

Conditional Cash Transfers, Political Participation, and Voting Behavior*

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Conditional Cash Transfer (CCT) programs are now a major component of poverty reduction and social protection strategies of several developing countries (World Bank-IEG, 2011). In Colombia, between 2.5 and 3 million households (30% of the population) have benefited from *Familias en Acción* (FA), the largest CCT program in the country. By giving cash and attaching conditionalities, CCTs have also induced changes in behaviors beyond decisions to invest in the education and health of children. However, and despite the growing number of studies measuring the “indirect” impacts of CCTs, very little is known about the effects of CCTs and political participation. Understanding the interactions between public spending and electoral outcomes is important given the growing speculations that CCTs can have electoral returns, particularly for the incumbent.¹

There are several ways through which CCTs could encourage political participation and influence electoral choices. Gleason (2001) finds that individuals in many democracies with higher or improved levels of socioeconomic status are often more likely to cast a ballot. CCTs could persuade participants to vote by changing the economic circumstances of households. Politicians could also strategically allocate transfers to certain groups of people to raise political support or persuade recipients to cast a ballot in favor of the incumbent (Robinson and Verdier, 2002, Camacho and Conover, 2011), and citizens may use social policy choices to infer the competence of politicians and their preferences for redistribution (Rogoff 1990; Drazen and Eslava, 2006; Banerjee et al., 2010). Higher political participation by program beneficiaries

¹The few papers that look at the effects of CCTs on voting behavior include: De La O (2009), who finds that the receipt of CCTs in México led to increases in voter turnout; and Nupia (2011) and Zucco (2008) who indicate that beneficiaries of conditional cash transfer programs in Colombia -the program analyzed in this study- and Brazil appear to reward the incumbent government in presidential elections.

could also be the result of reciprocity towards politicians that favor transfer programs (Finan and Schechter, 2010; Manacorda et al., 2011) or because participants fear that not supporting these politicians may result in beneficiaries losing coverage.

This is the first paper that uses individual and voting booth level data and exploits the exogenous discontinuity in FA assignment to identify the effect of a CCT program on electoral outcomes, specifically intention to vote and electoral choices. The use of this administrative data and the identification strategy allows us to control for possible policy endogeneity at the municipal level or individual selection in the take-up of FA. We find that relative to non-participants, FA beneficiaries are 4.5 percentage points more likely to register to vote in the Colombian presidential elections, and 6 percentage points more likely to cast a ballot for the incumbent party. The elected candidate in the 2010 presidential elections won 69% of the votes with a large margin of victory, thus our results are unlikely to explain the final outcome. However, the direction of our findings indicate that CCTs may help mobilize people to vote and influence their electoral choice. It remains to be studied if this mobilization in voting is due to revealed support to the programs the incumbent offers, or to individuals persuaded to cast a ballot to become beneficiaries.

I Background of the CCT Program

In 2001, to help mitigate the effects of an economic crisis, the Government launched the FA program. The program - inspired on Progresa/Oportunidades - seeks to promote improvements in children's education and health. The education component of the program delivers

cash transfers (ranging from approximately US \$8 to US \$16 per school age child) to female heads of poor households contingent upon school attendance of their children. In the same way, conditional on health checks, the program also offers lump sum health/nutrition grants of approximately US \$25 per month for eligible families with children under 6.

In addition to having children in the household, eligibility to FA is determined by a proxy-means test known as the *Sisben* score. Households in the lowest bracket (*Sisben* 1) are eligible. Initially, the program was targeted to 622 municipalities with fewer than 100,000 inhabitants amongst other conditions. In 2005, the program was extended to include displaced families and households in departmental capitals and municipalities which either became able to offer the required services or with services accessible in nearby towns. In 2007, the program was expanded to municipalities with more than 100,000 inhabitants. The program now covers nearly 2.8 million participating households in 1,093 municipalities, representing almost 65% of the target population (Acción Social, 2010; Attanasio et al., 2005).

II Data

To identify the effects of FA on voting behavior, we use three administrative data sets: (1) an electoral census, (2) the FA system of beneficiary information (SIFA) and, (3) the *Sisben*.

The electoral census has information on the date of registration and the polling station (municipality, polling station and voting booth) for all adults who are registered to vote.² Since we look at the effect of FA on voting behavior, we restrict the data to people who were 20 years and older at the time when they registered to vote, because since 1990, 18 and 19 year olds

²In Colombia people citizens become eligible to vote at age 18.

have been automatically registered when their adult national identity card is issued.

The FA system of beneficiary information (SIFA) is used by the national agency that runs FA (*Acción Social*) for administration and monitoring purposes. The data set is a longitudinal census of program beneficiaries from 2001 to the present. There is information on nearly 2.8 million families who have participated or are currently participating in the program. We limit the data set to adult beneficiaries with a valid id (needed to vote). We match this data set with the electoral census (using the person's id number) and find that 96.5% (3,608,733) people are registered to vote.

