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Investing in large scale financial inclusion: The Case of Colombia¹

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Introduction

Conditional Cash Transfer (CCT) programs have become in many countries the largest social program and the framework upon which a social protection network is being built. These programs have more than 24 million beneficiaries in the Latin America and the Caribbean region and have been subject to many types of evaluations showing them to be an effective means of increasing demand for health and education services. Familias en Accion is the national Conditional Cash Transfer program in Colombia. The program started in 2000 mostly in rural areas of the country. In its first stage, households from 691 of 1060 municipalities entered the program⁴ reaching 315 thousand beneficiaries; eventually the program was expanded and now covers 1093 of the 1098 municipalities in the country and more than 1.5 million households.

The program provides monetary incentives to families with children younger than 18. The program provides a nutritional subsidy of 50,000 Colombian pesos⁵ per month to families with children younger than 7 years of age. In some cities, families with no children younger than 7 but who have children younger than 11 can receive a 20,000 monthly nutrition transfer. The nutrition component is given to the family regardless of the number of children in this age group. The health and nutrition conditionality requires mothers to attend to 100% of growth and development controls as scheduled by their local health centers.

The education subsidy gives of 15,000 Colombian Pesos monthly to each child in primary and between 15,000 and 60,000 pesos monthly for children in secondary. This transfer is given to each child in the family. In some of the largest cities the transfer scheme varies by grade, in Cali, Medellin Barranquilla, Bogotá, Bucaramanga, Montería, Pasto, Pereira, Villavicencio, Yopal and Soacha, the transfer is of 25,000 for grades 6, 7 and 8; 35,000 for grades 9 and 10 and 40,000 for grade 11. In Ibagué, Neiva, Popayán, Santa Marta and Sincelejo the program gives 30,000 for grades 6, 7 and 8, 45,000 for grades 9 and 10 and 60,000 for grade 11.6 In any other location, the subsidy is 30,000 Colombian pesos monthly, regardless the grade. In education the conditionality required by the program is the attendance to 80% of classes.

⁴ [Programa Familias en Acción: Impactos en capital humano y Evaluación beneficio – costo del Programa](#)

⁵ As of November 2010, 50000 Colombian Pesos were equivalent to 26.18US\$

⁶ Familias en Accion Website at :

<http://www.accionsocial.gov.co/contenido/contenido.aspx?catID=204&conID=157&pagID=264>

The short term objectives of the program according to its 2008 Operating manual are to:

- Increase attendance and lower dropout rates in primary and secondary education.
- Supplement family income of families with children younger than 7 to support household spending in food.
- Increase health checkups for children younger than 7.

The long term objectives are:

- To contribute to the improvement of the health practices for children.
- To contribute to the improvement of nutritional practices for children.
- To contribute to the prevention of intra-household violence.
- To support State policies to improve the health and nutrition level for children younger than 7 years old.
- To bring back to school children who have dropped out to return to school and promote an increment in years of schooling.

From its beginnings the program started delivering cash to beneficiaries through bank branches in municipalities with less than 100,000 inhabitants. The availability of a bank branch was a necessary requirement for the incorporation of a municipality into the program. However, beneficiaries of the program did not receive any other services and few of them opened accounts on these institutions⁷.

From their inception, CCT programs have had a natural partnership with the financial sector. This is because CCTs have used bank branches as a delivery mechanism in most countries. In addition, there seems to be an increasing trend in the relationship between CCT programs and the financial sector. Programs such as Peru's Juntos are piloting incentives to savings in zero fee savings accounts, or in the case of Ecuador, CCT future transfers are allowed to be used as collateral for obtaining microcredit, other countries are using the cards in order to replace what were formerly generalized subsidies as is the case of Dominican Republic, and others are generalizing the availability of free savings accounts as is the case of Brazil and

⁷ More on this in Table 1 below

Colombia. However until recently, this link and its potential for development had not been well explored.

Evidence about the effects of financial inclusion in general for the poor in order to help them improve their welfare through savings (Gomez-Soto 2007); (Townsend, 2002); and (Alem and Townsend, 2010), access to credit (Gertler, Levine and Moretti, 2001); (Aroca, 2002); (Dunn and Arbuckle, 2001); (Roodman and Morduch, 2009) and insurance (Skees et al., 2002); (Siegel, Alwang and Canagarajah, 2001) is not new and many different approaches at estimating its impact have been attempted. In the area of microcredit the results from the first randomized impact evaluations in India (Banerjee et. al. 2009) and the Philippines (Karlan and Zinman, 2009) show positive results for some of the groups analyzed but not a rotund positive effect of access to credit on improved wellbeing of beneficiaries. With respect to savings another recent randomized evaluation offering free savings accounts to self employed persons in Kenya (Dupas and Robinson, 2010) did find positive effects on income of beneficiaries with larger impacts for women.

