Do Conditional Cash Transfers affect tertiary education outcomes in the long run?

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Abstract

This paper evaluates the effect of a conditional cash transfer program implemented in Uruguay in 2008 on educational outcomes in the long run. We estimate the effects on tertiary educational outcomes of beneficiaries who were children or teenagers when they began receiving the transfer. Our identification strategy relies on the program allocation design that depends on a discontinuous function of a poverty score at baseline. We match administrative records of the program with administrative records of tertiary education, considering technical education and university. Our results indicate that the people exposed to the program more than 72 months have greater probability of enrolling at tertiary education level in 15 percentage points than non-eligible population. For completion rates we do not find results, but for the probability of being first generation of university students the results are positive and the magnitude increase with the time of exposure. We also explore some mechanisms which could explain the impacts found: changes in household income, living conditions, high school graduation, parents' educational expectations, and changes in household socioeconomic conditions, among others.

JEL codes: I18, I28, I38, O15

Key words: Cash Transfer, Tertiary education, long term impacts.

Introduction

Interventions at early stages in life have the potential of being cost effective, because their benefits extend throughout the life cycle of individuals by affecting fundamental aspects of individuals´ development (Heckman 2000; 2012). Improvements in household financial resources due to certain programs, as cash transfer programs, may improve the well-being of children and adolescents from beneficiary households through human capital accumulation (Case, 2000; Case, Lubotsky and Paxson, 2002; Rawlings and Rubio, 2005; Molina Millan, et al., 2019). Generate better access to education at the different stages of the life cycle may have microeconomic and macroeconomic implications: educational and social mobility, higher salary returns, improve equal opportunities, contribute to a rupture of the intergenerational transmission of poverty, improvements in economic growth and social inclusion along with changes in income inequality (Schultz, 1960, 1961; Denison, 1962; Easterlin, 1981; Rawlings and Rubio, 2005). Transfer programs have been evaluated in a wide range of outcomes, including educational outcomes. Positive effects have been found in these dimensions, but mainly focused on short or medium run results, covering primary and secondary schooling (Villatoro, 2005; Fiszbein and Schady, 2009). This is particularly important from the perspective of policy makers if the program succeeds in improving educational mobility, due to children from poor households are at greater risk of ending up in poverty (Black and Devereux, 2011). The literature on long-term effects is incipient, it remains an open question whether receiving a cash transfer during childhood or adolescence may generate long-term effects on educational achievements, particularly in human capital formation.

In this context, this paper provides evidence on the potential effects of a conditional cash transfer program implemented in Uruguay in 2008 (*Asignaciones Familiares Plan de Equidad)*, on the educational outcomes in the long term, given that it is one of the main mechanisms to promote the well-being of individuals and households. We estimate the impact on tertiary educational results of beneficiaries who were children and teenagers when they began receiving the transfer. Our first question is whether children and teenagers from households eligible for AFAM show differences in enrollment, completion rates and the probability of being first generation of university students at tertiary education once they are 18 years old. The second question is whether the intensity of the treatment (number of months that individuals receive the transfer) generates a change in the probability of these outcomes for AFAM eligible individuals when compared to non-eligible. In addition, we analyze some of the mechanisms driving the decisions of individuals.

Our identification strategy relies on the program allocation design that depends on a discontinuous function of a poverty score at baseline. We compare the effect of eligible and ineligible children and young individuals at the beginning of the program using a quasi-experimental regression discontinuity design. From an individual identifier, we match administrative records of the transfer program (which include all applicants) with administrative records of tertiary education for 12 years. We have administrative records for technical and university students.

Our results indicate that the intensity of the transfer program led to an increase in tertiary education enrollment and on the probability of being first generation of university students. The magnitude effect increases with the number of months that people were exposed to the program. We do not find effects for completion rates. The results persist for different population groups, were the effects are more pronounced for people living in the main capital, for women and for individuals who were 6 and 11 years old when the program began. This indicates an improvement in the access of tertiary education from certain groups of beneficiary children and young individuals compared to children and young individuals from applicant but ineligible households. Therefore, we can conclude that the conditional cash transfer had long term impacts on beneficiary children and adolescents, especially related to human capital formation through increases in tertiary educational enrollment and educational mobility with changes on the probability of being first generation of university students.

We also explore which channels may explain these effects. We provide evidence suggesting that the educational expectations of parents, as well as the higher secondary school enrollment of these cohorts may drive the changes found. We also show that other behaviors that may explain educational decisions such as the educational level of the parents, their occupational category and level of labor income are not affected by program participation. Hence, our secondary sources of information provide some guidance on which channels may play a role in explaining the educational decisions and outcomes of children and adolescents from beneficiary households. It should be considered that the mechanisms explored are merely speculative, since we analyze whether those variables have changed for eligible and ineligible individuals using secondary data sources and not the administrative records used to perform the main analysis.

The evidence of the time that children and young people were exposed to transfer programs is limited, particularly the one which analyzes the impact on tertiary education outcomes. This lack of evidence may be related to the lack of availability of microdata as well as lack of

sources of exogenous variation in program implementation. This paper contributes to close this gap. One of the main contributions, in addition to answering a question without consensus in the literature, lies in the sources of information used, which allows us to identify the impact of the program as well as several mechanisms driving the effect. We match administrative records of the transfer program (which includes eligible and ineligible individuals) with administrative records of tertiary education (university and non-university) for 12 years with an individual identifier. In turn, we use the survey that monitors the transfer program, from which we analyze certain channels such as high school graduation, parents' educational expectations, and changes in household socioeconomic conditions, among others.

To our knowledge, this work is the first effort to bring together administrative records of a cash transfer program in Uruguay with records from tertiary education (university and non-university). Most of prior studies rely on survey data or geographically aggregated data, so that evaluations are aggregated by geographic identification criteria or by population groups. In our case, we exploit the variation of the poverty score, which is generated by exact allocation rules based on the population at baseline. This allows us to estimate program effects by comparing changes in the outcome variables across eligible and ineligible households around the eligibility threshold. That is, individuals who were children and young (between 6 and 17 years old) when the program began in 2008.

The structure of this paper is as follows. The second section presents the literature review. The third section describes the program under evaluation. The fourth section presents a detailed description of the data used and the methodology adopted. The fifth section reports the main findings. The sixth section assesses several channels that may drive the results and presents robustness checks to generate precision in our estimates. The last section draws final comments.

Cash transfers and long run educational outcomes

The body of literature analyzing the impact of cash transfer programs in Latin America focuses on multiple outcomes potentially affected by the policy: school attendance (primary and secondary), health outcomes, child labor, and labor market outcomes, among others. In general terms, these impact evaluations have shown that CCT programs have positive short-term absolute impacts on school enrolment and attendance for children. In their meta-analysis of evidence, Baird et al (2013) find that conditional and unconditional cash

transfers significantly increase the odds of a child being enrolled in school, and although the effect is higher in the presence of conditionalities, the difference between the effects on schooling of both types of transfers is not statistically significant. They also find that the odds of a child attending school -an outcome considered in fewer studies- is also higher in the presence of CCTs.

The focus of existing impact evaluations on short run outcomes arises from the fact that, even now that a sufficient period of time since the inception of these programs has taken place, there are data restrictions in terms of long run outcomes. A recent review of evidence about long term impacts of conditional cash transfers is presented by Molina Millán et al (2019). They consider impact evaluations for CCT programs in several Latin American countries (Mexico, Colombia, Nicaragua, Honduras and Ecuador) and on different outcomes.

There are some studies that analyze the effect of cash transfer in secondary education attendance in the long term. Alam, Baez and Del Carpio (2011) evaluate a Pakistani conditional cash transfer program that began in 2003, with the objective of promoting the enrollment in secondary education of women in public institutions. Using differences in differences approach and regression discontinuous design for the years 2003, 2007 and 2008, they find an increase in enrollment in secondary education for the 15- and 16-year-old cohort.

When considering secondary education completion for children and teenagers affected by the transfer programs, the literature is more abundant. In the case of Colombia, there is evidence about the impacts of *Familias en Acción*. The comparison of children from eligible households in the municipalities covered by the program in 2002 with potentially eligible children from comparable areas not covered by the program until 2007 indicates an increase in secondary education completion of beneficiaries between 8 and 16 years at the beginning of the program (García et al, 2012). Baez and Camacho (2011) also find a greater probability of completing secondary education for children exposed to *Familias en Acción* the program. For the Honduras case there is a work of Molina Millan et al. (2019), that evaluates *Programa de Asignación Familiar II*. By comparing the 20 municipalities affected by the program with the 20 unexposed municipalities, they find an increase in secondary education completion for both indigenous and non-indigenous men and women. Araujo, Bosch and Schady (2018) evaluate the long-term effect of the *Bono de Desarrollo Humano* program of Ecuador (10 years after the program started) relying on a discontinuous regression methodology. Focusing on individuals aged between 9 and 15 when the program began and compare children from eligible with children from non-eligible households, the

authors find a small and positive effect on high school completion of 1 to 2 p.p. on a base of 75 percent. For the Pakistani case, Alam, Baez and Del Carpio (2011) show an increase of 5 p.p. for the completion of secondary education (grade 8th).

Other studies analyze the grades attained in high school and changes in years of education in the long term in the affected cohorts. Evaluation based on the experimental nature of the allocation of *Progresa* program in Mexico indicate that, beneficiaries who were 9-15 years old at the start of the program (1997), have positive impacts in grades attained six to eight years after the program began (Berhman, Parker and Todd, 2009; 2011; Parker, Rubalcava and Teruel, 2012). For the Colombian case Garcia et al. (2012) find an increase in years of education for *Familias en Accion* Program. Neidhofer and Zarazua (2019) analyzing the long-term effects of the *Chile Solidario* program find an increase of 1.2 years of education for men and women. Molina Millan et al. (2019) evaluating the *Programa de Asignacion Familiar II* in Honduras find an increase in human capital through years of education for indigenous women. An important concern about this evidence refers to selectivity due to high rates of attrition, linked to migration strategies which poses questions about the external validity of these results (Molina Millán et al, 2019).

Some research evaluates the effect on educational performance in the long term, specifically these studies analyze high school dropouts, learning outcomes and test scores. Baez and Camacho (2011) analyzing *Familias en Accion* show non effects on graduation tests. Moreover, Duque et al (2018) with other sources of information for the same program report positive effects on graduation test scores. Attanasio et al (2021) evaluating the long-term effect of *Familias en acción* on diverse outcomes, provide evidence of a sizeable decrease in secondary school dropouts. For the Nicaraguan case, evidence after 10 years of implementation of *Red de Protección Social*, based on a follow-up panel data survey along with pre-intervention data, indicates a positive effect on learning outcomes for beneficiaries who were 9 to 12 years old when the program began (Barnam, Cacours and Maluccio, 2012; 2018).

Finally, the evidence of cash transfer programs on university outcomes in the long term is scarce. Parker and Vogl (2018) do not find effects on university attendance for children and young people affected by *PROGRESA*. Garcia et al. (2012), for *Familias en Acción* in Colombia, report a negative effect on enrollment in tertiary education. Furthermore, Attanasio et al (2021) based on administrative records for the city of Medellin using fuzzy discontinuous regression design provide evidence of a positive effect on higher education enrollment (1.7 p.p. increase on an 11-percent base for the male sample). Molina Millan et al. (2019), using

information from program allocation in Honduras along with individual population census data from 13 years after the program started, assess the effects on university enrollment for cohort of individuals aged between 6 and 13 when the program began. The authors find an increase in university enrollment for both indigenous and non-indigenous men and women of approximately 50 percent. For the case of Chile, Neidhofer and Zarazua (2019) comparing individuals who were born in 1985 or after and who lived their childhood in households that were eligible to receive the transfer at the beginning of the program (2002), with individuals who were born before 1985 and, therefore, not eligible to receive the program find that the program has a positive effect on higher education attendance. Barrera-Ososrio et al. (2008) study the effect of three conditional transfer programs in Bogotá with different incentives on education, and find positive effect on attendance, enrollment and completion in tertiary education. In particular, they find an increase in tertiary education enrollment 8 years after the beginning of the program in approximately 10 and 20 percent for children in secondary education at baseline.

Institutional context and description of the program

Uruguay is a Latin American developing country with around 3.5 million inhabitants. It is one of the countries with higher GDP per capita and lower income inequality in the region. It is also well known for having a strong welfare state providing, among others, public education with free access at all levels. The public educational system is wide and there are no access restrictions. In particular, Uruguay's public University and technical school has no admission exams or tuition fees, providing access potential universal access. Yet, completion rates of secondary school and enrollment in tertiary education are low, being around 26% of the population between 25 and 29 years of age attend University with a strong socioeconomic gradient (Udelar, 2020).

Beginning in the 1990s with the emblematic programs of Brazil and Mexico, CCTs have transformed social protection in Latin American countries, strengthening the social assistance pillar of social protection systems in the region and introducing innovative aspects (see Stampini & Tornarolli, 2012; Cecchini & Madariaga, 2012; Robles et al, 2017). In the realm of this transformation, Uruguay created the program *Asignaciones Familiares - Plan de Equidad (AFAM-PE)* in 2007, through law number 18,277 which began in 2008. It consists on a cash transfer focused on poor households with pregnant women or children under 18 years old, conditioned to certain education and health requirements.

By 2009 the program covered 40% of total households with children under 18 year old (Household Survey, 2009). The transfer average amount is 90 USD per month, representing around 10% of beneficiaries' household income. The amount of the transfer increases when the beneficiaries promote a specific level of education, and is also decreasing with the number of children in the household. Conditionalities consist of health checks (both for pregnant women and children) and school attendance for children in beneficiary households, and are strictly monitored by the government. The budget of the program has been around 0.4% of GDP since its inception. In sum, AFAM constitutes the most important social assistance program in Uruguay in terms of both coverage and magnitude of the cash benefits provided, and is also among the largest programs of this kind in Latin America.

Table 1. Information regarding AFAM-PE

	2008	2009	2010
Number of beneficiaries (households)	144314	179862	176752
Number of beneficiaries (population under 18)	660118	829864	799567
% of beneficiares among hh with children	30%	34%	34%
% of beneficiaries among population under 18	35%	39%	39%
Average transfer (USD)	67	72	74
% transfer on beneficiary household income	34%	34%	32%

Source of information: Household Survey, 2008-2010.