We use the *Sisben* to identify a comparison group to beneficiaries of FA. The *Sisben* is a registry of the people in the left tail of the Colombian income distribution, which is used to calculate a poverty index score from 0 (poorest) to 100 (less poor). This index is divided into 6 brackets and FA is assigned only to households in the first bracket. The *Sisben* allows us to identify comparable individuals to the FA beneficiaries because they live in households that have a similar poverty index score. We also restrict the control to individuals 20 years or older, who have children under the age of 18 as members of the household, the same restrictions we have on the FA beneficiaries. 85.9% of the FA beneficiaries are registered in the Census of the Poor. 59.7% of the non-registered are displaced individuals, who are not required to have a score below the eligibility threshold, and thus not included in our analysis.

Summary statistics for people 10 points above and below the eligibility threshold are reported in Table 1.

Table 1: Summary Statistics

Variable	Obs.	Mean	Std. Dev.
Panel A: Individual Level			
FA beneficiary (percent)	8,220,353	0.296	0.456
Registered to vote (percent)	8,220,353	0.918	0.274
Eligible (percent)	8,220,353	0.628	0.483
Registered after the onset of the program (percent) ^a	7,536,910	0.307	0.461
Panel B: Polling Booth Level			
Proportion of beneficiaries	139,289	0.102	0.114
Proportion of eligible individuals	139,289	0.207	0.176
Official candidate votes over total votes	139,289	0.459	0.172

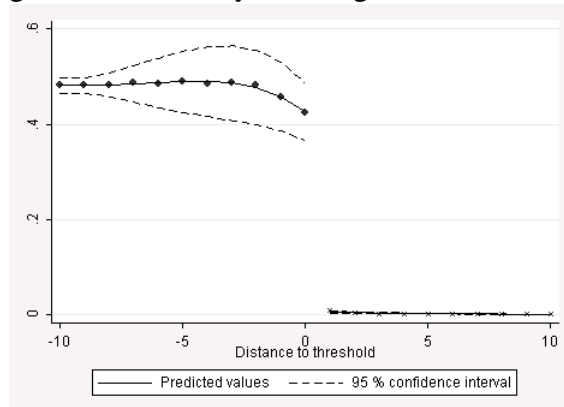
Source: *Registraduría Nacional*, DNP-DDS.

^aConditional on being registered to vote.

III Findings and Conclusion

We initially explore the overall effect of enrollment in the FA program on individuals’ intent to vote in the presidential election using voter registration as a proxy for intent to vote. Relying on a Regression Discontinuity (RD) framework, we identify the effects of FA on political participation by exploiting the discontinuity in FA eligibility for people around the threshold as shown in Figure 1.³ We use a “fuzzy” RD design since the probability of being in FA does not change from 1 to 0 for people above the eligibility threshold.

Figure 1: Probability of Being an FA Beneficiary



³The estimated discontinuity where we use eligibility as an instrument for being a FA beneficiary with a quartic polynomial on either side of the threshold is between 36 and 41 percentage points as reported in panel A of Table 2.

The left panel of Figure 2 suggests that individuals covered by FA were more likely to register to vote relative to those who were similar but barely ineligible for FA because their *Sisben* score was just above the eligibility threshold (we align the eligibility threshold to zero). The corresponding 2SLS results are shown in panel B of Table 2. In column (1) we report parametric regressions with a quartic functional form of the running variable which is allowed to be different on either side of the threshold. In column (2) we report results using an optimal bandwidth for an RD setting following Imbens and Kalyanaraman (2009) (I & K). Table 2 shows that the probability of being registered to vote is significantly higher (3.0-4.5 percentage points) among FA beneficiaries, approximately 5% higher than the level at which the comparison group is registered to vote.

To explore whether FA is causing people to register to vote, we exploit the variation in the roll-out of the program over time and across municipalities. Using the same specifications as in columns (1) and (2) but restricting the sample to individuals who signaled a desire to vote (i.e. registered to vote), we compare beneficiaries to non beneficiaries and find that the former are 4.1-4.5 percentage points more likely to register *after* the onset of the program in their municipality, equivalent to an increase of 16% of the value for those people above the threshold. These results are presented in the right panel of Figure 2 and in Columns (3) and (4) of Table 2). They are statistically significant and consistent in direction and magnitude to the probability of registering to vote.