Linking social program payments and financial inclusion is, however a relatively new area in which the relevant questions for research are still being defined (Natu Anant, Jayant et al., 2008, Zimmerman and Maury, 2009). One of the first studies in this area is for the case of Argentina, (Duryea and Schargrotsky, 2008) in which a payment scheme for the local CCT was linked to electronic cards that beneficiaries could use to get cash from the program from ATMs. Results of this study show that there was in general a good perception of the payment system by beneficiaries; they saved time in obtaining the cash and this translated into increased participation in the labor market. However they found no increased use of financial services.

Financial Inclusion in Familias en Acción

Starting in 2009, beneficiaries of the program started receiving their payments through debit cards as part of the “Plan de Bancarización”, a policy that aimed at providing all of the beneficiaries of the Familias en Acción program with access to Bank accounts and debit cards. The contract for the process was awarded to “Unión Temporal Banagrario-Assenda” a partnership between a state owned bank (Banco Agrario) and a private firm (Assenda).

While the objectives of Familias en Accion have not been updated to include the Plan de Bancarizacion, based on interviews with Program personnel, there seem to be two main objectives to be reached with the plan: (i) increased efficiency of the program by the delivery of cash through ATMs and availability of funds directly at stores and (ii) financial inclusion of beneficiaries of Familias en Accion.

What the beneficiary of the program receives is a debit card linked to a savings account.⁸ Features of the account are:

- They are interest generating accounts.
- No minimum deposit required for opening or maintaining the account active.
- No account maintenance fee.
- Beneficiaries can make at least two monthly withdrawals from the account and one balance inquiry without being charged a fee.
- The accounts are exempt from the financial transactions tax, and
- Two percentage points of the value added tax are refunded when purchases are made through the debit card.

After receiving the cards, the beneficiaries receive some training in the use of the cards through a 5 minute educational video and personal training.

An important operational feature of the accounts that should be highlighted is that even if beneficiaries make no movement in the accounts for any amount of time, the funds remain in the property of the beneficiary. While this is pretty much the definition of a Bank account, this is important in that it represents an operative change in the program. In the cash based system, a beneficiary who did not collect transfers for two consecutive times was expelled from the program, a feature that may potentially confuse beneficiaries as to the security of the account.

In the case of Colombia the average fee charged by the banks per transaction (delivery of cash to one beneficiary) prior to the implementation of the plan de bancarización was approximately 8,000 Colombian pesos (US\$4), after the implementation of the plan the average

⁸ The legal infrastructure for small savings accounts was framed in the decrees 4590 and 4591 of 2008, in which the regulation for this type of accounts is described.

cost per transaction is approximately 20,000 Colombian pesos (US\$10). A simple calculation (without considering other factors that presumably have changed due to the plan such as administrative personnel needed under the old and the new payment systems) gives an increment of 250% in the fees paid by the program. This increment presumably brings benefits for beneficiaries in terms of a lower transaction cost and a secure payment system and benefits for the program in terms of increased efficiency (lower administrative costs).

To assess the ex-ante characteristics of beneficiary population before the implementation of the Plan de Bancarización, we used data from the impact evaluation of the rural and urban components of the program (See Departamento nacional de Planeacion, 2008). These panel surveys aimed at evaluating the impact of the program on beneficiaries' human capital; however, they included some questions about the use of financial services such as credit, savings and insurance. Table 1 includes the results from this exercise.

Table 1: Use of Financial Services by Program Beneficiaries in Familias en Accion according to Impact Evaluation Surveys(2002-2006).

(Percentage)

	Savings		Insurance		Credit from banks	
	Control	Treatment	Control	Treatment	Control	Treatment
Rural Baseline 2002	2.1	2.2	1.2	1.1	NA	NA
First Rural Follow up 2005	4.9	3.8	2.4	1.5	3.0	6.9
Second Rural Follow up 2006	2.0	3.9	4.4	2.0	12.7	15.4
Urban Baseline 2007	4.0	3.9	6.2	6.2	20.8	20.2

Source: Authors calculations based on data from the impact evaluation for Familias en Accion in rural areas

As it can be seen from Table 1, households that are potential or actual beneficiaries of Familias en Accion have a very low level of interaction with the formal financial sector, especially in rural areas. In the case of savings, the level ranges from 2.1% of households with savings in a financial institution to 4.9 in the first rural follow up. One tendency that seems to be different from data from other countries (see Tejerina and Westley, 2007 for a summary of these indicators) is that the gap between rural and urban areas seems to be small, perhaps because at the time of the rural evaluation the program only intervened in municipalities that had access to a bank branch. In the case of insurance, there is a higher use of insurance products in urban areas

compared to rural ones, but overall rates are low, ranging from 1.1% in the rural baseline to 6.2% in the urban baseline. In the case of credit, levels have increased through time in rural areas; unfortunately this question was not included in the rural baseline data but rates range from 3% in the control group of the first rural follow-up to 20.8 percent in the urban baseline. A large increase between the first and second follow-ups in rural areas can be seen in the data; however it seems strange that such an increase could be observed in a one year period.

