Conditional Cash Transfers, Political Participation, and Voting Behavior*

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Abstract

This paper estimates the effect of enrollment in a large scale anti-poverty program in Colombia on intent to vote, turnout and electoral choice. For identification we use discontinuities in program eligibility and variation in program enrollment across voting booths. We find that in the 2010 presidential elections women who were direct recipients of the cash transfer were more likely to register to vote (1.8-2.9 pp). Among women, a standard deviation increase in the proportion of beneficiaries at the voting booth results in approximately a 2 pp increase in the probability of casting a ballot and a 1 pp increase in voting for the incumbent party under which the program was expanded. The effects for men are also positive and significant for turnout and voting, but about a third of the magnitude estimated for women. Our results show that voters respond to targeted transfers, that these transfers can foster support for incumbents, and that the mothers as direct recipients of the transfers respond more strongly than other household members.

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1 Introduction

Social and anti-poverty programs may influence individual political participation – in the form of voting – and preferences, strengthening democratic representation and accountability. They may also produce electoral rewards for the party or individuals that implement these programs. Establishing whether Conditional Cash Transfers (CCTs) affect decisions on whether or not to vote and who to support is important given that CCTs have become a major component of the poverty reduction and social protection strategies of many developing countries.[1] This paper shows that a large scale Colombian CCT program, *Familias en Acción* (FA), where women are direct recipients of the cash transfer, increased beneficiaries' political participation and their support for the incumbent party candidate.

Conjectures on political rewards derived from implementing CCTs were reported in the media following presidential elections in Ecuador, Peru, Mexico and Brazil. In the case of Colombia, different media outlets speculated right before the 2010 presidential election that the government had systematically used the expansion and allocation of FA to increase its votes.[2]. Despite the potential interactions between government policies and voter decision making, little evidence is available to assess whether CCTs encourage people to vote and influence their political choices.[3]

Addressing causality between social policy and political participation and preferences is empirically challenging because it requires an exogenous source of variation in social transfer receipt and rich data on voting behavior. Social programs are typically allocated based on need (poorer regions or individuals) or strategically (regions where the incumbent is disadvantaged).

[1] While most of these programs started in Latin America, currently CCTs are used in over 40 countries spanning several regions of the world (World Bank, 2011).

[2] See http://www.lasillavacia.com/historia/16024 and http://www.lasillavacia.com/node/30017. This relates to studies that look at political budget cycles and whether increase spending before an election benefits or hurts the incumbent (See for example, Alesina et al. 1997; Akhmedov and Zhuravskaya 2004; Brender 2003; Brender and Drazen 2013, Drazen and Eslava 2010, Faust and Irons 1999; Gonzalez 2002, and Sakurai and Menezes-Filho 2011).

[3] We discuss below the few studies that we are aware of that address this question and provide rigorous evidence (De la O 2013; Manacorda et al. 2011; Pop-Eleches and Pop-Eleches 2009; Nupia 2012; Zucco 2008.)

Comparisons that do not take into account the allocation process are biased. Furthermore, since votes are secret, disaggregated voting data is limited. Data on political preferences and choice used in studies are almost always either compiled from surveys with self-reported information or from administrative voting data at the municipal or the precinct levels.

Studies that take into account the allocation bias have analyzed programs that assign benefits randomly across villages, such as Mexico's *Progresa* (latter renamed *Oportunidades*). De la O (2013), using municipality level data of Mexico's *Progresa* finds that turnout and incumbent vote share increased in villages that were randomly assigned to receive the program. Labonne (2013), looking also at a randomly allocated CCT program in the Philippines, finds that local incumbents reap electoral rewards in municipalities with high program coverage and a competitive political environment. Using individual level self-reported survey data and non-experimental variation in program assignment, Manacorda et al. (2011) find that beneficiaries of PANES - a large and temporary unconditional Cash Transfer Program in Uruguay - express larger support for the incumbent that implemented the program. Similarly, evidence from Romania shows that incumbents gained political support through a program aimed at helping poor families purchase computers (Pop-Eleches and Pop-Eleches, 2009)

Previous work using data from Colombia's FA point to results in the same direction (Nupia, 2012). The larger beneficiary rates in regions where the former president of Colombia, Alvaro Uribe won by more than 50% of the vote in 2002 are associated with an increase in the proportion of votes that go to the incumbent governing coalition; but there is no statistically significant effect for swing regions.[4] Conditional and unconditional correlation analysis for Brazil suggests that the coverage of *Bolsa Familia*, a large scale CCT program, is associated with Lula's vote

[4]This paper relies on variation at the municipality level. However, there are concerns that identification strategy (concentration of swing voters and loyal voters) may violate the exclusion restriction. For instance, loyal voters' municipalities could have been strategically targeted by politicians when the program was expanded. In addition, using the number of children to instrument for program coverage is equally problematic, since fertility rates are higher among poor people and poor people may vote differently than the rest of the population

share when he sought a second term (Zucco, 2008).

In this paper we exploit discontinuities in program eligibility and variation in participation across voting booths to estimate the effect of being enrolled in FA on: intent to vote, turnout and electoral choice during the 2010 Colombian presidential election. The use of a regression discontinuity methodology allows us to control for possible confounders such as policy endogeneity, individual selection in the take-up and reverse causality. Additionally, we use administrative voting data at the individual and voting booth levels, as opposed to self-reported data which could suffer from reporting bias.

We find that among women who are heads of household or partners of household heads, relative to non-participants, FA beneficiaries of voting age are 1.8-2.9 percentage points more likely to register to vote. A standard deviation increase in the proportion of FA beneficiaries at each booth, results in a 1.8-2.2 percentage points increase in the likelihood of casting a ballot, and 0.8-1 percentage point increase in the probability of voting for the incumbent party candidate under which the program was expanded. Regarding voting registration, we find no robust effect among other members of the household. For turnout and support for the incumbent party candidate, we find that the effects for men in households that received FA are also positive and significant, but about a third of the magnitude estimated for women.

Our contribution is threefold: first, we add to the emerging literature on the impact of social programs in developing countries, in particular CCTs, impact on political participation and voters' preferences. Second, to our knowledge, we are the first to use administrative data at the most disaggregated level possible. For voter registration we use individual data, while for turnout and political outcomes we use booth level data.[5] Both types of data allow us to use actual and not self-reported voters' behavior and preferences. Third, our paper links to different

[5]Each municipality, has polling stations, and each polling station is comprise of voting booths (tables) where, on election day, voters are assigned to go and cast a ballot.

literatures, one to political participation and voting and the other to the autonomy and role of women in decision making within the household (Adato et al. 2000, Anderson and Eswaran 2009, Ashraf et al. 2010, Bobonis 2011, Bobonis et al. 2013, Duflo 2003, Gitter and Barham 2008). The program rules established the mothers as the direct recipients of the cash transfers, and the effect we find is stronger among them, providing support for the idea that it matters to whom in the household the transfer is given.

The rest of the paper is structured as follows. The next section provides background information on the Colombian electoral system and the FA program. Section 3 describes the main data sets used in the analysis. Section 4 describes the identification strategy. Section 5 presents the empirical results, including discussion on some robustness checks. Finally, section 6 concludes and discusses possible channels for our results.

2 Background

2.1 Electoral System and Political Context

Elections in Colombia -including the presidential election- are organized by the National Registry Office (RN–its acronym for *Registraduría Nacional* in Spanish), the institution is also responsible for the civil registry and identification of people. The RN updates the official voter registry before every election. The right to vote is granted to all Colombians 18 years and older. The RN determines when people can register to vote, usually a two-week period extensively advertised in the media in the months before elections. An individual can register in a different polling station each time registration opens prior to an election. However the person is only allowed to vote in the last place where she registered. Once registered in a specific polling station, citizens are assigned on election day to a voting booth within the polling station. Assignment to a voting booth is based on the voter's national identity card number (known as *cédula*), which

must be shown in order to vote. *Cédula* numbers up until 2000 were assigned consecutively in each municipality by sex. In our analysis we will use this allocation across booths and within a polling station as a source of exogenous variation, which conditional on age and sex is as "good as random". For presidential elections, registered voters can cast their vote for a candidate on election day in roughly 10,000 polling stations scattered in 1,119 municipalities across the country.[6]

In the last decade, at the presidential level, the political landscape was dominated by the party that expanded the FA program. Even though it was originally conceived and designed in 2001 under the government of the Conservative Party, FA became the flagship public anti-poverty strategy of the *Partido de la U* during the two terms of President Alvaro Uribe (2002-2006 and 2006-2010), reaching almost national coverage. Juan M. Santos, the former Defense Minister in Uribe's second term and also affiliated to his political party, became the presidential candidate in 2010. In the runoff election held on June 20, 2010, the election examined in this paper, Santos achieved a landslide victory, with 69 percent of the votes.

2.2 The *Familias en Acción* Program

Colombia suffered a severe economic downturn during the late 1990s that led to a serious increase in poverty and a deterioration of several social indicators. One of Government's response to mitigate the effects of the crisis on the poor was to launch a social transfer program in 2001 inspired in a successful scheme applied in Mexico, the widely known *Progresa/Oportunidades*. The Colombian FA program offers bimonthly cash transfers -ranging from approximately US $8 to US $16 per school age child and nutrition packages of approximately $28 dollars for children below 7- contingent upon school attendance of the beneficiary children and regular participation in growth monitoring sessions and nutrition workshops, respectively. In addition to having

[6] `http://www.registraduria.gov.co/Informacion/inscrip_ced_2011_preguntas.htm`, `http://www.colombia.com/especiales/elecciones_2011/pedagogia-electoral/`

children in the relevant ages, households are offered the program based on their poverty score index in a proxy means test system known as *SISBEN*.

The *SISBEN* poverty index score is constructed with information from a registry of the poor. This register, through household level interviews, collects information on households' demographics, structure, durable goods, housing characteristics, human capital, labor force participation, income, and access to basic services. The poverty index score is calculated with an algorithm that weighs several variables to predict household welfare. The score takes values from 0 to 100 for the poorest and less poor households, respectively. At the time of this study, the distribution of the score is divided into 6 brackets and households assigned to the lowest bracket (SISBEN level 1), corresponding nearly to the population in extreme poverty, are deemed eligible to benefit from the FA program.

