The Effects of Homeownership Assistance on Labor Supply*

Nicolás Navarrete H.
University of Warwick

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Abstract

Secure housing tenure is often thought to be a means of escaping poverty traps. Accordingly, policies that heavily subsidize private-market homeownership for low-income households are becoming part of the developing world landscape. To estimate the effect of this intervention type on the employment of beneficiaries, I implement a regression discontinuity design exploiting individual-level administrative data from a Chilean program that uses an arbitrary threshold to allocate homeownership vouchers. For the average user, the voucher represents approximately 5.1 years of salary and covers 97 percent of the total price of the purchased house. I present three main findings. First, receiving a voucher does not have an effect on the employment levels of heads of households, but it reduces the employment levels of their children. Second, children in new-homeowner households are more likely to be enrolled in full-time education, which may explain the decrease in their employment. Third, residential stability, residential area quality, and proximity to employment hubs do not seem to play any role in these findings. Results in this paper suggest that subsidized private-market homeownership could be an effective way to mitigate the intergenerational transmission of poverty.

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1 Introduction

According to a recent report from the Inter-American Development Bank, half of all Latin American families simply do not have enough money, or sufficient access to the lending market, to purchase the cheapest house in the private market that satisfies minimum living standards (Bouillon et al., 2012). The McKinsey Global Institute estimates the global affordable housing gap - the difference between the cost of a minimum-standard housing unit and what households can afford by spending 30 percent of their income over a 20-year period - at 650 billion US dollars per year (Woetzel et al., 2014). This report also shows that as a consequence of the affordable housing gap, by 2025, around 1.6 billion people worldwide will live in informal living arrangements such as slums, or with host families. These living arrangements are often seen as poverty traps, rather than a step in the direction of a better life.

To tackle this problem, governments in developing countries have created a number of programs that heavily subsidize homeownership for low-income families.[1] Most of these programs have led to the creation of public housing estates from which families purchase a subsidized unit. The scarce literature studying these programs suggests that they face low take-up rates due to the high costs of relocation (Barnhardt et al., 2017), and of moving families far from their personal networks and employment hubs (Bouillon et al., 2012). Few programs allow families to use their subsidy to purchase a house in the real estate market, without severe restrictions on location. To the best of my knowledge, there has been no prior study considering the impacts of this alternative type of interventions.

This lack of empirical evidence is particularly unfortunate since economic theory yields ambiguous predictions about the direction of the labor supply response to this type of policy.[2] On the one hand, McCormick (1983) points out that families transiting from renting to outright homeownership experience an increase in their assets and unearned income, which should increase their reservation wage and decrease employment levels (Cahuc and Zylberberg, 2004). On the other hand, Shroder (2002) suggests that "take it or leave it"-style housing incentives could increase labor supply,[3] as people may work more to earn additional

[1] *Procrear* in Argentina, *Minha Casa Minha Vida* in Brazil, *Subsidio habitacional* in Chile and *Ésta es tu Casa* in Mexico, are just a few examples of a long list of national government programs that attempt to make houses affordable for low-income families in developing countries.

[2] Although the focus of this paper is on labor supply, this is not the only outcome that can be affected by this type of intervention. Education, the decision to have children, and house characteristics are also considered in this paper and presented as mediating factors.

[3] "Take it or leave it" interventions are those in which individuals can either use the assistance in the

money and buy a house in a more expensive neighborhood. Some authors also propose that the very act of becoming a homeowner might have an effect on employment. For example, Dohmen (2005) argues that homeowners are less likely to be employed than people living in other arrangements, since homeownership reduces their spatial mobility.[4]

Using a unique individual-level administrative dataset of all households who applied for a Chilean voucher-based homeownership program, I estimate the causal effect of a large homeownership subsidy on the labor supply of low-income households. This program mandates households to purchase a property in the real estate market. Moreover, under the program restrictions, households are not permitted to obtain a mortgage to complement their voucher, nor to sell, rent or use the house as a collateral for an initial 5-year period. Since the number of applicants far exceeds the number of vouchers, the Chilean government selects voucher recipients by ranking applicant households - based on their poverty level and household composition - and, following the ranking, assigns as many vouchers as the budget permits. This method creates an arbitrary cutoff point. Among households just above the cutoff point, 65.4 percent redeem their voucher and buy a home. This take-up rate is more than 20 percentage points (pp.) higher than those presented for the housing programs previously studied in the literature (Barnhardt et al., 2017; Kling et al., 2007). This differential take-up rate may be explained by the fact that the program studied here does not impose heavy location restrictions on voucher usage, unlike other programs. Following this analysis, I implement a fuzzy regression discontinuity design to study the effect of this voucher on the employment status of household members of legal working age (*Applicants*).[5]

Understanding how households use the voucher and its impact on housing conditions is relevant in and of itself. I observe that 50 percent of those who use the voucher do so within the first year after applying. I also document that the voucher represents 5.1 years of the average user's salary and covers around 97 percent of the house price. Furthermore, four years after applying, voucher recipients households are 29.8 pp. less likely to live with a host family (e.g. parents) and 5.6 pp. less likely to live in a house without a concrete floor and potable water (a *rudimentary house*).

form that is offered (e.g. a voucher to purchase a house, rather than money), or receive no assistance at all.

[4]Another set of effects that homeownership can have is at the aggregate level, as described in Blanchflower and Oswald (2013). The authors point out that high aggregated levels of homeownership could induce low levels of supply of renting units and increase commuting times, among other factors. For a complete review of the potential effects of homeownership see: Coulson and Fisher (2002); Dietz and Haurin (2003).

[5]The legal working age in Chile is 15. The legal retirement age is 60 for women and 65 for men.

I then study the effect of receiving a voucher on the employment status of beneficiaries. Two main findings emerge. First, four years after applying for the voucher, the employment status of the heads of households in voucher-recipient families is not affected. Given the size of the voucher, this result was unexpected and it could be due to the fact that, at the moment of employment outcome measurement, the house is still an illiquid asset under the rules of the program, and so households cannot 'cash in' the value of the house. Second, the employment status of household members more than 15 years younger than heads of households (henceforth referred to as their presumed *children*) is negatively affected: they are 2.58 pp. less likely to be employed, when compared with their peers in non-recipient households.[6]

I provide evidence suggesting that spatial mobility is not the main driver of these results. In fact, voucher-recipient households are neither more nor less likely to move to a different labor market. Furthermore, I document that receiving a voucher does not affect the quality of the area in which households live. This last result, combined with the fact that voucher-recipient households are more likely to become homeowners, differentiates this study from the Moving to Opportunity (MTO) experiment, which offered rental vouchers to families with the intention of improving their local environment (Sanbonmatsu et al., 2014; Ludwig et al., 2013).

Looking at educational outcomes, I observe that presumed children in households that become homeowners under this program seem more likely to be enrolled in education (in a secondary school or higher education institution). A plausible explanation for this result is that low-income families in developing countries often see working-age children as a potential source of "extra income" (Galiani and Schargrodsky, 2010; Field, 2003). Since these households no longer need to pay rent or save money to move out of a host family's home, they might face less of a pressing need to have extra income sources. Consequently, they seem to start investing in their children's human capital accumulation.

In a further analysis, I provide evidence suggesting that voucher offers do not affect the

[6]For the average applicant, this corresponds to a point in time around 3 years after purchasing a house. Unfortunately, I am not able to observe the relationships between household members. I thus use their ages as an indicator of this relationship and define four exclusive groups: 1) Head of the household, the family member who submitted the application; 2) Spouse, a household member who is within 15 years of age of the head of the household; 3) Child, any household member who is 15 or more years younger than the head of the household; and 4) Grandparent, any household member who is 15 or more years older than the head of the household. As households around the cutoff are mostly single parent families without grandparents, I focus the analysis on heads of households and children. On average, children were at the end of high school at the moment of application and had been out of high school for 2 years at the point when employment is measured.

number of new children borne by heads of households, but children in voucher-recipient households are less likely to have one or more newborns after applying. This result is consistent with previous literature showing that a greater number of years of full-time education induces teenagers to postpone having their first child, moving them away from teenage parenthood (Geruso and Royer, 2014; Black et al., 2008; Monstad et al., 2008).

The primary contribution of this paper is to provide what I believe are the first estimates of the effects of subsidizing low-income families with the costs of buying a house in the market on labor supply, while relying on a clearly exogenous source of identifying variation. My results show that homeownership programs that do not impose heavy location restrictions deliver high take-up rates, do not disincentivize heads of households' labor supply, and could mitigate the intergenerational transmission of poverty by allowing families to invest more strongly in their children's education.

This paper contributes to the broad literature focused on understanding how means-tested housing programs can affect the behavior of recipients (Barnhardt et al., 2017; Jacob and Ludwig, 2012; Mills et al., 2006; Sanbonmatsu et al., 2014). It furthermore contributes to the literature studying the relationships between homeownership and employment (Battu et al., 2008; Van Leuvensteijn and Koning, 2004; Goss and Phillips, 1997; Munch et al., 2008; Valletta, 2013; Flatau et al., 2003), wealth shocks and employment (David et al., 2016; Alzúa et al., 2013; Picchio et al., 2017; Imbens et al., 2001), and property rights and employment (Field, 2007; Galiani and Schargrodsky, 2010).

The remainder of the paper is organized as follows. The following section presents the program studied here. Section 3 provides an overview of the data used in this paper. Section 4 presents the empirical strategy of the paper. In Section 5, I discuss the regression discontinuity validity in further depth. Section 6 presents the results, Section 7 the potential mechanisms, and Section 8 concludes.

2 The Homeownership Program and the Educational System

2.1 The Homeownership Program

Chile has a long tradition of offering subsidized housing to disadvantaged families. Historical accounts show that Chilean housing policy, established in 1906, was designed with a focus

on improving the housing conditions of the poorest Chileans.[7] Current housing policies target the poorest 40 percent of the population, and recently the main focus has moved towards providing disadvantaged households with large subsidies to help them buy their own house.

In the program analyzed in this paper, called *Adquisición de Vivienda Construida* (AVC), households must submit an application to obtain an up-front capital voucher that covers the costs of buying an existing housing unit in the private market. Households are free to choose any house that meets minimum habitability standards, and the number of applicants far exceeds the number of vouchers offered (for a detailed description of the program see Appendix B).

In the AVC, households apply through a regional office of the Ministry of Housing and Urbanism (MINVU, from its Spanish name: *"Ministerio de Vivienda y Urbanismo"*), selecting a particular region in which they would like to purchase a house.[8] To prevent a strategic approach to this process, households are only permitted to apply within one single region and are automatically excluded from the process if they apply in multiple regions. In the application process, households must also provide certificates proving that they belong to the poorest 40 percent of the population, and that they have had savings of at least 400 USD in a bank account over the course of the preceding year; if not, they are also excluded from the process. In the final step before applications are closed, the government identifies whether any member of the household already owns a house; if so, these households are also excluded.

Once the application period has expired, the selection process is made according to regional rankings and budgetary restrictions. The MINVU first assigns a score to each applicant household based on two factors: 1) their poverty level; and, 2) the household composition (e.g. more points are awarded to households with an elderly member). Administrative records show that, for the average applicant household, the poverty level accounts for around 60 percent of their total score. The MINVU then uses this score to rank the applications in each region and, following these regional rankings, assigns as many vouchers as its regional budget will allow.[9]

[7]For a complete review of Chilean housing policy, see Rubio (2006); Rodrigo (1999).

[8]Chile is divided into 15 regions, which are the country's highest level of administrative division. In every new offer round, households must submit a new application. Administrative records show that less than 1 percent of households apply for a different region to the one in which they lived when applying.

[9]The number of vouchers delivered under this program represents less than 3 percent of total transactions in the Chilean housing market, and the amount of money available for each region is assigned in the national budget in the preceding year.