A certain number of beneficiaries entered the program directly from a temporary social assistance program called *Plan de Atención Nacional a la Emergencia Social (PANES*) in 2005, whereas others applied for the benefit. In that case, they must complete a form, providing socioeconomic information: demographic characteristics, education and schooling attendance, participation in the labor market, condition and ownership of housing, durable goods, income, and subjective information. To become a beneficiary, two

steps are required. The first step consists of the verification of per capita income of the applicant household against a certain threshold, set according to the targeting objectives of the program. This household income is computed as the maximum between the self-declared income (in the application form), and the income reported in labor records histories (only for formal workers) and other Social Security benefits. If household income is below the established threshold, the assignment to the AFAM-PE is determined by a poverty prediction index, the Critical Needs Index (CNI) (second step).

This index orders the households according to the socioeconomic characteristics that arise from the application form (see Amarante et al., 2011). Only those households with at least one pregnant woman or children under 18 years old, and with a poverty score above a predetermined threshold qualify to receive the AFAM-PE benefit. Between 2008 and 2010, eligibility thresholds have varied according to the coverage goals of the program. To avoid any type of manipulation of the Index, households do not know how the CNI is constructed to determine program eligibility, nor the specific variables used for its construction, or the specific eligibility thresholds.

The requirements to be fulfill to obtain the benefit, vary according to population's age. In every case, the beneficiaries have to perform a specific number of medical checkups according to their life cycle. For those who are between 4 and 13 years old, it is also required to be enrolled and attend educational institutions. For individuals between 14 and 17 years old, it is required to attend high school. If the beneficiaries are between 14 and 16 years old and do not complete primary education, they will be able to receive the benefit when the non-completion is proven by a fully justified impediment. For disabled population, the educational requirements are not operative. Additionally, with the aim of encouraging attendance and promotion in the education system, the amount of the transfer increases when the beneficiaries promote a specific level of education.

Empirical strategy

Data

We use data from three sources. First, we use administrative data from the Social Security System on individuals who apply to the transfer program since the program began in 2008. It contains information of each household and its members at the time of application to the program. Hence, we have data on household and individual characteristics, such as housing conditions, income, labor participation, educational level, possession of durable goods, and the ICC by which the program is assigned. In addition, this source contains information on

individuals who have obtained the benefit and individuals who have not. Further, our sources of information include the identification number of all household members, so that it is possible to identify children and adolescents from applicant households at baseline. For those applicants who have obtained the benefit, monthly information on the amount received is available. Applicants can come from the PANES program (an unconditional transfer program that was replaced by the AFAM-PE), or can be new applicants. The period considered covers the period from January 2008 to December 2018, focusing on the first two years of entry into the program and controlling for the persistence of the benefit over time.

Between 2008 and 2009, around 200,000 households have applied to the program, which is equivalent to 786,662 individuals. The birth cohort under evaluation covers the cohorts between 1991 to 2002, that is, children and adolescents who were between 6 and 17 years old at the time the program began. This group represents approximately 30% of individuals, reaching 240,136 individuals. Table 2 shows the distribution between eligible and ineligible for the total population and for the cohorts considered. We observe that the non-eligible group represent 9.82% in the case of the total population and 8.11% in the case of the cohorts under evaluation.

Table 2. Distribution of eligible and ineligible individuals

	Total population	%	Birth cohorts between 1991 and 2002	%
Non-beneficiaries	77221	9.82	22368	8.11
Beneficiaries	709441	90.18	253575	91.89
Total	786662	100	275943	100

Data from the CCT program is combined with administrative records from tertiary education. This source of information provides data on all students from public tertiary education [1] (university and non-university) in the country. These students amount to approximately 333,000 in the period considered. The data of students who study a university degree come from the University of the Republic, the largest institution of tertiary education in the country. In particular, this data contains information on enrollment, the type of degree chosen by students who enroll, socioeconomic information on students and their households, information on where they finished secondary education, employment status of students and their parents, parents' education, information regarding if they receive a scholarship to study and if they completed the degree.

[1] We do not consider students from the teacher training degree.

The information comes from the forms that students have to complete when entering the institution, as well as from information that administrative officials fill out at the time of student enrollment. On the other hand, the information on students of non-university tertiary degrees comes from the University of Labor of Uruguay, a public institution that covers most of the technical degrees taught in the country. This source of information contains data on the year of admission, the chosen degree, the department where they study and duration of the degree. The information is completed by administrative officials at the time of student enrollment. The period considered covers the period from 2008 to 2020, which allows to measure the medium and long-term effects of children and adolescents from beneficiary households.

Table 3 shows the data matched from the different sources of information for the birth cohort from 1991 to 2002, that is, children and adolescents who were between 6 and 17 years old when the program began in 2008 and 2009.

Table 3. Link of the sources of information: total and by 1991-2002 cohort

	Link
CCT and enrollment Public University (total)	37159
CCT and enrollment tertiary education non-university (total)	20039
CCT and enrollment Public University (cohort)	31251
CCT and enrollment tertiary education non-university (cohort)	6992

Table 4 shows the tertiary education enrollment between the eligible and ineligible groups. The proportion of individuals enrolled in tertiary education is 13.5% on average for the eligible for the CCT program, while 41% on average for the non-eligible.

Table 4. Tertiary education attendance by birth cohort

	Non-eligible	Eligibles	Total
1991	46.08	15.18	17.72
1992	43.55	14.89	17.21
1993	47.18	16.02	18.14
1994	42.59	14.78	16.50
1995	42.11	15.19	16.86
1996	41.03	14.40	15.89
1997	40.37	13.97	15.32
1998	43.73	12.97	14.54
1999	40.84	12.37	13.76
2000	35.64	10.93	12.06
2001	27.69	7.67	8.50

2002	7.95	1.98	2.22

Because we know when households receive the transfer as well as the duration of the transfer and the age of the household members, we are able to analyze whether children and young individuals were exposed to the program and for how long. In this way, for the birth cohort under evaluation, in addition to knowing the information contained in the administrative records of the program, we know the educational trajectory in tertiary education (in case of matching both sources of information).

Our outcome variables of interest are the following. A variable indicating if children and adolescents born between 1991 and 2002 are enrolled in a tertiary education degree (university or non-university) since the year 2009, where individuals who are not found in the tertiary education records have not enrolled in a degree in the period under analysis. In addition, we consider if the cohort of children and adolescents have completed a university degree and, lastly, the type of degree chosen – if it is oriented towards a particular field of study and the years of duration.

Methodology

We exploit the discontinuity in assignment to the CCT program as a function of the poverty score at baseline, and we compare the educational performance outcomes of eligible and ineligible individuals around the eligibility threshold. To this end, we perform a fuzzy regression discontinuity design, considering that the allocation around the threshold is as good as random, which allows to evaluate the long-term outcomes in a causal manner. In addition, and in order to control for changes in status of individuals over time we consider individual who changed from ineligible to eligible.

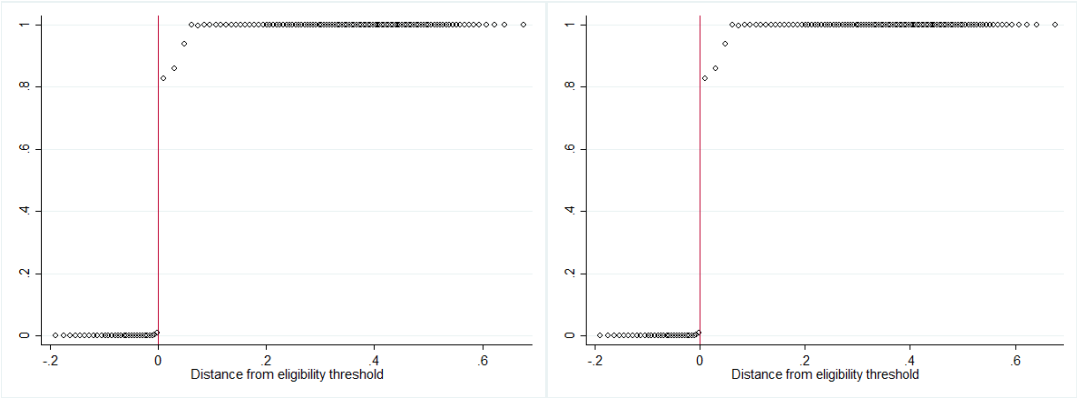
The index used to grant the transfer is built by the Ministry of Social Development, and households do not have information on how it is computed. Households with an index above 0 are eligible, while households with a negative index are ineligible.

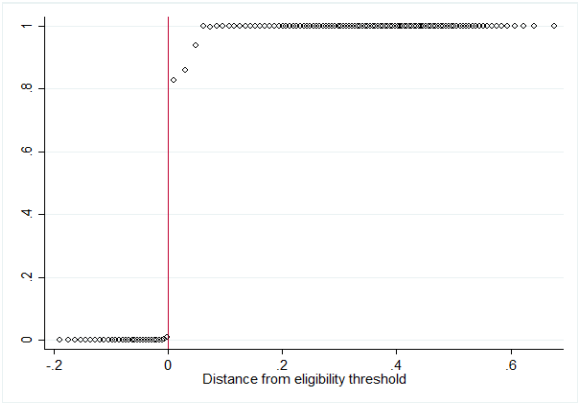
To use a regression discontinuity design, we must meet a number of assumptions. The following Figure shows the program allocation during the first years for our sample. The way in which the program is allocated suggests that a fuzzy regression discontinuity design can be applied.[2] Table 5 shows that if we focus on those ineligible individuals during the

[2] We show the first two years of the program because in these year all assumptions needed to apply Regression Discontinuity are fulfilled. We then show the results for the manipulation test and the correlation between program participation and characteristics at baseline.

first years of the program who later become eligible, program allocation changed and the discontinuity (jump around the threshold) is lower.

Graph 1 and 2. Program allocation 2008, 2009 and the accumulated period (new entrants)





The next table shows the jump around the eligibility threshold for the period under analysis.

Table 5. Jump around the eligibility threshold.

	Treatment variable (without changes in individual status)			Treatment variable (with changes in individual status)		
VARIABLES	2008	2009	2008-2009	2008	2009	2008-2009
Elegible	0.924***	0.960***	0.935***	0.504***	0.492***	0.502***
	(0.00224)	(0.00328)	(0.00186)	(0.00375)	(0.00696)	(0.00328)
Standarized Index	0.0595	0.0540	0.0579	4.216***	4.312***	4.240***
	(0.0564)	(0.0842)	(0.0472)	(0.0643)	(0.126)	(0.0567)
Elegible*Standarized Index	0.331***	0.167**	0.283***	-3.628***	-3.966***	-3.721***

	(0.0565)	(0.0845)	(0.0473)	(0.0649)	(0.127)	(0.0572)
Standarized Index 2	0.271	0.238	0.262	19.67***	19.49***	19.59***
	(0.303)	(0.455)	(0.254)	(0.231)	(0.495)	(0.207)
Elegible*Standarized Index 2	-0.744**	-0.528	-0.680***	-20.35***	-19.90***	-20.19***
	(0.303)	(0.456)	(0.254)	(0.231)	(0.496)	(0.208)
Constant	0.00264	0.00256	0.00262	0.372***	0.438***	0.389***
	(0.00215)	(0.00312)	(0.00178)	(0.00347)	(0.00639)	(0.00302)
Observations	208,362	42,741	251,103	217,993	44,850	262,843
R-squared	0.876	0.935	0.891	0.534	0.564	0.540

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Following Lee and Card (2007), Imbens and Lemieux (2008), and Lee and Lemieux (2010) we estimate the following equation:

$$y_i = \alpha + \beta_1(N_i > 0) + f(N_i) + u_i$$

where y_i is the outcome variable for individuals of the 1991 to 2002 cohorts of beneficiary households at the beginning of the program. The indicator variable $1(N_i > 0)$ is a dummy variable that takes the value of 1 for households that are eligible for the program (i.e. with an index above 0) and 0 otherwise. The variable $f(N_i)$ is a smooth function of the variable used to assign to the program. The coefficient β_1 allows us to identify the causal effect of the CCT program on the outcome variables around the eligibility threshold.

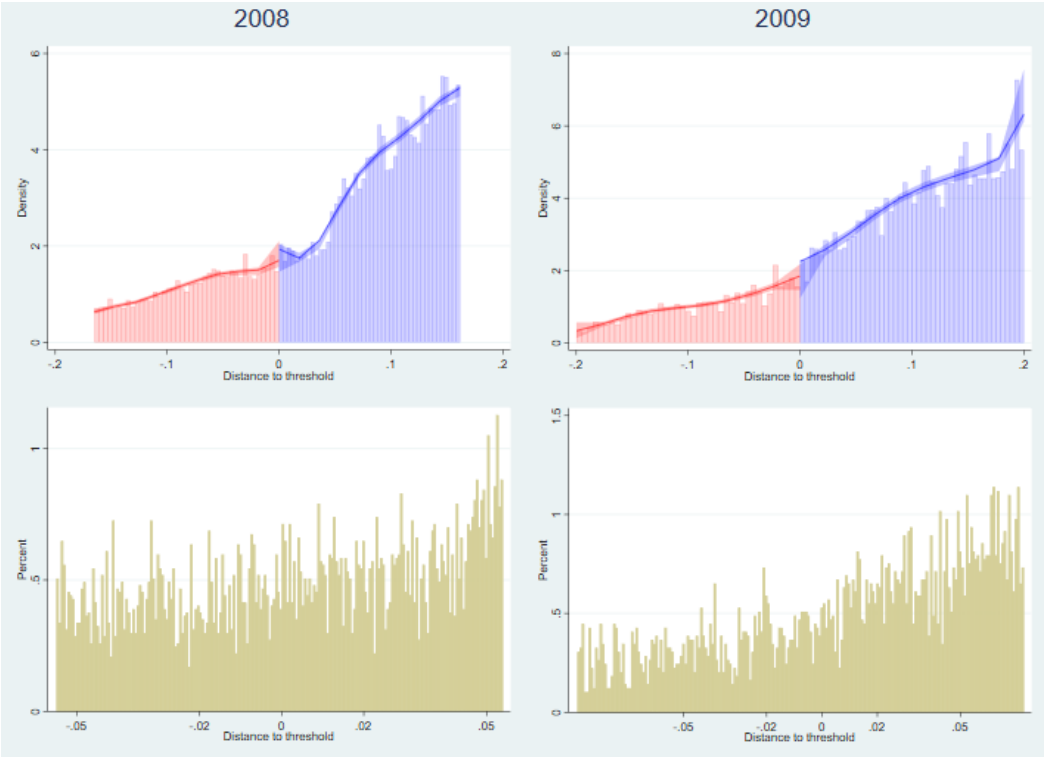
We consider the following outcome variables. First, we estimate a dummy variable that takes the value of 1 if individuals belonging to the 1991 to 2002 cohorts have enrolled in a tertiary education degree from 2009 (one year after starting the program) until 2020. Second, we evaluate the effect of the program intensity on the probability of enrollment. In addition, for applicants who have enrolled in a degree, we analyze the probability of choosing certain specific degrees, differentiating either by duration or by the field of study. Further, we explore heterogeneous effects for the cohorts that were the most exposed to the program, that is individuals who were between 6 and 11 years old at the beginning of the program, and the cohorts that were affected at high school age, that is adolescents that were between 12 and 17 years old.

