2016).

<sup>4</sup>Decree 419 of March 18, 2020; Decree 458 of March 22, 2020; Resolución 1058 of March 27, 2020.

<sup>5</sup>As described in appendix B, the 53 municipalities of the RCT sample excluded the poorest quartile of municipalities, which were deemed high priority for VAT Compensation. Given high-MPI municipalities are, on average, less populous, the RCT sample includes larger municipalities that, by June 2020, had more positive detected cases of COVID-19 (Bogotá D.C., Medellín, Cali, Barranquilla, Cartagena). Excluding these municipalities does not affect our estimates.

Potenciales Beneficiarios de Programas Sociales (SISBEN). SISBEN has detailed baseline sociodemographic information about individuals and households and includes the information about the geographic location of the household. Our data include information from the two most recent versions of SISBEN: SISBEN III (2010) and SISBEN IV (2018).

Second, we use administrative data from Colombia's Department of Social Prosperity (DPS) on the VAT Compensation. This includes household-level information of treatment assignment, indicators for whether a household is a beneficiary of Familias en Acción and/or Colombia Mayor and/or wait-listed to receive Colombia Mayor, the date and location of the VAT Compensation, the type of transfer (mobile money or cash), as well as the date and mode of payment of the last transfer from Colombia Mayor and/or Familias en Acción.

Third, we use data from household surveys collected specifically for this research project by staff at IPA–Colombia. The data were collected by phone in the first two weeks of June 2020, shortly after households received the second VAT Compensation (figure 1), when Colombians were under strict quarantine. We sought to interview the head of household or, if unavailable, another adult family member competent to answer questions about all aspects of household decision making. The survey covered nine core topics: financial well-being, consumption and food security, health (both mental and physical symptoms associated with COVID-19), behaviors to mitigate the spread of coronavirus, education, employment, intimate partner violence (IPV), trust in the state, and the receipt of government emergency cash assistance during the national quarantine (the survey instrument is available in appendix D).

We complement this information with 35 qualitative interviews conducted via phone by IPA–Colombia and IPA Financial Inclusion Program specifically for this research project in October 2020, after four VAT Compensations had been disbursed. The interviews were conducted among female recipients of the VAT Compensation who completed the phone survey described, as well as DPS employees and local government workers in charge of implementing and executing Familias en Acción and the VAT Compensation (called *enlaces municipales*).

We attempted to survey all 3,462 households in the RCT sample as part of our survey. We completed interviews with 2,052 households, for a survey completion rate of 59.3%, evenly distributed between treatment and control groups (table A.1). Baseline covariates were balanced across the treatment arms. On average, the RCT sample lives in municipalities where 35.4% of residents are poor and 56% of households live in an urban area. Given that the RCT sample is based on Familias en Acción, which gives cash to poor mothers, our sample is predominantly female and unmarried. It is also remarkably vulnerable: in addition to living in extreme poverty, 43% of households are registered victims of the Colombian internal armed conflict. Seventy percent of survey respondents worked in February 2020, before the onset of the coronavirus pandemic. Consistent with pervasive

informality among this population, 87.3% of such individuals worked without a written contract. Among prepandemic workers, 22% worked in agriculture, 21% in domestic service, 12% in hotel and restaurants, 11% in retail, 11% as street vendors, and 9% in other low-skill occupations. On average, respondents have four other household members, two of them minors.

Table A.2 compares baseline differences by survey completion. The likelihood of completing the phone survey is higher among urban households living in wealthier municipalities, where cell phone connection is better. Women and victims of conflict are also more likely to complete the survey. Importantly, the survey completion rate is not affected by the level of poverty (SISBEN score), meaning we can capture impacts on the poorest citizens.

#### IV. Poor Households and The Impact of Money during a Pandemic

We begin by describing households' conditions during the quarantine. By June, only 43% of individuals who worked before the crisis reported working for pay in the past week, meaning 57% of those who worked before the pandemic no longer had a job or work activity for pay by the time we surveyed them. This highlights the devastating economic effects of the pandemic. Not surprisingly, when asked to list their main source of concern regarding the effects of the coronavirus crisis in Colombia, most households responded “economic needs”—far beyond any other category (see figure 2a).