Vouchers from the AVC program cover the difference between the market price of the house and the household's accredited savings at the moment of application, up to a value of approximately 25,000 USD, with the total price of the house not exceeding 40,000 USD. To prevent this money from being used for unrelated expenses, the vouchers are issued in the form of certificates. The voucher's corresponding monetary value is only transferred to the seller of the house after the property contract has been signed.

The AVC homeownership vouchers are subject to a number of regulations. Recipient households are given a maximum timeframe of two years in which they can use their voucher; after this period, it expires permanently. Second, voucher recipients cannot buy a house owned by a relative - this is checked against the government's own official family records. Third, households are not allowed to complement their MINVU voucher with financial credits when purchasing a house. Finally, households are prohibited from selling and renting the house (or part of it), or using it as collateral for credit during the first five years of ownership, and must live in the house over this initial period. The Ministry of Housing pays visits to voucher-bought houses and checks whether the recipient household is indeed living in the house. If households do not comply with this, they either automatically lose their purchased house or are forced to repay the voucher's monetary value to the MINVU.

In this study, I use data from the 2010 and 2011 AVC offer rounds. Offers from earlier years were not included as MINVU funds were not exhausted and so no cutoff point was generated. In 2012 and 2013 there were no offers as AVC resources were focused on housing reconstruction following the 2010 earthquake. Although the program was reintroduced from 2014 onwards, the short timespan between the offers and the follow-up data results renders these rounds of offers unsuitable for analysis.

2.2 Educational System

Families choose from three types of school when enrolling their children in Chile: free public schools, voucher schools, or private schools. Children have 8 years of mandatory primary school, generally between the ages of 6 and 13; and 4 years of non-mandatory secondary school, generally between the ages of 14 and 17. A recent report from the Ministry of Education shows that around 12 percent of those who could be enrolled in secondary education are not, and this number grows to 18 percent for the poorest 40 percent of the population. Among the reasons given for not being enrolled in secondary school, the most common for men is

work (38 percent), and for women are child-bearing (35 percent) and work (15 percent).

After completing secondary school, students can access higher education. There are four types of higher educational institutions in Chile: selective universities, non-selective universities, professional institutes, and technical schooling centers. In general, only selective universities use high-stakes exams to select their students, while the other institutions accept everyone who has a secondary school diploma.

All higher educational institutions charge some tuition and fees, and a number of public and private financial aids exist to assist students in covering these charges. Regarding the particular group of interest for this paper, the government provides numerous non-repayable scholarships to students coming from households in the poorest 40 percent of the population. These scholarships cover the full costs of tuition and fees without any restriction on the type of institution in which students are enrolled.[10] Despite this significant financial aid, only 30 percent of young people in the poorest 20 percent of households have been enrolled in higher education within 6 years of their completion of high school (Ministry of Education, 2014). This figure jumps to more than 80 percent for young people in the wealthiest 20 percent. The reasons for not being enrolled in higher education remain qualitatively the same as in the case of secondary school.

3 Data and Descriptive Statistics

3.1 Heads of Households and Household Members Dataset

To identify the heads of households, and their corresponding household members, the MINVU has provided me with several administrative datasets. The first dataset contains all heads of households who applied for a homeownership voucher in 2010 and 2011. The variables within this dataset are the application score, the household ID, the head of household ID, their town and region of residence when applying, their region of application, the offer round to which they applied, and whether the household received a voucher offer or not.

The second dataset contains information regarding the household members included in the application of each head of household. The variables in this dataset are the household ID, the ID of each member of the household, and the offer round of the application. I link

[10]The only restriction is that the institution must be certified by the government, and 90 percent of higher education institutions meet this criterion.

both datasets using the household ID and the offer round.

A third dataset tells me whether or not a voucher was paid out and, if so, the amount paid. A separate dataset tells me the date at which the vouchers were paid. This last dataset is incomplete, and I can only correctly match 93 percent of voucher users with their date of voucher payment.[11] These two datasets are merged with the previous sources using the household ID.

In a fourth dataset, the MINVU provided me with each applicant's date of birth, gender, any children born into the household after applying, and the town of residence four years after applying. MINVU has also provided me with some housing characteristics four years after applying, such as whether the household lives in an apartment, the number of rooms used as bedrooms by the household, whether the household lives in a house without a concrete floor or potable water (referred to as a rudimentary house), and whether the household lives in another family's house (referred to as host family).[12] I successfully link all applicants with their corresponding variables, except for 4,915 whose gender could not be identified from MINVU records. Using the data showing the municipality of residence four years after applying, I collected the most recent measure of poverty for each municipality (2013), from the Ministry of Planning.

Unfortunately, MINVU datasets do not provide the specific relationship of each household member to the main applicant, but I am able to use the age of each person as an indicator of this relationship. I thus define four exclusive groups: 1) the *Head of Household* is the person who submitted the application; 2) the *Spouse* is a family member who is less than fifteen years younger or older than the head of household; 3) a *Child* is a family member who is younger than the head of household by fifteen years or more; and 4) a *Grandparent* is a family member who is older than the head of household by fifteen years or more.

After combining all sources, I examine each regional voucher assignment process to determine whether all regions had some applicants who did *not* receive a voucher offer. Out of 43 regional assignment processes,[13] there were 4 in which all families were offered a voucher. I

[11] MINVU has tried to centrally keep track of these dates, however on some occasions regional offices do not report it, as it was not a mandatory process in 2010 and 2011.

[12] I do not have access to information regarding the specifics of host families, however they tend to be close relatives such as parents (CASEN, 2013).

[13] There were 2 national offer rounds in 2010 and 1 in 2011. These occurred in all 15 regions, except for the Santiago Metropolitan Region, which participated in neither of the 2010 offer rounds. This accounts for the total of 43 regional assignment processes.

further analyze each applicant's region of application, and identified 161 applicants for whom this variable was missing.[14] I have removed from the sample these regional assignment processes that had no non-recipients and all applicants for whom the region of application was missing.

Finally, I center the cutoff scores from every offer round and region to zero. Then, I calculate the centered scores of each application by subtracting the corresponding cutoff from each particular application score. The new score variable ranges from -994 to 986.1 in degrees of 0.1.

3.2 Unemployment Insurance Dataset

The Ministry of Labor has granted me access to the wage and date of payment for every applicant with unemployment insurance between January 2010 and December 2015.

As the most recent employment data to which I have access is from December 2015, I can measure labor market outcomes for four years beyond the point at which households applied for a voucher. This means that I use 2014 employment data for offer rounds in 2010 and 2015 employment data for offer round in 2011.

Using this dataset, I construct the following variables:

- *Employed:* equal to 1 if the applicant is working, according to the *Unemployment Insurance* dataset, four years after applying, and equal to 0 otherwise.
- *Wage:* equal to the observed wage in the *Unemployment Insurance* dataset (in US dollars) four years after applying and equal to 0 if the applicant has no observed wage for that month.

I also compute applicants' working status and wage 2 months before applying as baseline measures. I combine this with the previous dataset using the applicant IDs.

In the final sample, I keep families in which the head of household was of legal working-age four years after applying, and restrict the sample to include only the household members of legal working age four years after the family applied for the voucher. According to the Chilean Labor Code, the minimum working age is fifteen years (Chilean National Congress, 2002). To legally claim pension benefits, the minimum retirement age is sixty for women and sixty-five

[14] This is most likely to have occurred due to a clerical or typing error at the database level.

for men (Chilean National Congress, 2009).[15] Since the legal working age limit is dependent on gender, applicants whose genders could not be identified were removed from the sample.

It is worth noting that the unemployment insurance dataset contains only those workers who have a formal contract, and so excludes the self-employed, independent contractors, civil servants, and members of military forces. I address the implications of this on the results in section 6.1. Also, the dataset unfortunately does not provide the number of hours worked by employees. I can thus only investigate the effect of this program on the applicants' decision of whether or not to supply labor (extensive margin), but I cannot observe the effect on the number of hours supplied by applicants who work (intensive margin).

3.3 Education Dataset

The Ministry of Education has granted me access to their administrative enrollment data, between 2010 and 2015. This dataset provides for each year whether a person is enrolled in any educational institution, the institution ID, and whether the student is enrolled full-time or part-time.

I merge this dataset with the one from the Ministry of Housing described in section 3.1. The Ministry of Education expressed concern that I may be able to use individuals' age and gender to retrieve their identity, so these variables were deleted following the merge with the program applicant dataset. Thus, I identified whether the applicant is a head of household, spouse, child, or grandparent using the corresponding pre-generated dummy variables. Unfortunately, given the way in which the data passes across ministries, I am not able to merge this dataset with the labor dataset.[16]

3.4 Descriptive Statistics

Table 1 provides summary statistics for heads of households and their family members who are of legal working age four years after applying. This table displays their characteristics at the moment of application, and shows that the heads of households were mostly

[15]The Chilean population tends to retire shortly after reaching this retirement age, with the average Chilean woman starting to receive a pension at age sixty-one, and the average man at sixty-five.

[16]The cross-data process is as follow: The Ministry of Housing has the national ID of every head of household and household member. They provided this information, and the variables used in this study, to the Ministries of Labor and Education. Then, each of these last two Ministries cross-referenced the data from the Ministry of Housing with their own data, and provided me a separate dataset with their own fake ID. This ID is created in each particular ministry, and thus cannot be merged with those used in the other ministries.

women in their mid-30s, who do not live with another adult at home (spouse or grandparent), and are among the poorest in the population. This seems to be the result of a program design that aims to benefit poor single parents, which in turn might make them more likely to apply. The characteristics of this group are remarkably similar to those applying to programs offering rent subsidies, such as MTO (Sanbonmatsu et al., 2014), and programs offering other forms of homeownership assistance, such as the small-scale Indian program analyzed by Barnhardt et al. (2017). This could reflect authorities actively seeking this particular group of people when offering housing assistance, perhaps since they are perceived as the group that is most likely to obtain benefits from it.

Although voucher recipients and non-recipients do not differ greatly on a number of measures, their poverty levels do vary: voucher recipients are on average at the lowest 10th percentile of the poverty distribution, while voucher non-recipients are at the lowest 15th percentile. This is not surprising given that poorer families receive more points in their application, and this is the single biggest component of an applicant's score (Section 2.1).

Table 1 also shows that heads of household who do not live with a spouse or grandparent, and who live in larger households, are slightly more likely to receive a voucher offer. This is in line with the fact that single adult families, and households with a greater number of children, receive more points in their application.

The average voucher value in the sample is 16,491 US dollars. Given that the average working voucher user earns approximately 270 US dollars per month at the moment of application, I compute that the voucher is equivalent to 5.1 years of wages for its average user. Administrative records show that the average accredited savings of voucher-recipient families is around 450 US dollars, meaning that the voucher covers on average around 97 percent of the cost of the house.[17]

Children are, on average, 15 years old at the moment of application and their employment level is around 6.6 pp. The low level of employment might be due to the fact that the average child has only just finished primary school and reached the legal working age. Also, children in voucher-recipient households seem to be slightly less likely to work than their peers in non-voucher-recipient households. This might be the result of children in recipient households being slightly poorer and younger.

[17]As mentioned in Section 2.1, the voucher covers the difference between the household's accredited savings at the moment of application and the house price.

Spouses are mostly men - which mirrors the fact that heads of households are mostly women - in their mid 30s, and their employment level is around 41 pp. Grandparents are 50 years old and are roughly equally comprised of men and women. Given the small number of spouses and grandparents in voucher-recipient households, I focus the analysis on heads of household and children. For completeness, I present the main results for spouses in the Appendix.

4 Empirical Strategy

I use a regression discontinuity design (RDD) to estimate the causal effect of using a homeownership voucher to buy a house in the real estate market on different outcomes. Here, I rely on the fact that an applicant's voucher offer status changes discontinuously at the eligibility threshold. Then, I focus on the set of applicants close to the cutoff under the following assumption: those who only just missed out on receiving a homeownership voucher (control group) can serve as a good counterfactual for those who only just received it (treatment group). The plausibility of this assumption is discussed in the next section, but first I will describe the set of equations estimated in this paper.