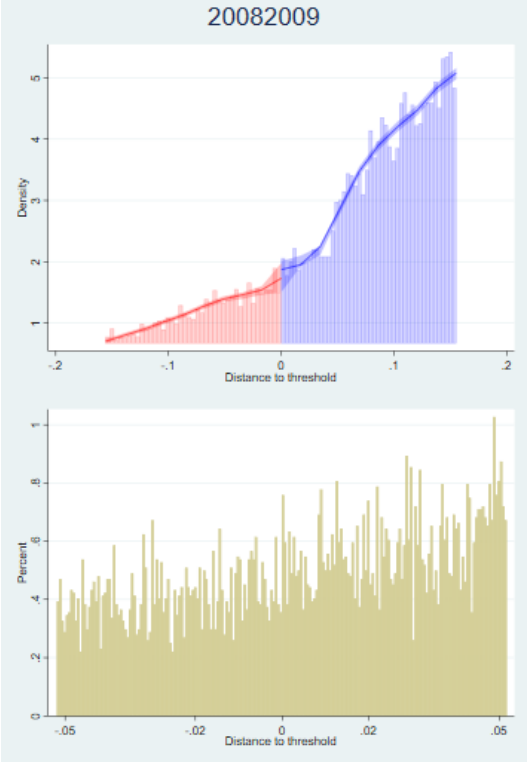
Given that the impact of the program depends on the function $f(.)$, we use different specifications including linear and quadratic polynomial specifications, and with and without controls at baseline (Gelman and Imbens, 2017). Further, to give robustness to our estimates, we consider different bandwidths around the eligibility threshold.

There are a number of assumptions that must hold in order to apply a discontinuous regression design and to interpret results in a causal manner. First, as shown in Figures 1 to 3, program allocation must be a discontinuous function around the eligibility threshold. Second, there should be no manipulation of the index by the applicant households, which means that the density function of the index should be continuous around the eligibility threshold. Third, relevant characteristics of the eligible and ineligible groups must be balanced at baseline.

To analyze the existence of manipulation, we perform the commands proposed by Cattaneo et al. (2017) for evaluating the density of the standardized index around the eligibility threshold. Graph 4 shows the manipulation test along with the index histogram for the years 2008 and 2009. From 2010 onwards, this assumption does not hold. As a consequence, we restrict the analysis to the first two years of the program, which are the years with largest number of applicants. Figures 4 to 6 show the continuity of the density function of the poverty score and suggest the existence of non-manipulation of individuals, validating the fact that eligible and ineligible individuals are randomly distributed around the threshold. In the Annex we provide the p-value for different polynomial order and for different bandwidths. As we mentioned above, the analysis is restricted to our sample.

Figures 4, 5, 6. Manipulation test 2008, 2009 and the accumulated period 2008-2009





Tables A.1 and A.2 on the Annex reinforce the analysis of the manipulation test graph. Table A.1 shows the p-value for each polynomial order and year, and on table A.2 we can observe the p-value and observations for different bandwidth. Both tables suggest the existence of no manipulation around the eligibility threshold.

On the other hand, we estimate a linear correlation model to analyze the correlation between being a beneficiary of the CCT program and relevant characteristics in the baseline, in order to account for the balance between eligible and ineligibles at baseline. Table 6 shows that the groups do not present significant differences in the variables considered when using a bandwidth of [-0.1; 0.1]. These variables are included as control variables in the main regression.

Table 6. Baseline covariates

	Coefficient	SD	Observations
Gender	0.0223	(0.0136)	26,540
Age	-0.0715	(0.0932)	26,540
Level of education	0.0390	(0.0255)	26,524
Education attendance	0.00399	(0.00829)	26,524
Years of education	-0.0509	(0.0457)	26,524
Region (1=Montevideo)	0.0194	(0.0317)	26,540
Participation in Panes Program	0.0232	(0.0141)	26,540

Even though the RD methodology allows to estimate causal effects of the program, these estimates only have internal validity because they are estimated around the eligibility threshold, accounting for a local effect of the treatment. However, the evidence presented in this work sheds light on the potential medium and long term effect that these programs have on the accumulation of human capital.

Results

We analyze the effect of the program on tertiary education considering university level and technical education. In both cases, our dependent variable is binary and is calculated for individuals who were children or teenagers when the program began (living in households which applied for the program between 2008 and 2010). These dependent variables take the value 1 if they enrolled at university or, alternatively, technical education, in the subsequent years to the application. We then explore differences according intensity of the treatment, being cautious with the results since the duration of the program is endogenous to certain characteristics of the participants.

The literature has pointed out the difference between having being exposed to a program at an early age of life or at a late age. To capture the length of exposure, we explore differential effects according to the age of individuals at the beginning of the program. Our time window allows us to analyze individuals who were 6 years or older when program started. Hence, we analyze program effects considering individuals who were at school age (6 to 11 years old) when the program began and individuals who were at the age of attending secondary education (12 to 17 years). We evaluate heterogeneities according to region (considering Montevideo, which is the capital city of Uruguay, and the rest of the country) and gender.

Table 7 reports our main estimates without controlling for the time in which individuals have been exposed to the program, where we estimate both a sharp and fuzzy regression discontinuity design. In this case we do not find any effects of the program on tertiary education attendance, completion and the probability of being first generation of university students. However, when we analyze intensity of the treatment (dummy variables indicate different periods of time) we achieve interesting results in table 8.

Table 7. Effect of CCT program in tertiary outcomes (total, technical and university)

	Sharp Specification				Fuzzy Specification			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education								
Enrollment	-0.0119	0.00244	-0.00856	0.00510	-0.0174	0.00369	-0.0130	0.00798
	(0.0171)	(0.0255)	(0.0170)	(0.0253)	(0.0233)	(0.0357)	(0.0239)	(0.0364)
Observations	12,729	12,729	12,729	12,729	12,729	12,729	12,729	12,729
R-squared	0.005	0.005	0.039	0.039	0.006	0.005	0.039	0.039
Completion	-0.00182	-0.00351	0.000895	-0.00143	-0.00265	-0.00531	0.00135	-0.00224
	(0.00485)	(0.00743)	(0.00487)	(0.00746)	(0.00692)	(0.0109)	(0.00717)	(0.0113)
Observations	13,083	13,083	13,083	13,083	13,083	13,083	13,083	13,083
R-squared	0.002	0.002	0.020	0.020	0.003	0.003	0.020	0.020
Panel B. University level								
Enrollment	-0.0183	-0.00629	-0.0168	-0.00562	-0.0267	-0.00953	-0.0254	-0.00883
	(0.0165)	(0.0249)	(0.0164)	(0.0247)	(0.0223)	(0.0345)	(0.0228)	(0.0351)
Observations	13,083	13,083	13,083	13,083	13,083	13,083	13,083	13,083
R-squared	0.006	0.006	0.040	0.041	0.006	0.006	0.041	0.041
Completion	-0.000712	0.00113	0.00117	0.00253	-0.000999	0.00176	0.00169	0.00404
	(0.00346)	(0.00537)	(0.00347)	(0.00538)	(0.00462)	(0.00787)	(0.00475)	(0.00809)
Observations	15,723	15,723	15,723	15,723	15,723	15,723	15,723	15,723
R-squared	0.002	0.002	0.015	0.015	0.002	0.002	0.015	0.015
First Generation of University Students	-0.00341	0.000277	-0.00180	-7.94e-05	-0.00434	0.000394	-0.00234	-0.000115
	(0.0120)	(0.0181)	(0.0120)	(0.0181)	(0.0140)	(0.0233)	(0.0141)	(0.0233)
Observations	21,482	21,482	21,482	21,482	21,482	21,482	21,482	21,482
R-squared	0.002	0.002	0.039	0.039	0.002	0.002	0.039	0.039
Panel C. Technical school								
Enrollment	-0.0166	0.00466	-0.0154	0.00545	-0.0166	0.00466	-0.0154	0.00545
	(0.0142)	(0.0209)	(0.0141)	(0.0208)	(0.0142)	(0.0209)	(0.0141)	(0.0208)
Observations	17,244	17,244	17,244	17,244	17,244	17,244	17,244	17,244
R-squared	0.003	0.003	0.038	0.039	0.003	0.003	0.038	0.039
Completion	-0.0166	0.00466	-0.0154	0.00545	-0.0166	0.00466	-0.0154	0.00545
	(0.0142)	(0.0209)	(0.0141)	(0.0208)	(0.0142)	(0.0209)	(0.0141)	(0.0208)
Observations	17,244	17,244	17,244	17,244	17,244	17,244	17,244	17,244
R-squared	0.003	0.003	0.038	0.039	0.003	0.003	0.038	0.039

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In table 8, we analyze dummy variables of the period of time. We construct four dummy variables: the first one takes value 1 if individuals receive the transfer more than 72 months. The second one takes value 1 if individuals receive the transfer between 36 and 72 months. The third, takes value 1 if individuals receive the benefit between 1 and 36 months and the last one takes value 1 if individuals are non-eligible. The omitted variable is the last one.

The results show that people exposed to the program more than 72 months have greater probability of enrolling at tertiary education level in 15 percentage points. Moreover, people exposed to the program between 36 and 72 months increase the probability of enrolling in around 4 percentage points (these results are not robust for different polynomial orders and controlling for different variables). Last, people who were exposed less to the program have a smaller probability of enrolling at tertiary education institution than people who were non eligible to the program. The reason could be that people who receive the transfer less time may not fulfill the education requirements. The results are explained basically by university level.

For completion rates we do not find any results, but for the probability of being first generation of university students the results are positive, where people exposed more than 72 months increase the probability of being first generation of university students between 8 and 11 percentage points. Individuals who receive between 36 and 72 months have a greater probability of being first generation of university students than non-eligible people in around 13 percentage points (again these results are non-robust for different specifications). Finally, people we do not find effects for people exposed to the program between 1 and 36 months.

Table 8. Effect of intensity of CCT program in tertiary education outcomes (total, technical and university). Variable time in dummies.

	Enrollment				Completion				First Generation of University Students			
VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables
Panel A. Tertiary education												
Eligibility*time>= 72 months	0.162***	0.146***	0.163***	0.149***	-0.00156	-0.000466	-0.00782	-0.00633				
	(0.0206)	(0.0239)	(0.0416)	(0.0404)	(0.00517)	(0.00613)	(0.00658)	(0.00749)				
Eligibility*time>= 36 & <72 months	0.210***	0.189***	0.0435**	0.0250	0.00638	0.00782	-0.0241***	-0.0222***				
	(0.0189)	(0.0240)	(0.0214)	(0.0260)	(0.00530)	(0.00695)	(0.00674)	(0.00808)				
Eligibility*time>= 1 & <36 months	-0.0250*	-0.0251*	-0.0270**	-0.0271**	-0.000243	-0.000253	-0.00285	-0.00286				
	(0.0130)	(0.0130)	(0.0129)	(0.0129)	(0.00337)	(0.00337)	(0.00337)	(0.00338)				
Observations	12,729	12,729	12,729	12,729	13,083	13,083	13,083	13,083				
R-squared	0.007	0.007	0.040	0.040	0.004	0.004	0.020	0.020				
Panel B. University level												
Eligibility*time>= 72 months	0.165***	0.149***	0.166***	0.151***	0.00120	0.00192	-0.00327	-0.00227	0.119***	0.116***	0.0843**	0.0838**
	(0.0198)	(0.0232)	(0.0458)	(0.0442)	(0.00375)	(0.00433)	(0.00548)	(0.00599)	(0.0141)	(0.0169)	(0.0359)	(0.0370)
Eligibility*time>= 36 & <72 months	0.201***	0.180***	0.0410**	0.0214	0.00365	0.00453	-0.0171***	-0.0159***	0.137***	0.133***	-0.00789	-0.00850
	(0.0182)	(0.0234)	(0.0206)	(0.0253)	(0.00380)	(0.00474)	(0.00480)	(0.00551)	(0.0137)	(0.0179)	(0.0149)	(0.0188)

Eligibility*time>= 1 & <30 months	-0.0227*	-0.0229*	-0.0245**	-0.0247**	0.00291	0.00305	0.00144	0.00157	-0.000405	-0.000452	-0.00544	-0.00533
	(0.0123)	(0.0123)	(0.0122)	(0.0122)	(0.00255)	(0.00257)	(0.00254)	(0.00256)	(0.00892)	(0.00898)	(0.00875)	(0.00881)
Observations	13,083	13,083	13,083	13,083	15,723	15,723	15,723	15,723	21,482	21,482	21,482	21,482
R-squared	0.007	0.007	0.041	0.041	0.003	0.003	0.016	0.016	0.003	0.003	0.039	0.039
Panel C. Technical school												
Eligibility*time>= 72 months	0.00161	0.0102	-0.00461	0.00468	-0.000714	-0.000940	-0.00336	-0.00332				
	(0.00710)	(0.00837)	(0.00735)	(0.00830)	(0.00315)	(0.00382)	(0.00321)	(0.00390)				
Eligibility*time>= 36 & <72 months	0.0210***	0.0315***	-0.00956	0.00176	0.00547*	0.00521	-0.00521	-0.00512				
	(0.00693)	(0.00877)	(0.00795)	(0.00957)	(0.00319)	(0.00421)	(0.00365)	(0.00476)				
Eligibility*time>= 1 & <36 months	-0.00213	-0.00194	-0.00487	-0.00468	-0.000903	-0.000959	-0.00215	-0.00221				
	(0.00476)	(0.00476)	(0.00479)	(0.00479)	(0.00201)	(0.00199)	(0.00201)	(0.00200)				
Observations	18,118	18,118	18,118	18,118	17,576	17,576	17,576	17,576				
R-squared	0.003	0.003	0.014	0.014	0.002	0.002	0.007	0.007				
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												

Figures reported in the Appendix show differences in the enrollment of individuals belonging to eligible and ineligible households, which allows visualizing the potential effect that is evaluated in the estimation. Despite the variability exhibit in the data due to the relatively limited amount of tertiary education admissions, there is a clear jump for the cohorts under analysis in both enrollment and graduation when we consider the intensity of the treatment.