Given the incidence of a greater intent to vote by FA beneficiaries, we explore whether the program fosters political support for the incumbent party candidate. The FA program was originally conceived and designed in 2001. One year later, the independent candidate Alvaro

Figure 2: Probability and Timing of Registering to Vote

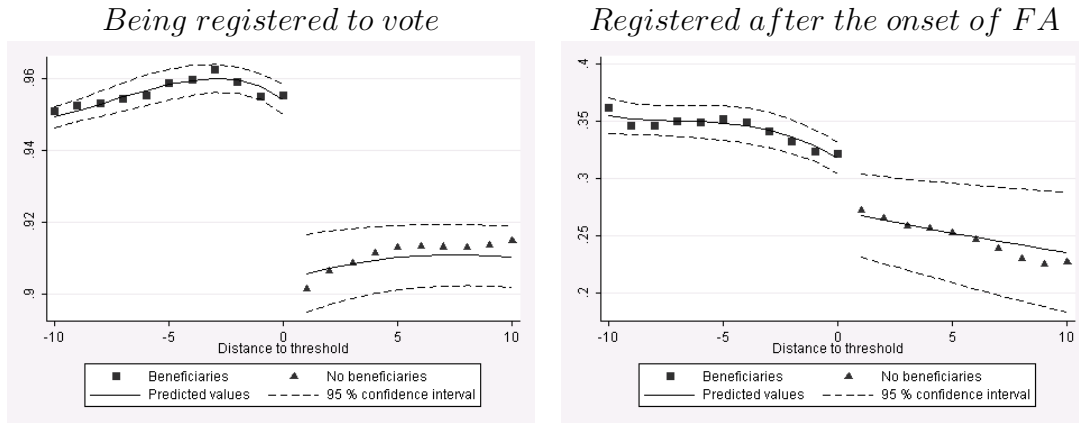


Table 2: Probability and Timing of Registering to Vote

Dependent variable:	Registering to Vote		Registering after the Onset of FA	
	Parametric (1)	I & K (2)	Parametric (3)	I & K (4)
Panel A: First stage				
Eligibility	0.364*** (0.001)	0.396*** (0.002)	0.382*** (0.002)	0.407*** (0.002)
Observations	8,220,353		7,536,910	
Panel B: 2SLS				
FA	0.030*** (0.003)	0.045*** (0.005)	0.041*** (0.005)	0.045*** (0.006)
Observations	8,220,353	239,317	7,536,910	341,506
Bandwidth	0.562		0.884	

Source: *Registraduría Nacional*, DNP-DDS. Standard errors in parenthesis.
 Sample in columns 3 and 4 is conditional on being registered to vote.
 Parametric estimations clustered at the household level and with municipality fixed effects.
 *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Uribe was elected president for the period between 2002 and 2006. He then ran successfully for a second term and was president until 2010. FA became the government's flagship anti-poverty program, which led to a notable expansion until achieving almost national coverage by 2009. In 2010 the presidential candidate of the incumbent party, achieved a landslide victory with 69% of the votes.

We estimate the effect of FA on the electoral outcomes of the 2010 presidential election

Table 3: Effect of FEA on Electoral Outcomes

Dependent variable:	Official candidate proportion of votes			
	Voting Booth Level		Individual level (RD)	
	OLS	IV	Parametric	I & K
	(1)	(2)	(3)	(4)
Proportion in FA	0.080*** (0.004)	0.115*** (0.003)	0.004*** (0.001)	0.062*** (0.003)
Observations	139,289	139,040	18,387,462	204,753
Bandwidth				0.209
Polling station fixed effects	Yes	Yes		
Municipality fixed effects			Yes	
Election round fixed effects	Yes	Yes	Yes	
Weighted			Yes	

Source: *Registraduría Nacional*, DNP-DDS. Robust standard errors in parenthesis.

Parametric RD estimations clustered at the household level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

-measured as the proportion of votes that went to the incumbent party candidate in the first round and in the runoff- with three identification approaches. First, using the voting booth as the unit of analysis, we estimate an OLS regression between average participation in FA and the incumbent's vote share (Column 1, Table 3). By using polling station fixed effects (each polling station has several voting booths), we exploit the variation in participation in FA beneficiaries across voting booths within the same polling station, where polling station proxies for neighborhood. This specification also controls for the electoral round. Second, to control for potential endogeneity in take-up of FA, we instrument the proportion of FA participants in the voting booth with the average eligibility, calculated as the proportion of people in *Sisben* level 1 that voted in each voting booth (Column 2, Table 3). Finally, we use the RD framework described before to estimate the impact of the discontinuous change in FA participation on voters' choice including municipality fixed effects in column 3. Column 4 uses a sample closer to the threshold and the I & K optimal bandwidth. Since we do not observe individual voting outcomes we then weight each observation by the booth turnout rate (to better capture the

probability that an individual voted) divided by the standard deviation of the *Sisben* score in each voting booth (to give more value to the proportion of votes for individuals who vote in a booth with people of similar scores).

The results of all models indicate a positive and significant effect of FA enrollment on incumbent vote share. OLS and IV estimates show that an increase of one standard deviation in the average FA participation rate at each voting booth raises the share of votes of the elected President by 0.08 and 0.11 standard deviations, respectively. RD estimates, also suggest that FA enrollment also increased the proportion of votes for the incumbent party candidate by 0.4-6.2 percentage points.

Our findings of FA beneficiaries being more likely to register to vote, and registering after the onset of the CCT program suggest that CCTs helped mobilize people to vote. Furthermore, although the higher probability of FA beneficiaries supporting the incumbent party candidate can not fully explain his victory, it suggests that FA may have influenced their electoral choice.

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