4.1 The Effect of Receiving an Offer for a Voucher

The first step for buying a house using a homeownership voucher under the AVC program, is receiving an offer for a voucher. This alone can have an effect on an applicant's behavior. To estimate the causal effect of receiving an offer on a given outcome for applicants around the cutoff, the so-called Intention To Treat (ITT), I perform the following OLS regression:

$$\begin{aligned} y_{i,r,c,t} = \alpha_0 + \eta_{r,c} + \alpha_1 f_0(\text{Score}_{i,r,c}) + \beta_{ITT}\text{D}_{i,r,c} + \alpha_2 \text{D}_{i,r,c} \times f_1(\text{Score}_{i,r,c}) \\ + \text{X}_{\boldsymbol{i,r,c}}\boldsymbol{\Pi} + \text{e}_{i,r,c,t} \end{aligned} \tag{1}$$

where $y_{i,r,c,t}$ is the outcome of interest for applicant i, in region of application r, offer round c, and at time t. α_0 is the constant of the equation and $\eta_{r,c}$ is a region-offer round fixed effect. $\text{Score}_{i,r,c}$ is the application score for applicant i, in region of application r, and offer round c. In my main specifications, f_0 and f_1 are polynomials of order 1 in $\text{Score}_{i,r,c}$. As a robustness check, I also estimate Equation (1) with polynomials of order 2 in $\text{Score}_{i,r,c}$ on either

side of the cutoff.[18] $\mathrm{X}_{\boldsymbol{i,r,c}}$ controls for a set of family and individual characteristics including the gender, age, poverty level, working status and wage before applying of applicant i, as well as dummies for whether their family has a disabled member or an elderly member. $\mathrm{D}_{i,r,c}$ is a dummy for receiving an offer for a homeownership voucher, which is defined as follows:

$$\mathrm{D}_{i,r,c} = \begin{cases} 1 & \text{if } \mathrm{Score}_{i,r,c} \geq 0 \\ 0 & \text{if } \mathrm{Score}_{i,r,c} < 0 \end{cases}$$

The sample is restricted to a bandwidth of 100 points on either side of the cutoff. I also explore the robustness of the results using the optimal bandwidth selection procedure proposed by Calonico et al. (2014). Throughout the analysis, I cluster standard errors at the municipal-year level, as all the labor market outcomes measured are likely to be correlated at this geographic-time level.

The coefficient of interest is β_{ITT}, which estimates the causal effect of receiving an offer for a homeownership voucher on the outcome of interest, for applicants around the cutoff score.

4.2 The Effect of Buying a House Using the Voucher

If all households that received a voucher offer were to use it to buy a house, I could use Equation (1) to estimate the causal effect of buying a house using a homeownership voucher on the outcome of interest. Since not all families redeem their voucher, the parameter of interest in Equation (1) - β_{ITT} - will not capture the desired causal effect.

To estimate the desired causal effect, I use the voucher assignment indicator as an instrument for buying a house using the homeownership voucher, and estimate a Two-Stage Least Square regression. The set of equations estimated is as follows:

$$\begin{aligned} \mathit{Homeownership}_{i,r,c,t} = \gamma_0 + \mu_{r,c} + \gamma_1 f_0(\mathrm{Score}_{i,r,c}) + \beta \mathrm{D}_{i,r,c} + \gamma_2 \mathrm{D}_{i,r,c} \times f_1(\mathrm{Score}_{i,r,c}) \\ + \mathrm{X}_{\boldsymbol{i,r,c}}\boldsymbol{\Gamma} + \mathrm{u}_{i,r,c,t} \end{aligned} \tag{2}$$

[18] In RDD estimation, Gelman and Imbens (2014) recommend against using polynomials of orders larger than 2.

$$
\begin{aligned}
y_{i,r,c,t} = \delta_0 + \kappa_{r,c} + \delta_1 f_0(\text{Score}_{i,r,c}) + \beta_{IV} \mathit{Homeownership}_{i,r,c,t} \\
+ \delta_2 \text{D}_{i,r,c} \times f_1(\text{Score}_{i,r,c}) + \text{X}_{\boldsymbol{i,r,c}}\boldsymbol{\Omega} + \text{v}_{i,r,c,t}
\end{aligned}
\tag{3}
$$

where $\mathit{Homeownership}_{i,r,c,t}$ is a dummy indicator, equal to 1 if the applicant i, in region of application r, offer round c, and at time t bought a house using the homeownership voucher, and equal to 0 otherwise. The remaining terms are defined as in Equation (1).

In Equation (3), β_{IV} captures the causal effect of using a voucher to buy a house on the outcome of interest for applicants around the cutoff that comply with their voucher offer, the so-called Local Average Treatment Effect (Hahn et al., 2001; Imbens and Angrist, 1994).

5 Regression Discontinuity Validity

5.1 The Effect of the Being Above the Eligibility Cutoff on Voucher Utilization and House Characteristics

I begin by showing that being above the eligibility cutoff score for receiving an offer for a homeownership voucher increases the likelihood of buying a house in the real estate market using a voucher, the so-called First Stage. To do this, I estimate Equation (1) using as an outcome variable a dummy equal to 1 if an applicant household has ever bought a house using a governmental voucher after 2010, and equal to 0 otherwise.[19]

The left panel of Figure 1 shows the causal effect of receiving a voucher offer on its utilization. This panel shows that being above the eligibility cutoff for receiving an offer for a voucher vastly increases the probability of ever using it to buy a house. The first two columns of Table 2 confirm these results and show that being above the cutoff increases voucher utilization by 65.4 pp. To get some sense of the size of the program take-up, the point estimate presented here is 20 pp. higher than those presented for the MTO rental voucher experiment, and 30 pp. higher than the Indian homeownership program discussed by Barnhardt et al. (2017). A plausible explanation for the differential pattern in take-up rate is that, in this program, households are free to choose where to use their voucher, while in the other two programs household assistance was restricted to some specific locations.

[19]There are several other programs that provide a large subsidy to buy a house in the real estate market. As the focus of this paper is related to discovering the effects of receiving substantial financial assistance when buying a house, I take into account these other means of obtaining a house using large quantities of assistance.

Thus, households under the Chilean program might face lower relocation costs, which in turn could increase the share of recipients that use the voucher.

The left panel of Figure 1 also shows that a small number applicants below the cutoff use a voucher. This can be due to two factors: 1) applicants can appeal to reverse the Ministry of Housing's decision not to offer them a homeownership voucher, and 2) applicants who did not receive a homeownership voucher in an early offer round may re-apply and receive a homeownership voucher in a later one. Even though most non-recipient applicants do not buy a house through the program, they could still buy a house by themselves without using a voucher. However, it seems unlikely that families close to the cutoff and who did not receive a voucher could save sufficient money to buy a house in the real estate market within this four-year window (the average accredited savings of households close to the cutoff over the year prior to applying was 450 USD). Unfortunately, I do not have data to see whether non-recipient households went on to purchase a house without any subsidies.

This panel also shows that some voucher recipients did not redeem their homeownership voucher. Table 3 explores the variables correlated with the voucher utilization by regressing an indicator for whether a voucher-recipient household in the sample ever used the voucher against baseline covariates. Column 1 presents a series of bivariate regressions in which each baseline characteristic is entered separately, while columns 2 and 3 show regressions that condition on multiple covariates simultaneously. This table shows that larger households are less likely to use the voucher, while households living in more disadvantaged municipalities and with children are more likely to use the voucher. This could reflect two points: first, it might be more difficult for larger families to find a house large enough for their entire family within the financial limits of a voucher; and second, households living in poorer areas, with presumably lower house prices, are more likely to use the voucher. A plausible explanation for the correlation between voucher utilization and the presence of a child is that households with children might be more likely to live with a host family,[20] and families not having a house for themselves may be more eager to use the voucher in order to obtain their own place.

The right panel of Figure 1 shows that applicants who are above the cutoff score receive a large wealth shock in the form of a house. Table 2 shows that this estimated wealth shock for households that used the voucher is around 20,000 US dollars. Given the restrictions

[20] According to the Chilean household survey, most households living with a host family have a school-age child (CASEN, 2013).

and program conditions described in Section 3.1, which prevent voucher users from selling or renting their house for 5 years, the wealth transferred is extremely illiquid for the period of time under analysis.

By exploiting the date at which each homeownership voucher was paid, I aim to understand how long households take to use their voucher, and how long they have been homeowners at different points after their application. Figure 2 shows that around 50 percent of households that use the voucher do so within 12 months of applying, with almost 75 percent doing so within 18 months. Table 4 confirms that voucher utilization is around 32 pp. 12 months after application and 49 pp. 18 months after application. Results in Section 6 should thus be understood as if the applicants have on average been in their new house for 3 years.

In exploring the effect that the homeownership voucher has on house quality, I perform the analysis using as an outcome of interest one of the house characteristics described in Section 3.1. Figure 3 displays the causal relationship of receiving a homeownership voucher offer on house characteristics. ITT estimates in Table 5 suggest that being above the eligibility cutoff has a causal effect on reducing the probability that a household lives with a host family by 29.8 pp. and in a rudimentary house by 5.58 pp. I also observe that the number of rooms that the household uses as a bedroom increases by 0.0473 rooms, although this is not significant in the quadratic specification. I do not observe any causal impact on the probability of living in an apartment. IV estimates in Table 5 confirm these results and show that buying a house using the voucher decreases the probability that a household lives with a host family by 44 pp., in a rudimentary house by 8.19 pp., and increases the number of rooms that the household uses as a bedroom by 0.0691 rooms.

The results regarding living with a host family and having a rudimentary house seem to be mechanical effects of the program. As mentioned in Section 2.1, voucher-user households are forced to live in their purchased property for five years, and thus they are forced to leave their host family. Also, MINVU only allows households to purchase units that satisfy the conditions of minimum habitability, and so no voucher-bought houses can be rudimentary. The result regarding the number of rooms used as a bedroom is rather more surprising. This might reflect that these households are selecting houses that improve their living conditions in a broader sense, including the amount of space available to them.

Table 5 is also informative in two further ways regarding the situation of the control group four years after applying. First, the comparison group is comprised of roughly 47 per-

cent of households who live with a host family and 53 percent who are renters. On average, renter families in the poorest 20 percent of the Chilean population expend 32 percent of their income on rent (CASEN, 2013). Second, the share of non-recipient households living in a rudimentary house is around 8.6 pp.

5.2 The Continuity of the Share of Applicants Around the Cutoff

A key assumption in the regression discontinuity design is that households cannot manipulate their application score, so they cannot actively choose to be voucher recipients (McCrary, 2008). Qualitatively, if households are able to manipulate the score, we should see a discontinuity in the mass of people below and above the cutoff.

When performing the McCrary test, I reject the discontinuity in the share of applicants at the threshold with a t-stat of 0.7598 and a p-value of 0.4474 for heads of households, and with a t-stat of 0.3983 and a p-value of 0.6904 for children. Figure 4 confirms these results by showing no discontinuity around the cutoff in the number of heads of households and children. This suggests that the application score has not been manipulated in order to become a voucher-recipient. This is not surprising given that households (and authorities) do not know the cutoff ex-ante.

5.3 The Continuity of Applicant Characteristics Around the Cutoff

Under the identifying assumption of the RD estimator - that treatment and control groups are locally comparable - predetermined covariates for each particular subgroup of household members should be locally balanced around the threshold (Lee and Lemieux, 2010). To test this, I estimate Equation (1) using as an outcome variable the predetermined covariates in $X_{i,r,c}$ described in Section 4.1.

Table 6 confirms that there is no major discontinuity in the predetermined covariates. This piece of evidence suggests that homeownership voucher offers are as good as locally randomly assigned around the cutoff.