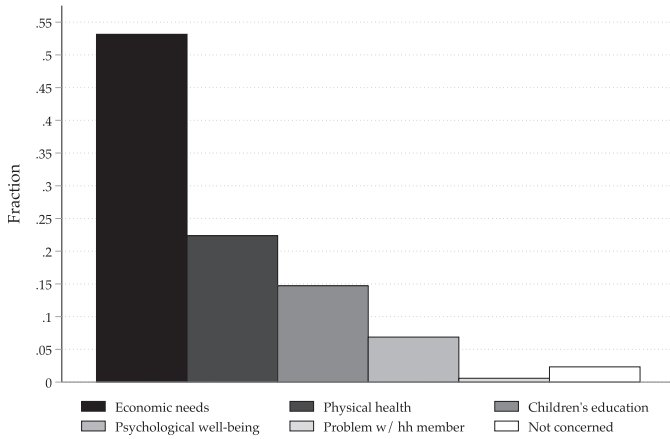
Since most respondents are parents, we asked them to list the difficulties they faced regarding their children's education during the quarantine, when schools were closed: 46% reported lacking access to the Internet (figure 2b). Only 35% reported having access to the Internet for the most part of May 2020, which points to the digital divide as a critical driver of disparities emerging during COVID-19. The second most common challenge regarding children's education was not understanding the child's homework, cited by one-fifth of households. This was followed by a lack of or insufficient access to a tablet or laptop, mentioned by 15.2%.

There is widespread food insecurity among this population during the pandemic: 57.7% of control households reported having to limit the portion size at mealtimes at least once in May 2020, 12.5% spent an entire day without food at least once that month, 22.6% ate at a relative's or friend's because the food was insufficient at home, and 11.6% begged for food in the street.

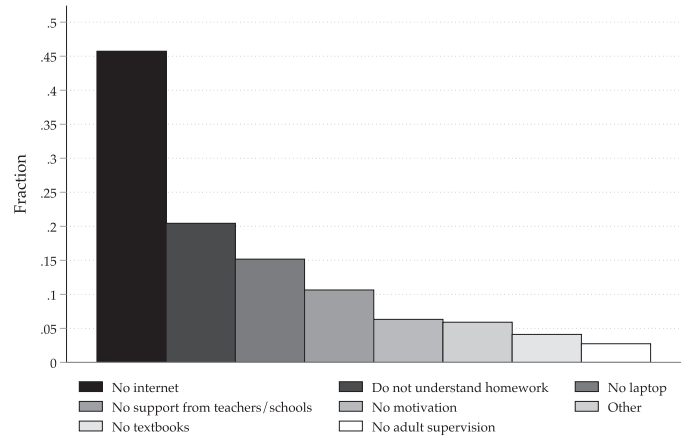
Finally, we examine households' knowledge about the VAT Compensation. Survey participants were asked whether, since the national quarantine, they had received any government cash transfers among a list that included Familias en Acción, Jóvenes en Acción, Colombia Mayor, and the VAT Compensation. The VAT Compensation was highly salient, which is especially noteworthy given how recently the program had been implemented. By June—roughly two months after its rollout—almost 91% of treated households reported

FIGURE 2.—THE MOST COMMON CONCERNS AND CHALLENGES DURING THE PANDEMIC

(a) Sources of Concern Vis-à-Vis the COVID Crisis



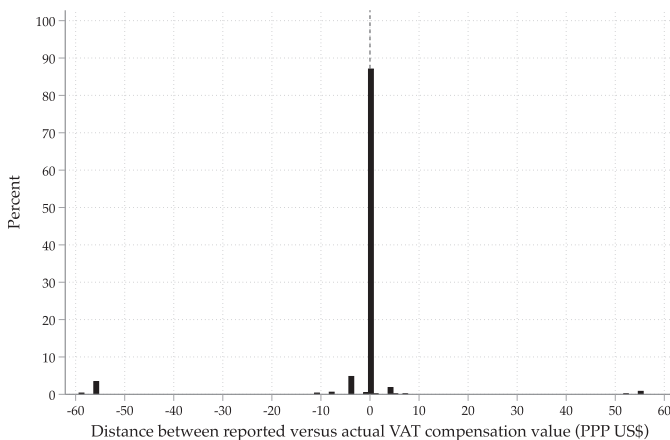
(b) Difficulties Faced since Schools Closed