Data

The study presents the results from a household survey of 658 beneficiaries of Familias en Accion in six cities who at the time of the survey received their payments in cash and using debit cards provided by the program.

The study combines three instruments in order to have a comprehensive view of the process: (i) a small survey of six urban cities, (ii) one focus group per city studied and (iii) a set of semi-structured interviews with beneficiaries, bankers and Familias en Acción Personnel. Table 2 below shows the distribution of the various instruments implemented as part of the project.

Table 2: Sample of beneficiaries by instrument and by city.

City	Number of surveyed households	Number of participants in each focus group	Number of interviews
Bogota	220	20	6
Valledupar	59	20	11
Monteria	133	16	13
Pasto	91	23	20
Sincelejo	93	18	14
Cali	62	28	9
Total	658	125	73

A total of 658 households answered the survey, 125 persons from the six cities participated in the focus groups and a total of 73 persons from the program and from the

financial sector were interviewed. Table 3 shows some descriptive statistics regarding the type of payment that beneficiaries in the sample used at the time of the survey and if that beneficiary received transfers from the program through a different system previously.

Table 3: Distribution of the sample by previous and current type of payment

Modalidad	Bogotá	Montería	Sincelejo	Pasto	Valledupar	Cali	Total
Always Cash	4.1	0	8.6	0	1.7	4.8	3.2
Always Tarjeta Eficaz	0.5	0	0	1.1		1.6	0.5
First cash now Tarjeta Eficaz	0.5	0	6.5	7.7	5.1	0	2.6
Always BanAgrario card	47.3	35.3	24.7	15.4	3.4	1.6	29.0
First “Tarjeta Eficaz” now BanAgrario	14.6	11.3	17.2	34.1	22.0	16.1	17.8
First cash now BanAgrario card	1.8	0	1.1	0	1.7	4.8	1.4
First cash, then Tarjeta Eficaz and now BanAgrario card	30.0	52.6	41.9	40.7	61.0	67.7	44.1

Source: Authors calculations based on household survey

Out of the total sample 92 percent of surveyed beneficiaries already received their payments through Banco Agrario accounts. The largest group in the table above (44%) has used the three payment systems that the Program has used and the second largest group has always used the BanAgrario card only (29%).

Using this information and based on the objectives of the program Familias en Accion, the objectives of the Plan de Bancarizacion and the results from previous studies (see Duryea and Schargrodsky, 2009 for example) we aim at answering the following set of questions:

- Are beneficiaries making use of the financial services being provided?
- Is the availability of formal financial services affecting wellbeing of beneficiaries through:
 - lower costs (time and money),
 - intra household dynamics,
 - increased security,
 - improved consumption patterns
- How well do beneficiaries understand the financial services being offered to them?

In order to describe the socioeconomic characteristics of the sample a summary of selected characteristics is presented below.

Table 4: Distribution of the sample by previous and current type of payment

Variable	Mean
Years of education	9.6
can read (%)	94.1
works (%)	47.6
studies (%)	7.4
monthly consumption in the household (Colombian pesos)	585935
monthly consumption of food in the household (Colombian pesos)	359244
household size	4.6
hours of work	8.6
household has a business (%)	9.0
household has a car (%)	1.0
beneficiary is self employed (%)	62.6

As Table 4 shows, in our sample, 94% of beneficiaries declare knowing how to read and write, the average number of years of education is 9.6, and only 7.4% study. Monthly consumption of the households is 586 thousand Colombian Pesos (approximately 307US\$) and consumption on food is 359 thousand Colombian pesos (approximately US\$188), this for an average family size of 4.6 (percapita total consumption equal to 66.7US\$). 47.6 of the beneficiary mothers of the program work, of those 62.6 are self employed and for those who work average hours worked are 8.6, the percentage of households that have a business is 9% and only 1% of households have a car, which is consistent with the targeting policies of the program.

Main results

Use of services

The Plan de Bancarizacion makes sure that all beneficiaries receiving their payments have a savings account with the characteristics mentioned above. What is not clear is how well the beneficiaries of the program understand what they are receiving and how willing or capable they

are of making use of the accounts. The first question we address is if the households are indeed saving or considering saving in the accounts. Table 5 presents some summary statistics regarding the use of savings accounts by the household (in any institution).