The program was initially piloted in 22 municipalities in 2001 and has been continuously expanding since then. The first major expansion took place in the second half of 2002, targeting initially 600 municipalities with fewer than 100,000 inhabitants amongst other conditions.[7] In 2005, the program was extended to include displaced families and municipalities which either became able to offer the required education and health services or with services accessible in nearby towns. In 2007, the program was further expanded to large urban centers and municipalities not covered before. By 2010 the program reached almost national coverage, benefiting nearly 2.3 million households in 1,093 municipalities (Acción Social, 2010; Attanasio et al, 2010).

3 Data

This paper uses three administrative datasets to identify the effects of FA on voting behavior: (1) an electoral census, (2) the FA's information system of beneficiaries (SIFA) and, (3) the

[7]Municipalities could not be departmental capitals, had to have at least one bank branch in the municipality (to deliver the transfers), and access to education and health facilities that allowed for the implementation of the program.

SISBEN. The first one has information on the most recent date of registration and voting place (municipality, polling station and voting booth) for all adults who were registered to vote in the 2010 Presidential election.

The second dataset, SIFA, is used by the national agency that runs FA for administrative and monitoring purposes. The dataset is a longitudinal census of program beneficiaries from 2001 to the present. We use this dataset for the period 2001-2009 to identify the beneficiaries to the program. There is information on nearly 2.3 million families who have participated or are currently participating in the program. We limit this dataset to all adults from beneficiary households with a valid identity card (needed to vote) and match it with our first dataset, the electoral census (using each person's national identification number).[8] Overall, most people in SIFA (96.5%, corresponding to 3,608,733 individual beneficiaries) are registered to vote.

Finally, since SIFA only has information about FA beneficiaries, we need another data source to obtain a comparison group. We use the *SISBEN* to identify non-participants who are comparable to FA beneficiaries, namely that they live in households with similar socio-economic and demographic characteristics as determined by their corresponding poverty index score. These data are also matched with the electoral census. Then we append SISBEN-electoral census with SIFA-electoral census to produce a sample that is comprised of individuals below and above the cutoff score that establishes eligibility to FA. The matched sample shows that 86% of the FA beneficiaries are registered in the *SISBEN*. The rest is mostly comprised of displaced individuals and indigenous people, who by law are not required to have a score below the eligibility threshold to participate in FA. Some of these people were not interviewed for the *SISBEN* or can be beneficiaries with scores above the threshold. Our working sample includes 8,918,080 people.

The sample is further restricted in two ways. First, we restrict the sample to urban areas because in rural areas, by construction of the algorithm, individual characteristics related to FA

[8] 6% of people in our data do not have a valid ID card needed to vote.

and the outcome variables changed discontinuously at the threshold. This is not the case in urban areas, where the eligibility threshold is different and as we show in Figure 1 individual characteristics are smooth at the threshold. Moreover, most Colombians live in urban areas (76%)[9]. Second, prior to 1988 any citizen eligible to vote and interested in voting had to register in an electoral office. After 1988, any citizen who requests and obtains a national identity card (*cédula*) from the RN after turning 18 is automatically enrolled in the official electoral registry (Art. 49 of *Ley Estatutaria*).[10] Before 2003 these automatic registrations were assigned to the largest polling station in each municipality. Since 2003 people are automatically registered to vote near the office where they obtained their valid identification card.[11]. Since there is widespread need of the *cédula*, the majority of Colombian's obtain it when they turn 18.[12]

In the individual level regressions, to avoid capturing people who were automatically registered, we limit the sample to those born prior to 1970 (they would have been older than 18 in 2010), and if born between 1970 and 1985, we exclude those registered in the largest polling stations in each municipality (which is where they would have been automatically registered by the RN).[13]. We exclude those who turned 18 after 2003, since we cannot separately identify whether the voting location near to the RN office where they obtained their *cédula* is different from the one they would have registered on their own. In the booth level regressions with polling station fixed effects, for consistency to avoid capturing anyone who was automatically registered, we again exclude from the analysis the largest polling stations.[14]

Summary statistics for the final matched dataset (electoral census + SIFA + SISBEN) used

[9]Source: DANE, 2005, `http://www.dane.gov.co/censo/files/Grupo_mixto22%20_PUBL.pdf`

[10]`http://www.registraduria.gov.co/Reforma-politica-y-Elecciones-de.html`

[11]`http://www.colombia.com/especiales/elecciones_2011/pedagogia-electoral/`

[12]For example a *cédula* is required for access to health services, voting, access to social programs, access to financial services, etc.

[13]Automatic registration is relevant only for our first outcome variable (voting registration) which captures intend to vote. For consistency, we keep the restriction of excluding the largest polling stations in each municipality for our other outcomes (turnout and political support)

[14]If we include the largest polling stations, for women our results are smaller in magnitude and statistically significant at the 1% level. For men, the results are no longer statistically significant.

in the individual level regressions are reported in Table 1. We split the sample into four groups, two for men and two for women. We first look at women and men who are household heads or partners (e.g. spouses) of the household head (panels A and B), since the program was designed so that women heads of household would be the direct recipients of the transfer. We then look at other women and other men in the household, who may have benefited indirectly from the transfer (panels C and D).

Panel A reports statistics for women heads of household or partners of household heads, most often the direct recipients of the cash transfer. Approximately 44% of these women are eligible to benefit from FA but around 47% of the eligible (20.8%) actually participate in the program.[15] 93.4% of individuals are registered to vote in the elections.[16] 25.4% women registered to vote after the onset of FA in the municipality. The average woman in this group was 38 years old and had 6.5 years of education when she was interviewed for the *SISBEN*. Panel B, reports the same characteristics but for men who are heads of households or partners of household heads. The proportions are very similar to those reported in Panel A, with the exception of the proportion of men who receive FA (9.9%). This is not surprising given the program rules, and that at least 43% of the households in the sample have single mothers. Panel C and D report statistics for other women and other men in the household besides the household heads respectively. These people tend to be younger, and have more education. In total we have approximately 7 million women (Panel A and C), and over 5.5 million men (Panel B and D).

Table 2 in turn presents descriptive statistics for the booth-level sample used to estimate the effects of FA on voter turnout and choice. People registered to vote in urban centers were assigned to 85,471 voting booths, each of them with an average of 393 individuals. Turnout rates at the booth level for both Presidential elections (first round and runoff) were close to

[15]FA program administrators estimate that the overall take up rate in 2010 was around 65 percent. However, take up rates have been found to be much lower in urban areas.

[16]This figure is similar to the rate calculated using a political survey done in Colombia, *LAPOP*, 90%.

64 percent. Finally, the average fraction of votes for the incumbent party candidate was 37% and 50% in the first round and runoff respectively, with a margin of victory at the booth level of 14 (first round) and 27 (runoff) percentage points. We analyze these data by sex, thus we report the proportion of women and men at each booth who are FA beneficiaries (5.3% and 1.6% respectively).

4 Empirical Strategies

4.1 Regression Discontinuity

We use a Regression Discontinuity (RD) framework to identify a causal effect of FA on decisions regarding registering to vote. We exploit the discontinuity in FA eligibility for people around the threshold, since people just below the eligibility threshold, the first bracket of the SISBEN score, were able to enroll in FA, while people just above were not. Moreover, the cutoff for the first bracket of the SISBEN score does not determine eligibility to other major social programs except for a nutrition program given to children between 6 months and 5 years old. This program provides an in-kind daily transfer that does not coincide specifically with the payment of FA, therefore it is not expected to invalidate our empirical strategy. In section 5.3 we discuss the robustness of the results when potential beneficiaries of the nutrition program are excluded from the sample of analysis.

We need to validate several assumptions for the RD strategy to work in this context. Specifically, if the eligibility indicator affects registration to vote only through enrollment in FA, then two necessary conditions should hold. First, there should be no bunching in the distribution of the *SISBEN* score around the eligibility threshold. Figure 2 shows the histograms for all the individuals in the SISBEN data base (top graph), and in our matched samples for women household heads or partners (second row left), for men household heads or partners (second row

right) and for women and men who are not household heads or partners (bottom left and bottom right respectively). By design of the proxy-means test algorithm, the distribution is bimodal and the overall distribution (shown under the title "All SISBEN") is very similar to the one in our matched samples. Furthermore, the density is higher above the eligibility threshold[17] than below it, which is contrary to the idea of manipulation of the score in order to become eligible for FA. Neither distribution shows bunching at the eligibility threshold.

Second, as Figure 1 shows for the women household head sample (the other samples are reported in appendix Figures A1-A3), other variables which are not affected by the program are continuous at the eligibility threshold.[18] We checked for household size and number of children, given that these variables might be endogenous to the program eligibility criteria. We also checked that other variables, such as years of schooling, cohabitation, age and unemployed, that could potentially affect political preferences and voting decisions do not exhibit discontinuities at the cutoff either. These two conditions of no bunching at the threshold and continuity in observables at the threshold, lend support to the use of regression discontinuity as the first identification strategy.

Program effects on voting registration are estimated using a "fuzzy" RD design given that the probability of being in FA does not change from 1 to 0 at the eligibility threshold. Specifically the first stage regression is given by:

$$\begin{aligned} FA_{ij} &= \delta_0 + \delta_1 elig_{ij} + f_1\left(score_{ij} | score_{ij} \leq \overline{score}\right) \\ &+ f_2\left(score_{ij} | score_{ij} > \overline{score}\right) + \chi' X_{ij} + \gamma_j + \epsilon_{ij} \end{aligned} \tag{1}$$

Where FA_{ij} is an indicator variable equal to one if the individual i of municipality j is enrolled

[17] Normalized to a value of zero and depicted with a vertical line.

[18] Even though the functions that characterize these variables are not always monotonic on the poverty score –due to the way the score algorithm was constructed, importantly, there are no abrupt changes occurring at the discontinuity threshold, as shown in the figures. When we estimate the regressions in the same way we do for our outcome variables, we do not get consistent results (in significance and direction) for any of the variables as seen in Appendix Table A1.

in FA. $elig_{ij}$ is an indicator equal to one if the person is eligible for FA. $\overline{score}$ is the threshold score used to determined eligibility for FA, and it is normalized to a value of zero at the eligibility threshold. $f_1(\cdot)$ and $f_2(\cdot)$ are functions of the *SISBEN* score that are allowed to be different at each side of the threshold. X_{ij} corresponds to individual covariates such as age and years of schooling.[19] γ_j controls for municipality fixed effects and ϵ_{ij} is an error term.