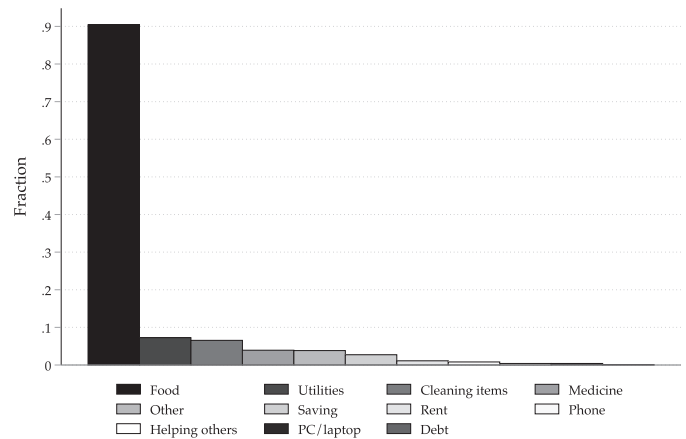
Panel (a) plots the most common sources of concern regarding the effects of the coronavirus crisis in Colombia. Panel (b) plots the most common difficulties households have faced since schools closed. The sample is restricted to control households only.  
 Source: Authors' calculations using administrative microdata from DNP and DPS, as well as survey data: treatment status comes from administrative data and outcomes from survey data.

FIGURE 3.—THE VAT COMPENSATION

(a) Accurate Perception of the Transfer Value



(b) Most Common Spending Items for VAT Comp.



Panel (a) plots the distance between the VAT Compensation values from individuals who reported to have received the transfer and the actual value of their transfer: 86.3 percent of individuals reported the transfer value accurately. Panel (b) plots the most common spending items reported for the VAT Compensation.  
 Source: Authors' calculations using administrative microdata from DNP and DPS, as well as survey data: treatment status comes from administrative data and outcomes from survey data.

having received a VAT Compensation, relative to 8% of control households (table A.3).<sup>6</sup> In addition, households accurately reported the amount of money they received from the VAT Compensation: 86.3% of households reported receiving the exact value of the VAT Compensation, and more than 94% of households were within PPP US\$10 of the actual value (see figure 3a).<sup>7</sup> Consistent with the government's im-

plementation of the program, most households reported having learned about their eligibility for the VAT Compensation through an SMS text message sent to their phone, while one in five did so through the government website (figure A.1).

A. Impacts on Household Well-Being

We first examine impacts on measures of household well-being during the pandemic: financial health, food access and

<sup>6</sup>The fact that 8% of control households report receiving a VAT Compensation reflects some confusion, which is also present for Familias en Acción: although all households receive this CCT, only 94% report it.

<sup>7</sup>Over 97% of households assigned to treatment had effectively received the UCT by the time we surveyed them, suggesting noncompliance is neg-

ligible in our setting. Our intent-to-treat estimates can therefore be viewed as the average treatment effect.

TABLE 1.—TREATMENT EFFECTS ON HOUSEHOLD FINANCIAL HEALTH

	Sell Belongings (1)	Deplete Savings (2)	Borrow Money (3)	Skip Loan Payment (4)	Stop Other Payments (5)	Pawn Belongings (6)	Index (7)
Treatment	−0.033* (0.018)	−0.027 (0.020)	−0.011 (0.021)	−0.023 (0.016)	−0.019 (0.019)	−0.024* (0.014)	0.055** (0.024)
Municipality FE	X	X	X	X	X	X	X
Baseline controls	X	X	X	X	X	X	X
N	2,052	2,052	2,052	2,052	2,052	2,052	2,052
R-squared	0.061	0.061	0.067	0.045	0.082	0.061	0.091
Control Mean	0.213	0.31	0.347	0.169	0.279	0.121	0

This table presents the treatment effects of the UCT on household financial health, estimated using equation (1). For each outcome variable, we report the coefficients of interest and robust standard errors in parentheses. All regressions include municipality fixed effects as well as baseline controls for sex, age, victim status, civil status, employment sector, living in an urban area, being a recipient of Colombia Mayor, and SISBEN score. \* $p < 0.1$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$ .

Source: Authors' calculations using administrative microdata from DNP and DPS, as well as survey data: treatment status and most baseline covariates come from administrative data and outcomes from survey data.

security, mental well-being, and parental investment in children's education.