Table 5: Use of formal and informal financial services in the survey according to the main form of payment of the subsidy (percentage)

	Formal savings	Informal savings	Formal credit Informal credit	
			(last three years)	
cash	4.8	47.6	4.8	76.2
Tarjeta eficaz	0.0	21.1	21.1	45.0
BanAgrario	5.5	22.4	15.5	43.4
Total	5.2	23.1	15.7	44.5

Source: Authors calculations based on household survey

Use of financial services by beneficiaries of the program seems to be low and similar to that found in the urban baseline data in the previous section. The use of savings accounts ranges from 0% for clients receiving payments through Tarjeta Eficaz to 5.5% for those receiving payments through BanAgrario. In the case of BanAgrario the average savings amount is 585US\$⁹. When asked why they did not save, 94% of respondents answered that they did not have money to save. At the same time when asked about money they had saved in informal ways (such as piggybanks, cadenas, friends, among others) 23% of households responded that they do save in one of these forms¹⁰. It is possible that beneficiaries learn to use the accounts slowly and what we are observing in the data is just a slow start, however a follow-up study would be necessary to check if after a few months; beneficiaries are indeed using the accounts for saving.

Beneficiaries who receive payments through BanAgrario cards make more use of formal credit compared to formal savings (15.5% compared to 5.5%) and this is also consistent with the results from the impact evaluation of the program. Also, beneficiaries who are receiving transfers through cards make more use of formal credit compared to their cash counterparts. Informal credit is very high for every group; however it is higher for those receiving benefits in cash.

⁹ These figures do not imply that they are using BanAgrario as their savings institution.

¹⁰ See Apendix for complete table of reasons why households don't save

In order to understand how poor households view the usefulness of financial services, in the survey we also asked households about actual and potential use of savings and use of credit whenever it was obtained. Table 6 shows the results of this exercise.

Table 6: demand for credit and savings in the surveyed beneficiaries
(percentages)

	Savings		Credit	
	Actual use	Expected use	Formal	Informal
Education (fees, materials)	11.7	17.4	9.2	7.2
To buy a house	7.4	14.5	2.5	1.7
To purchase a car	0.0	0.6	0.0	0.0
Home improvements	6.9	8.7	15.0	7.0
Household appliances	6.9	2.9	10.8	9.6
Special events	4.3	2.9	0.0	0.6
Christmas, parties	6.5	13.4	0.8	1.4
Groceries	n.a.	n.a.	n.a.	27.0
Unforeseen events	27.3	19.8	6.7	7.5
Vacations	0.4	1.2	0.8	0.0
To purchase land/house	1.3	1.2	0.0	0.0
To purchase business assets	3.5	2.9	19.2	7.2
To start a business	1.7	2.3	12.5	1.2
To pay debt	9.5	5.2	10.8	11.9
Other	12.6	7.0	11.7	17.7
Number of observations	231	172	120	345

Source: Authors calculations based on household survey

Note: households were able to chose more than one option and the question does not differentiate between formal or informal savings

In the survey between 67 and 74% of households declare that they don't save or they do not plan to save, Among those that do save, Table 5 shows that the highest percentage (27.3) has used their savings to cope against unforeseen events or expects to do so (19.8%). The next use of savings (although much lower) is education, paying debt and home purchases (home improvement and household appliances). Among households that obtained credit, the most common use is to finance business assets or to start a business, especially in the case of formal credit (27.7 together in the case of formal and 8.4 for informal), the next largest category is purchases for household improvements or appliances (25.8% for formal and 16.6% for informal),

the next categories are debt payment and education (10.8% formal, 11.9% informal and 9.2% formal and 7.2 informal, respectively), low in the list comes credit to face an unforeseen event.

The information obtained from the focus groups shows a very consistent story regarding the use of the savings accounts, it seems that most beneficiaries who save, do so through informal methods, (piggy bank, under the mattress, livestock, cadenas, etc) many beneficiaries don't know about the savings account that is available through Familias en Accion or are doubtful about the security of the funds, for example, some beneficiaries believe that if you don't have a movement in the account for two payment periods you lose the funds (which was true before the Plan de bancarizacion under the rules of the program). There is also a fear of ceasing to be eligible for the program if a beneficiary accumulates savings in the accounts. All this factors seem to combine to act as a disincentive for the use of the accounts as a saving option.

Lower transaction costs

The purpose of this section is to compare the time and money that beneficiaries spend in collecting the cash transfer from the program. A naïve approach would be to compare, say the time spend in collecting the transfer between those households that have a card and those that don't. This neglects, however the possibility that households that do not have a card may live in areas with a smaller supply of financial services, in this case we would erroneously interpret a difference in characteristics of the locality as time savings for the beneficiary. For this reason, we limited the analysis to a subsample of those beneficiaries who had received payments in two or more ways always including the BanAgrario card as one of them (those who have BanAgrario but used other mechanism before) and all the comparisons were done using retrospective information from the same sample of people. There is of course the possibility that retrospective information itself is biased but since the debit cards have been only recently distributed to beneficiaries the problem of people not remembering accurately past information should be small. Table 7 describes the preferred places to get the cash transfers provided by Familias en Accion.