6 Results

6.1 The Effect of the Homeownership Voucher on Employment and Wages

Figure 6 displays the causal relationship between receiving an offer for a homeownership voucher and employment levels around the cutoff for heads of households and children. The top left panel shows that heads of households receiving a voucher offer neither increase nor decrease their labor market participation four years after applying, when compared with the heads of households who did not receive an offer. This result is confirmed by the regression results reported in Table 7. It is worth noting that the point estimate for heads of households' employment is less than 1 pp., and I can rule out the voucher reducing heads of households' employment levels by more than 3 pp., at the 95% confidence interval. This could be explained by the following: 1) the asset is extremely illiquid, which prevents heads of household from 'cashing it in'; 2) this poor population might face the need to work in order to have enough money to survive, even in the presence of this massive illiquid transfer; and, 3) most heads of households had already made their labor market decision at the moment of application, and so they may be more likely to stick to it.

The bottom left panel of Figure 6 shows that children in households that received a voucher offer - those whose application scores put them just above the eligibility threshold - are on average less employed than children in households that did not receive one. ITT results in Table 7 confirm this and show that homeownership voucher offers decrease the employment of children by 2.58 pp. IV results in Table 7 show that buying a house using a voucher decreases children employment level by 4.17 pp. ITT and IV results are statistically significant in all specifications and robust to the use of the optimal bandwidth (see Appendix Table A1). This piece of evidence suggests that buying a house using a homeownership voucher under this program decreases the level of employment for children.

Two things are worth noting from this result. First, as the employment level of children is extremely low at the moment of application (see Table 1), this effect might be explained by a higher share of children joining the labor market in households that did not receive a voucher offer when compared with children in households that did receive an offer. Second, as mentioned in Section 3.2, the UI dataset does not contain people who work in the in-

formal sector. Among Chileans aged 15 to 24, 5 percent work in the informal sector.[21] A back-of-the-envelope computation suggests that the level of informality for children in the treatment group should be around 50 percent higher than for children in the control group, in order to cancel out the effect on formal employment.

Next, I attempt to analyze whether homeownership voucher offers have an effect on wages. Since receiving a voucher offer does not affect the likelihood of being employed for heads of households, Table 7 is informative in showing that the offers seem not to causally affect their wages. On the other hand, since the voucher offers have an effect on the likelihood of child employment, I cannot study its causal effect on wages: the population employed to the left and to the right of the threshold are not comparable. Instead, I stick to the analysis across the whole sample, assigning a wage of 0 to unemployed children. The estimations in Table 7 show a negative effect, which might be driven by the differential likelihood of working. In the next section I conduct the analysis on wages conditional on working, and see whether these results still hold.

6.2 The Heterogeneous Effect of the Homeownership Voucher on Employment

Table 8 shows the effect of receiving a homeownership voucher offer on employment by gender, and for both heads of households and children. Although the point estimates show some differences, none of these differences are statistically significant. In a further analysis, Appendix Table A2 explores the heterogeneous effects by family structure and Appendix Table A3 by area of residency when applying.[22] Again, none of the differences in point estimates are statistically significant.[23]

In an exploratory analysis, I try to see whether there is some selection of which children in voucher-recipient households join the labor force, when compared with children in non-recipient households. Then, I look at the effects considering only those who are working

[21] In the entire population, around 60 percent of people in this age group are enrolled in study. The Chilean National Institute of Statistics does not report educational or employment figures for the lowest 10th percentile of the population in this age group.

[22] First, I conduct a separate analysis for single adult and non-single adult households, as well as for households with and without children. Second, in an attempt to see whether the effect differs depending on labor market conditions, I conduct separate analyses for the Santiago Metropolitan Area and the rest of the country.

[23] The difference in point estimates between single adult and non-single adult households, for heads of households, is close to being significant (t-stat=1.58). However, as several point estimate differences are being tested here, this is likely to be the result of multiple hypothesis testing.

four years after applying. Table 9 does not show any effect on wages (as a proxy for productivity), the share of people who perform blue-collar jobs (as a proxy for job riskiness), and the number of employers (as a proxy for effort expended on work). These results imply that there is no particular selection of the type of children who join the labor market in households that receive a homeownership voucher offer, when compared to their peers in non-voucher-recipient households.

7 Potential Mechanisms

The results indicate that receiving a homeownership voucher offer seems not to affect head of household employment levels, while it reduces the labor supply of those who seem to be the children of the head of household. In trying to explain what may be driving these effects, I show that labor mobility and the quality of the area in which they live do not play any role. On the other hand, I show that children in voucher-recipient households are more likely to be enrolled full-time in education and less likely to have a newborn after applying, than their peers in non-recipient households.

7.1 The Effect of the Homeownership Voucher on Residential Stability and Area Quality

As described in the introduction, some scholars have argued that the reduced mobility of homeowners - the so-called lock-in effect - is a mechanism through which homeownership subsidies could reduce employment levels of household members. To test this, I use municipalities as a proxy for a labor market: I conduct the analysis using as a dependent variable a dummy indicator equal to 1 if the applicant is living in a different municipality from the one in which they were living when applying, and equal to 0 otherwise. It is worth noting that, in the metropolitan area (from which 40 percent of applications originate), the average largest distance across a municipality is 5 kilometers.

The left panel of Figures 7 and 8, as well as the first two columns of Table 10, provide evidence suggesting that both heads of households and children in voucher-recipient families do not move to another municipality in a different proportion than those in non-recipient families. Another pattern arising from this table is that around 80 percent of households, on both sides of the cutoff, remain within the same municipality four years after applying. The

lack of differential mobility between voucher recipients and non-recipients can be explained by findings in previous literature: often low-income families place significant importance on the social networks established in their place of residency, and this encourages them to stay in the same area (Sanbonmatsu et al., 2014; Barnhardt et al., 2017).

The mobility results above could have several implications. First, in our context, the reduced mobility of homeowners does not seem to be the main mechanism driving the employment effects. Second, even when compared to this extreme case where low-income homeowners are forced to remain in a fixed location for five years, low-income households in other living arrangements are still not more likely to move to a different municipality in a higher proportion. Third, this might imply that employment results are also not driven by voucher-user households being relocated far from employment opportunities (Bouillon et al., 2012).[24]

The right panels of Figures 7 and 8 show no discontinuity in the poverty level of the municipalities in which heads of household and children live four years after applying for the voucher. Columns 3 and 4 of Table 10 confirm this result and do not show statistically significant results in this dimension. This piece of evidence suggests that the quality of the area in which new homeowner households live - and the subsequent networks that they form in their new place of residence - are not likely to drive the observed effects.

7.2 The Effect of the Homeownership Voucher on Education and Household Newborns

Table 11 shows the effect of voucher offers on educational outcomes. This table seems to suggest that children in voucher-recipient households are more likely to be enrolled in education than children in non-recipient households. This result is significant in the linear specification, but is not robust as it becomes non-significant in the quadratic specification.[25] Table 11 also shows that children in voucher-recipient households who are enrolled in education are more likely to be enrolled full-time than their peers in non-recipient households. This result is robust in the quadratic specification and to the use of the optimal bandwidth

[24] Appendix Table A4 provides additional supporting evidence. This table uses the distance between the municipality of residency when applying and four years after applying as an outcome variable, and conducts the analysis using only households that changed their municipality of residency in this four-year window. Results in this table show that voucher-recipient heads of households and children do not move farther than those in non-recipient households.

[25] As mentioned in Section 3, the Ministry of Education removed the variables related to gender and age of applicants. I am thus left with less statistical precision to perform this test.

(see appendix Table A5).

The evidence presented suggests that the homeownership voucher is inducing children to not enter the labor market, in favor of enrolling full-time in an educational institution. A plausible explanation for this result is that, in developing countries, parents in low-income families tend to perceive working-age children as a potential source of extra income (Galiani and Schargrodsky, 2010; Field, 2003). Since new homeowner households under this program no longer need to pay rent or to save money to move out of a host family's home, they face less of a pressing need to have this extra income. Thus, they decide to invest in their children's education.

The data described in Section 3 allows me to observe whether there has been a new child born into the household since applying, but unfortunately it does not allow me to identify this newborn's parents (i.e. whether the parent is the *head of household* or *child*, as per my definitions). I start by running a regression, at the household level, using as outcome variable a dummy indicator equal to 1 if there was a newborn child in the household within four years after applying, and equal to 0 otherwise. Columns 1 and 2 of Tables 12 and 13 suggest that voucher-recipient households are less likely to have a newborn child, and this effect is stronger among those households with a working-age child.

In an attempt to determine the newborn's parent, I keep the analysis at the household level and define the head of household as the newborn's parent if the household contains: 1) a member younger than 5 years old at the moment of application; or 2) no children of legal working age four years after applying. Conversely, if the head of household is not the parent of the newborn, I assume that the parent of the newborn is one of the head of household's children. The right panel of Figure 11 and columns 3 and 4 of Table 12 show that heads of households in voucher-recipient families seem neither more nor less likely to have a newborn after applying. On the other hand, the bottom right panel of Figure 12 and columns 3 and 4 of Table 13 show that children in voucher-recipient households seem less likely to have a newborn four years after applying.

Results regarding the decision to have a newborn are consistent with the educational results shown above, and with previous literature suggesting that a greater number of years spent in full-time education reduces teenage pregnancy.

7.3 Timing

The ways in which the effects on children evolve over the years might also prove to be informative regarding the timing of the household's decision. Figure 10 shows that the negative effect on employment for children starts to arise in the second year. On the other hand, results for education seem to start to arise right after the homeownership voucher offer has been made, and point estimates are, if anything, larger than for employment. A plausible explanation for this pattern between employment and educational results is that there may be some differential friction between joining the labor market and education: people joining the labor market require a period of time to find suitable employment, while children enrolling in education can do so without a waiting period.[26]

Figure 10 also shows that employment and educational effects grow over time, but in opposite directions. This could be the result of more children finishing primary and secondary school over time, and deciding between moving into work or further study. At this decision-making point, voucher-recipient households might opt to enroll their children in full-time education in higher numbers, while non-recipient households might opt more often to send their children into the workforce.

8 Conclusion

In this paper, I have explored the ways in which means-tested programs that subsidize substantial homeownership costs for low-income households, allowing them to purchase a house in the real estate market, affect their employment levels. To this end, I implemented a regression discontinuity design exploiting an arbitrary cutoff from a Chilean program that offers a homeownership voucher to purchase a house in the market. First, I documented that this voucher represents 5.1 years of salary for its average user and covers around 97 percent of the cost of the house. Later, I showed that this program has a take-up rate more than 20 pp. higher than those presented in housing programs that impose heavy location restrictions, which seems to be explained by the lower relocation costs in this program. Since programs im-

[26] An alternative explanation would be that voucher-recipient households tend to keep their children in both study and work - perhaps part-time - during the voucher-usage period. After they use the voucher, a share of children progressively start focusing more on their studies, and move out of work. This last hypothesis would imply that households understand that leaving and then returning to the educational system is costly. I do not find this hypothesis very likely, as it is not supported by the evidence regarding full-time education enrollment.

posing severe location restrictions and delivering low take-up rates are widespread, this result seems relevant for optimal policy design in different contexts: it suggests that relaxing location restrictions might induce a higher take-up rate from a program's intended beneficiaries.

I also provided evidence showing that employment levels and wages of heads of households are not affected by homeownership voucher offers. This result was unexpected considering the magnitude of the wealth transfer, alongside some families being relieved from the financial burden of rent. However, it also suggests that when low-income households receive the transfer of a large illiquid asset, and perhaps the relief of some financial burden, they are not likely to change their labor supply. This seems relevant not just for the optimal design of housing policies, but also for other interventions that attempt to transfer large in-kind subsidies to low-income families, without affecting their labor supply.