Table 1 shows the effects of the UCT on household measures of financial health during the quarantine. Column 1 shows that the money reduced the likelihood of selling belongings by 3.3 percentage points or 15.5% from a control mean of 21.3%. Columns 2 through 6 show similar negative effects on the probability of depleting savings, borrowing money, skipping loan payments, stopping other mandatory payments, and pawning belongings, although the coefficients are sometimes less precisely estimated. Column 7 computes a standardized weighted average of these six (negatively coded) indicators of financial health following the methodology described in Anderson (2008).<sup>8</sup> The UCT improved household financial health during the pandemic by  $0.055\sigma$ , an effect significant at the 5% level. This economically modest impact is concomitant with the modest value of the UCT, as small cash transfers are associated with small impacts (Bastagli et al., 2016).

Regarding food access and food security, more than 90% of households reported spending the VAT Compensation on food (figure 3b). This result is strongly supported by the qualitative interviews conducted among the UCT beneficiaries as well as the *enlaces municipales* in charge of implementing and executing the CCT and UCT programs. Consistent with improved food access, the money boosted the probability of purchasing food in the previous week by 4.4 percentage points or 6.1% (table A.4). Turning to food security, we investigate impacts on different measures of hunger experienced during the pandemic (table A.5). Despite widespread food insecurity, we cannot reject the null hypothesis of no effect; such is the case both when using an index outcome based on the six (negatively coded) indicators (column 7) and an index based on continuous measures to capture the intensity of food insecurity (column 8). We reconcile this result by noting

<sup>8</sup>As prespecified in our preanalysis plan, for each set of outcomes, we examine effects on a summary measure of the outcomes, following Anderson (2008). We switch the signs of all items so that the positive direction indicates a "better" outcome and standardize using the mean and standard deviation of that outcome among the control group. We then create a weighted average using all of the outcomes in the domain, using the inverse of the covariance matrix of the transformed outcomes in the domain.

that the positive effect on food access, coupled with the lack of a detectable impact on food security, suggests the UCT might have been spent on improving the quality and diversity of diet, for example, by increasing items rich in protein, such as milk, meat, and eggs, which unfortunately our (short phone) survey did not capture.<sup>9</sup> Treated households may have also shared the food with other households (e.g., neighbors or extended family).

Table A.6 shows the impact of the program on household measures of psychological well-being during the pandemic. One-third of control households reported having experienced at least one disorder (difficulty sleeping, anxiety, aggressive behavior, or sadness) since the quarantine began. The transfer appears to have improved mental health: it decreased the likelihood of experiencing difficulty sleeping by 1.2 percentage points (10.9% on a base of 11%) and anxiety by 2.1 percentage points (10.3% on a base of 20.4%), although the large standard errors do not allow rejecting the null of no effect.

Finally, recall that both control and treated households receive Familias en Acción, which provides cash transfers conditioned on school attendance and health controls. While these conditions do not apply to the UCT we study, treated households might react to the transfer by investing in schooling (or feel compelled to report that they do). Table A.7 suggests the UCT had a positive but economically modest effect on parental investment in children's education ( $0.032\sigma$ ). For instance, it more than doubled the likelihood of paying for tutoring, albeit from a very low base of less than 1%. Qualitative interviews suggest parents used the UCT to purchase schooling materials (e.g., photocopies) and mobile Internet service for their kids' remote learning, and the coefficients on these outcomes are positive though not statistically significant. Table A.8, which reports the heterogeneous treatment effects we prespecified, suggests these gains tend to be driven by urban households. This is consistent with evidence emerging from other countries that rural areas have been less likely to

<sup>9</sup>For instance, the qualitative interviews revealed that some treated households used the UCT to purchase milk and meat. Moreover, past evidence on Colombia's CCT Familias en Acción has shown that cash transfers raise the share of food expenditures precisely by improving quality (Fiszbein et al., 2009).