Then, using eligibility as an instrument for FA enrollment status, to determine the effect of FA on the probability of registering to vote, we estimate the second stage regression:

$$\begin{aligned} Registered_{ij} &= \pi_0 + \pi_1 \widehat{FA_{ij}} + f_1\left(score_{ij} | score_{ij} \leq \overline{score}\right) \\ &+ f_2\left(score_{ij} | score_{ij} > \overline{score}\right) + \nu' X_{ij} + \gamma_j + \eta_{ij} \end{aligned} \tag{2}$$

where $Registered_{ij}$ corresponds to an indicator variable of whether an individual i in municipality j registered to vote. The coefficient of interest is π_1. Here we assume that the eligibility indicator affects registration to vote only through enrollment in FA. This is a plausible assumption given the smoothness of the distribution of the *SISBEN* score and other covariates at the program eligibility threshold (Figure 1 and Figure 2). Since eligibility is assigned at the household level, we cluster the RD results at this unit. This applies only to the samples where we have multiple household members. We identify tables using this methodology with the word "RD" in the title.

4.2 Fixed Effects and 2SLS Regressions

Administrative individual level voting data is rarely (legally) recorded. To overcome the absence of information on the actual vote for each person, we use voting outcomes at the voting booth level, which is the most disaggregated level available. As stated in the background section 2.1, voters are able to choose their polling station but not their voting booth. We use polling station fixed effects regressions of the variable of interest (turnout, incumbent's party vote share, margin

[19] The results are robust and very similar when omitting these covariates.

of victory) on the proportion of FA participants (men and women or women) in the voting booth (b) of the form:

$$Y_{pbr} = \gamma_0 + \gamma_1 Prop\_FA_{pb} + \sum_{i=0}^{100} \beta_i SISBEN_{pb} + \gamma_3 controls_{pbr} + \theta_p + \eta_r + \epsilon_{pbr} \quad (3)$$

Where p designates a polling station, b a voting booth, and r an electoral round (first round or runoff). Y is the outcome of interest which is identified in each table. $Prop\_FA$ is the proportion of registered voters at the booth who are FA beneficiaries (men or women beneficiaries). To control for poverty, we include the proportion of people in the booth at each point of the *SISBEN* score. *controls* corresponds to a vector of other booth (b) level characteristics specified in each table including proportion of people who are: female, cohabitating, working, not working, seeking employment, students, working in the home, renting, receiving a pension and disabled. It also includes booth averages for: age, household size, number of children, education level and length of time between the *SISBEN* interview and the elections. We use polling station (p) and electoral round (r) fixed effects and also estimate separately results for each round.

Before estimating our results, we checked whether the allocation across booths is "as good as random" by calculating the probability of having FA at each polling station and at each voting booth. We took the difference between the two and graphed the distribution of these differences for the whole sample. Consistent with the notion that assignment to a voting booth is arbitrary, Figure 3 shows that this distribution is symmetrical around zero and has a small variance (relative to that of a normal distribution).

In summary, by using the identification strategies outline in this section, we are able to obtain causal estimates of the effect of FA on voting behavior. In particular, the RD strategy allows us to estimate effects for people around the threshold. The polling station fixed effect strategy allows us to avoid selection concerns due to the fact that individuals are assigned to a voting booth within a station.

5 Findings

5.1 Intent to Vote and Turnout

We initially explore the overall effect of enrollment in the FA program on individuals' intent to vote in the 2010 presidential election using voter registration as a proxy for intent to vote. This part of the analysis relies on the Regression Discontinuity (RD) framework described in section 4.1. Specifically, we exploit the discontinuity in FA eligibility to the program for people around the threshold.

Figure 4 presents a graphical representation of the first stage regression and shows a sharp discontinuity in FA enrollment at the eligibility threshold for all four samples. Given the non-monotonic relationships between the covariates and the *SISBEN* score, the figures show predicted values from regressions that controls for years of schooling and age. In the first sample, women heads of household or partners to the left of the eligibility threshold are between 28 and 33 percentage points more likely to be beneficiaries (panel A "First Stage" of Table 3). The estimated discontinuity for the other samples, is smaller, between 15 and 16.8 percentage points for men who are household heads (panel B); and 17.6 and 19.7 (7.2 and 7.8) for other women (men) besides household heads as reported in panels C and D respectively.

An initial graphical examination of the data - shown in the left top panel of Figure 5- suggests that women who are household heads or partners 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. The corresponding 2SLS results are shown in panel A under "2SLS" of Table 3. In columns (1)-(3) we report parametric regressions with different functional forms of the running variable which are allowed to be different on either side of the threshold. The first column uses the whole sample and the second and third column uses a narrower bandwidth around the eligibility threshold. In column (4) we report results using

an optimal bandwidth for an RD setting following Imbens and Kalyanaraman (2012) (I & K). Overall, there is strong evidence that FA encourages women heads of households or partners to participate in the elections as voters. Table 3 shows that the probability of registering to vote is significantly higher (1.8-2.9 percentage points) among FA beneficiaries relative to comparable non-participants whose poverty scores are just above the threshold. In contrast to these results, the men and other women in the household do not show an increase in registering to vote as indicated in panels B, C and D of Table 3.

To further explore whether the availability of FA is inducing people to register to vote, we also exploit the variation in the roll-out of the program over time and across municipalities. We condition the sample to all individuals who signaled a desire to vote (i.e. registered to vote) and redefine the dependent variable in equation 2 to take a value of 1 if the person registered after the onset of FA in their municipality and 0 if the person registered before the onset of FA. The results on this subsample provide some indication that in particular, women heads of household or partners covered by FA were more likely to register to vote after FA was introduced in their municipalities (Table 4, Panel A and top left panel in Figure 6). These findings do not hold when we restrict the data to a very narrow bandwidth around the threshold (Column (4)) following I & K.

Next we look at whether the relatively higher intention to vote attributed to FA translates into actual votes. Considering that voting is not compulsory, this point is important in light of the differences between high registration rates and lower turnout rates in Colombia. For instance, 44.3% of the population registered in the electoral census cast ballots in the 2010 Presidential elections[20]. In the absence of voting records at the individual level, we exploit variation in eligibility to FA across more than 85,000 voting booths. Since individuals were able to choose their polling station but were assigned to a voting booth in a way that is not

[20]Source: IDEA, website:`http://www.idea.int/vt/country_view.cfm?id=48#pres`

correlated with the allocation of the CCT program, we exploit the variation in the proportion of FA beneficiaries among adults registered to vote across voting booths within the same polling station by using polling station fixed effects (each polling station has on average 10 (s.d.=11.4) voting booths). The polling station proxies for neighborhood, and to further control for poverty, we include controls for the proportion of people in each booth with a given *SISBEN* score (e.g. proportion with a score of 1, proportion with a score of 2, all the way to a score of 100). Using these polling station fixed effect regressions we look at the effect of FA on voter turnout in the 2010 presidential election.

We separately explore the effects of women and men. The results indicate that, in addition to encouraging people to register to vote, the receipt of FA transfers has a positive effect in the probability of casting a vote (Column (1) in Table 5). For women, an increase of one standard deviation in the proportion of FA beneficiaries at the voting booth (around 10%), results in an increase in turnout of .097 of a standard deviation. This corresponds to nearly a 2 percentage point increase in the turnout rate (or 2.9% of the average turnout). The effect on men is smaller, an increase of one standard deviation in the proportion of FA beneficiaries at the voting booth results in an increase in turnout of .03 of a standard deviation. This corresponds to approximately 0.7 percentage point increase in the turnout rate (or 1.1% of the average turnout). Back-of-the-envelope calculations suggest that together these two effects translate into roughly 400,000 additional votes in the 2010 elections.[21] Consistent with the findings on the probability of being registered to vote, we find that the increase in turnout rates among FA beneficiaries is mostly explained by women voting more.

[21]The total number of registered people to vote in the 2010 elections was 29,853,299, and of those, 13,296,924 voted in the 2010 runoff. We assume that half the people who voted are men and half women.

5.2 Political Support

The FA program was originally conceived, designed and piloted in 2001 under the administration of the Conservative party. One year later, the independent candidate Alvaro 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 during his two terms, which led to a notable expansion until achieving almost national coverage by 2010.

The results discussed above indicate that FA beneficiaries, particularly women who were the direct recipients of the transfer, not only signaled a greater intent to vote but actually were more likely to vote in the Presidential elections. Seeking to shed light on the possible influence of targeted transfers on voter's choices, we examine whether FA fostered political support for the incumbent party candidate that implemented and expanded the program between 2002 and 2009. We again use polling station fixed effect regressions, where we control for the proportion of people at each *SISBEN* score.

We measure political support with two variables: the percentage of votes that went to candidate of the incumbent party; and the margin of victory defined as: $\frac{Votes\ Incumbent - Runner\ Up}{Incumbent + Runner\ Up}$, where a value close to 1 favors the incumbent party, whereas a value close to -1 favors the runner-up. We present results where we pool the two electoral rounds and include election round fixed effects, and results for each round separately.

Table 5 columns (2) and (3) presents results that use variation on voting outcomes at the voting booth level to identify the effects of FA enrollment. The findings indicate that FA beneficiaries vote more for the incumbent party candidate. A one standard deviation increase on the average FA participation rate at each voting booth raises the share of votes of the elected candidate by 0.06 and 0.2 of a standard deviation, which corresponds to approximately a 1 percentage point for women and 0.3 percentage points for men (column (2)). Results based on

the margin of victory reported in column (3) yield slightly larger results, namely that the gap in the votes between the incumbent party candidate Santos, and the runner up broadened in favor of the former (by 0.7 and 0.2 of a standard deviation, which correspond to 1.6 and 0.4 percentage points for women and men respectively) with an increase of a standard deviation in the proportion of FA beneficiaries. The two sets of results are robust to empirical models that use each electoral round independently. Along the same lines of the heterogeneity observed in program effects on intent-to-vote and voter turnout by gender, the stronger support for the incumbent party attributed to FA is driven by the preferences of women to vote for the incumbent party candidate.[22]

5.3 Robustness

In this section we perform additional tests to assess the robustness of the findings and the causal interpretation behind them. First, for the individual level RD voting registration results using the sample of women who are household heads or partners, we set the eligibility cutoff at arbitrary values below and above the actual threshold and re-ran the reduced form of the main empirical models employed to estimate the effects of eligibility on intent-to-vote. If by chance the analysis was picking a structural break in the relationship between the outcomes of interest and the *SISBEN* score, we might observe a discontinuous variation also at different values of the eligibility threshold. Table 6 shows that none of the coefficients for the reduced form results, using the arbitrary eligibility cutoffs, are statistically significant across all the different model specifications.