In the final part of the paper, I showed that homeownership voucher offers seem to decrease the employment levels of children in the household, which seems to be explained by an increased likelihood of being enrolled in full-time education. It seems that, because these families are in less pressing need of money, they decide to invest more heavily in their children's education. This result, along with the employment results for heads of households, implies two findings regarding the provision of an illiquid in-kind wealth transfer to low-income families: 1) it does not make families financially worse off; and 2) it seems to alleviate the intergenerational transmission of poverty, by allowing them to further invest in the educational future of their children. These results seem particularly relevant for institutions that make substantial financial efforts to reduce poverty and its transmission to future generations in developing contexts.

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Table 1: Characteristics of Voucher Recipients and Non-Recipients Before Applying - Head of Household and Family Members

	Sample	Non-Recipients	Recipients	Voucher users	Voucher non-users
Head of Household					
Age	34.512	34.537	34.237	33.973	34.702
	(9.365)	(9.535)	(7.300)	(7.243)	(7.379)
Female	0.866	0.863	0.892	0.892	0.892
	(0.341)	(0.344)	(0.311)	(0.310)	(0.311)
Elderly Family Member	0.022	0.022	0.017	0.016	0.018
	(0.146)	(0.148)	(0.128)	(0.124)	(0.135)
% of Poverty dist.	15.359	15.821	10.399	10.110	10.908
	(3.955)	(3.516)	(4.891)	(4.907)	(4.821)
Metropolitan Area	0.403	0.392	0.518	0.538	0.483
	(0.490)	(0.488)	(0.500)	(0.499)	(0.500)
Single Adult	0.696	0.693	0.724	0.727	0.718
	(0.460)	(0.461)	(0.447)	(0.446)	(0.450)
Family Size	2.958	2.862	3.987	3.948	4.055
	(1.144)	(1.071)	(1.366)	(1.335)	(1.417)
Employment	0.298	0.298	0.301	0.296	0.310
	(0.458)	(0.457)	(0.459)	(0.457)	(0.463)
Voucher Amount (USD)				16,491	
Observations	103,350	94,536	8,814	5,620	3,194
Children					
Age	15.492	15.536	15.162	15.084	15.285
	(3.683)	(3.694)	(3.583)	(3.522)	(3.675)
Female	0.533	0.534	0.526	0.532	0.516
	(0.499)	(0.499)	(0.499)	(0.499)	(0.500)
Employment	0.066	0.068	0.052	0.052	0.053
	(0.248)	(0.251)	(0.222)	(0.222)	(0.223)
Observations	66,749	58,869	7,880	4,805	3,075
Spouse					
Age	35.722	35.923	33.433	33.202	33.821
	(9.940)	(9.971)	(9.279)	(9.325)	(9.192)
Female	0.305	0.302	0.350	0.359	0.336
	(0.461)	(0.459)	(0.477)	(0.480)	(0.473)
Employment	0.412	0.412	0.406	0.409	0.402
	(0.492)	(0.492)	(0.491)	(0.492)	(0.491)
Observations	30,982	28,476	2,506	1,571	935
Grandparent					
Age	49.670	49.726	49.007	48.439	50.302
	(5.823)	(5.804)	(6.035)	(5.960)	(6.073)
Female	0.505	0.506	0.489	0.480	0.512
	(0.500)	(0.500)	(0.502)	(0.502)	(0.506)
Employment	0.267	0.268	0.255	0.255	0.256
	(0.443)	(0.443)	(0.438)	(0.438)	(0.441)
Observations	1,814	1,673	141	98	43

Notes: Data is for people of legal working age four years after applying for 2010 and 2011 offer rounds, and at the moment of application. *Head of Household* is the main applicant, *Children* are family members 15 years or more younger than the head of household, *Spouse* is a family member less than 15 years younger or older than the head of household. *Grandparents* are family members 15 years or more older than the head of household. In each particular subgroup *Age* is the average age measured in years, *Female* is the share of females, *% of Poverty dist* is the average percentile of the family in the poverty distribution with respect to the Chilean population, *Single Adult* are households that do not contain a spouse or grandparent, *Employment* is the share of people that were employed 2 months before applying, and *Wage* is the average observed wage 2 months before applying.

Table 2:
Effect of Homeownership Voucher Offer on Utilization and Voucher Value

VARIABLES	Voucher Utilization		Voucher Value (USD)			
			ITT		IV	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)
Homeownership Voucher	0.654***	0.619***	12,842***	12,432***	19,549***	20,063***
	(0.0164)	(0.0178)	(212.2)	(229.7)	(378.8)	(401.8)
Observations	23,128	23,128	23,128	23,128	23,128	23,128
R-squared	0.539	0.539	0.795	0.796	0.737	0.738
CONTROL MEAN	.013	.013	259.951	259.951	259.951	259.951
BANDWIDTH	100	100	100	100	100	100
CONTROLS	NO	NO	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES

Notes: Data is at the household level of legal working age, four years after applying to the 2010 and 2011 offer rounds. *Voucher Utilization* is a dummy variable equal to 1 if the household has ever bought a house using a homeownership voucher after 2010, and equal to 0 otherwise. *Voucher Value* is the value of the voucher executed by voucher recipients. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Correlations Between Baseline Household Characteristics and Homeownership Voucher Utilization

	Voucher Utilization - Treated Households		
VARIABLES	(1)	(2)	(3)
Age	-0.00300***	-0.00231**	-0.00292***
	(0.000749)	(0.000968)	(0.000953)
Female	0.00136	-0.0349*	-0.0337*
	(0.0175)	(0.0200)	(0.0196)
Employment	-0.0146	-0.000946	-0.00251
	(0.0119)	(0.0157)	(0.0155)
Wage (per 100 USD)	-0.00503*	0.00428	-0.00445
	(0.00288)	(0.00719)	(0.00371)
% in the Poverty distrib.	-0.00612***	-0.00586***	0.000433
	(0.000802)	(0.000874)	(0.00119)
Elderly Family Member	-0.0301	0.0179	0.00768
	(0.0423)	(0.0427)	(0.0415)
Household Size	-0.0194***	-0.0207***	-0.0221***
	(0.00453)	(0.00789)	(0.00778)
Single Adult	0.0165	-0.0284*	-0.0249
	(0.0122)	(0.0163)	(0.0159)
Has a Child	-0.0205*	0.0479***	0.0487***
	(0.0110)	(0.0176)	(0.0171)
Municipal Share of People in the Poorer 20%	0.670***		0.188*
	(0.0769)		(0.106)
Region and Year Dummies	NO	NO	YES
Observations	8,814	8,814	8,814

Notes: Data is for households that received a voucher offer, four years after applying to 2010 and 2011 offer rounds. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Homeownership Voucher Utilization by Dates After Applying

VARIABLES	6 Months after Applying		12 Months after Applying		18 Months after Applying		24 Months after Applying	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Homeownership Voucher	0.126***	0.109***	0.320***	0.298***	0.490***	0.458***	0.555***	0.524***
	(0.0142)	(0.0163)	(0.0173)	(0.0197)	(0.0170)	(0.0190)	(0.0183)	(0.0198)
Observations	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128
R-squared	0.131	0.131	0.262	0.262	0.391	0.392	0.453	0.453
CONTROL MEAN	0	0	.001	.001	.004	.004	.007	.007
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is at the household level, four years after applying to 2010 and 2011 offer rounds. *6 Months after Applying* is a dummy variable equal to 1 if the household used a voucher to buy a house 6 months after applying, and equal to 0 otherwise. *12 Months after Applying* is a dummy variable equal to 1 if the household used a voucher to buy a house 12 months after applying, and equal to 0 otherwise. *18 Months after Applying* is a dummy variable equal to 1 if the household used a voucher to buy a house 18 months after applying, and equal to 0 otherwise. *24 Months after Applying* is a dummy variable equal to 1 if the household used a voucher to buy a house 24 months after applying, and equal to 0 otherwise. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Effect of Homeownership Voucher on House Characteristics

VARIABLES	Living with a Host Family		Rudimentary House		Number of Rooms Used		Apartment	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ITT Results								
Homeownership Voucher	-0.298***	-0.294***	-0.0558***	-0.0351***	0.0473**	0.0468	0.00907	-0.0183
	(0.0139)	(0.0179)	(0.00696)	(0.00816)	(0.0230)	(0.0341)	(0.0105)	(0.0138)
R-squared	0.158	0.159	0.052	0.052	0.128	0.128	0.048	0.049
IV Results								
Homeownership Voucher	-0.440***	-0.457***	-0.0819***	-0.0525***	0.0691*	0.0757	0.0136	-0.0328
	(0.0189)	(0.0265)	(0.00997)	(0.0132)	(0.0356)	(0.0568)	(0.0165)	(0.0231)
R-squared	0.245	0.247	0.062	0.039	0.130	0.129	0.049	0.031
Observations	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128
CONTROL MEAN	.472	.472	.086	.086	1.614	1.614	.129	.129
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is at the household level, four years after applying to 2010 and 2011 offer rounds. *Living with a Host Family* is a dummy variable equal to 1 if the household lives in another family's house, and equal to 0 otherwise. *Rudimentary House* is a dummy variable equal to 1 if the household lives in a house without a concrete floor or potable water, and equal to 0 otherwise. *Number of Rooms Used* is the number of rooms that the household uses as bedrooms in the house. *Apartment* is a dummy variable equal to 1 if the household lives in an apartment, and equal to 0 otherwise. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Continuity of Covariates Around the Cutoff - Head of Household and Children

VARIABLES	Employment		Wage USD		Age		Female		Poverty Level		Elderly Fam. Member		Disabled Fam. Member	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Head of Household														
Homeownership Voucher	-0.0175	0.00730	-4.917	4.128	-0.0199	0.334	0.000184	-0.0153	0.0222	0.0409	-0.000412	0.000853	0.00651	-0.00419
	(0.0119)	(0.0153)	(3.883)	(5.885)	(0.204)	(0.312)	(0.00774)	(0.0107)	(0.0239)	(0.0265)	(0.00309)	(0.00415)	(0.00437)	(0.00711)
Observations	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128
R-squared	0.032	0.032	0.036	0.036	0.026	0.026	0.048	0.048	0.971	0.971	0.006	0.006	0.006	0.007
CONTROL MEAN	.274	.274	74.326	74.326	33.85	33.85	.909	.909	12.199	12.199	.016	.016	.029	.029
Children														
Homeownership Voucher	-0.00160	-0.00571	-1.370	-1.514	-0.160	0.258	-0.0138	0.00967	-0.0426	0.0589	-0.00160	0.00620	-0.00460	-0.00229
	(0.00637)	(0.00878)	(1.268)	(1.847)	(0.116)	(0.159)	(0.0154)	(0.0227)	(0.0326)	(0.0388)	(0.00534)	(0.00727)	(0.00667)	(0.0115)
Observations	18,742	18,742	18,742	18,742	18,742	18,742	18,742	18,742	12,296	12,296	12,296	12,296	12,296	12,296
R-squared	0.009	0.009	0.009	0.009	0.015	0.016	0.003	0.003	0.964	0.964	0.005	0.005	0.008	0.008
CONTROL MEAN	.052	.052	10.88	10.88	15.131	15.131	.532	.532	12.437	12.437	.019	.019	.037	.037
BANDWIDTH	100	100	100	100	100	100	100	100	100	100	100	100	100	100
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Employment* is a dummy variable equal to 1 if the person was working before applying, and equal to 0 otherwise. *Wage* is the wage before applying. *Age* is the age in years. *Female* is a dummy variable equal to 1 if the person is female, and equal to 0 otherwise. *Poverty Level* is the percentile of the family poverty level with respect to the Chilean population. *Elderly Fam. Member* is a dummy variable equal to 1 if the family has an elderly family member when applying, and equal to 0 otherwise. *Disabled Fam. Member* is a dummy variable equal to 1 if the family has a disabled familiy member when applying, and equal to 0 otherwise. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. *** p<0.01, ** p<0.05, * p<0.1