Heterogeneity effect of the program

The tables A.3 to A.14 report our estimates for university and technical education respectively by different population groups: gender, region and cohorts. The specifications focus on the main estimations and the intensity of the treatment, number of months that beneficiaries received the transfer from 2008 to 2018 (for dummy variables specification). Overall, we do not find robust effects for the main analysis for any group (tables A.3 to A.8). However, we find heterogeneous effects when we consider the time exposed to the program for the population under analysis.

For individuals from Montevideo we find that people exposed to the program more than 72 months increase the probability of enrolling at tertiary education institution in around 18 percentage points when we compare with non-eligible people. The effect for people who receive the transfer between 36 and 72 months the results indicate a rise in 24 percentage points (results that are non-robust for different polynomial order). The results are concentrated at the University level with an increase for people who were exposed to the program more than 72 months ranging in between 16 and 23 percentage points. Individuals who receive the transfer less than 36 months do not have any effect compare to non-eligible population. Additionally, we do not find effects for completion rates. However, the probability of being first generation of university students is positive and significant for people who were exposed more than 72 months. This indicator increases between 8 and 10 percentage points compared with non-eligible population. Again, there is non-effect for people who receive the benefit less than 36 months.

When we consider people outside the main capital the results are a bit different. The probability of enrollment at tertiary education institution increases between 10 and 16 percentage points for individuals exposed to the program more than 72 months, compared to non-eligible individuals. For individuals exposed less than 36 months the probability of enrollment decreases in around 3 percentage points compared with non-eligible people.

The effects are concentrated at the university level. The probability of completing a tertiary education degree decreases for individuals who were exposed to the transfer for a period between 36 and 72 months in around 1 and 1.5 percentage points. When we separate the effects between a university degree or a technical school career we do not find effects. Moreover, the probability of being first generation of university students increases for people exposed more time to the program, rising in 10 percentage points (results are non-robust for every specification).

When we analyze the effect by gender, we find that for men exposed to the program more than 72 months and between 36 and 72 months the probability of enroll in a tertiary education institution increase between 7 and 16 percentage points, being more pronounced the effects for individuals more exposed. The results are explained mainly by the effect at University level, ranging in between 7 and 13 percentage points. For technical school, we find an increase on the probability of enrolling for men who received the benefit between 36 and 72 months (non-robust results). The probability of completing a university degree increase for men who were exposed more time to the benefit (more than 36). This magnitude although being significant is very small (around 0.5 percentage points). The probability of being first generation of university students increase in around 8 percentage points for those men who receive the benefit more than 72 months.

The effects for women are more pronounced. First the probability of being enrolled at tertiary education institution is positive and significant for women who receive the benefit more than 72 months, increasing around 18 percentage points. However, the probability of enrollment at tertiary education institution is negative for women who receive the benefit less than 36 months in 5 percentage points compared with non-eligible people. When we observe the university level the probability of enrolling at the institution increases in around 20 percentage points for women who were exposed more than 72 months and decreases for those women who receive the transfer less than 36 months in 4 percentage points. The probability of completing a degree decreases for women exposed to the program between 36 and 72 months in around 2 percentage points. These results are explained mainly by the results found at the University level. However, the probability of being first generation of university students increases in around 10 and 14 percentage points for women who received the benefit more time.

Last, we evaluate differences within the cohort under analysis. We analyze the cohort 1991-1996 (people who were in high school when the program began) and individuals who born between 1997 and 2002 (i.e. individuals who were at school at the beginning of the CCT

program). For individuals who were between 12 and 17 years old when the program began we find a positive and significant effect on tertiary education enrollment in about 67 percentage points. When we observe the impact for individuals exposed less than 36 months the results are negative compared with non-eligible people (4 percentage points). The results are still positive and significant for university level, but negative for technical school. Additionally, the completion rate at tertiary education institution decreases for people who were exposed to the program more than 72 months and between 36 and 72 months compared with non-eligible individuals (between 1 and 3 percentage points). In this case the effect is explained by the results at technical school level (which decreases in 1.5 percentage points).

For individuals who had between 6 and 11 years old when the program began we find a positive effect on the probability of enrollment at tertiary education institution (specifically at university level) for people exposed more than 72 months. This increase ranges between 15 and 22 percentage points for tertiary education and between 18 and 24 percentage points for university level. This population has non-effect on the probability of completing a tertiary education degree.

Our evidence shows that the program improves the long-term educational performance of the cohorts that were children and adolescents when the program began. Estimated impacts are not conclusive and vary according some individuals' characteristics. This suggests that interventions at early ages can have effects in the medium and long term on human capital accumulation. However, the probability of being first generation of university students is positive and significant in around 14 percentage points.

Figures reported in the Appendix show differences in the enrollment of individuals belonging to eligible and ineligible households, and allow to visualize the potential effect that is evaluated in the estimation (we report the graphs considering the intensity of the program). Despite the variability exhibited in the data due to the relatively limited amount of tertiary education admissions, there is a clear jump for the cohorts under analysis in both enrollments on University and non-university institution.

To sum up, the time exposed to the program is a fundamental variable to explain the results found, being people who receive more than 72 months the benefit those who have greater results compared with non-eligible individuals. The effects are mainly concentrated at university level and on the probability of enrollment and being first generation of university students. Non-results were found on the probability of completing a degree at tertiary education institution.

Channels

In order to analyze possible channels that may contribute to better understand the estimated effects, we rely on baseline and follow-up surveys designed with the aim of analyzing program effects. The completeness of these information systems allows the analysis of different behaviors of individuals and their households. It is important to note that estimated effects are local around the eligibility threshold, which may imply a lower bound of the average program effect on outcomes of the whole population of treated households. Additionally, we complement the analysis with administrative records of high school attendance.

We start by analyzing the effect of the program on the income of households with children between 6 and 17 years of age in 2008. We do not find any effect on the monthly income (Table A.15). Traditional labor economics theory predicts that social programs tend to reduce the labor supply due to an income effect. Additionally, these types of programs, such as AFAM-PE, may potentially affect working hours and labor participation due to a substitution effect. In our case, it would be important to analyze whether the parents of individuals in our affected cohorts have undergone changes in terms of labor participation and their type of occupation, which may impact the decision to enroll and graduate from tertiary education. This mechanism can be explained by several factors. On the one hand, a potential change in working conditions can have positive or negative impacts in household conditions. A second explanation may be related to changes in the type of occupation that may affect the decisions that children make regarding enrollment in tertiary education, and potentially the type of degree they choose. Lastly, decisions regarding the occupation of the different members of the household (father or mother) can generate an intergenerational transmission in the educational preferences of their children that may impact our results. In this sense, in table A.15 we observe a positive effect on occupation of household members in around 11.4 percentage points, a decrease in hours of work, an increase in fathers´ occupation, but not in mother (these results are non-robust for different specifications).

In addition, we analyze the effect of the expectation of parents regarding the education of their children as a mechanism. The belief that parents have about the level of education that their children can achieve may influence their present and future decisions. The survey asks parents *up to what educational level they think their children will study,* and we believe that it could be a potential mechanism that affects our variables of interest. Estimates reported in Table A.16, show that there are significant differences in the expectations that parents have about their children around the eligibility threshold, specifically on the expectation

about study in high school in around 7 and 15 percentage points. This evidence may indicate that these beliefs could influence the educational decisions of children in the medium term.

Another relevant variable to analyze is students' educational outcomes at different levels of education (primary, secondary and tertiary). We evaluate differences in having incomplete and complete primary school, incomplete and complete high school and incomplete and complete tertiary education. Estimates reported in Table A.17 show that eligible individuals belonging to the 1991 to 2002 birth cohorts have less probability to have incomplete primary school than non-eligible individuals of the same cohorts in 5.3 percentage points (non-robust for different specifications). Additionally, eligible individuals have greater probability of complete primary school according to the follow up survey in around 3 percentage points (non-robust for different specifications). This may indicate that a better performance in primary school can explain certain educational decisions in the medium and long term, according the follow up survey.

Further, we do not find a significant improvement of certain housing conditions for eligible families, specifically in households' sanitation (table A.18).

Lastly, we analyze the effect of high school attendance using administrative records. In this we analyze the differences between eligible and non-eligible population of our cohorts and then we evaluate the differences according time of exposure to the program. In Table A.19 we observe a positive effect on high school enrollment in 5 percentage points when comparing the eligible and ineligible groups around the eligibility threshold (non-robust for different specifications). Furthermore, in table A.20 we show that individuals who receive the transfer more than 72 months are more likely to attend high school in a range between 5 and 17 percentage points than non-eligible individuals. People who were exposed to the program between 36 and 72 months are more likely to attend high school in around 5 percentage points. However, individuals who receive the benefit between 1 and 36 months are less likely to attend high school in around 3 and 5 percentage points. This result leads to the question of what role, if any, do conditionalities play in explaining our results. It can be thought that high school attendance of children between 6 and 17 years of age in 2008 may partially explain the results on human capital in the medium and long term.

In sum, this analysis can give us guidelines on which channels may be correlated with the educational performance of the population under analysis.

Final Considerations

This study evaluates the impact of a conditional cash program on the medium- and long-term educational performance of individuals who were children and adolescents when the program began. In particular, we analyze the effect on the probability of enrollment in tertiary education (university and non-university) as well as completion rates and the probability of being first generation of university students. The program consists on a conditional transfer to households belonging to the lower end of the income distribution – a population with an average 10% of attendance in tertiary education. Using a novel data set of CCT program matched with administrative records from tertiary education, and relying on a discontinuous regression design, our estimates indicate an increase in enrollment in tertiary education (university and non-university institutions) and on the probability of being first generation of university students in the medium term.

Our results indicate that the intensity of the transfer program led to an increase in tertiary education enrollment and on the probability of being first generation of university students. The magnitude effect increases with the number of months that people were exposed to the program. We do not find effects for completion rates. The results persist for different population groups, were the effects are more pronounced for people living in the main capital, for women and for individuals who were 6 and 11 years old when the program began. This indicates an improvement in the access of tertiary education from certain groups of beneficiary children and young individuals compared to children and young individuals from applicant but ineligible households. We also explore which channels may explain these effects. We provide evidence suggesting that the educational expectations of parents, as well as the higher secondary school enrollment of these cohorts may drive the changes found. We also show that other behaviors that may explain educational decisions such as the educational level of the parents, their occupational category and level of labor income are not affected by program participation.

This generates an improvement in the human capital accumulation of the eligible population, which has implications for improvements towards equal opportunities. Our results suggest that conditional cash transfers may potentially contribute to break the cycles of intergenerational poverty by improving educational outcomes.

Our results are relevant both for Latin American countries and the rest of the world, indicating that conditional cash transfer programs have an effect on the human capital accumulation of children and adolescents from beneficiary households.

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Annex

Table A.1. Manipulation test. P-value and observations for each polynomial order.

	2008		2009		2008-2009	
Polynomial order	p-value	Observations	p-value	Observations	p-value	Observations
1	0.126	2246	0.600	776	0.007	2403
2	0.359	7075	0.220	4062	0.068	12268
3	0.671	7712	0.702	4918	0.908	10416
4	0.567	10330	0.231	9212	0.508	15085

Table A.2. Manipulation test. P- value and observations for different bandwidths.