Considering that the cutoff for the first bracket of *SISBEN* determines eligibility to both FA

[22] As a robustness check, in results not shown, we estimate 2SLS regressions where we instrument the proportion of FA enrolled in the booth (men and women beneficiaries) with the proportion of FA eligible at each booth as determined by the *SISBEN* score of each person assigned to cast a ballot in the corresponding voting booth. We keep the same controls included in equation 3, the polling station fixed effects, and the proportion of people in the booth at each point of the *SISBEN* score. The 2SLS regressions are consistent with the results reported in Table 5, showing an increase in turnout and support for the incumbent party candidate. The magnitude of the IV results is larger than those reported in Table 5.

and a small nutrition program for poor families with children between 6 months and 5 years old, another concern is that the actual effect on voting behavior may be a combination of the influence of both programs. To address this issue, we re-estimate the models on registration to vote for the sample of women who are household heads or partners, excluding individuals that belong to households potentially eligible for the nutrition program based on the age of their children. Overall, the positive and statistically significant effects of FA on registration also hold in this subsample (Table 7). The fact that program effects on the intent-to-vote remain for only FA participants suggests that the effects of the nutrition scheme, if any, are unlikely to be large.

Another possible threat to the internal validity of this paper is that a *cédula* is needed to enroll in FA. If that is the case, the effects seen in the voter registration results could be driven by people obtaining *cédula* rather than by their actual intent to vote. However, a *cédula* is not needed to be covered by FA. In addition to confirming in the data that there are adults receiving FA without a *cédula*, and to restricting the individual data to avoid automatic registration (as described in Section 3), we also checked using the *SISBEN* dataset for adults in urban areas, whether the probability of having a *cédula* changes discontinuously at the eligibility threshold. Figure 7 shows that there is no discontinuous change at the eligibility threshold.

6 Conclusion

This paper provides empirical evidence to support the notion that political participation and political views are responsive to targeted transfers. The issue is increasingly attracting the attention of policy makers and researchers particularly in a context where identifying policy instruments to balance the trade-offs of the direct and indirect effects of CCTs -including mobilizing people strategically to participate in political processes as voters and electoral accountability- has become important. Increasing voter turnout is often considered a desirable outcome since it increases representation, a basic element that underpins a democracy. This argument is even

stronger for countries like Colombia where voting is not compulsory and turnout rates are around 45 percent, lower than those observed in comparable democratic systems.[23]

Using a unique Census dataset with individual level voter registration data and booth level information, we show that women who are direct recipients of the cash transfer are 1.8-2.9 percentage points more likely to register to vote. We also find that women are around 2 percentage points more likely than comparable non-beneficiaries to cast a ballot (roughly 400,000 additional votes), and 1 percentage point more likely to vote for the incumbent party candidate. These results are consistent with those reported by De La O (2013), who finds using *Progresa* data from Mexico, that the effect of the CCTs may be along the mobilization rather than the persuasive dimension.

Expanding those findings, we show that it matters who in the household receives the money. According to program rules, the mothers in the household are the ones getting the transfer. We find no effect on registering to vote among men or other women in the household. Regarding voter turnout and support for the incumbent party candidate, we find a positive but smaller effect among men in households that received FA. These heterogeneous effects are likely the result of both the actual receipt of money and more extensive community participation. More specifically, in the case of FA, the mothers of beneficiary children are the ones who are designated to receive the transfer and are also required to participate in a number of activities at the community level (e.g. growth monitoring sessions and workshops on good nutrition, health and hygiene practices). Previous studies have shown that the extra income of CCTs improve the status of women by allowing them to exert larger control over family resources (Attanasio et al. (2009) and Acción Social (2010). Likewise, the recurrent interactions between program administrators, community leaders and mothers, typical of CCT programs, are also thought to

[23] Authors' calculation based on information from `http://www.idea.int/vt/countryview.cfm?CountryCode=CO`.

increase the exposure of women to public life and information, thus raising awareness among them about the importance of participating in the electoral process to shape policy outcomes. This hypothesis fits well with results from previous evidence showing that women tend to vote more and adjust their candidate choices when given extra information about the significance of political participation. Moreover, compared to men, women that decide to vote have been found to be more supportive of candidates promoting policies to provide welfare services (Gine and Mansuri 2011; Lott and Kenny 1999; Funk and Gathman 2006 and Aidt and Dallal 2007).

Given the local nature of the estimator presented in this paper, it is not possible to fully account for all of the political support for the official party brought about by the FA program. Yet, contrary to anecdotal evidence and considering the wide margin of victory exhibited by the elected President, it is highly unlikely that the overall change in political preferences attributed to FA explains the final outcome of the 2010 presidential election. The results, however, show that voters and in particular the direct recipients, respond to targeted transfers and that these transfers can foster support for incumbents, thus making the case for designing political and legislative mechanisms that reduce the risk that anti-poverty schemes can be captured by political patronage.

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Figure 1: Covariates at the Eligibility Threshold –Women who are household heads or partners

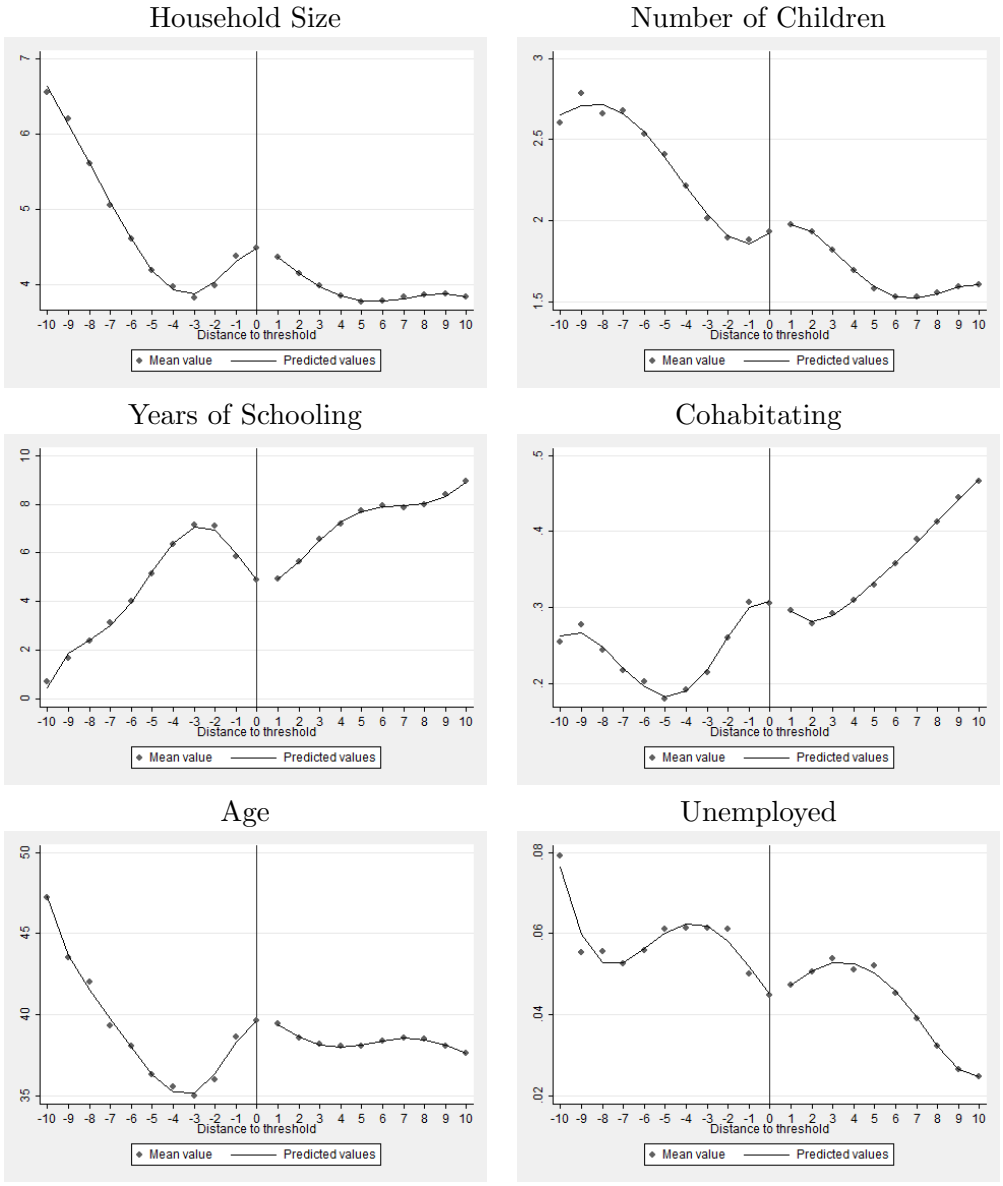
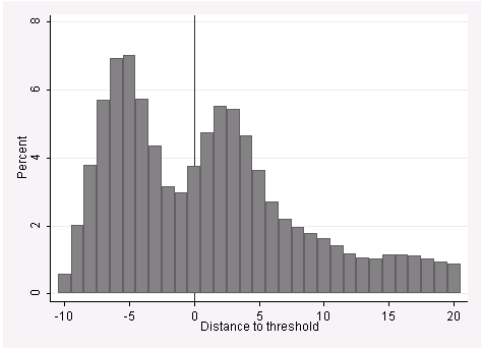
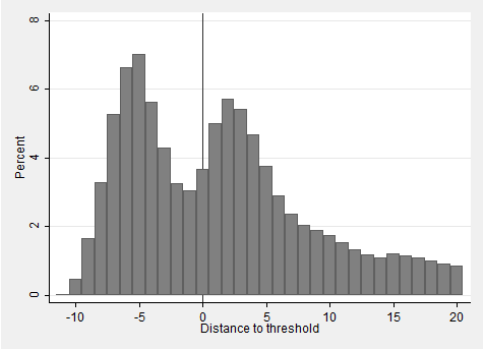