Table 7: The Effect of the Homeownership Voucher on Employment and Wages

VARIABLES	ITT				IV			
	Employment		Wage (USD)		Employment		Wage (USD)	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Head of Household								
Homeownership Voucher	-0.00976	0.0181	-6.473	13.70	-0.0154	0.0325	-10.13	24.56
	(0.0108)	(0.0156)	(6.435)	(9.027)	(0.0167)	(0.0267)	(9.963)	(15.34)
Observations	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128
R-squared	0.197	0.197	0.236	0.236	0.197	0.192	0.236	0.229
CONTROL MEAN	.348	.348	158.986	158.986	.348	.348	158.986	158.986
Children								
Homeownership Voucher	-0.0258***	-0.0461***	-7.873*	-15.32*	-0.0416***	-0.0822***	-12.12*	-26.89*
	(0.00958)	(0.0172)	(4.283)	(7.883)	(0.0154)	(0.0311)	(6.945)	(14.32)
Observations	18,742	18,742	18,742	18,742	18,742	18,742	18,742	18,742
R-squared	0.168	0.168	0.173	0.173	0.166	0.154	0.171	0.167
CONTROL MEAN	.194	.194	71.567	71.567	.194	.194	71.567	71.567
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Employment* is a dummy variable equal to 1 if the person is working four years after applying, and equal to 0 otherwise. *Wage USD* is the observed wage four years after applying. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, disabled family member, employment status before applying and wage before applying. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table 8: The Effect of the Homeownership Voucher on Employment by Gender

VARIABLES	ITT				IV			
	Men		Female		Men		Female	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Head of Household	-0.0279	0.0592	-0.00854	0.0143	-0.0454	0.110	-0.0139	0.0258
	(0.0355)	(0.0543)	(0.0111)	(0.0161)	(0.0586)	(0.0998)	(0.0171)	(0.0273)
Observations	2,069	2,069	21,059	21,059	2,069	2,069	21,059	21,059
R-squared	0.291	0.293	0.170	0.170	0.288	0.282	0.170	0.166
CONTROL MEAN	.56	.56	.326	.326	.56	.56	.326	.326
Children								
Homeownership Voucher	-0.0408***	-0.0544**	-0.0168	-0.0390*	-0.0678***	-0.0997**	-0.0263	-0.0672*
	(0.0153)	(0.0245)	(0.0127)	(0.0222)	(0.0250)	(0.0465)	(0.0201)	(0.0394)
Observations	8,847	8,847	9,895	9,895	8,847	8,847	9,895	9,895
R-squared	0.211	0.211	0.144	0.144	0.191	0.143	0.136	
CONTROL MEAN	.213	.213	.177	.177	.213	.213	.177	.177
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include age, poverty level, elderly family member, disabled family member, employment status before applying and wage before applying. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table 9: The Effect of the Homeownership Voucher on Job Characteristics - ITT

VARIABLES	Wage (USD)		Blue Collar Worker		Number of Employers	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)
Head of Household						
Homeownership Voucher	-10.92	20.30	-0.00519	-0.0167	0.00280	0.000430
	(14.38)	(19.19)	(0.0164)	(0.0244)	(0.00705)	(0.0111)
Observations	7,856	7,856	7,856	7,856	7,856	7,856
R-squared	0.183	0.184	0.065	0.065	0.007	0.007
CONTROL MEAN	457.26	457.26	.211	.211	1.027	1.027
Children						
Homeownership Voucher	-2.816	-5.269	-0.00730	-0.0291	0.0121	0.0121
	(15.42)	(22.97)	(0.0316)	(0.0466)	(0.0127)	(0.0179)
Observations	3,628	3,628	3,628	3,628	3,628	3,628
R-squared	0.138	0.138	0.067	0.067	0.019	0.019
CONTROL MEAN	369.722	369.722	.248	.248	1.033	1.033
BANDWIDTH	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. The table uses only workers. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, disabled family member, employment status before applying and wage before applying. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table 10: The Effect of the Homeownership Voucher on Residential Stability and Area Quality - Heads of Household and Children

VARIABLES	ITT				IV			
	Moving to another Municipality		Municipal Poverty Level		Moving to another Municipality		Municipal Poverty Level	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Head of Household								
Homeownership Voucher	-0.0183	-0.00765	-0.000801	-0.000295	-0.0282	-0.0117	-0.00139	-0.000301
	(0.0127)	(0.0184)	(0.00159)	(0.00216)	(0.0194)	(0.0299)	(0.00245)	(0.00363)
Observations	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128
R-squared	0.047	0.048	0.442	0.442	0.049	0.044	0.442	0.441
CONTROL MEAN	.209	.209	.149	.149	.209	.209	.149	.149
Children								
Homeownership Voucher	-0.0128	0.0135	0.000954	0.00366	-0.0191	0.0225	0.000969	0.00700
	(0.0161)	(0.0248)	(0.00202)	(0.00290)	(0.0248)	(0.0415)	(0.00312)	(0.00505)
Observations	12,296	12,296	12,296	12,296	12,296	12,296	12,296	12,296
R-squared	0.041	0.042	0.430	0.430	0.041	0.015	0.430	0.413
CONTROL MEAN	.211	.211	.149	.149	.211	.211	.149	.149
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Moving to Another Municipality* is a dummy variable equal to 1 if the applicant is living in a different municipality from the one in which she was living when applying and 0 otherwise. *Municipal Poverty level* is the average poverty level in the municipality in which the household lives four years after applying. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 11: The Effect of the Homeownership Voucher on Education - Children

VARIABLES	ITT				IV			
	Enrolled in School or Tertiary Education		Enrolled Full time Uni - School		Enrolled in School or Tertiary Education		Enrolled Full time Uni - School	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Homeownership Voucher	0.0363**	0.00726	0.0371***	0.0341***	0.0359	0.00659	0.0510***	0.0579**
	(0.0142)	(0.0201)	(0.00905)	(0.0121)	(0.0230)	(0.0359)	(0.0149)	(0.0226)
Observations	18,742	18,742	10,385	10,385	18,742	18,742	10,385	10,385
R-squared	0.019	0.019	0.016	0.016	0.018	0.012	0.014	0.013
CONTROL MEAN	.554	.554	.918	.918	.554	.554	.918	.918
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is for children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Enrolled in School or Tertiary Education* is a dummy variable equal to 1 if the child is enrolled in a school or in a higher educational institution, and equal to 0 otherwise. *Enrolled Full-Time* is a dummy variable equal to 1 if the child is enrolled full-time in school or in a higher educational institution, and equal to 0 otherwise. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 12: The Effect of the Homeownership Voucher on Family Newborns - Heads of Households

VARIABLES	ITT				IV			
	Newborn in the household		Head of household is the Parent of the Newborn		Newborn in the household		Head of household is the Parent of the Newborn	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Head of Household								
Homeownership Voucher	-0.0250*	-0.0255	0.00499	0.000909	-0.0377*	-0.0414	0.0105	0.000803
	(0.0129)	(0.0179)	(0.0102)	(0.0145)	(0.0199)	(0.0296)	(0.0158)	(0.0241)
Observations	23,128	23,128	23,128	23,128	23,128	23,128	23,128	23,128
R-squared	0.008	0.008	0.016	0.017	0.007	0.007	0.016	0.016
CONTROL MEAN	.253	.253	.162	.162	.253	.253	.162	.162
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

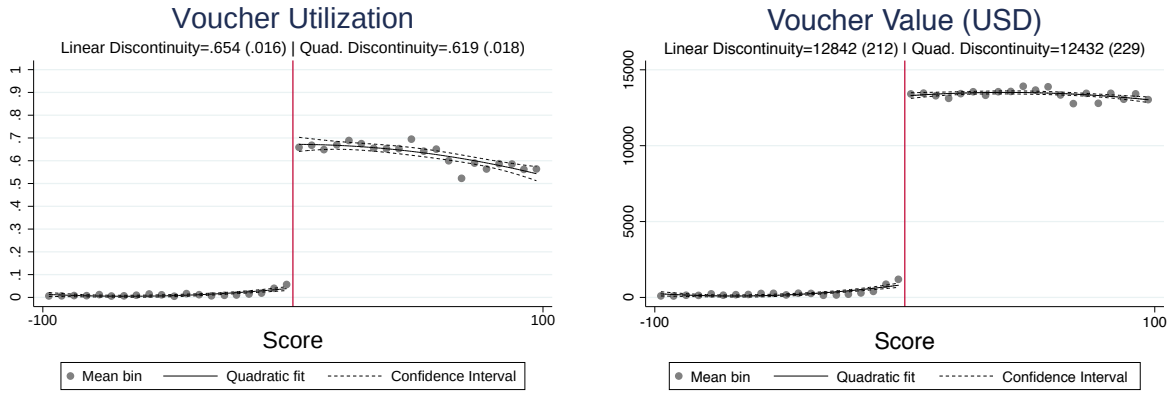
Notes: Data is for head of household of legal working age, four years after applying to 2010 and 2011 offer rounds. *Newborn in the household* is a dummy variable equal to 1 if the household has had a newborn within four years of applying, and equal to 0 otherwise. *Head of Household is the Parent of the Newborn* is a dummy variable equal to 1 if the household has had a newborn within four years of applying and either: 1) the youngest child at the moment of application was less than 5 years old; or, 2) there are no children of legal working age. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 13: The Effect of the Homeownership Voucher on Family Newborns - Children

VARIABLES	ITT				IV			
	Newborn in the household		Child is the Parent of the Newborn		Newborn in the household		Child is the Parent of the Newborn	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Children								
Homeownership Voucher	-0.0478***	-0.0742***	-0.0302***	-0.0359***	-0.0750***	-0.125***	-0.0476***	-0.0595***
	(0.0181)	(0.0262)	(0.00885)	(0.0124)	(0.0286)	(0.0459)	(0.0138)	(0.0214)
Observations	12,296	12,296	12,296	12,296	12,296	12,296	12,296	12,296
R-squared	0.009	0.009	0.015	0.015	0.006		0.013	0.010
CONTROL MEAN	.196	.196	.084	.084	.196	.196	.084	.084
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

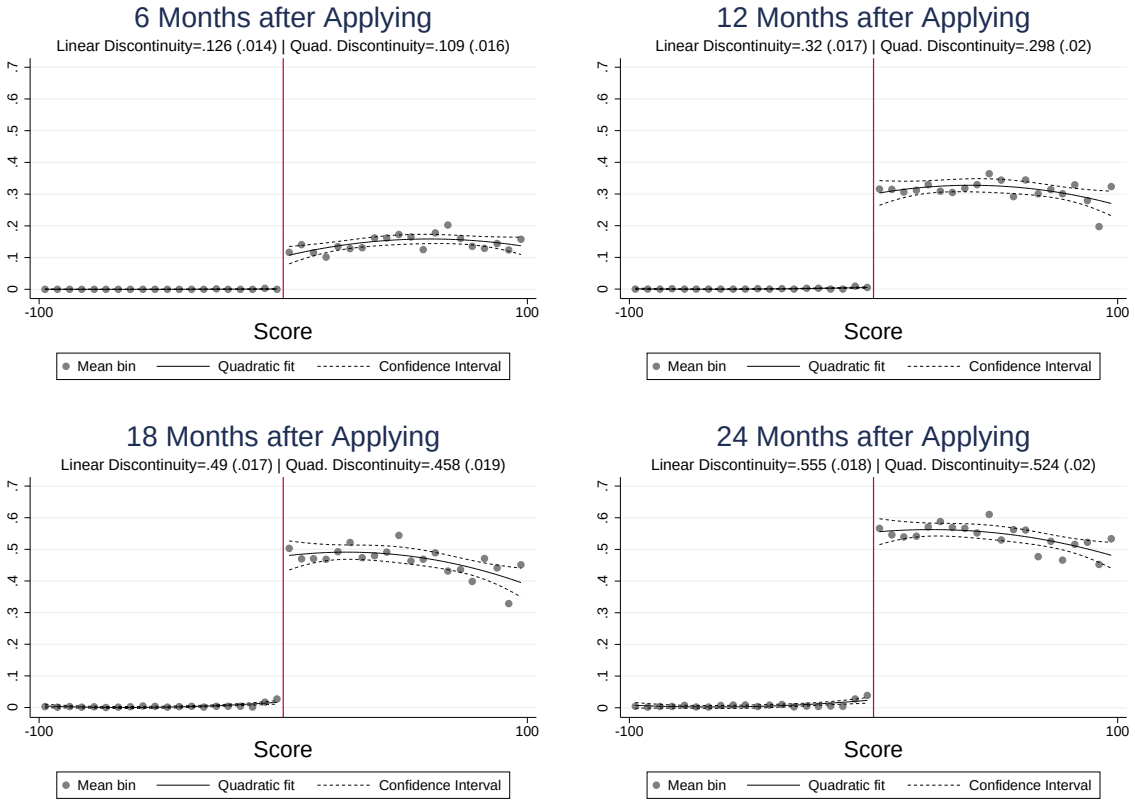
Notes: Data is for children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Newborn in the household* is a dummy variable equal to 1 if the household has had a newborn within four years of applying, and equal to 0 otherwise. *Children is the Parent of the Newborn* is a dummy variable equal to 1 if the household has had a newborn within four years of applying and the youngest child at the moment of application was older than 5 years of age. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Figure 1:
Effect of Homeownership Voucher Offer on Utilization and Voucher Value