**Table 7: preferred places to cash subsidy
(percentage)**

	Bank	Familias en Accion meeting	ATM	Chain Store or supermarket	Corres- pondent	local store or minimarket	Other
Cash	38.9	38.3	-	-	-		22.2
Tarjeta Eficaz	12.1	1.4	82.8	2.6	0.2	0.7	n.a.
BanAgrario	5.6	0.7	77.4	14.4	0.5	1.5	n.a.

Source: Authors calculations based on household survey

As the table shows, by far the most common way to cash the benefits from the program, once available, is using the ATMs, this even though cards can be used at stores for this purpose. Thus, the main differences in terms of transactional cost should come in the case of cash from the shift from bank branches or Program meetings to the extensive use of ATMs, and in the case of BanAgrario, there seems to be a shift toward using the card in supermarkets compared to the Tarjeta eficaz, presumably because these stores are located closer than ATMs for beneficiaries, also stores do not charge an additional fee for purchases or cash withdrawals.

So what do the numbers say? Table 8 shows the data in terms of the mean transactional costs in terms of money and time (both to get to the payment center and to wait for the transfer).

Table 8: Gains in terms of money and time with the new system (percentages)

	<i>Cost Cash/Tarjeta Eficaz</i>	<i>Cost BanAgrario</i>	<i>Difference (savings)</i>		<i>number of observations</i>
<i>Time spent in getting to the payment site</i>					
<i>Cash</i>	33.3	24.5	8.7	**	236
<i>Tarjeta Eficaz</i>	29.9	26.2	3.7	*	354
<i>Money spent in getting to the payment site</i>					
<i>Cash</i>	2072.9	1800.8	272.1	**	199
<i>Tarjeta Eficaz</i>	1858.7	1834.3	24.3		290
<i>Time spent waiting for payment</i>					
<i>Cash</i>	302.7	35.6	267.2	**	231
<i>Tarjeta Eficaz</i>	74.9	55.0	19.8	**	352

Note: * denotes a significant difference at the 10% level, ** denotes a difference at the 5% level.
Source: Authors calculations based on household survey

As the Table 8 shows there seem to be important gains in switching from cash based payment system to a card based system. In terms of transportation to the place of payment the savings are small, 8.7 minutes and 272 pesos (US\$0.13). The largest gains come in the time spent waiting for the payment, which are 267 minutes (almost five hours!). The comparison with the Tarjeta Eficaz does not yield large gains, in terms of transportation the gains are only 3.7 minutes and not significant in terms of money spent. In terms of time there does seem to be an important saving of 20 minutes, although much smaller than the gains when compared to the cash based system. The differences are statistically significant though.

Results from the focal groups are also consistent with the quantitative results. One of the main benefits that are reported are the elimination of long lines and waiting periods under the sun or rain. While there is a complaint about the availability of ATMs to retire the funds in general it seems that there is a net improvement in terms of time spent in retiring the funds. However it also seems that many beneficiaries are only gradually learning about the use of the card in stores (a fact also reflected in the quantitative information), which should only increase the benefits of the card as mothers begin to use all the options available.

Intra household dynamics

One of the main features of CCTs is that they give transfers directly to mothers of the family since there is evidence in favor of women spending being more altruistic in terms of household wellbeing (See Quisumbing and Maluccio, 2003). As it can be seen in studies from Argentina (Duryea and Schargrotsky, 2008) there is a risk of distorting this program feature in Conditional Cash transfer programs if there is an incentive for mothers to depend on someone to obtain the funds from an ATM (be it for security or financial literacy reasons). In the survey, mothers were asked if they regularly depended on someone to withdraw funds from ATMs and if they had to give up some cash for this reason. In Table 9 we summarized the results of the section regarding this issue.

**Table 9: Use of other persons to obtain program's subsidy
(percentages)**

Does somebody regularly help you in withdrawing funds?			
Who?	Do you need to pay a commission to this person?	Did this person give you all the money withdrawn	
Police officer	4.2	0.3	91.7
Mother leader	0.3	0.0	100.0
Friend	2.4	0.0	93.3
Familias en Accion employee	0.3	0.0	100.0
Spouse	6.4	0.0	67.6
Other family member	31.0	0.7	78.7
Someone else	5.2	1.3	92.9
Nobody	50.7	0.0	100.0

Source: Authors calculations based on household survey

As the Table 9 shows, an important percentage of mothers rely on someone else for the purpose of obtaining the funds using the cards. Only 50.7 percent of mothers never depend on someone for withdrawing the funds and most of the mothers rely on someone within the household in order to obtain the funds (around 37 percent of the total of mothers including family members and spouse). One positive result is that there seems to be no “formal” commission paid to those persons who help the mother withdraw the funds, however there seems

to be a problem in terms of the family member giving all of the funds withdrawn to the mothers; this is specially the case for spouse and “other” family members who help mothers. In the first case 67.6% of beneficiaries who are helped by the spouse receive the full amount of funds, in the second case 78.7 percent of mothers receive the full amount.