TABLE 2.—TREATMENT EFFECTS ON POLITICAL ATTITUDES

	Supports Programs to HHs and Firms (1)	Trust in Government (2)	Supports Quarantine (3)	Would Contribute Money to Community (4)	Would Contribute Work to Community (5)	Supports Evading VAT (6)	Index (7)
Treatment	0.061*** (0.016)	−0.001 (0.019)	0.011 (0.014)	0.01 (0.018)	0.030** (0.014)	0.009 (0.015)	0.053** (0.022)
Municipality FE	X	X	X	X	X	X	X
Baseline controls	X	X	X	X	X	X	X
N	2,028	1,942	2,014	1,969	2,020	1,976	2,052
R-squared	0.071	0.067	0.059	0.069	0.058	0.043	0.075
Control Mean	0.821	0.776	0.883	0.78	0.879	0.866	0

This table presents the treatment effects of the UCT on political attitudes, estimated using equation (1). For each outcome variable, we report the coefficients of interest and robust standard errors in parentheses. All regressions include municipality fixed effects as well as baseline controls for sex, age, victim status, civil status, employment sector, living in an urban area, being a recipient of Colombia Mayor, and SISBEN score. \* $p < 0.1$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$ .

Source: Authors' calculations using administrative microdata from DNP and DPS, as well as survey data: treatment status and most baseline covariates come from administrative data and outcomes from survey data.

expect teachers to provide instruction during the COVID-19 pandemic, partly due to the digital divide.<sup>10</sup>

### B. Impacts on Political Attitudes

In the context of a pandemic, governments require citizens' compliance with restrictive measures to prevent the spread of the virus. This section assesses whether social assistance translates into greater trust and/or support for government policies addressing the coronavirus crisis.

Columns 1 to 3 of table 2 show widespread trust in the government and support for COVID-related policies among these extremely poor households that, despite receiving CCTs, are clearly suffering from the impacts of the pandemic: 82.1% of control households support emergency aid programs in response to the coronavirus pandemic, 77.6% trust the government to promote citizens' well-being, and 88.3% support the national quarantine. Further, column 1 shows that treated households were 6.1 percentage points (7.4%) more likely to support emergency assistance for households and firms rolled out by the government. This suggests UCTs influence people's tastes for safety-net programs, much like COVID-19 did in the United States (Rees-Jones et al., 2020). Unlike support for government assistance, columns 2 and 3 show that neither trust in the government to look after its citizens nor support for the government's lockdown to flatten the contagion curve for COVID-19 are influenced by money received during the pandemic.

The qualitative interviews revealed a deep sense of community among our population of study. For instance, people asked their neighbors for help to verify their eligibility for the VAT Compensation and learn how to use the Daviplata mobile wallet app. The treatment appears to have further heightened reciprocity during the pandemic: columns 4 and 5 of table 2 show that treated households are 3 percentage points (3.4%) more likely to contribute with work—though not money—to support their community. Social assistance

<sup>10</sup>We do not find evidence of statistically significant impacts on the three remaining prespecified outcomes: IPV, expenditures, nor most physical symptoms associated with COVID-19 (appendix C). We also find no evidence of heterogeneous treatment effects by the amount of Colombia Mayor or Familias en Acción transfers received (available upon request).

programs may therefore also have indirect welfare impacts by promoting other forms of social cooperation (Caprettini, Schmidt-Fischbach, & Voth, 2018).<sup>11</sup>

### V. Expanding Access to Mobile Money during a Pandemic

In the midst of the pandemic, Colombia achieved a record-time expansion of mobile money to improve the speed of secure cash transfers in a manner that would foster compliance with social distancing. While 32.8% of households in the RCT sample received the first VAT Compensation through Daviplata in April, this share almost doubled to 58.6% for the second transfer in May and reached roughly 75% by November.<sup>12</sup> This section discusses the implications of expanding mobile money during COVID-19 and its impact on households' behaviors to mitigate the spread of the virus.

Despite the benefits of mobile money (reviewed in Aron, 2018; Suri, 2017), introducing the new payment technology during a national quarantine inflicted a cost on households. Roughly one-fifth of respondents reported experiencing delays or difficulties receiving the VAT Compensation, and this share doubles for mobile money versus hard cash (figure A.2). The use of the mobile money app, Daviplata, was the most frequently cited problem. Using the app was more difficult in remote areas with a weak or unstable cellular connection. Even if located in an area with a cellular connection, virtually all households in our study have prepaid cell phone plans (and buy airtime when they can afford to), and many reported owning a poor device. Further, rural beneficiaries complained about the burden of cashing out in terms of time and

<sup>11</sup>While Colombia introduced the VAT Compensation as a first step to encourage support in paying the VAT among poor households, column 6 suggests treated households do not report being less willing to evade VAT tax payments. Instead, and as in Fergusson, Molina, and Riaño (2019), Colombians display little social desirability bias and are in fact largely willing to be complicit in VAT evasion by not requesting a purchase receipt, with the VAT Compensation having little impact on tax morale.