	2008			**2009**			**2008-2009**		
	p-value	Obs on the left	Obs on the right	p-value	Obs on the left	Obs on the right	p-value	Obs on the left	Obs on the right
0.02	0.345	1262	1506	0.542	485	694	0.651	1747	2200
0.03	0.384	1829	2257	0.271	749	1111	0.194	2578	3368
0.04	0.154	2436	3012	0.250	931	1510	0.074	3367	4522
0.05	0.082	3003	3928	0.069	1146	1928	0.392	4149	5856
0.06	0.708	3602	5204	0.018	1325	2422	0.106	4927	7626
0.07	0.061	4166	6489	0.019	1501	2958	0.795	5667	9447
0.08	0.000	4653	7928	0.025	1661	3513	0.060	6314	11441
0.09	0.023	5126	9514	0.021	1832	4070	0.001	6958	13584
0.1	0.167	5582	11131	0.167	1953	4715	0.167	7535	15846
0.11	0.972	6000	12823	0.972	2099	5318	0.972	8099	18141
0.12	0.152	6366	14664	0.152	2262	6050	0.152	8628	20714
0.13	0.000	6697	16460	0.010	2405	6627	0.000	9102	23087
0.14	0.000	7015	18330	0.000	2525	7283	0.000	9540	25613
0.15	0.000	7309	20476	0.000	2648	8081	0.000	9957	28557
0.16	0.000	7642	22539	0.000	2759	8754	0.004	10401	31293
0.17	0.000	7872	24718	0.000	2837	9492	0.035	10709	34210
0.18	0.000	8097	26844	0.000	2921	10169	0.194	11018	37013
0.19	0.000	8250	29172	0.000	2994	10932	0.709	11244	40104
0.2	0.000	8387	31963	0.000	3038	11844	0.579	11425	43807
0.21	0.000	8529	35019	0.000	3090	12693	0.247	11619	47712

Table A.3. Effect of CCT on tertiary outcomes for individuals in the main capital

	Sharp Specification				Fuzzy Specification			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education								
Enrollment	-0.0546**	-0.0570	-0.0419	-0.0418	-0.0818**	-0.0865	-0.0645	-0.0654
	(0.0272)	(0.0392)	(0.0270)	(0.0388)	(0.0396)	(0.0607)	(0.0400)	(0.0610)
Observations	4,178	4,178	4,178	4,178	4,178	4,178	4,178	4,178
R-squared	0.011	0.012	0.053	0.054	0.011	0.012	0.052	0.053
Completion	-0.00661	-0.00630	-0.00503	-0.00397	-0.0101	-0.00906	-0.00797	-0.00601
	(0.00604)	(0.00763)	(0.00620)	(0.00791)	(0.00942)	(0.0116)	(0.00998)	(0.0127)
Observations	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311
R-squared	0.002	0.002	0.011	0.011	0.002	0.002	0.011	0.011
Panel B. University level								
Enrollment	-0.0461	-0.0821*	-0.0371	-0.0618	-0.0708	-0.118*	-0.0577	-0.0914
	(0.0295)	(0.0429)	(0.0291)	(0.0422)	(0.0436)	(0.0635)	(0.0431)	(0.0632)
Observations	3,312	3,312	3,312	3,312	3,312	3,312	3,312	3,312
R-squared	0.014	0.014	0.050	0.051	0.013	0.010	0.049	0.047
Completion	6.46e-05	-0.00416	0.00174	-0.00318	6.46e-05	-0.00416	0.00174	-0.00318
	(0.00393)	(0.00511)	(0.00403)	(0.00505)	(0.00393)	(0.00511)	(0.00403)	(0.00505)
Observations	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808
R-squared	0.002	0.003	0.012	0.012	0.002	0.003	0.012	0.012
First Generation of University Students	-0.0189	-0.0195	-0.0120	-0.00898	-0.0257	-0.0272	-0.0166	-0.0128
	(0.0200)	(0.0312)	(0.0199)	(0.0309)	(0.0263)	(0.0414)	(0.0262)	(0.0414)
Observations	5,090	5,090	5,090	5,090	5,090	5,090	5,090	5,090
R-squared	0.004	0.004	0.047	0.047	0.003	0.003	0.047	0.047
Panel C. Technical school								
Enrollment	0.00474	0.00633	0.00843	0.00997	0.00705	0.00967	0.0128	0.0157
	(0.00999)	(0.0144)	(0.0101)	(0.0147)	(0.0144)	(0.0211)	(0.0149)	(0.0222)
Observations	4,344	4,344	4,344	4,344	4,344	4,344	4,344	4,344
R-squared	0.001	0.001	0.009	0.009	0.001	0.001	0.009	0.009
Completion	-0.000980	-0.000710	0.000115	0.000103	-0.000980	-0.000710	0.000115	0.000103
	(0.00520)	(0.00681)	(0.00530)	(0.00689)	(0.00520)	(0.00681)	(0.00530)	(0.00689)
Observations	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335
R-squared	0.002	0.002	0.009	0.009	0.002	0.002	0.009	0.009

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.4. Effect of CCT on tertiary education outcomes for individuals outside the main capital

	Sharp Specification				Fuzzy Specification			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education								
Enrollment	0.0209	0.0146	0.0227	0.0108	0.0295	0.0224	0.0333	0.0172
	(0.0209)	(0.0315)	(0.0209)	(0.0313)	(0.0267)	(0.0429)	(0.0276)	(0.0438)
Observations	9,731	9,731	9,731	9,731	9,731	9,731	9,731	9,731
R-squared	0.007	0.007	0.038	0.039	0.005	0.006	0.037	0.038
Completion	-0.00160	0.00476	0.00107	0.00811	-0.00239	0.00687	0.00168	0.0124
	(0.00719)	(0.0111)	(0.00724)	(0.0113)	(0.0104)	(0.0155)	(0.0109)	(0.0164)
Observations	7,397	7,397	7,397	7,397	7,397	7,397	7,397	7,397
R-squared	0.002	0.002	0.025	0.026	0.002	0.001	0.025	0.024
Panel B. University level								
Enrollment	0.00258	0.0327	0.00470	0.0281	0.00385	0.0472	0.00706	0.0410
	(0.0227)	(0.0344)	(0.0224)	(0.0340)	(0.0303)	(0.0434)	(0.0301)	(0.0430)
Observations	7,397	7,397	7,397	7,397	7,397	7,397	7,397	7,397
R-squared	0.003	0.004	0.035	0.036	0.003	0.001	0.035	0.034
Completion	-0.000536	-0.00409	0.000828	-0.00305	-0.000771	-0.00641	0.00121	-0.00488
	(0.00357)	(0.00511)	(0.00362)	(0.00504)	(0.00522)	(0.00834)	(0.00539)	(0.00844)
Observations	5,928	5,928	5,928	5,928	5,928	5,928	5,928	5,928
R-squared	0.004	0.004	0.027	0.027	0.004	0.004	0.027	0.027
First Generation of University Students	0.000350	0.0238	0.00120	0.0211	0.000457	0.0337	0.00160	0.0304
	(0.0167)	(0.0254)	(0.0169)	(0.0255)	(0.0195)	(0.0313)	(0.0199)	(0.0316)
Observations	12,178	12,178	12,178	12,178	12,178	12,178	12,178	12,178
R-squared	0.002	0.002	0.040	0.040	0.002	0.001	0.040	0.039
Panel C. Technical school								
Enrollment	0.00395	-0.000196	0.00923	0.00314	0.00553	-0.000303	0.0134	0.00502
	(0.00826)	(0.0128)	(0.00833)	(0.0127)	(0.0118)	(0.0202)	(0.0122)	(0.0208)
Observations	10,146	10,146	10,146	10,146	10,146	10,146	10,146	10,146
R-squared	0.001	0.001	0.015	0.015	0.001	0.001	0.014	0.015
Completion	-0.00374	-0.00246	-0.00326	-0.00290	-0.00563	-0.00373	-0.00503	-0.00348
	(0.00429)	(0.00571)	(0.00445)	(0.00595)	(0.00651)	(0.00845)	(0.00692)	(0.00920)
Observations	9,587	9,587	9,587	9,587	9,587	9,587	9,587	9,587
R-squared	0.001	0.001	0.007	0.007	0.001	0.001	0.007	0.007

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.5. Effect of CCT tertiary education outcomes for men

	Sharp Specification				Fuzzy Specification			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education								
Enrollment	-0.00789	-0.00689	-0.00507	-0.00375	-0.0116	-0.0103	-0.00776	-0.00584
	(0.0211)	(0.0316)	(0.0213)	(0.0320)	(0.0293)	(0.0428)	(0.0305)	(0.0449)
Observations	6,356	6,356	6,356	6,356	6,356	6,356	6,356	6,356
R-squared	0.004	0.005	0.014	0.015	0.004	0.005	0.014	0.015
Completion	-0.0112*	-0.0129	-0.0102*	-0.0107	-0.0170*	-0.0184	-0.0162*	-0.0162
	(0.00589)	(0.00809)	(0.00588)	(0.00805)	(0.00912)	(0.0119)	(0.00953)	(0.0124)
Observations	5,381	5,381	5,381	5,381	5,381	5,381	5,381	5,381
R-squared	0.001	0.001	0.013	0.013	0.001	0.001	0.011	0.011
Panel B. University level								
Enrollment	-0.00336	-0.0150	-0.00300	-0.0139	-0.00483	-0.0230	-0.00445	-0.0220
	(0.0190)	(0.0283)	(0.0191)	(0.0285)	(0.0259)	(0.0398)	(0.0268)	(0.0412)
Observations	7,325	7,325	7,325	7,325	7,325	7,325	7,325	7,325
R-squared	0.008	0.008	0.014	0.014	0.008	0.008	0.014	0.015
Completion	-0.00592*	-0.00495	-0.00517*	-0.00447	-0.00836*	-0.00768	-0.00754*	-0.00713
	(0.00309)	(0.00466)	(0.00299)	(0.00463)	(0.00440)	(0.00730)	(0.00440)	(0.00746)
Observations	7,861	7,861	7,861	7,861	7,861	7,861	7,861	7,861
R-squared	0.001	0.001	0.007	0.007	0.001	0.001	0.006	0.006
First Generation of University Students	-0.0220	-0.0143	-0.0166	-0.0132	-0.0220	-0.0143	-0.0166	-0.0132
	(0.0167)	(0.0254)	(0.0167)	(0.0254)	(0.0167)	(0.0254)	(0.0167)	(0.0254)
Observations	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888
R-squared	0.004	0.004	0.018	0.018	0.004	0.004	0.018	0.018
Panel C. Technical school								
Enrollment	-0.00622	-0.00966	-0.00171	-0.00433	-0.00935	-0.0140	-0.00268	-0.00660
	(0.0110)	(0.0165)	(0.0110)	(0.0165)	(0.0163)	(0.0238)	(0.0171)	(0.0249)
Observations	5,680	5,680	5,680	5,680	5,680	5,680	5,680	5,680
R-squared	0.000	0.001	0.011	0.012	0.000	0.001	0.011	0.012
Completion	-0.00232	-0.00841	-0.00105	-0.00724	-0.00331	-0.0130	-0.00156	-0.0115
	(0.00424)	(0.00569)	(0.00429)	(0.00572)	(0.00613)	(0.00888)	(0.00639)	(0.00920)
Observations	7,506	7,506	7,506	7,506	7,506	7,506	7,506	7,506
R-squared	0.001	0.001	0.006	0.006	0.001	0.000	0.006	0.005

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.6. Effect of CCT tertiary education outcomes for women

	Sharp Specification				Fuzzy Specification			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education								
Enrollment	-0.0155	0.0102	-0.0117	0.0140	-0.0227	0.0154	-0.0178	0.0219
	(0.0249)	(0.0373)	(0.0248)	(0.0369)	(0.0360)	(0.0567)	(0.0372)	(0.0583)
Observations	6,194	6,194	6,194	6,194	6,194	6,194	6,194	6,194
R-squared	0.006	0.007	0.027	0.027	0.008	0.006	0.027	0.026
Completion	0.00495	0.0144	0.00856	0.0186	0.00742	0.0210	0.0134	0.0284
	(0.00878)	(0.0138)	(0.00888)	(0.0141)	(0.0124)	(0.0191)	(0.0130)	(0.0202)
Observations	5,327	5,327	5,327	5,327	5,327	5,327	5,327	5,327
R-squared	0.003	0.004	0.027	0.027	0.002	0.002	0.025	0.021
Panel B. University level								
Enrollment	-0.0268	-0.00999	-0.0241	-0.00883	-0.0381	-0.0155	-0.0354	-0.0141
	(0.0232)	(0.0354)	(0.0231)	(0.0350)	(0.0324)	(0.0535)	(0.0334)	(0.0546)
Observations	7,173	7,173	7,173	7,173	7,173	7,173	7,173	7,173
R-squared	0.008	0.008	0.026	0.026	0.009	0.009	0.027	0.026
Completion	0.00847	0.0125	0.0143*	0.0142	0.00847	0.0125	0.0143*	0.0142
	(0.00821)	(0.0127)	(0.00856)	(0.0128)	(0.00821)	(0.0127)	(0.00856)	(0.0128)
Observations	3,983	3,983	3,983	3,983	3,983	3,983	3,983	3,983
R-squared	0.005	0.006	0.030	0.030	0.005	0.006	0.030	0.030
First Generation of University Students	0.00697	0.0159	0.00829	0.0135	0.00877	0.0228	0.0106	0.0196
	(0.0180)	(0.0273)	(0.0179)	(0.0269)	(0.0216)	(0.0371)	(0.0218)	(0.0371)
Observations	11,282	11,282	11,282	11,282	11,282	11,282	11,282	11,282
R-squared	0.003	0.003	0.031	0.031	0.002	0.002	0.031	0.030
Panel C. Technical school								
Enrollment	0.0132	0.0158	0.0169*	0.0193	0.0197	0.0234	0.0262*	0.0298
	(0.00970)	(0.0147)	(0.00984)	(0.0148)	(0.0144)	(0.0217)	(0.0151)	(0.0228)
Observations	5,566	5,566	5,566	5,566	5,566	5,566	5,566	5,566
R-squared	0.001	0.001	0.013	0.013	0.001	0.001	0.008	0.008
Completion	-0.00189	0.00186	-0.000555	0.00250	-0.00267	0.00288	-0.000810	0.00399
	(0.00427)	(0.00702)	(0.00430)	(0.00708)	(0.00604)	(0.0107)	(0.00627)	(0.0111)
Observations	7,352	7,352	7,352	7,352	7,352	7,352	7,352	7,352
R-squared	0.001	0.001	0.009	0.009	0.001	0.001	0.009	0.008

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.7. Effect of CCT on tertiary education outcomes for the cohorts 1991-1996