It is important to note that in order to make a fair comparison with the funds received in cash we would need a much richer dataset allowing us to measure the amount of leakage of funds in both types of payment (taking into account impulse purchases for example when receiving money in cash) and how they affect consumption of the household (for example is the money that the spouse keeps, money that would be given to him anyway in the case of cash?). However the percentage of mothers not receiving the total amount withdrawn does draw some attention to the potential problems that could be a consequence of mothers not accessing the funds directly for any reason.

Results from the focus groups show that this is indeed a cause of concern, as the problem of depending on other people to withdraw funds appears repeatedly. For example in many cases beneficiaries report that there is congestion at the ATMs because some people carry more than one card, in one city the payment of commissions for the funds is cited. One issue that seems to be in part behind the dependence on other people is that if there are too many mistakes in the use of the ATM, the card may be blocked, and the process of unblocking it could take as much as two months. For this reason, learning by doing in the case of ATMs has a high cost and this perpetuates the dependence of beneficiaries on other members of the family to use the ATMs. Mothers seem to be more comfortable with using the cards in stores, however as seen above, the use of this option is not yet widespread among beneficiaries.

Financial literacy

In order to measure financial literacy, and since the program provides training regarding the specific details of the accounts, households were surveyed about the specific details about the accounts. From the second section of the paper, the reader should remember that the accounts provided to Familias en Accion beneficiaries are particular in that they do not require a maintenance fee, provide tax incentives and have a small number of transactions that are exempt from fees. Table 10 shows some of the results about general knowledge about the accounts.

Table 10: Understanding of the rules of the program
(percent)

	Bogotá	Montería	Sincelejo	Pasto	Valledupar	Cali	Total
The first two transactions are free in ServiBanca and Banagrario ATMs	80	89	92	50	91	60	79
The first balance statement of every month is free	85	91	95	89	98	65	88
The Banagrario savings account does not have a maintenance fee	67	71	42	39	60	53	59
Purchases made with the Banagrario card have two percentage points from the VAT exempt	9	14	39	7	9	19	15
Accounts are income generating	10	16	54	2	9	2	15
There is no minimum balance required	70	74	58	57	75	39	65
Does not pay 4x1000 tax	73	55	73	38	69	40	61
Funds can be left in the account and not lost	57	80	51	42	64	7	55
You can make additional deposits	74	86	71	37	75	12	65
They have been told they have to withdraw all available funds	28	25	13	19	32	20	23

Source: Authors calculations based on household survey

Two things should be evident from the Table 10 above, first there is great heterogeneity between geographic areas in the way beneficiaries understand the characteristics of the account and second, there are important gaps in the understanding of key issues of the accounts. In the Table, both in Pasto and Cali there are much lower levels of understanding compared to the other cities in the sample. In the total sample, a large majority is aware that the first two transactions are free (79%) and that the first statement of the month is free (88%), these may be the most important facts of the accounts, as not knowing them may actually lead to losing money (by constantly checking your balance for example).

However, understanding is much lower regarding the savings potential of the accounts. For example, 65 percent of households know that they can make additional deposits in these accounts, 59 percent knows that the account does not have a maintenance fee, 65 percent knows

that there is no minimum balance required and only 55 percent answered that funds cannot be lost. Knowledge is even lower when one considers the questions related to the income generating potential of the accounts, for example only 15 percent of beneficiaries knew that funds in the accounts received an interest rate or that VAT was lower for purchases with the cards. What may be more confusing to beneficiaries is that 23 percent declared that they had been told that they had to withdraw all funds from the accounts, which might be a consequence of the fact that beneficiaries who used tarjeta eficaz, (since it was a card without an attached savings account) indeed had to withdraw all the money or it would be transferred back to the program.

So in terms of the basic functioning of the accounts and the cards it seems that the vast majority of beneficiaries receives a good training and seem to be satisfied with the use of the cards. However the understanding of the accounts in terms of their savings benefits seems to have not been correctly understood by an important share of program beneficiaries. This would have to be taken into consideration when assessing the use of savings accounts in the program, and in considering the programs of financial education.

Focus groups also tell a very consistent story regarding understanding of the rules and benefits of the program. People report being satisfied with the explanation given about the cards, however this explanation lasted in some cases only five minutes. This is the case of Pasto for example and results from this city are consistently worse in the quantitative analysis. While mothers were satisfied with the explanations given, it seemed clear in the groups as well as in the survey that there are many misconceptions about the security of the funds, and the rules for the commissions to be paid both in ATMs and stores.

Beneficiary perceptions

Regarding the perception of beneficiaries about the new payment system, results seem to show in general a good acceptance of the new payment system. Table 11 shows a self evaluation of what beneficiaries perceive about the Plan de Bancarizacion.