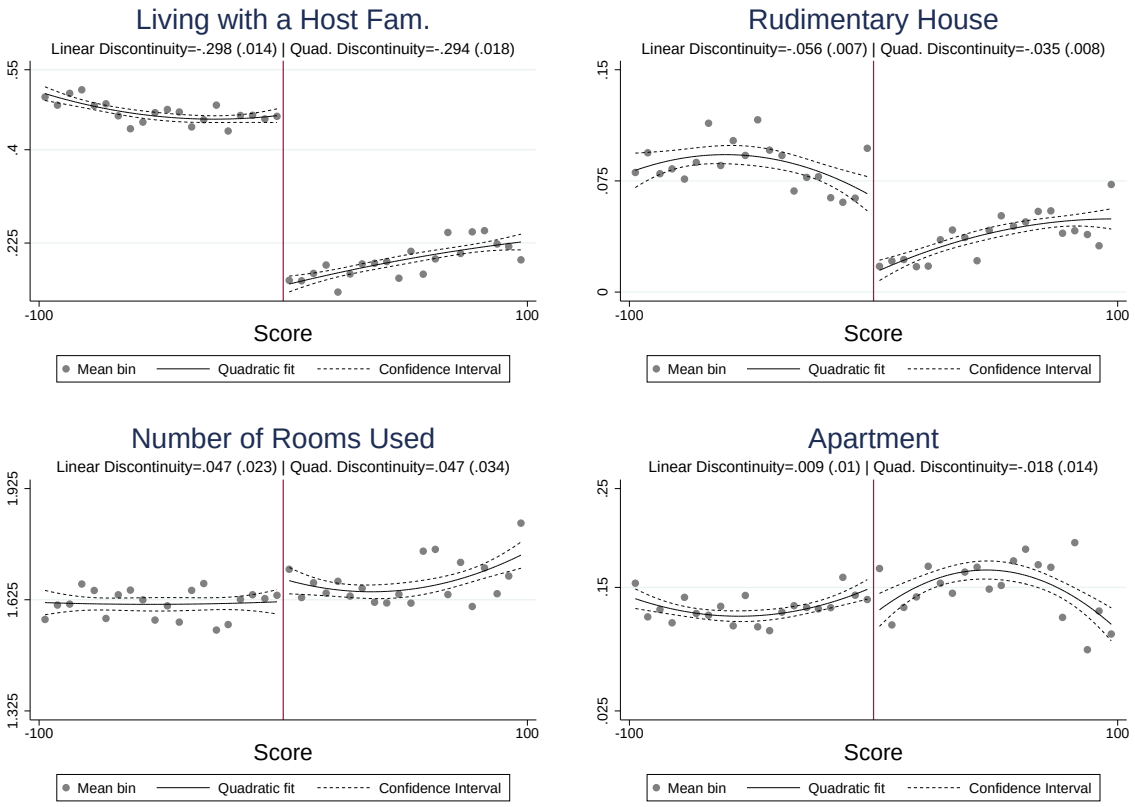
Notes: Data is at the household level, four years after applying to the 2010 and 2011 offer rounds. The left panel uses a dummy variable equal to 1 if the household has ever bought a house using a homeownership voucher after 2010, and equal to 0 otherwise. The right panel uses as a variable the value of the voucher redeemed by the applicant after 2010. Each dot represents the mean of the corresponding outcome for the applicants in a particular bin. The vertical line represents the eligibility cutoff score for receiving a homeownership voucher offer.

Figure 2: Homeownership Voucher Utilization by Dates After Applying



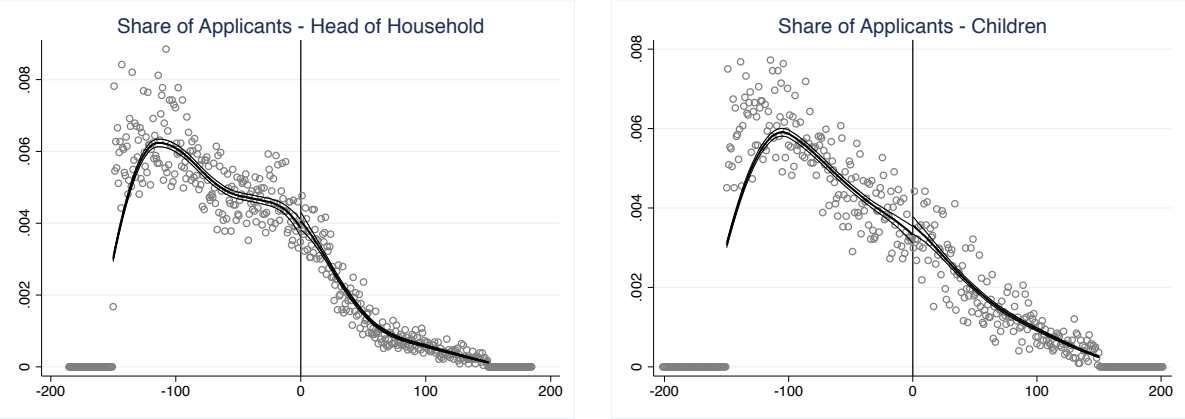
Notes: Data is at the household level, four years after applying to 2010 and 2011 offer rounds. The top left panel uses a dummy variable equal to 1 if the household used a voucher to buy a house 6 months after applying, and equal to 0 otherwise. The top right panel uses a dummy variable equal to 1 if the household used a voucher to buy a house 12 months after applying, and equal to 0 otherwise. The bottom left panel uses a dummy variable equal to 1 if the household used a voucher to buy a house 18 months after applying, and equal to 0 otherwise. The bottom right panel uses a dummy variable equal to 1 if the household used a voucher to buy a house 24 months after applying, and equal to 0 otherwise. Each dot represents the mean of the corresponding outcome variable for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a homeownership voucher offer.

Figure 3: Effect of Homeownership Voucher on House Characteristics



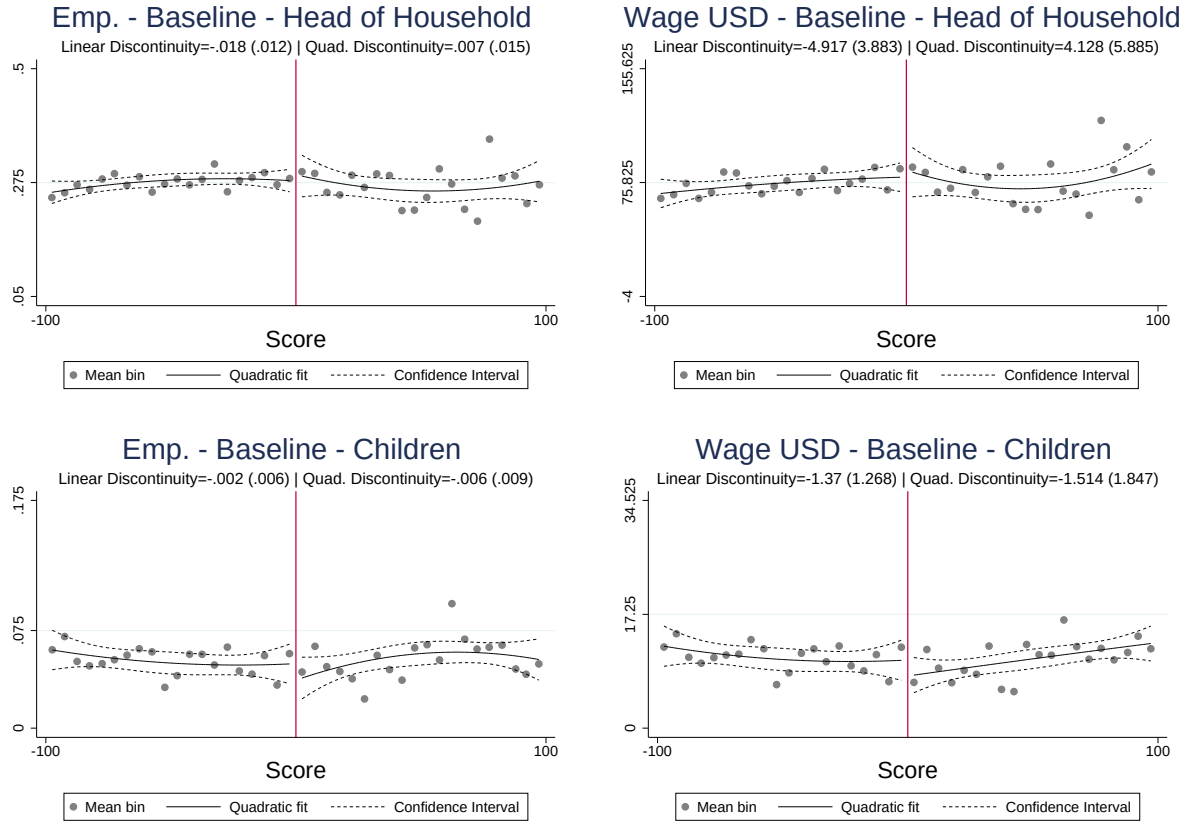
Notes: Data is at the household level, four years after applying to 2010 and 2011 offer rounds. *Living with a Host Family* is a dummy variable equal to 1 if the household lives in another family's house, and equal to 0 otherwise. *Rudimentary House* is a dummy variable equal to 1 if the household lives in a house without concrete floor or potable water, and equal to 0 otherwise. *Number of Rooms Used* is the number of rooms that the household uses as bedroom in the house. *Apartment* is a dummy variable equal to 1 if the household lives in an apartment, and equal to 0 otherwise. Each dot represents the mean of the corresponding outcome variable for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a homeownership voucher offer.