	Sharp Specification				Fuzzy Specification			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education								
Enrollment	-0.00922	0.0139	-0.0120	-0.0129	-0.0153	0.0211	-0.0214	0.00124
	(0.0264)	(0.0390)	(0.0262)	(0.0393)	(0.0429)	(0.0582)	(0.0456)	(0.0619)
Observations	4,558	4,558	4,558	4,558	4,558	4,558	4,558	4,558
R-squared	0.003	0.003	0.039	0.039	0.003	0.003	0.039	0.039
Completion	-0.00774	2.05e-05	-0.00432	0.00270	-0.0128	3.16e-05	-0.00767	0.00449
	(0.0104)	(0.0154)	(0.0106)	(0.0157)	(0.0167)	(0.0226)	(0.0181)	(0.0247)
Observations	4,806	4,806	4,806	4,806	4,806	4,806	4,806	4,806
R-squared	0.001	0.002	0.014	0.014	0.002	0.002	0.014	0.014
Panel B. University level								
Enrollment	-0.0116	-0.0192	-0.0129	-0.0233	-0.0180	-0.0325	-0.0203	-0.0403
	(0.0222)	(0.0331)	(0.0217)	(0.0319)	(0.0331)	(0.0539)	(0.0331)	(0.0535)
Observations	6,566	6,566	6,566	6,566	6,566	6,566	6,566	6,566
R-squared	0.006	0.006	0.041	0.041	0.006	0.006	0.041	0.041
Completion	5.84e-06	-0.000693	0.00311	0.00195	9.00e-06	-0.00118	0.00504	0.00348
	(0.00712)	(0.0110)	(0.00723)	(0.0111)	(0.0104)	(0.0173)	(0.0111)	(0.0183)
Observations	6,636	6,636	6,636	6,636	6,636	6,636	6,636	6,636
R-squared	0.002	0.002	0.016	0.016	0.002	0.003	0.016	0.016
First Generation of University Students	0.0170	0.0169	0.0188	0.0195	0.0217	0.0243	0.0245	0.0286
	(0.0172)	(0.0255)	(0.0170)	(0.0251)	(0.0212)	(0.0350)	(0.0214)	(0.0352)
Observations	10,815	10,815	10,815	10,815	10,815	10,815	10,815	10,815
R-squared	0.003	0.003	0.035	0.035	0.002	0.002	0.035	0.034
Panel C. Technical school								
Enrollment	0.00626	-0.00983	0.00857	-0.00850	0.00963	-0.0167	0.0139	-0.0152
	(0.0111)	(0.0162)	(0.0113)	(0.0164)	(0.0170)	(0.0279)	(0.0180)	(0.0294)
Observations	6,632	6,632	6,632	6,632	6,632	6,632	6,632	6,632
R-squared	0.000	0.001	0.006	0.006	0.006	0.001	0.005	0.006
Completion	-0.00565	-0.00335	-0.00478	-0.00271	-0.00843	-0.00576	-0.00745	-0.00486
	(0.00568)	(0.00790)	(0.00575)	(0.00805)	(0.00841)	(0.0135)	(0.00889)	(0.0143)
Observations	7,382	7,382	7,382	7,382	7,382	7,382	7,382	7,382
R-squared	0.001	0.001	0.002	0.003	0.001	0.001	0.003	0.003

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.8. Effect of CCT on tertiary education outcomes for the cohorts 1997-2002

	Sharp Specification				Fuzzy Specification			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education								
Enrollment	0.00875	-0.0150	0.00781	0.00732	0.0126	-0.0207	0.0117	-0.0166
	(0.0287)	(0.0433)	(0.0284)	(0.0443)	(0.0396)	(0.0571)	(0.0405)	(0.0583)
Observations	4,578	4,578	4,578	4,578	4,578	4,578	4,578	4,578
R-squared	0.004	0.004	0.040	0.041	0.003	0.006	0.039	0.041
Completion	0.00298	0.00304	0.00342	0.00364	0.00298	0.00304	0.00342	0.00364
	(0.00402)	(0.00660)	(0.00410)	(0.00673)	(0.00402)	(0.00660)	(0.00410)	(0.00673)
Observations	2,864	2,864	2,864	2,864	2,864	2,864	2,864	2,864
R-squared	0.001	0.001	0.003	0.004	0.001	0.001	0.003	0.004
Panel B. University level								
Enrollment	-0.00967	-0.000657	-0.00744	0.00414	-0.0131	-0.000976	-0.0101	0.00616
	(0.0237)	(0.0353)	(0.0232)	(0.0348)	(0.0305)	(0.0502)	(0.0301)	(0.0493)
Observations	7,125	7,125	7,125	7,125	7,125	7,125	7,125	7,125
R-squared	0.007	0.007	0.040	0.040	0.007	0.007	0.040	0.040
Completion	0.00187	0.00365	0.00194	0.00367	0.00252	0.00542	0.00267	0.00557
	(0.00133)	(0.00268)	(0.00137)	(0.00267)	(0.00179)	(0.00399)	(0.00189)	(0.00406)
Observations	7,213	7,213	7,213	7,213	7,213	7,213	7,213	7,213
R-squared	0.001	0.003	0.003	0.004	0.002	0.001	0.003	0.002
First Generation of University Students	-0.0172	-0.0215	-0.0198	-0.0219	-0.0218	-0.0306	-0.0255	-0.0318
	(0.0173)	(0.0265)	(0.0171)	(0.0263)	(0.0211)	(0.0358)	(0.0211)	(0.0358)
Observations	9,246	9,246	9,246	9,246	9,246	9,246	9,246	9,246
R-squared	0.002	0.002	0.031	0.031	0.002	0.002	0.031	0.031
Panel C. Technical school								
Enrollment	0.00830	0.0170	0.0103	0.0183	0.0112	0.0253	0.0142	0.0278
	(0.00790)	(0.0124)	(0.00799)	(0.0123)	(0.0107)	(0.0189)	(0.0111)	(0.0192)
Observations	7,214	7,214	7,214	7,214	7,214	7,214	7,214	7,214
R-squared	0.001	0.001	0.007	0.007	0.001	0.001	0.005	0.003
Completion	0.00194	-0.00187	0.00204	-0.00180	0.00255	-0.00279	0.00273	-0.00273
	(0.00225)	(0.00375)	(0.00228)	(0.00380)	(0.00296)	(0.00560)	(0.00305)	(0.00576)
Observations	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158
R-squared	0.000	0.001	0.002	0.003		0.001	0.002	0.003

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.9. Effect of CCT intensity on tertiary outcomes for individuals in the main capital (time dummies variables)

	Enrollment				Completion				First Generation of University Students			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education												
Eligibility*time>= 72 months	0.153***	0.181***	0.198***	0.226***	0.000199	-0.00118	-0.00166	-0.00353				
	(0.0346)	(0.0417)	(0.0352)	(0.0419)	(0.00726)	(0.00878)	(0.00734)	(0.00950)				
Eligibility*time>= 30 & <72 months	0.217***	0.245***	-0.00149	0.0269	0.00482	0.00345	-0.00854	-0.0104				
	(0.0318)	(0.0395)	(0.0351)	(0.0418)	(0.00724)	(0.00876)	(0.0109)	(0.0122)				
Eligibility*time>= 1 & <30 months	-0.0290	-0.0290	-0.0308	-0.0309	-0.00111	-0.00108	-0.00240	-0.00238				
	(0.0217)	(0.0217)	(0.0215)	(0.0215)	(0.00458)	(0.00459)	(0.00482)	(0.00483)				
Observations	4,178	4,178	4,178	4,178	3,311	3,311	3,311	3,311				
R-squared	0.014	0.015	0.054	0.055	0.002	0.002	0.011	0.011				
Panel B. University level												
Eligibility*time>= 72 months	0.162***	0.187***	0.213***	0.233***	-0.000353	0.00303	-0.000169	0.00327	0.0826***	0.0947***	0.0957***	0.109***
	(0.0366)	(0.0442)	(0.0378)	(0.0446)	(0.00444)	(0.00583)	(0.00451)	(0.00589)	(0.0245)	(0.0322)	(0.0251)	(0.0328)
Eligibility*time>= 30 & <72 months	0.228***	0.254***	0.0338	0.0541	8.40e-06	0.00339	-0.0102*	-0.00674	0.116***	0.128***	-0.0437*	-0.0305
	(0.0337)	(0.0417)	(0.0374)	(0.0447)	(0.00457)	(0.00593)	(0.00565)	(0.00652)	(0.0231)	(0.0312)	(0.0254)	(0.0326)

Eligibility*time>= 1 & <30 months	-0.0246	-0.0242	-0.0220	-0.0218	0.00505	0.00503	0.00447	0.00445	-0.00486	-0.00481	-0.00825	-0.00819
	(0.0232)	(0.0231)	(0.0230)	(0.0230)	(0.00318)	(0.00320)	(0.00323)	(0.00325)	(0.0152)	(0.0152)	(0.0150)	(0.0150)
Observations	3,312	3,312	3,312	3,312	5,174	5,174	5,174	5,174	5,090	5,090	5,090	5,090
R-squared	0.016	0.017	0.052	0.052	0.003	0.003	0.013	0.013	0.005	0.005	0.048	0.048
Panel C. Technical school												
Eligibility*time>= 72 months	-0.0121	-0.0141	-0.0199	-0.0215	-0.00109	-0.00355	-0.00489	-0.00698				
	(0.0125)	(0.0146)	(0.0131)	(0.0151)	(0.00522)	(0.00643)	(0.00550)	(0.00680)				
Eligibility*time>= 30 & <72 months	0.00886	0.00687	-0.00955	-0.0112	0.00460	0.00212	0.000133	-0.00197				
	(0.0122)	(0.0143)	(0.0145)	(0.0171)	(0.00512)	(0.00635)	(0.00747)	(0.00943)				
Eligibility*time>= 1 & <30 months	-0.0120	-0.0120	-0.0127	-0.0127	-0.00320	-0.00319	-0.00482	-0.00481				
	(0.00869)	(0.00868)	(0.00864)	(0.00863)	(0.00332)	(0.00332)	(0.00302)	(0.00302)				
Observations	4,344	4,344	4,344	4,344	4,123	4,123	4,123	4,123				
R-squared	0.004	0.004	0.011	0.011	0.002	0.002	0.011	0.011				
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												

Table A.10. Effect of CCT intensity on tertiary education outcomes for individuals outside the main capital (time dummies variables)

	Enrollment				Completion				First Generation of University Students			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education												
Eligibility*time>= 72 months	0.161***	0.150***	0.108***	0.0997***	-0.00504	-0.00558	-0.0219**	-0.0225**				
	(0.0238)	(0.0256)	(0.0250)	(0.0268)	(0.00726)	(0.00777)	(0.00851)	(0.00907)				
Eligibility*time>= 30 & <72 months	-0.0321**	-0.0337**	-0.0239	-0.0255*	-0.0153***	-0.0155***	-0.0104**	-0.0105**				
	(0.0156)	(0.0156)	(0.0154)	(0.0154)	(0.00536)	(0.00538)	(0.00505)	(0.00506)				
Eligibility*time>= 1 & <30 months	-0.0261*	-0.0276*	-0.0276*	-0.0291*	-0.000195	-0.000265	-0.00321	-0.00327				
	(0.0150)	(0.0151)	(0.0148)	(0.0149)	(0.00511)	(0.00510)	(0.00515)	(0.00513)				
Observations	9,731	9,731	9,731	9,731	7,397	7,397	7,397	7,397				
R-squared	0.008	0.009	0.039	0.039	0.005	0.005	0.026	0.026				
Panel B. University level												
Eligibility*time>= 72 months	0.148***	0.132***	0.102***	0.0887***	0.00292	0.00174	-0.00818	-0.00891	0.120***	0.104***	0.0438**	0.0308
	(0.0260)	(0.0276)	(0.0272)	(0.0288)	(0.00479)	(0.00521)	(0.00529)	(0.00574)	(0.0187)	(0.0207)	(0.0196)	(0.0217)
Eligibility*time>= 30 & <72 months	-0.0328*	-0.0327*	-0.0223	-0.0222	-0.00640*	-0.00607*	-0.00386	-0.00356	-0.00955	-0.00999	-0.00508	-0.00541
	(0.0167)	(0.0167)	(0.0163)	(0.0163)	(0.00334)	(0.00334)	(0.00317)	(0.00316)	(0.0126)	(0.0126)	(0.0124)	(0.0124)

Eligibility*time>= 1 & <30 months	-0.0335**	-0.0335**	-0.0303*	-0.0303*	0.00157	0.00180	-9.80e-05	0.000126	-0.0110	-0.0113	-0.0151	-0.0153
	(0.0165)	(0.0165)	(0.0162)	(0.0162)	(0.00318)	(0.00321)	(0.00313)	(0.00317)	(0.0119)	(0.0119)	(0.0116)	(0.0116)
Observations	7,397	7,397	7,397	7,397	12,122	12,122	12,122	12,122	12,178	12,178	12,178	12,178
R-squared	0.005	0.005	0.036	0.036	0.005	0.005	0.018	0.019	0.002	0.003	0.040	0.040
Panel C. Technical school												
Eligibility*time>= 72 months	0.0104	0.0129	0.00481	0.00804	-0.00127	-0.00102	-0.00577	-0.00532				
	(0.00926)	(0.0104)	(0.0102)	(0.0111)	(0.00413)	(0.00472)	(0.00482)	(0.00544)				
Eligibility*time>= 30 & <72 months	-0.00812	-0.00813	-0.00199	-0.00202	-0.00430	-0.00439	-0.00265	-0.00274				
	(0.00644)	(0.00644)	(0.00647)	(0.00647)	(0.00281)	(0.00281)	(0.00278)	(0.00278)				
Eligibility*time>= 1 & <30 months	-0.00221	-0.00221	-0.00478	-0.00482	-0.00143	-0.00152	-0.00272	-0.00282				
	(0.00635)	(0.00636)	(0.00641)	(0.00641)	(0.00255)	(0.00253)	(0.00255)	(0.00253)				
Observations	10,146	10,146	10,146	10,146	9,587	9,587	9,587	9,587				
R-squared	0.003	0.003	0.015	0.015	0.002	0.002	0.007	0.007				
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												

Table A.11. Effect of CCT intensity on tertiary education outcomes for men (time dummies variables)

	Enrollment				Completion				First Generation of University Students			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education												
Eligibility*time>= 72 months	0.123***	0.113***	0.128***	0.118***	-0.00156	0.00375	0.00466	-6.22e-05	0.000513			
	(0.0245)	(0.0260)	(0.0258)	(0.0272)	(0.00517)	(0.00586)	(0.00630)	(0.00646)	(0.00671)			
Eligibility*time>= 30 & <72 months	0.164***	0.145***	0.0928***	0.0729**	0.00638	0.0107	0.0128	-0.00515	-0.00377			
	(0.0231)	(0.0290)	(0.0267)	(0.0321)	(0.00530)	(0.00652)	(0.00823)	(0.00738)	(0.00863)			
Eligibility*time>= 1 & <30 months	0.00504	0.00468	0.00437	0.00397	-0.000243	0.00314	0.00312	0.00171	0.00169			
	(0.0162)	(0.0162)	(0.0162)	(0.0162)	(0.00337)	(0.00388)	(0.00390)	(0.00376)	(0.00379)			
Observations	6,356	6,356	6,356	6,356	13,083	5,381	5,381	5,381	5,381			
R-squared	0.006	0.007	0.015	0.015	0.004	0.003	0.003	0.013	0.013			
Panel B. University level												
Eligibility*time>= 72 months	0.111***	0.109***	0.116***	0.114***	0.00683**	0.00609	0.00578**	0.00505	0.0913***	0.0884***	0.0670***	0.0651***
	(0.0221)	(0.0237)	(0.0232)	(0.0247)	(0.00315)	(0.00374)	(0.00290)	(0.00353)	(0.0158)	(0.0180)	(0.0164)	(0.0185)
Eligibility*time>= 30 & <72 months	0.136***	0.133***	0.0794***	0.0765***	0.00927***	0.00799*	0.00209	0.000859	0.0984***	0.0942***	0.0304*	0.0275
	(0.0209)	(0.0264)	(0.0236)	(0.0286)	(0.00357)	(0.00479)	(0.00279)	(0.00435)	(0.0159)	(0.0207)	(0.0173)	(0.0218)