Figure 2: Histogram of *SISBEN* score

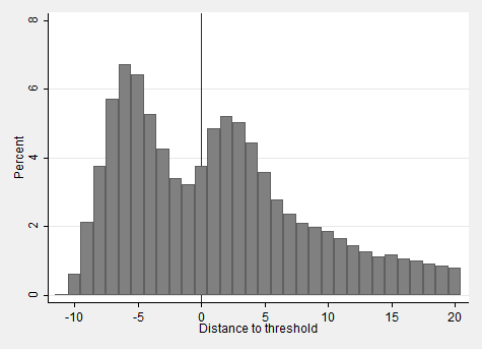
All *SISBEN*



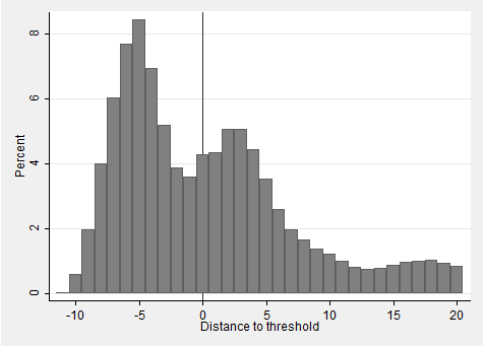
Women who are HH heads or partners



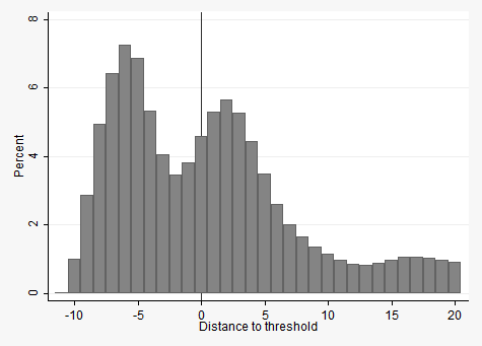
Men who are HH heads or partners



Women who are not HH heads or partners



Men who are not HH heads or partners



Note: Women (men) household heads or partners are women (men) who are household heads or partners of household heads. Women not household heads or partners, excludes women who are household heads or partners of household heads, i.e. includes other women in the family such as daughters, sisters, grandmothers, aunts, etc.

Figure 3: Difference Between the Proportion of FA in the Booth and the Polling Station

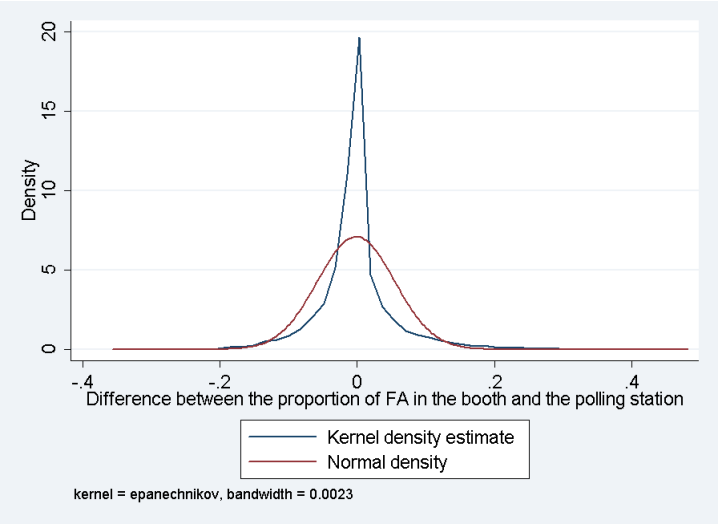
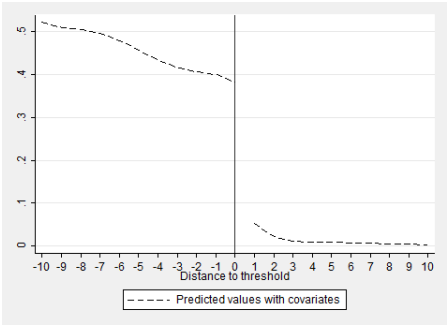
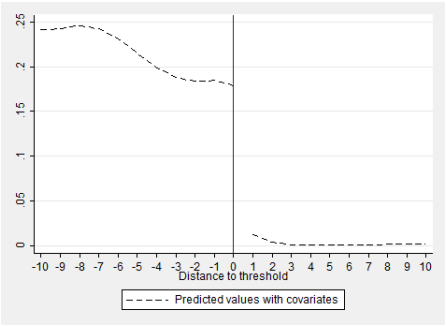


Figure 4: Probability of Being an FA Beneficiary–First Stage

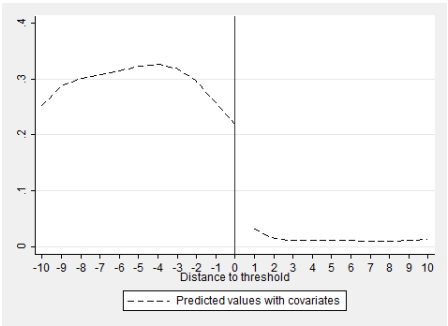
Women who are HH heads or partners



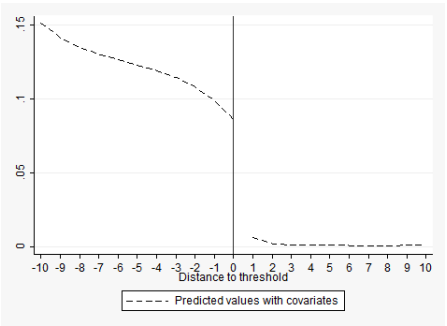
Men who are HH heads or partners



Women not HH heads or partners



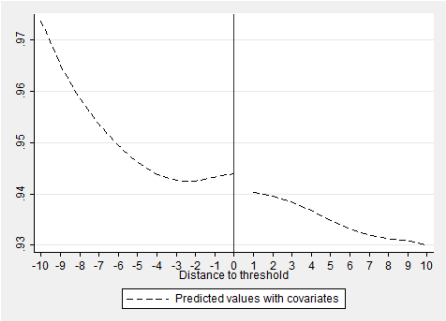
Men not household heads or partners



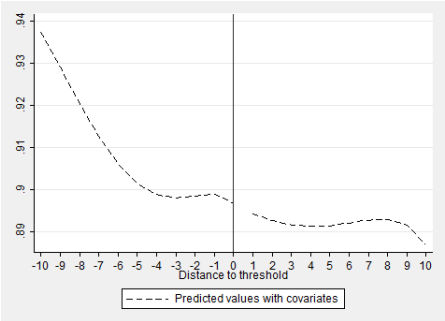
Note: See sample definitions described in the note of Figure 2. The figures show predicted values from regression that control for years of schooling and age.

Figure 5: Probability of Registering to Vote–Reduced Form

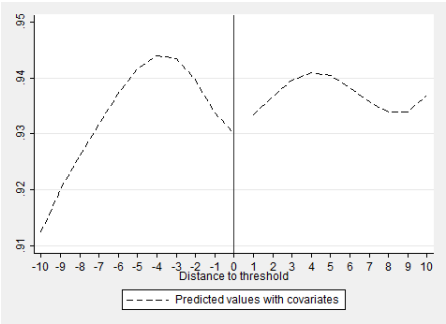
Women who are HH heads or partners



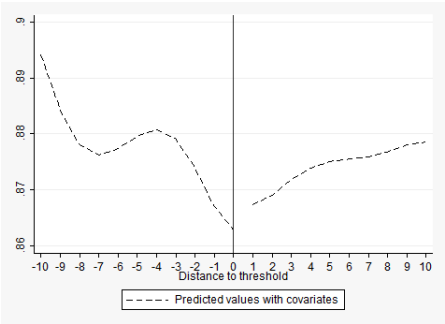
Men who are HH heads or partners



Women not HH heads or partners



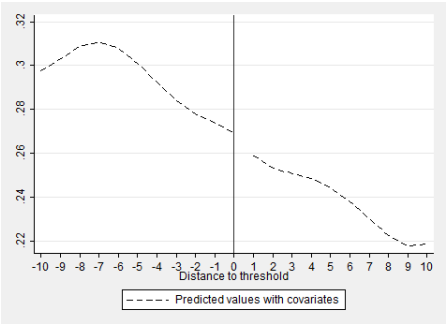
Men not household heads or partners



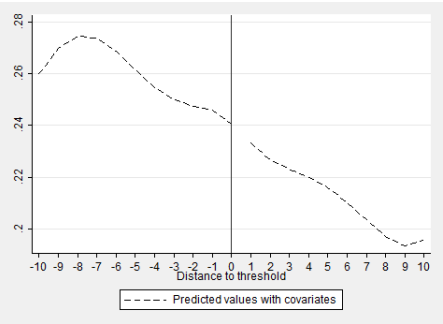
Note: See sample definitions described in the note of Figure 2. The figures show predicted values from regression that control for years of schooling and age.

Figure 6: Registered after the onset of FA–Reduced Form

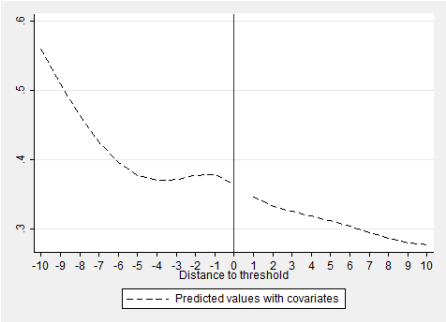
Women who are HH heads or partners



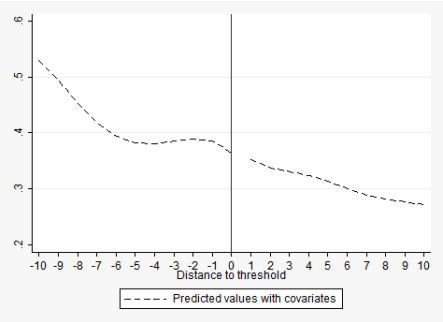
Men who are HH heads or partners



Women not HH heads or partners

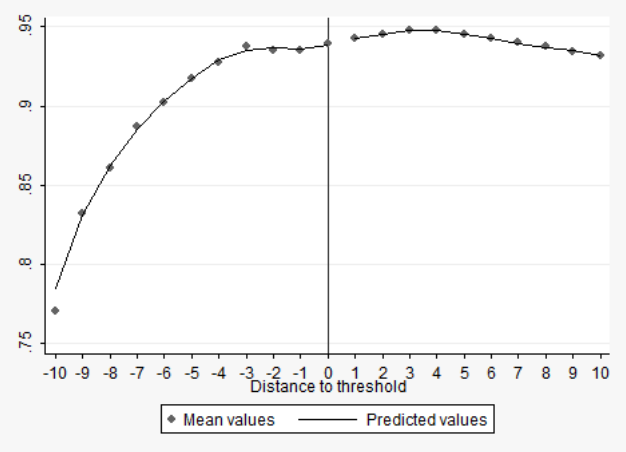


Men not household heads or partners



Note: See sample definitions described in the note of Figure 2. The figures show predicted values from regression that control for years of schooling and age.