<sup>12</sup>The likelihood of receiving VAT Compensation through Daviplata in May is higher among people living in urban and wealthier municipalities and in urban areas within a given municipality, reflecting the importance of network connectivity. It is also higher among people who worked prior to the pandemic (table A.9).

travel costs. Technology adoption issues played an additional role, with frequent complaints of blocked Daviplata accounts when attempting to update phone numbers—a common occurrence as at least 56% of survey respondents share their phone with other people.<sup>13</sup> Critically, the benefits of mobile money are not always perceived by households, and none of the interviewed individuals reported purchasing goods or services with mobile money (with the exception of call credit). On the contrary, they reported cashing out as soon as they could to purchase goods with hard cash.

The urgency to cash out to consume might affect people's compliance with strict quarantine. To investigate this issue, we asked respondents whether they had left their home in May 2020 for a particular reason, including having to go to the bank or ATM. Column 3 of table A.10 reveals that the cash transfer had a significant and sizable impact on leaving home to visit a bank or an ATM of 11.4 percentage points or 24.2% from a base of 47.2%. This effect does not vary by whether the UCT was paid in physical cash or mobile money (table A.11), which clashes with the notion that digital payments can offer the opportunity to distribute cash transfers in a manner compliant with social distancing. Instead, Colombia's relatively less-developed digital payments ecosystem, in which few merchants accept digital payments and mobile commerce is still in its infancy, coupled with mobile money being a new technology for most recipients, induced people to leave their home during the pandemic to collect the money. Qualitative interviews confirm reports of agglomerations of people queuing outside banks, ATMs, and mobile money agents. As a result, the transfer had a small negative impact ( $-0.047\sigma$ ) on individuals' behavior to mitigate the spread of COVID-19.<sup>14</sup>

Colombia's experience with this UCT contrasts with Kenya's experience with UBI paid via M-PESA during the pandemic. First, Kenyans were familiar with the program's operation, as the UBI had been in place since 2018. Second, Kenya already had a well-developed digital payments ecosystem: 96% of Kenyan households had a mobile money

account before the pandemic (Suri & Jack, 2016). In contrast, Colombia's VAT Compensation was launched in the middle of the pandemic, using a little-known mobile payment technology solely used by recipients to cash out. As a result, while Kenya's UBI transfer encouraged households to stay home during the pandemic (and make payments electronically), Colombia's UCT induced households to leave their homes.

In sum, although introducing new payment technologies during COVID-19 may facilitate the rapid disbursement of money to vulnerable households, our results suggest it may also undermine their effectiveness in contexts with underdeveloped digital payments ecosystems. This highlights the importance of developing digital payments ecosystems to facilitate the easy deployment and efficacy of cash assistance during crises.

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<sup>13</sup>These anecdotes from the qualitative interviews help explain the otherwise puzzling result from column 2 of table C.14 that the UCT literally appears to have given recipients a headache.

<sup>14</sup>The effect on this index measure becomes smaller and less significant when excluding visits to the bank or ATM in May (table A.12), suggesting the former is partly driven by impacts on the latter.

In addition, column 1 of table A.10 suggests that the transfer raised the likelihood of leaving home in May for work by 2.9 percentage points. However, this effect is only significant at the 10% level. In fact, table A.4, which reports the effects on the outcomes where the period of reference is the "last week" rather than May 2020, shows that the treatment had no impact on labor supply or on the likelihood of leaving home for work in the past week. Column 12 suggests the transfer might have raised the likelihood of having a guest at home—specifically, of having someone over to ask for help, which increased by 1.6 percentage points or 59% (table A.13). While this effect is only marginally significant, it is consistent with the evidence from section IVB that the UCT promotes social cooperation as well as with previous work documenting social pressure to share economic gains with friends, relatives and neighbors in developing countries (Jakiela & Ozier, 2015).



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