Eligibility*time>= 1 & <30 months	-0.00891	-0.00953	-0.00982	-0.0104	0.00513**	0.00512**	0.00437*	0.00435*	0.00842	0.00812	0.00513	0.00494
	(0.0141)	(0.0141)	(0.0140)	(0.0141)	(0.00239)	(0.00239)	(0.00235)	(0.00235)	(0.0100)	(0.0101)	(0.00997)	(0.00999)
Observations	7,325	7,325	7,325	7,325	7,861	7,861	7,861	7,861	11,311	11,311	11,311	11,311
R-squared	0.009	0.009	0.015	0.015	0.002	0.002	0.008	0.008	0.003	0.003	0.017	0.017
Panel C. Technical school												
Eligibility*time>= 72 months	0.0147	0.0197	0.0113	0.0157	-0.000459	0.00183	-0.00305	-0.000691				
	(0.0125)	(0.0136)	(0.0125)	(0.0134)	(0.00449)	(0.00490)	(0.00498)	(0.00533)				
Eligibility*time>= 30 & <72 months	0.0380***	0.0490***	0.00202	0.0121	0.00473	0.00887	-0.00487	-0.000620				
	(0.0125)	(0.0162)	(0.0141)	(0.0176)	(0.00483)	(0.00592)	(0.00556)	(0.00641)				
Eligibility*time>= 1 & <30 months	0.00112	0.00103	0.00102	0.000934	0.000982	0.000884	0.000351	0.000254				
	(0.00851)	(0.00853)	(0.00860)	(0.00862)	(0.00306)	(0.00308)	(0.00299)	(0.00301)				
Observations	5,680	5,680	5,680	5,680	7,506	7,506	7,506	7,506				
R-squared	0.002	0.002	0.012	0.012	0.001	0.002	0.006	0.006				
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												

Table A.12. Effect of CCT intensity on tertiary education outcomes for women (time dummies variables)

	Enrollment				Completion				First Generation of University Students			
VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables
Panel A. Tertiary education												
Eligibility*time>= 72 months	0.187***	0.174***	0.189***	0.179***	-0.0127	-0.0163	-0.0174*	-0.0208*				
	(0.0309)	(0.0380)	(0.0311)	(0.0379)	(0.00982)	(0.0126)	(0.00976)	(0.0124)				
Eligibility*time>= 30 & <72 months	-0.0411**	-0.0407**	-0.0260	-0.0255	-0.0183***	-0.0184***	-0.0132**	-0.0133**				
	(0.0199)	(0.0199)	(0.0198)	(0.0198)	(0.00697)	(0.00697)	(0.00657)	(0.00657)				
Eligibility*time>= 1 & <30 months	-0.0501***	-0.0499***	-0.0542***	-0.0540***	-0.00332	-0.00340	-0.00838	-0.00845				
	(0.0187)	(0.0187)	(0.0187)	(0.0187)	(0.00681)	(0.00678)	(0.00690)	(0.00689)				
Observations	6,194	6,194	6,194	6,194	5,327	5,327	5,327	5,327				
R-squared	0.010	0.010	0.028	0.028	0.007	0.007	0.028	0.028				
Panel B. University level												
Eligibility*time>= 72 months	0.217***	0.193***	0.223***	0.204***	-0.00504	-0.00331	-0.00742	-0.00443	0.142***	0.128***	0.110***	0.103***
	(0.0287)	(0.0356)	(0.0286)	(0.0354)	(0.00709)	(0.00864)	(0.00694)	(0.00849)	(0.0216)	(0.0274)	(0.0217)	(0.0272)
Eligibility*time>= 30 & <72 months	-0.0328*	-0.0334*	-0.0232	-0.0236	-0.0116**	-0.0112**	-0.00864*	-0.00828*	0.00293	0.00226	0.00624	0.00601
	(0.0181)	(0.0181)	(0.0180)	(0.0180)	(0.00479)	(0.00479)	(0.00451)	(0.00452)	(0.0140)	(0.0141)	(0.0137)	(0.0138)
Eligibility*time>= 1 & <30 months	-0.0391**	-0.0396**	-0.0435**	-0.0437***	0.000499	0.000756	-0.00221	-0.00195	-0.00847	-0.00883	-0.0152	-0.0153
	(0.0169)	(0.0170)	(0.0169)	(0.0169)	(0.00458)	(0.00462)	(0.00458)	(0.00463)	(0.0131)	(0.0132)	(0.0129)	(0.0130)

Observations	7,173	7,173	7,173	7,173	7,690	7,690	7,690	7,690	11,282	11,282	11,282	11,282
R-squared	0.009	0.010	0.027	0.027	0.007	0.007	0.023	0.023	0.004	0.004	0.031	0.031
Panel C. Technical school												
Eligibility*time>= 72 months	-0.0174	-0.0190	-0.0211*	-0.0223	-0.00115	-0.00566	-0.00461	-0.00862				
	(0.0116)	(0.0147)	(0.0114)	(0.0145)	(0.00494)	(0.00714)	(0.00491)	(0.00727)				
Eligibility*time>= 30 & <72 months	-0.0204**	-0.0204**	-0.0160**	-0.0160**	-0.00291	-0.00298	-0.00170	-0.00179				
	(0.00804)	(0.00804)	(0.00799)	(0.00799)	(0.00331)	(0.00329)	(0.00323)	(0.00322)				
Eligibility*time>= 1 & <30 months	-0.0150*	-0.0150*	-0.0180**	-0.0180**	-0.00391	-0.00395	-0.00580*	-0.00585*				
	(0.00791)	(0.00791)	(0.00808)	(0.00808)	(0.00305)	(0.00303)	(0.00305)	(0.00303)				
Observations	5,566	5,566	5,566	5,566	7,352	7,352	7,352	7,352				
R-squared	0.005	0.005	0.014	0.014	0.002	0.002	0.009	0.009				
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												

Table A.13. Effect of CCT intensity on tertiary education outcomes for the cohorts 1991-1996 (time dummies variables)

	Enrollment				Completion				First Generation of University Students			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education												
Eligibility*time>= 72 months	0.773***	0.773***	0.673***	0.673***	-0.0370***	-0.0363***	-0.0319***	-0.0312***				
	(0.0212)	(0.0212)	(0.0277)	(0.0277)	(0.00787)	(0.00761)	(0.00953)	(0.00922)				
Eligibility*time>= 30 & <72 months	0.00594	0.00560	0.00583	0.00578	-0.0198***	-0.0199***	-0.0111*	-0.0112*				
	(0.0197)	(0.0198)	(0.0202)	(0.0202)	(0.00697)	(0.00705)	(0.00671)	(0.00678)				
Eligibility*time>= 1 & <30 months	-0.0403**	-0.0406**	-0.0380*	-0.0381*	-0.00296	-0.00319	-0.00618	-0.00638				
	(0.0195)	(0.0195)	(0.0194)	(0.0195)	(0.00646)	(0.00645)	(0.00668)	(0.00665)				
Observations	4,558	4,558	4,558	4,558	4,806	4,806	4,806	4,806				
R-squared	0.005	0.005	0.041	0.041	0.003	0.003	0.015	0.015				
Panel B. University level												
Eligibility*time>= 72 months	0.799***	0.795***	0.718***	0.714***	-0.0148***	-0.0138**	-0.00637	-0.00542	-0.0115	-0.0120	-0.00692	-0.00690
	(0.0156)	(0.0174)	(0.0212)	(0.0225)	(0.00485)	(0.00540)	(0.00599)	(0.00632)	(0.0161)	(0.0161)	(0.0158)	(0.0159)
Eligibility*time>= 30 & <72 months	-0.0119	-0.0124	-0.0109	-0.0114	-0.00775*	-0.00765*	-0.000711	-0.000634	0.00180	0.00136	0.00220	0.00223
	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.00453)	(0.00455)	(0.00425)	(0.00427)	(0.0132)	(0.0133)	(0.0130)	(0.0131)

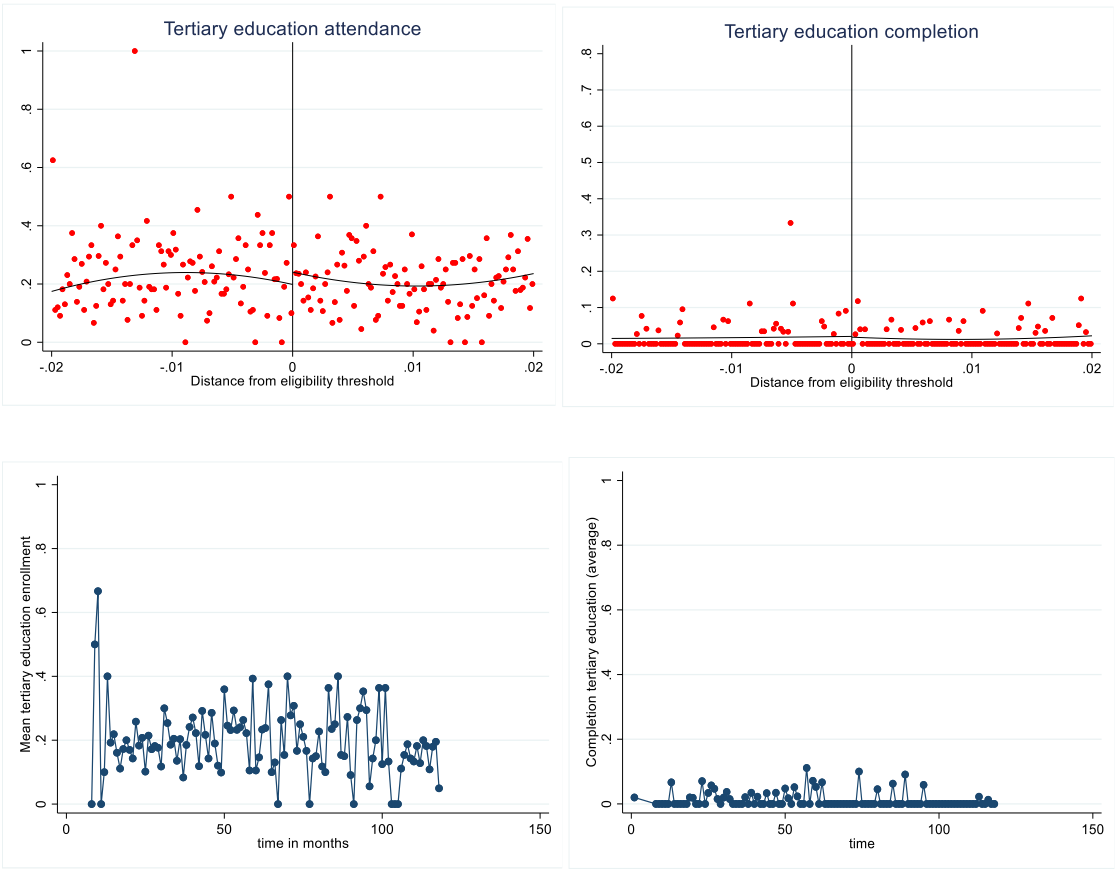
Eligibility*time>= 1 & <30 months	-0.0211	-0.0215	-0.0206	-0.0210	0.00188	0.00196	-0.00178	-0.00171	-0.00419	-0.00444	-0.00505	-0.00504
	(0.0152)	(0.0153)	(0.0149)	(0.0149)	(0.00452)	(0.00453)	(0.00459)	(0.00461)	(0.0127)	(0.0127)	(0.0124)	(0.0125)
Observations	6,566	6,566	6,566	6,566	6,636	6,636	6,636	6,636	10,815	10,815	10,815	10,815
R-squared	0.007	0.007	0.042	0.042	0.003	0.003	0.016	0.016	0.003	0.003	0.035	0.035
Panel C. Technical school												
Eligibility*time>= 72 months	-0.0570***	-0.0596***	-0.0464***	-0.0492***	-0.0158***	-0.0161***	-0.0134**	-0.0138**				
	(0.00780)	(0.00857)	(0.0103)	(0.0109)	(0.00454)	(0.00489)	(0.00563)	(0.00594)				
Eligibility*time>= 30 & <72 months	-0.0153**	-0.0155**	-0.00933	-0.00963	-0.00314	-0.00296	-0.00108	-0.000912				
	(0.00760)	(0.00758)	(0.00767)	(0.00766)	(0.00369)	(0.00374)	(0.00391)	(0.00395)				
Eligibility*time>= 1 & <30 months	-0.0103	-0.0105	-0.0110	-0.0111	-0.000455	-0.000340	-0.00137	-0.00126				
	(0.00720)	(0.00719)	(0.00738)	(0.00738)	(0.00359)	(0.00354)	(0.00361)	(0.00357)				
Observations	6,632	6,632	6,632	6,632	7,382	7,382	7,382	7,382				
R-squared	0.001	0.001	0.006	0.006	0.001	0.001	0.003	0.003				
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												

Table A.14. Effect of CCT intensity on tertiary education outcomes for the cohorts 1997-2002 (time dummies variables)