Figure 7: Probability of Having a National Identity Card (*Cédula*)



Source: *SISBEN* dataset, restricting the sample to adults in urban areas.

Table 1: Summary Statistics at Individual Level

Variable	Obs	Mean	Std. Dev.	Min	Max
Panel A: Women who are households heads or partners					
FA(%)	4,466,006	0.208	0.406	0.000	1.000
Eligible(%)	4,466,006	0.442	0.497	0.000	1.000
Register to vote(%)	3,845,358	0.934	0.249	0.000	1.000
Registered after the onset of FA(%)[a]	3,590,782	0.254	0.435	0.000	1.000
Age in years	4,465,995	38.479	12.038	18.000	99.000
Years of schooling	4,465,995	6.541	3.908	0.000	22.000
Panel B: Men who are households heads or partners					
FA(%)	3,451,503	0.099	0.298	0.000	1.000
Eligible(%)	3,451,503	0.452	0.498	0.000	1.000
Register to vote(%)	3,078,378	0.893	0.310	0.000	1.000
Registered after the onset of FA(%)[a]	2,747,486	0.227	0.419	0.000	1.000
Age in years	3,451,502	40.906	12.555	18.000	99.000
Years of schooling	3,451,494	6.382	3.989	0.000	22.000
Panel C: Women who are not households heads nor partners					
FA(%)	2,567,483	0.297	0.457	0.000	1.000
Eligible(%)	2,567,483	0.526	0.499	0.000	1.000
Register to vote(%)	1,994,344	0.936	0.244	0.000	1.000
Registered after the onset of FA(%)[a]	1,867,485	0.362	0.481	0.000	1.000
Age in years	2,567,468	30.518	14.787	18.000	99.000
Years of schooling	2,085,396	8.122	4.073	0.000	22.000
Panel D: Men who are not households heads nor partners					
FA(%)	2,093,852	0.118	0.323	0.000	1.000
Eligible(%)	2,093,852	0.505	0.500	0.000	1.000
Register to vote(%)	1,583,171	0.878	0.328	0.000	1.000
Registered after the onset of FA(%)[a]	1,389,534	0.348	0.476	0.000	1.000
Age in years	2,093,852	32.594	11.787	18.000	110.000
Years of schooling	1,958,872	7.927	3.892	0.000	22.000

Source: *Registraduría Nacional*, DNP-DDS. Note: [a] Conditional on being registered to vote.

Table 2: Summary Statistics at the Booth Level

Variable	Obs	Mean	Std. Dev.	Min	Max
Registered people	85,471	392.679	79.749	6	2,239
Number of votes	85,471	248.431	82.430	1	751
Controls					
Age	85,471	35.721	11.089	18	78
Number of children	85,471	1.606	0.643	0	13
Household size	85,471	4.254	0.566	1	19
Years of schooling	85,471	7.312	1.911	0	15
Female	85,471	0.549	0.425	0	1
Cohabitating	85,471	0.245	0.171	0	1
Working	85,471	0.458	0.234	0	1
Not working	85,471	0.107	0.097	0	1
Seeking employment	85,471	0.068	0.063	0	1
Student	85,471	0.084	0.141	0	1
Works in the home	85,471	0.258	0.231	0	1
Renting	85,471	0.005	0.014	0	1
Receiving a pension	85,471	0.017	0.041	0	1
Disabled	85,471	0.017	0.041	0	1
Outcome Variables					
Turnout (%)	85,471	0.636	0.190	0	1
First round	43,013	0.635	0.185	0	1
Runoff	42,458	0.637	0.195	0	1
Votes for incumbent (%)	85,471	0.433	0.152	0	1
First round	43,013	0.368	0.133	0	1
Runoff	42,458	0.499	0.142	0	1
Margin of victory (%)	85,471	0.203	0.227	-1	1
First round	43,013	0.140	0.207	-1	1
Runoff	42,458	0.266	0.228	-1	1
Explanatory Variables					
Prop. FA female	85,471	0.053	0.084	0	0.7
Prop. FA male	85,471	0.016	0.033	0	0.4

Source: *Registraduría Nacional*, DNP-DDS. Note: [b]Margin of Victory is defined as $\frac{Votes\ Incumbent - Runner\ Up}{Votes\ Incumbent + Runner\ Up}$.

Table 3: RD Regression of Registering to Vote

	(1)	(2)	(3)	(4)
Panel A: Women who are households heads or partners				
	First Stage			
Eligibility	0.332***	0.294***	0.284***	0.287***
	(0.002)	(0.002)	(0.004)	(0.003)
	2SLS			
FA	0.018***	0.019***	0.029***	0.022***
	(0.004)	(0.006)	(0.010)	(0.008)
R^2	0.016	0.018	0.016	0.016
Observations	3,845,341	1,683,103	337,125	209,017
Panel B: Men who are households heads or partners				
	First Stage			
Eligibility	0.168***	0.154***	0.150***	0.152***
	(0.002)	(0.002)	(0.003)	(0.002)
	2SLS			
FA	0.033***	0.009	0.013	0.007
	(0.012)	(0.015)	(0.026)	(0.020)
R^2	0.005	0.005	0.006	0.006
Observations	3,078,371	1,295,883	266,839	198,218
Panel C: Women who are not households heads nor partners				
	First Stage			
Eligibility	0.197***	0.188***	0.176***	0.180***
	(0.003)	(0.003)	(0.005)	(0.004)
	2SLS			
FA	-0.023**	-0.008	-0.015	-0.022
	(0.010)	(0.014)	(0.024)	(0.018)
R^2	0.086	0.092	0.109	0.107
Observations	1,603,438	750,224	143,408	106,654
Panel D: Men who are not households heads nor partners				
	First Stage			
Eligibility	0.078***	0.075***	0.072***	0.072***
	(0.002)	(0.002)	(0.003)	(0.002)
	2SLS			
FA	-0.026	-0.082*	-0.060	-0.070
	(0.037)	(0.047)	(0.078)	(0.059)
R^2	0.012	0.008	0.008	0.180
Observations	1,471,205	670,755	147,321	122,190
Bandwidth		5	1	I&K
Functional Form	5^{th} degree	Cubic	Quadratic	Linear

Note: Standard errors clustered at household level in parenthesis. All estimations include controls for age, schooling, and municipality fixed effects. The functional form of the aligned *SISBEN* score is allowed to be different above and below the threshold. I&K column uses an optimal bandwidth algorithm developed by Imbens and Kalyanaraman (2012). For panel A, B, C and D the optimal bandwidth is 0.629, 0.74, 0.757, and 0.839, respectively. *** p-value<0.01, ** p-value<0.05, * p-value<0.1.

Table 4: RD Regression of Registering to Vote after the Onset of FA in the Municipality (2SLS)

	(1)	(2)	(3)	(4)
Panel A: Women who are households heads or partners				
FA	0.038***	0.025***	0.029***	0.004
	(0.006)	(0.007)	(0.011)	(0.016)
R^2	0.024	0.024	0.019	0.020
Observations	3,590,767	1,576,351	313,745	160,570
Panel B: Men who are households heads or partners				
FA	0.035***	0.012	0.032	0.017
	(0.014)	(0.015)	(0.024)	(0.025)
R^2	0.009	0.012	0.009	0.009
Observations	2,747,480	1,156,976	236,618	217,670
Panel C: Women who are not households heads nor partners				
FA	0.044**	0.048**	0.046	0.040
	(0.018)	(0.021)	(0.029)	(0.031)
R^2	0.048	0.043	0.047	0.047
Observations	1,487,020	696,984	132,833	120,345
Panel D: Men who are not households heads nor partners				
FA	-0.078*	-0.038	-0.009	0.002
	(0.047)	(0.053)	(0.079)	(0.082)
R^2	0.040	0.038	0.040	0.040
Observations	1,287,084	583,006	126,868	108,966
Bandwidth		5	1	I&K
Functional Form	4^{th} degree	Quadratic	Linear	Linear

Note: Standard errors clustered at household level in parenthesis. All estimations include controls for age, schooling, and municipality fixed effects. The functional form of the aligned *SISBEN* score is allowed to be different above and below the threshold. I&K column uses an optimal bandwidth algorithm developed by Imbens and Kalyanaraman (2012). For panel A, B, C and D, the optimal bandwidth is 0.515, 0.927, 0.914, and 0.860, respectively. *** p-value<0.01, ** p-value<0.05, * p-value<0.1.