Table 11: beneficiary perceptions of the new system
(percentages)

	The service quality at the BanAgrario meetings was	The explanations given at the BanAgrario meetings were	Qualification given to the toll free line
Very bad	1.8	1.3	13.0
Bad	1.0	1.2	20.3
Normal	11.8	11.2	11.6
Good	70.9	75.8	43.5
Very good	14.5	10.5	11.6
Do you think that the new system (BanAgrario Ccard)			
	is better for you?	Reduces time spent in obtaining the transfer	Reduces monetary spending in obtaining the transfer
Yes	72.4	68.0	51.3
No	4.9	8.3	23.4
NA	19.1	23.7	25.3
Doesn't know	3.6		
	Which one do you think is the most secure payment system	Which do you think is the less congested system	Which do you think is the system better suited to your needs
Cash	6.3	3.7	3.9
Eficaz card	5.7	4.5	5.1
Banco Agrario Card	87.8	91.6	90.9

Source: Authors calculations based on household survey

As Table 11 shows, in general there is a good perception of the service provided by Banco Agrario. 86% of beneficiaries grade the quality of service provided by Banco Agrario and the explanations given at the meetings as “good” or “very good”. Also, most people rate the new system as being better for them (72%) and that they perceive a reduction in the time spent in obtaining the money from the program. Only slightly more than 50% perceived a reduction in the monetary costs of obtaining payments from the program. In contrast, the toll free line received lower acceptance rates; only 55% of beneficiaries listed this service as being either good or very good.

The third block of Table 11 shows that there is a very high level of acceptance of the services being provided by Banco Agrario. Almost 88% of the surveyed beneficiaries declared

that they perceive this system as being the most secure, 91.6% perceive it to be less congested and almost 91% perceive it to be better suited for their needs.

In general, in contrast to the level of *use* of the savings component of the new payment mechanism, beneficiaries seem to be very satisfied with the operational part of it, that is, they perceive it to be more efficient (although the calling center received low marks).

The focus groups also send a consistent message in that beneficiaries report having a good experience in terms of the use of the card. Avoiding the long lines, thirst, absence of toilets and exposure to the sun are among the many benefits cited. The most common complaints about the use of the card are congestion around the ATMs, the fact that most beneficiaries have to call the callcenter using a cellphone which is costly and the lengthy process of unblocking the accounts.

Operational issues

On the basis of the survey, some operational issues have been found to be of relevance for the design and functioning of the program. Table 12 lists some select findings from the survey.

**Table 12: Perception about some operational issues of the new system
(percentages)**

Percentage of users who have used the 1-800 line	22,6
Percentage of sample with landline	32
Percentage of beneficiaries who consider that retail accept the BanAgrario Card	70.9
Percentage of beneficiaries who declare knowing how to collect the subsidy in retail stores	51
Percentage of respondents who think it is necessary to purchase something to obtain the subsidy	26.4
Number of beneficiaries who consider they have to pay a commission to the retail to obtain the subsidy	9.1

Source: Authors calculations based on household survey

As Table 12 shows, only 22.6% of beneficiaries have used the hotline for solving operational problems in the system, this could be because people are not having many problems

or because only 32% of beneficiaries have a landline to use the free hotline, the rest communicate through cellular phones, which have a cost for calling the center.

Another operational issue worth noting is that there is a level of misconception about the use of retail stores to obtain the subsidy provided by the program. There is close to 30% of surveyed beneficiaries who consider that retail stores do not accept the program's card, only 51% declare knowing how to collect the subsidy in retail stores and more than a quarter think that it is necessary to purchase something at the store in order to be able to obtain the cash. Although the percentage is low it is also worrisome that 9.1% of beneficiaries think they have to pay a commission to the store in order to obtain the program's transfer.

The focus groups in this case identified a problem that was not considered ex-ante and would have been missed in the survey. The process of unblocking accounts and the many cases of beneficiaries who have their accounts blocked because they did not use the ATMs properly is one of the main complaints about the operational part of the program.

What groups are more likely to have problems with the system?

In order to better inform if there are certain socioeconomic characteristics associated with lack of use or understanding of the savings accounts provided under the Plan de Bancarizacion a set of simple regressions were run with five of the main problems identified. The dependent variables are:

- 1) Makes use of the savings account
- 2) Somebody else makes use of the card to receive the funds
- 3) Does not know number of free transactions at ATM (withdrawals or statements)
- 4) Think they have to pay a commission to retail stores
- 5) Know you can make additional deposits into the account

In all cases the coefficients and variables were normalized so that a positive coefficient means a positive relationship between the variable and the financial inclusion outcome Table 13 below shows the results of this exercise.