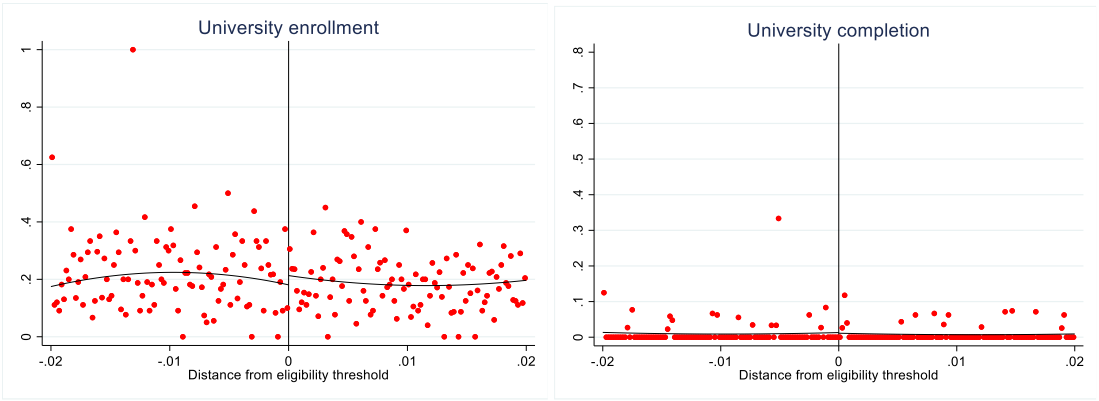
	Enrollment				Completion				First Generation of University Students			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
VARIABLES	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables	Polynomial first order	Polynomial first order control variables	Polynomial second order	Polynomial second order control variables
Panel A. Tertiary education												
Eligibility*time>= 72 months	0.156***	0.174***	0.211***	0.227***	-0.00179	-0.000877	-0.00360	-0.00273				
	(0.0336)	(0.0413)	(0.0358)	(0.0430)	(0.00396)	(0.00503)	(0.00387)	(0.00500)				
Eligibility*time>= 30 & <72 months	-0.0461**	-0.0458**	-0.0373	-0.0372	-0.000194	-0.000322	-0.000558	-0.000699				
	(0.0226)	(0.0226)	(0.0230)	(0.0229)	(0.00330)	(0.00327)	(0.00326)	(0.00323)				
Eligibility*time>= 1 & <30 months	-0.0335	-0.0335	-0.0245	-0.0245	-0.000825	-0.000728	-0.000901	-0.000815				
	(0.0220)	(0.0220)	(0.0221)	(0.0221)	(0.00348)	(0.00350)	(0.00347)	(0.00348)				
Observations	4,578	4,578	4,578	4,578	4,876	4,876	4,876	4,876				
R-squared	0.006	0.006	0.041	0.041	0.001	0.002	0.004	0.005				
Panel B. University level												
Eligibility*time>= 72 months	0.188***	0.175***	0.258***	0.243***	0.00138	0.00160	0.00109	0.00133	0.139***	0.138***	0.138***	0.137***
	(0.0280)	(0.0347)	(0.0295)	(0.0357)	(0.00160)	(0.00176)	(0.00113)	(0.00134)	(0.0204)	(0.0268)	(0.0213)	(0.0274)
Eligibility*time>= 30 & <72 months	-0.0276	-0.0283	-0.0191	-0.0197	0.00130	0.00153	0.00130	0.00153	0.00866	0.00810	0.00739	0.00702
	(0.0183)	(0.0185)	(0.0183)	(0.0186)	(0.00169)	(0.00185)	(0.00168)	(0.00183)	(0.0129)	(0.0130)	(0.0129)	(0.0130)
Eligibility*time>= 1 & <30 months	-0.0327*	-0.0333*	-0.0243	-0.0247	0.00256	0.00274	0.00261	0.00279	0.00187	0.00142	0.00372	0.00343
	(0.0175)	(0.0176)	(0.0174)	(0.0174)	(0.00197)	(0.00211)	(0.00197)	(0.00210)	(0.0126)	(0.0127)	(0.0125)	(0.0126)

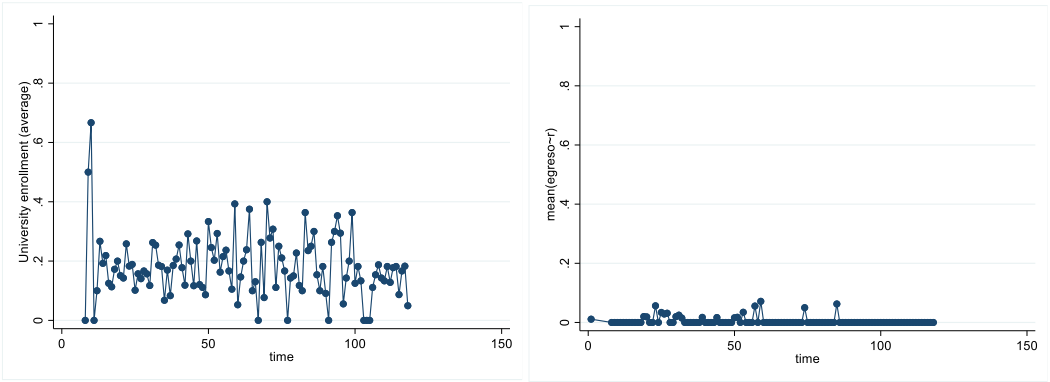
Observations	7,125	7,125	7,125	7,125	7,213	7,213	7,213	7,213	9,246	9,246	9,246	9,246
R-squared	0.008	0.008	0.041	0.041	0.003	0.005	0.005	0.006	0.002	0.002	0.032	0.032
Panel C. Technical school												
Eligibility*time>= 72 months	0.00928	0.00940	-0.00316	-0.00283	-0.00403	-0.00158	-0.00584*	-0.00339				
	(0.0107)	(0.0128)	(0.0108)	(0.0129)	(0.00287)	(0.00378)	(0.00308)	(0.00395)				
Eligibility*time>= 30 & <72 months	-0.00161	-0.000675	-0.00148	-0.000586	-0.00109	-0.00130	-0.00132	-0.00153				
	(0.00855)	(0.00865)	(0.00851)	(0.00860)	(0.00200)	(0.00191)	(0.00198)	(0.00189)				
Eligibility*time>= 1 & <30 months	0.000786	0.00148	0.00127	0.00194	-0.00420**	-0.00436***	-0.00420**	-0.00436***				
	(0.00818)	(0.00821)	(0.00808)	(0.00811)	(0.00170)	(0.00169)	(0.00167)	(0.00166)				
Observations	7,214	7,214	7,214	7,214	8,158	8,158	8,158	8,158				
R-squared	0.002	0.002	0.007	0.008	0.002	0.002	0.003	0.004				
Robust standard errors in parentheses												
*** p<0.01, ** p<0.05, * p<0.1												

Graphs A.1. Tertiary education enrollment and completion around the threshold and time of exposure to the program



Graphs A.2. University enrollment and completion around the threshold and time of exposure to the program





Graphs A.3. Technical school enrollment and completion around the threshold and time of exposure to the program

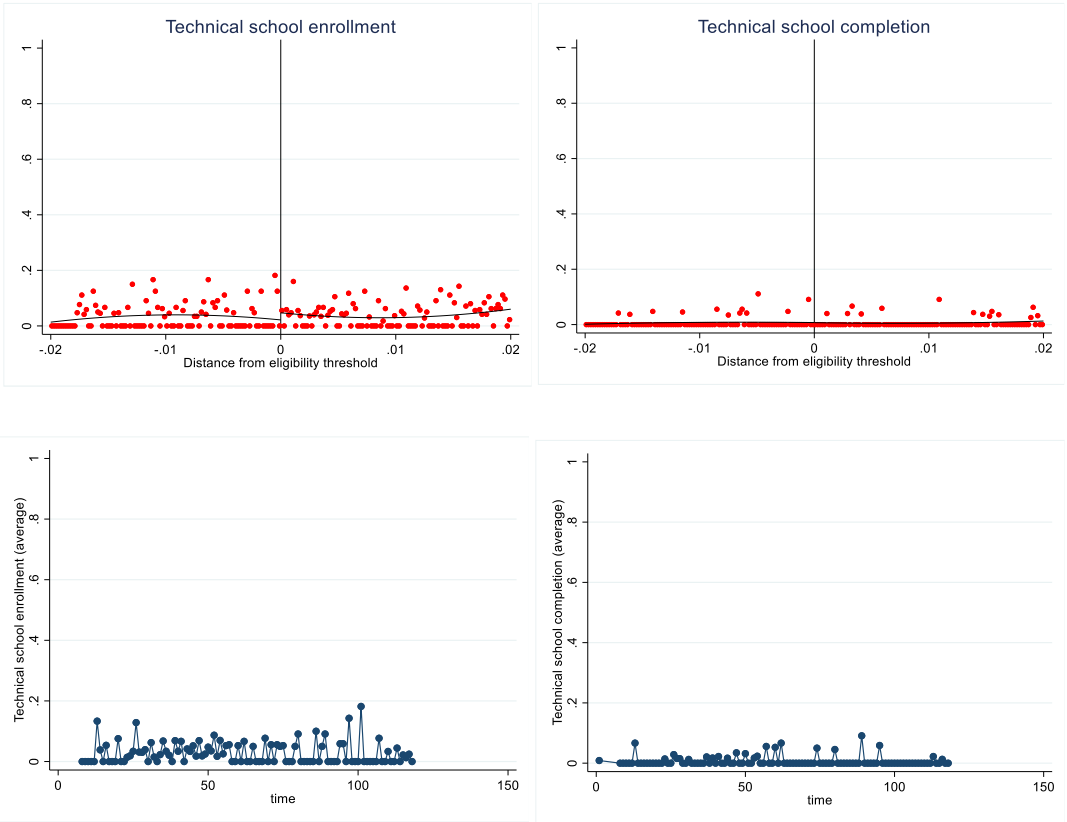


Table A.15. Labor market outcomes mechanisms (follow up survey)

VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables
Occupation	0.0349	0.0521	0.0634	0.114*
	(0.0314)	(0.0436)	(0.0428)	(0.0638)
Observations	4,126	4,126	3,738	3,738
R-squared	0.008	0.009	0.081	0.081
Labor income	-299.0	-589.8	-119.6	-45.94
	(259.6)	(359.5)	(183.3)	(253.1)
Observations	4,126	4,126	3,738	3,738
R-squared	0.047	0.048	0.116	0.116
Hours of work	-13.02***	-14.84**	-7.104	-8.775
	(4.070)	(6.378)	(4.773)	(6.275)
Observations	4,126	4,126	3,738	3,738
R-squared	0.014	0.017	0.160	0.160
Occupation of mothers	0.0105	-0.000247	0.0541	0.0454
	(0.0553)	(0.0822)	(0.0540)	(0.0786)
Observations	2,000	2,000	2,000	2,000
R-squared	0.009	0.010	0.068	0.068
Occupation of fathers	0.0652	0.152**	0.0681	0.191**
	(0.0523)	(0.0739)	(0.0555)	(0.0801)
Observations	1,738	1,738	1,738	1,738
R-squared	0.010	0.011	0.121	0.124
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

Table A.16. Parents expectations mechanisms (follow up survey)

VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables
Education expectation of parents (HS)	0.0730**	0.130**	0.0820**	0.151**
	(0.0344)	(0.0510)	(0.0415)	(0.0621)
Observations	4,126	4,126	3,738	3,738

R-squared	0.022	0.023	0.157	0.158
Education expectation of parents (tertiary)	-0.0357	-0.0898	0.00707	-0.0816
	(0.0368)	(0.0553)	(0.0428)	(0.0625)
Observations	4,126	4,126	3,738	3,738
R-squared	0.035	0.036	0.152	0.153

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.17. Education outcomes mechanisms (follow up survey)

VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables
Education attendance	-0.0216	-0.0420	0.0140	0.00855
	(0.0263)	(0.0368)	(0.0309)	(0.0451)
Observations	4,126	4,126	3,738	3,738
R-squared	0.016	0.017	0.364	0.364
Incomplete primary school	-0.0157	0.0411	-0.0537*	-0.0168
	(0.0272)	(0.0393)	(0.0287)	(0.0431)
Observations	4,126	4,126	3,738	3,738
R-squared	0.012	0.013	0.422	0.422
Complete primary school	0.00689	0.0106	0.0288**	0.0315*
	(0.0137)	(0.0190)	(0.0137)	(0.0173)
Observations	3,816	3,816	3,459	3,459
R-squared	0.016	0.017	0.062	0.062
Incomplete high school	0.0299	0.00873	-0.0332	-0.0215
	(0.0349)	(0.0510)	(0.0447)	(0.0639)
Observations	3,783	3,783	3,431	3,431
R-squared	0.016	0.017	0.076	0.076
Complete high school	0.0174	-0.0430	0.0959	-0.00561
	(0.0508)	(0.0732)	(0.0718)	(0.106)
Observations	1,546	1,546	1,370	1,370
R-squared	0.000	0.005	0.143	0.148
Incomplete tertiary education	-0.0501	-0.0405	-0.0120	0.0476

	(0.0397)	(0.0659)	(0.0414)	(0.0453)
Observations	1,394	1,394	1,241	1,241
R-squared	0.020	0.022	0.085	0.089
Complete tertiary education	0.0110	-0.00697	0.0289**	-0.0126
	(0.0122)	(0.0147)	(0.0142)	(0.0133)
Observations	1,393	1,393	1,240	1,240
R-squared	0.011	0.014	0.059	0.065

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.18. Sanitation condition mechanisms (follow up survey)

VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables
Sanitation	-0.0569	-0.00449	-0.0139	0.0202
	(0.0438)	(0.0635)	(0.0501)	(0.0745)
Observations	4,126	4,126	3,738	3,738
R-squared	0.031	0.033	0.219	0.221

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.19. High school attendance (administrative records)

VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables
Enrollment	0.0527***	0.0222	0.0189	-0.000369
	(0.0148)	(0.0223)	(0.0142)	(0.0212)
Observations	25,369	25,369	25,369	25,369
R-squared	0.007	0.007	0.060	0.061

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.20. High school attendance intensity of the treatment (administrative records)

VARIABLES	(1) Polynomial first order	(2) Polynomial first order control variables	(3) Polynomial second order	(4) Polynomial second order control variables

Eligibility*time>=72 months	0.179***	0.158***	0.0666***	0.0485**
	(0.0163)	(0.0240)	(0.0165)	(0.0237)
Eligibility*time>=30 & <72 months	0.110***	0.0891***	0.0747***	0.0566**
	(0.0155)	(0.0234)	(0.0152)	(0.0228)
Eligibility*time>=1 & <30 months	-0.0375**	-0.0581**	-0.0367**	-0.0541**
	(0.0160)	(0.0234)	(0.0153)	(0.0226)
Observations	24,475	24,475	24,475	24,475
R-squared	0.029	0.030	0.064	0.065

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1