Table 5: Voting and Voting Outcomes

Dependent variable:	Turnout	Votes for Incumbent Party Candidate	Margin of Victory
	(1)	(2)	(3)
Panel A: First Round and Runoff			
Prop. FA female	0.097***	0.061***	0.072***
	(0.009)	(0.006)	(0.006)
Prop. FA male	0.030***	0.019***	0.018***
	(0.007)	(0.005)	(0.005)
R^2Within	0.35	0.63	0.57
Observations	84,471	84,330	84,330
Panel B: First Round			
Prop. FA female	0.089***	0.058***	0.071***
	(0.009)	(0.006)	(0.006)
Prop. FA male	0.031***	0.018***	0.019***
	(0.007)	(0.005)	(0.006)
R^2Within	0.36	0.41	0.46
Observations	42,533	42,436	42,436
Panel C: Runoff			
Prop. FA female	0.104***	0.064***	0.072***
	(0.009)	(0.008)	(0.007)
Prop. FA male	0.028***	0.020***	0.017***
	(0.007)	(0.006)	(0.006)
R^2Within	0.38	0.51	0.58
Observations	41,938	41,894	41,894

Note: robust standard errors in parenthesis. All regressions include polling station fixed effects, controls for proportion of people at each value of the *SISBEN* score, and booth level controls. Booth level controls including proportion: female, cohabitating, working, not working, seeking employment, studying, renting, receiving a pension, disabled. It also includes booth averages for: age, number of children, household size, years of schooling, and length of time between the *SISBEN* interview and the elections. Standardized coefficients reported. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6: RD Regression of Registering to Vote at Points Above and Below the Eligibility Threshold –**Women who are Household Heads or Partners**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: -/+ 1 point							
	1 point below the threshold				1 point above the threshold			
Eligibility	-0.002	-0.002*	-0.002	-0.001	0.001	-0.002	-0.003	-0.002
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
R^2	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Observations	3,845,341	1,517,766	423,340	267,091	3,845,341	1,801,502	261,349	209,534
Bandwidth		5	1	0.685		5	1	0.817
	Panel A: -/+ 2 point							
	2 points below the threshold				2 points above the threshold			
Eligibility	0.001	0.001	0.003	0.001	-0.000	-0.000	-0.001	-0.001
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
R^2	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Observations	3,845,341	1,584,729	410,985	283,937	3,845,341	1,876,180	240,446	182,464
Bandwidth		5	1	0.623		5	1	0.788
	Panel B: -/+ 5 points							
	5 point below the threshold				5 point above the threshold			
Eligibility	-0.002**	0.001	0.004	0.002	0.003***	0.001	0.002	0.002
	(0.001)	(0.002)	(0.003)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
R^2	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Observations	3,845,341	1,353,401	254,032	176,999	3,845,341	1,667,800	470,632	294,071
Bandwidth		5	1	0.709		5	1	0.611
Functional form	Quintic	Cubic	Quadratic	I&K	Quintic	Cubic	Quadratic	I&K

Note: Standard errors clustered at household level in parenthesis. All estimations include controls for age, schooling, and municipality fixed effects. The functional form of the aligned *SISBEN* score is allowed to be different above and below the threshold. I&K column uses an optimal bandwidth algorithm developed by Imbens and Kalyanaraman (2012). *** p-value<0.01, ** p-value<0.05, * p-value<0.1.

Table 7: RD Regression of Registering to Vote: Women Excluding Potential Beneficiaries to the Child Feeding Program

	(1)	(2)	(3)	(4)
Panel A: Registering to vote				
	First Stage			
Eligibility	0.298***	0.273***	0.268***	0.269***
	(0.002)	(0.002)	(0.004)	(0.004)
	2SLS			
FA	0.018***	0.023***	0.033***	0.025**
	(0.005)	(0.007)	(0.011)	(0.010)
R^2	0.02	0.02	0.01	0.02
Observations	3,242,033	1,400,927	281,066	149,282
Panel B: Registering after the onset of FA in the municipality				
	First Stage			
Eligibility	0.302***	0.280***	0.269***	0.269***
	(0.002)	(0.002)	(0.003)	(0.003)
	2SLS			
FA	0.039***	0.028***	0.032**	0.008
	(0.007)	(0.009)	(0.013)	(0.017)
R^2	0.02	0.02	0.01	0.01
Observations	3,016,616	1,307,384	260,818	161,898
Bandwidth		5	1	I&K
Functional Form	5^{th} degree	Cubic	Quadratic	Linear

Note: Standard errors clustered at household level in parenthesis. All estimations include controls for age, schooling, and municipality fixed effects. The functional form of the aligned *SISBEN* score is allowed to be different above and below the threshold. I&K column uses an optimal bandwidth algorithm developed by Imbens and Kalyanaraman (2012). For panel A and panel B, the optimal bandwidth is 0.629, 0.74. *** p-value<0.01, ** p-value<0.05, * p-value<0.1.

Appendix

Figure A1: Covariates at the Eligibility Threshold –Women who are not household heads or partners

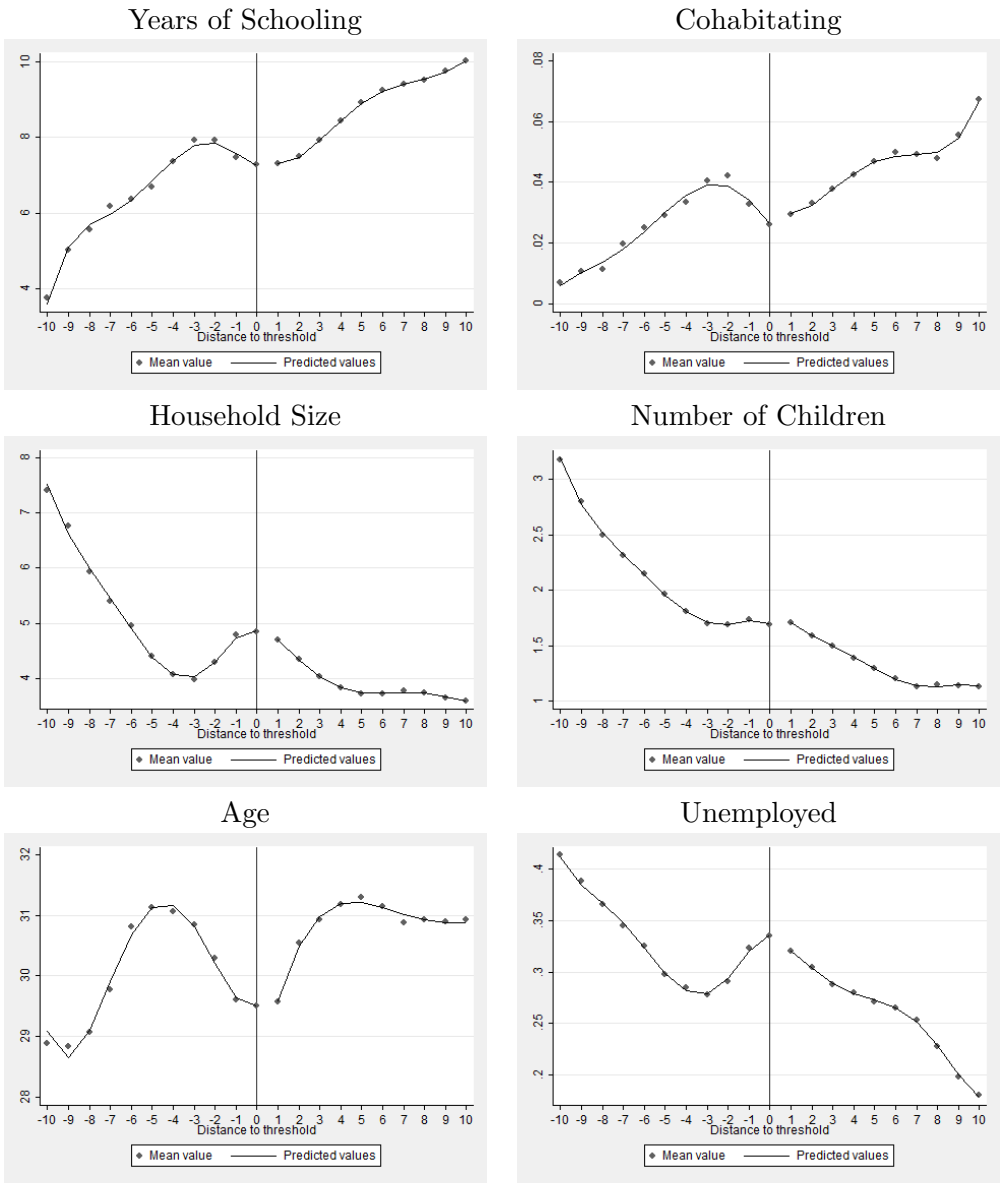


Figure A2: Covariates at the Eligibility Threshold –Men who are household heads or partners

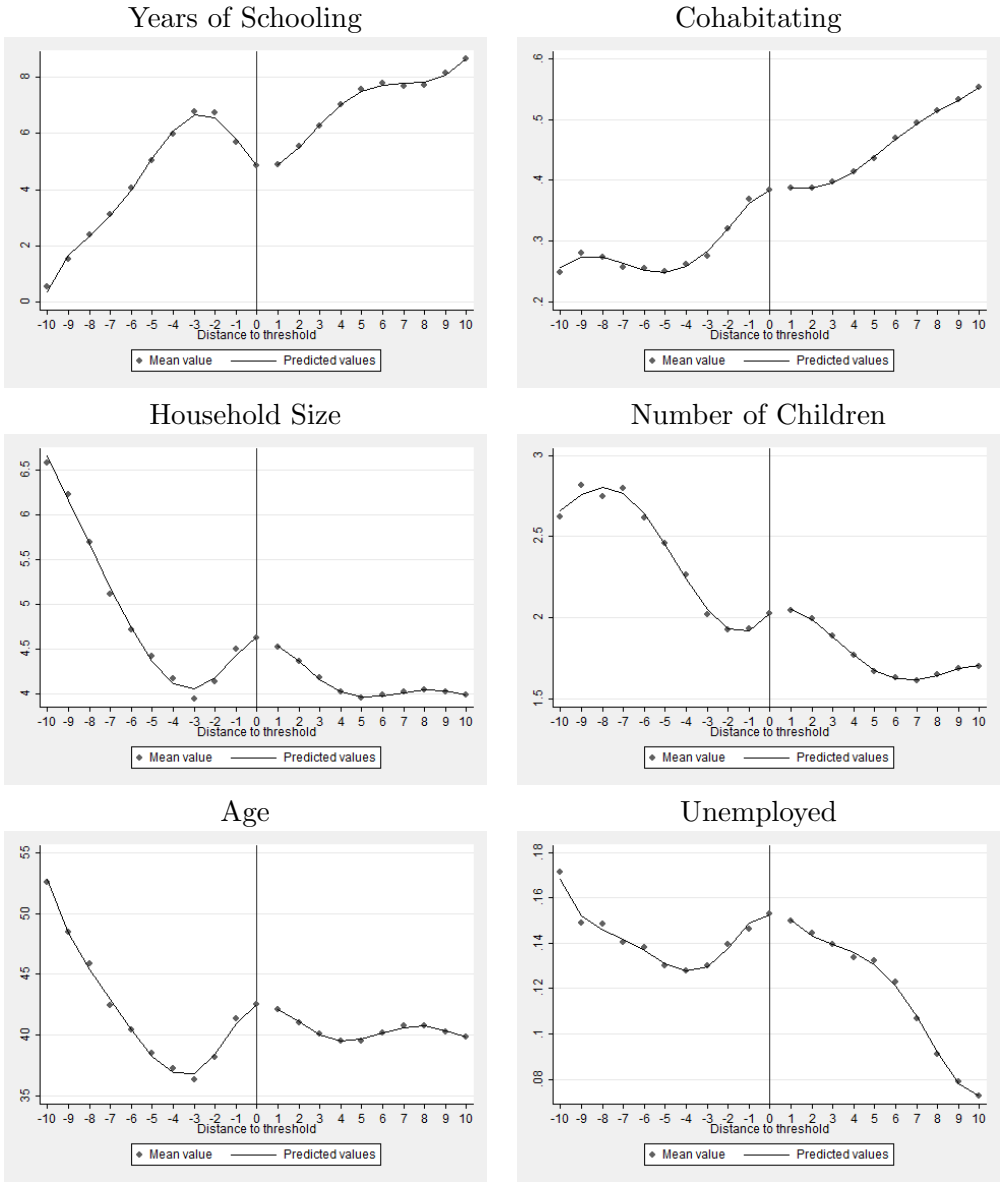


Figure A3: Covariates at the Eligibility Threshold –Men who are not household heads or partners