Table 13: Relationship between select household characteristics and financial inclusion variables

	saves	does not need help	financial literacy	pays commission	knows she can make deposits
Pc monthly income	0.00	0.00	0.00	0.00	0.00
age	0.00	-0.01 **	0.00	0.00	0.00
education (years)	0.00	0.02 **	0.00	0.00	0.00
works	0.01	0.08 *	0.03	0.03	-0.01
can read	-0.01	0.02	0.00	-0.05	0.19 **
years as beneficiary	0.00	-0.02	-0.01 **	0.00	-0.01
Bogota	0.05	0.44	0.82	0.04	0.52
Cali	-0.01	0.64	0.57	0.16	-0.05
Monteria	-0.03	0.51	0.89	0.06	0.68
Pasto	-0.03	0.28	0.75	0.04	0.17
Sincelejo	-0.01	0.71	0.77	0.09	0.49
Valledupar	-0.03	0.90 **	0.83 **	0.25	0.53 **
Number of Obs.	545	507	545	545	545

Source: Authors calculations based on household survey

In the exercise in table 13, it is important to take into account that the sample used is small, and that there is little heterogeneity between households in socioeconomic variables. This second point is driven by the targeting system of the program, since beneficiaries of the program are already selected to be the poorest households in the country based on an index built using information on household characteristics.

Results from the exercise show no significance in explaining why the household saves or not, it is important to note that even the household percapita consumption variable lacks significance in this column. The second column, refers to the variable that equals 1 if the person needs help for obtaining the cash from the program using the card and 0 if she doesn't, in this case there are some intuitive results, first older people seem to need more help, which could be the result of them being less accustomed to using technology, education is also a factor positively linked to not needing assistance perhaps for similar reasons, and beneficiaries who work are also more independent in the sense that they do not need other people to get the program's subsidies for them.

The financial literacy variable is equal to 1 if the person answered correctly to the question about the number of free transactions allowed by the program; in this case the only variable that was significant was the number of years a beneficiary has been in the program, which have a negative effect on this variable. Since the rules of the debit card system are new, a reason for this result could be that newer beneficiaries participated more actively in the training given for how to use the card. Older beneficiaries might be more used to previous system and need an extra effort to switch to the new scheme.

Regarding the payment of commissions no related factors were found at conventional levels of significance. Finally, the only variable linked to beneficiaries knowing that they can make additional deposits into their accounts was the ability to read, which shows a positive sign, showing the importance of literacy and its relationship with access to financial services.

Conclusions

Through the Plan de Bancarizacion, the Familias en Accion Program is making a large investment in order to provide Program beneficiaries with the option of using formal savings accounts and indirectly other financial instruments in order to manage their money. This benefit comes at the expense of increasing the average cost paid by the program per transaction by 250%. The survey implemented in six cities included in the plan de Bancarizacion provides a first look at the potential problems and benefits of this investment for the beneficiaries of the program.

While results should be taken with caution as they are only representative of one fraction of beneficiaries of the program and the survey was implemented at a relatively short period of time after beneficiaries received the cards, some interesting results show up:

There seems to be a disconnection between the goal of including people into the formal financial sector and the program's objectives of increasing human capital of beneficiaries, as there is no objective in Familias en Accion linked to financial inclusion. This may be one of the factors perpetuating misconceptions such as the idea that beneficiaries need to cash all of the transfer to avoid losing the funds, which is in fact a disincentive to use the accounts as savings mechanisms.

The main benefit of the program seems to be the use of the cards as a payment system, not necessarily as a financial inclusion mechanism. As shown in the previous sections, there are savings in terms of costs of obtaining the subsidies provided by the program and there is high acceptance of the payment mechanism in comparison to previous mechanisms used by the Program. However some risks are evident due to the limited understanding of the rules and benefits of the new payment system. While most people seem to understand the basic workings of the cards to get cash, a small percentage understands the savings potential of the cards as evidenced by the amount of beneficiaries who fear losing the funds if left in the account or the number of people who do not know that you can make additional deposits or that the accounts are income generating. In that sense, financial education should be enhanced within this population.

In addition, some operational issues arise that may negatively affect important design features of the program. An undesirable consequence of using debit cards for the program may be a larger dependence on other members in the family in order to use the ATM, which may lead to the mother of the household losing administrative power over the funds provided by the program.

Results from a simple set of regressions linked mostly educational factors as related to a deeper interaction with the financial sector and understanding of the potential of the accounts offered. It is also recommended that the program monitors older recipients of the subsidy as they may be more vulnerable to other people making use of their accounts.

While results from this study need to be monitored to see if they remain constant as beneficiaries become more familiar with the payment mechanism, results show that if financial inclusion is to be done through a program such as this, it should be clear that the program or some close partner to the program has the objective of promoting financial inclusion of beneficiaries. Second, more resources should be allocated in order to train people so that they understand what are the implications and benefits of having an account beyond receiving the subsidy in a way similar as they had received it in the previous system.

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Appendix 1

Where do you keep your savings?	
Cash	1.4
Piggy bank	18.3
ROSCAS	1.4
Credit to other persons	0.8
Friends and relatives	0.8
Stores	0.6
Construction material	0.5
Domestic animals	0.8
Other	0.9