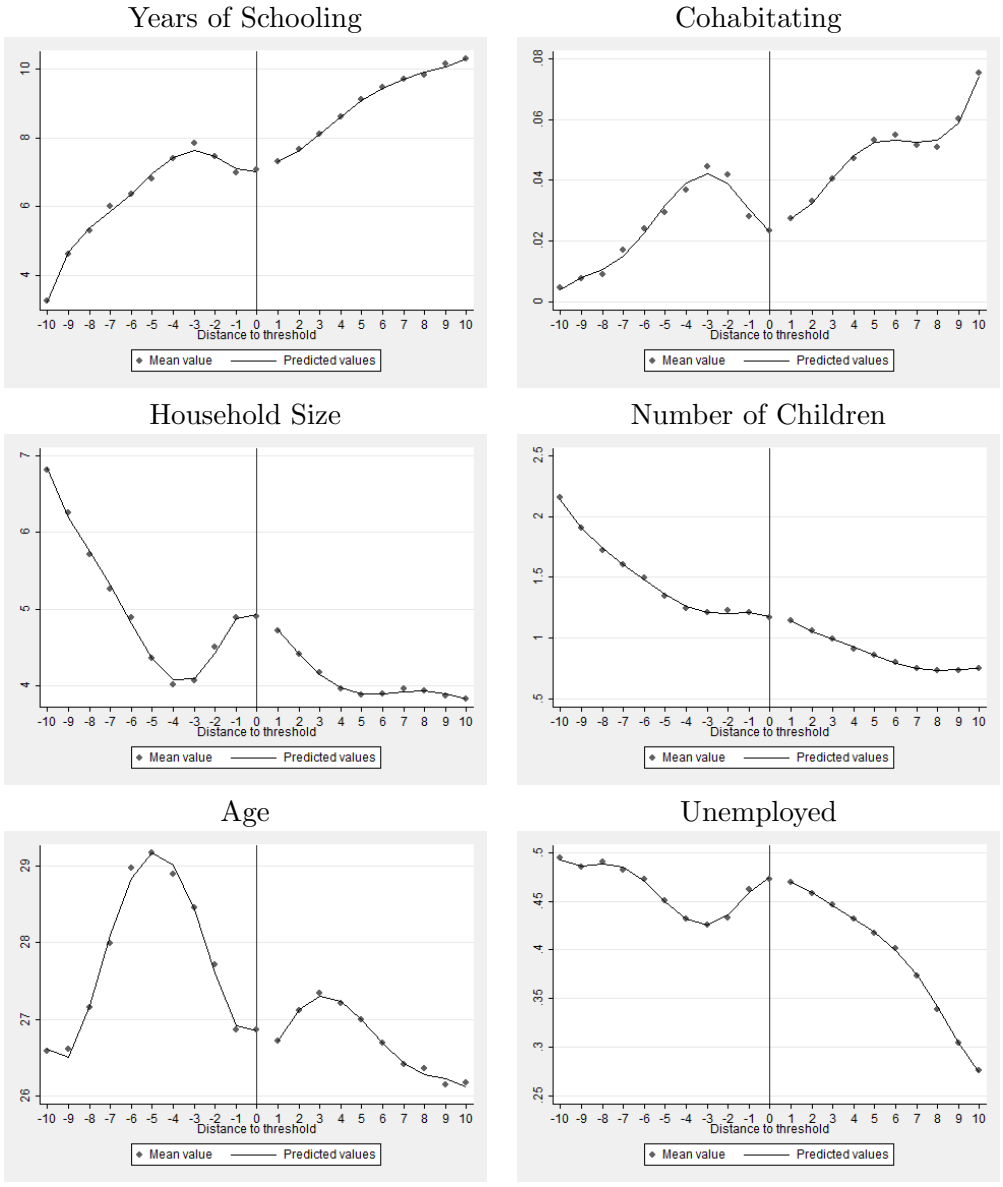


Table A1: RD other variables for women who are households heads or partners

	(1)	(2)	(3)	(4)
	Panel A: Age			
FA	-0.331	-0.835	-1.062	-1.213
	(0.614)	(0.804)	(1.458)	(1.145)
R^2	0.002	0.002	0.016	0.001
Observations	4,465,995	1,986,196	388,839	271,673
	Panel B: Years of Schooling			
FA	0.825***	-0.383***	0.446**	0.195
	(0.114)	(0.144)	(0.206)	(0.165)
R^2	0.078	0.014	0.001	0.001
Observations	4,465,995	1,986,193	388,839	264,282
	Panel C: Kids			
FA	0.027	-0.085	-0.114	-0.099*
	(0.042)	(0.055)	(0.097)	(0.052)
R^2	0.016	0.007	0.005	0.004
Observations	4,466,006	1,986,199	388,840	567,617
	Panel D: Household size			
FA	0.432***	-0.115	-0.337**	-0.293**
	(0.069)	(0.089)	(0.167)	(0.143)
R^2	0.012	0.002	0.002	0.002
Observations	4,466,006	1,986,199	388,840	229,842
	Panel E: Cohabitating			
FA	0.187***	-0.065***	-0.027	-0.026**
	(0.009)	(0.011)	(0.019)	(0.013)
R^2	0.016	0.004	0.001	0.001
Observations	4,466,006	1,986,199	388,840	360,936
	Panel F: Studying			
FA	-0.006	0.005	0.002	-0.003
	(0.030)	(0.041)	(0.070)	(0.058)
R^2	0.000	0.000	0.000	0.000
Observations	4,466,006	1,986,199	388,840	249,122
	Panel G: Unemployed			
FA	-0.042***	-0.002	0.004	0.001
	(0.003)	(0.004)	(0.008)	(0.006)
R^2	0.000	0.001	0.000	0.000
Observations	4,466,006	1,986,199	388,840	302,069
Bandwidth		5	1	I&K
Functional Form	5^{th} degree	Cubic	Quadratic	Linear

Note: Standard errors clustered at household level in parenthesis. All estimations include controls for age, schooling, and municipality fixed effects. The functional form of the aligned *SISBEN* score is allowed to be different above and below the threshold. I&K column uses an optimal bandwidth algorithm developed by Imbens & Kalyanaraman (2009). For panel A, panel B, panel C, panel D, panel E, panel F, and panel G the optimal bandwidth is 0.701, 0.685, 1.463, 0.598, 0.939, 0.648, and 0.784, respectively. *** p-value<0.01, ** p-value<0.05, * p-value<0.1.

Table A2: Voting and Voting Outcomes–First Stage of IV

Dependent variable:	Proportion *Familias en Acción* (FA)		
	(1)	(2)	(3)
Panel A: Female			
Prop. Eligible Female	0.917***	0.918***	0.917***
	(0.014)	(0.014)	(0.014)
R^2Within	0.91	0.91	0.91
Observations	84,471	42,533	41,938
Panel B: Male			
Prop. Eligible Male	0.734***	0.733***	0.735***
	(0.021)	(0.021)	(0.021)
R^2Within	0.71	0.71	0.71
Observations	84,471	42,533	41,938
Voting round	Both	First round	Runoff

Note: robust standard errors in parenthesis. All regressions include polling station fixed effects, controls for proportion of people at each value of the *SISBEN* score, and booth level controls. Booth level controls including proportion: female, cohabitating, working, not working, seeking employment, student, working in the home, renting, receiving a pension and disabled. It also includes booth averages for: age, household size, number of children, education level and length of time between the *SISBEN* interview and the elections. Standardized coefficients reported. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A3: Voting and Voting Outcomes–IV

Dependent variable:	Turnout	Votes for Incumbent Party Candidate	Margin of Victory
	(1)	(2)	(3)
Panel A: First Round and Runoff			
Prop. FA female	0.158***	0.165***	0.173***
	(0.010)	(0.009)	(0.009)
Prop. FA male	0.114***	0.120***	0.114***
	(0.010)	(0.010)	(0.009)
R^2Within	0.35	0.63	0.57
Observations	84,471	84,330	84,330
Panel B: First Round			
Prop. FA female	0.173***	0.154***	0.151***
	(0.013)	(0.011)	(0.011)
Prop. FA male	0.135***	0.122***	0.095***
	(0.014)	(0.011)	(0.011)
R^2Within	0.35	0.40	0.46
Observations	42,533	42,436	42,436
Panel C: Runoff			
Prop. FA female	0.141***	0.173***	0.194***
	(0.015)	(0.014)	(0.012)
Prop. FA male	0.091***	0.116***	0.133***
	(0.016)	(0.014)	(0.012)
R^2Within	0.38	0.50	0.57
Observations	41,938	41,894	41,894

Note: robust standard errors in parenthesis. All regressions include polling station fixed effects, controls for proportion of people at each value of the *SISBEN* score, and booth level controls. Booth level controls including proportion: female, cohabitating, working, not working, seeking employment, student, working in the home, renting, receiving a pension and disabled. It also includes booth averages for: age, household size, number of children, education level and length of time between the *SISBEN* interview and the elections. Standardized coefficients reported. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.