Figure 4: The Continuity of the Share of Applicants Around the Cutoff - Head of Household and Children



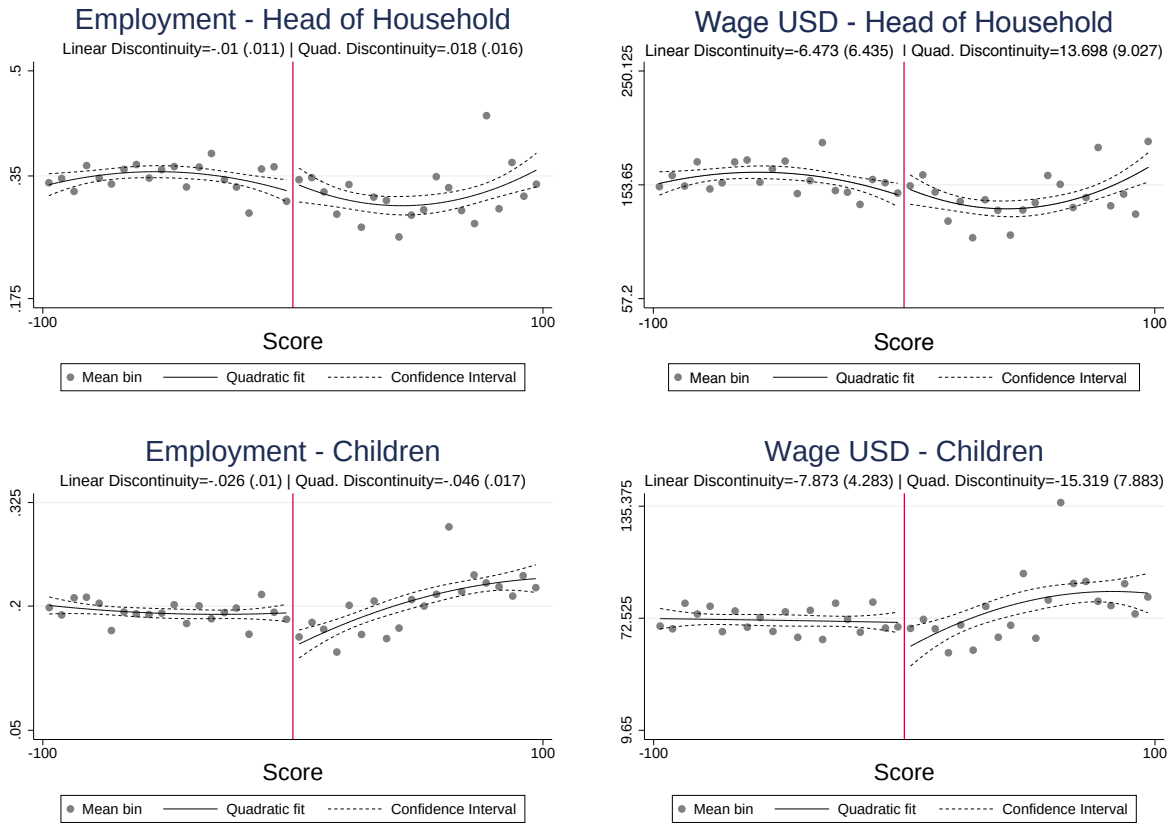
Notes: Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. Each circle represents the share of applicants in each particular subgroup and in a particular bin. The vertical line in each panel represents the cutoff score for receiving a homeownership voucher offer.

Figure 5:
Continuity of Covariates around the Cutoff - Head of Household and Children



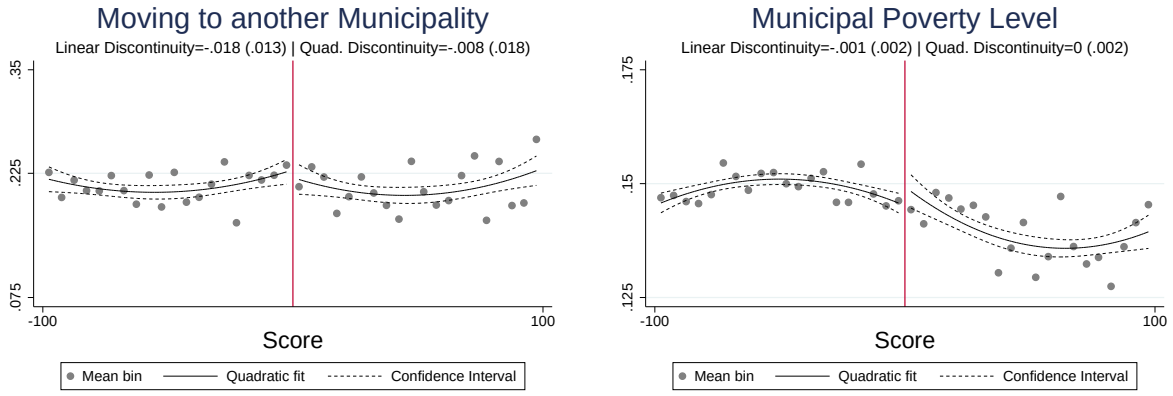
Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Emp. - Baseline* is a dummy variable equal to 1 if the person was working before applying, and equal to 0 otherwise. *Wage - Baseline* is the corresponding wage before applying. Each dot represents the mean of the pre-determined covariate for the corresponding subgroup in a particular bin. The vertical line in each panel represents the cutoff score for receiving a homeownership voucher offer.

Figure 6: The Effect of the Homeownership Voucher on Employment and Wages



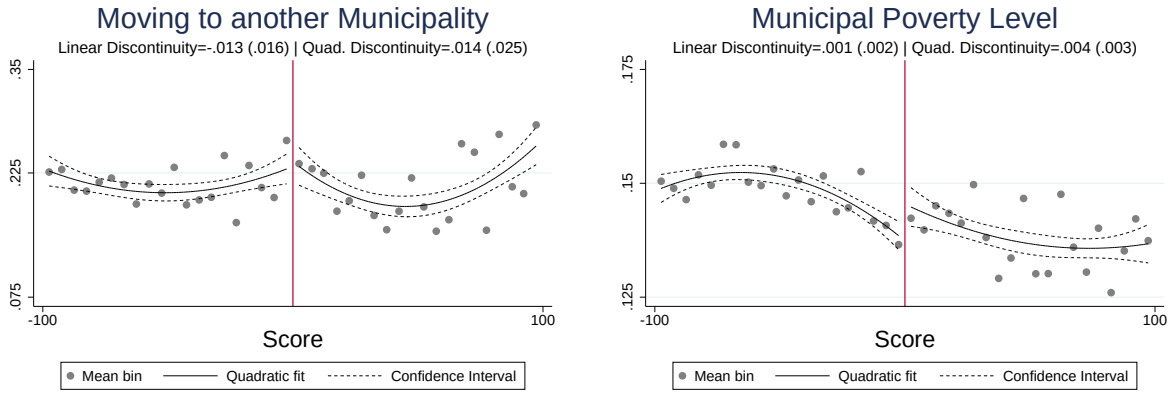
Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Employment* is a dummy variable equal to 1 if the person is working four years after applying, and equal to 0 otherwise. *Wage USD* is the observed wage four years after applying. Each dot represents the mean of the corresponding outcome variable for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a homeownership voucher offer.

Figure 7: The Effect of the Homeownership Voucher on Residential Stability and Area Quality - Heads of Households



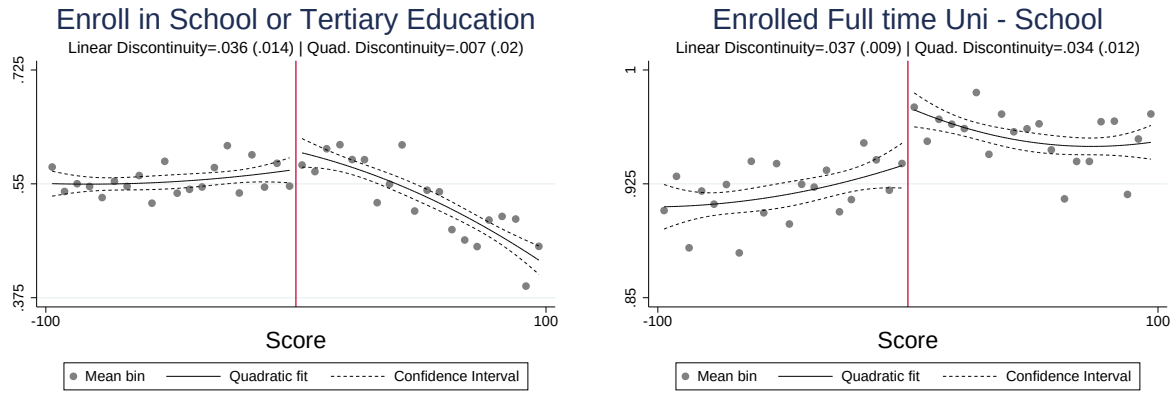
Notes: Data is for heads of households of legal working age, four years after applying to 2010 and 2011 offer rounds. *Moving to Another Municipality* is a dummy variable equal to 1 if the head of household is living in a different municipality from the one in which they lived when applying, and equal to 0 otherwise. *Municipal Poverty Level* is the average poverty level of the municipality in which the head of household lives four years after applying. Each dot represents the mean of the corresponding outcome for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a voucher offer.

Figure 8: The Effect of the Homeownership Voucher on Residential Stability and Area Quality - Children



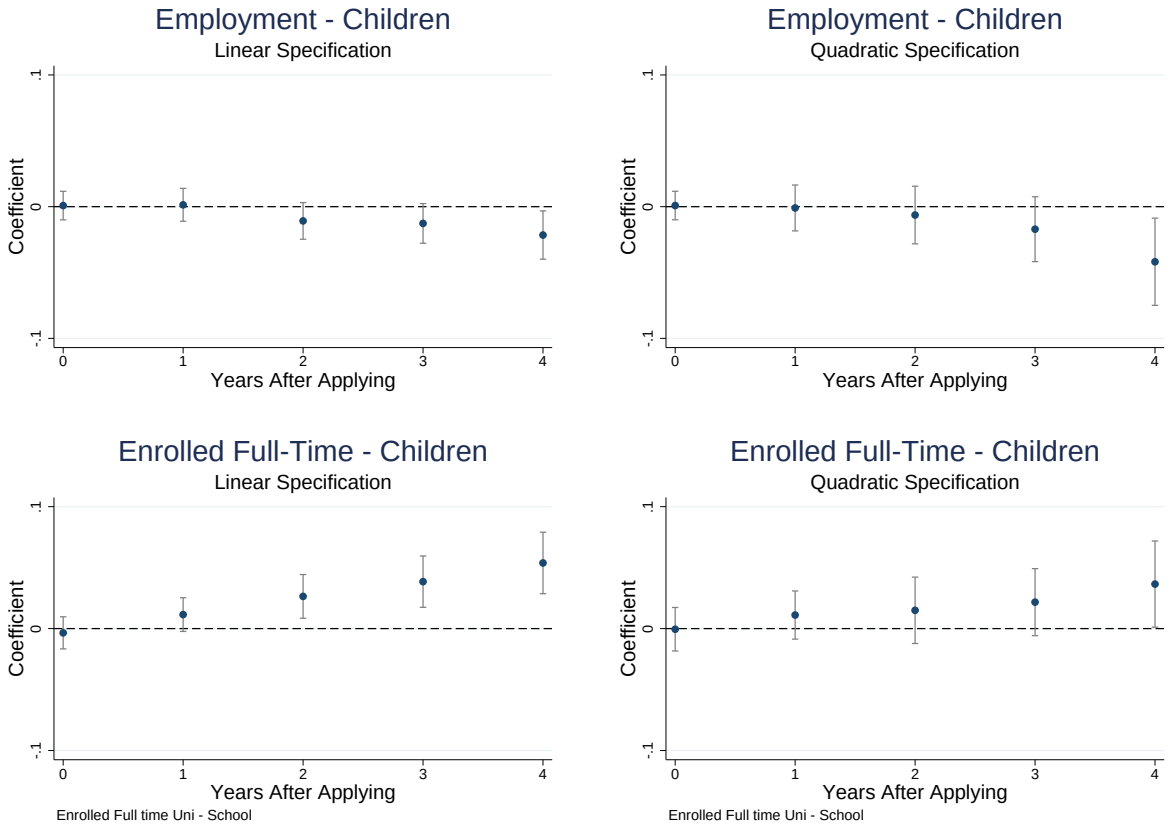
Notes: Data is for children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Moving to Another Municipality* is a dummy variable equal to 1 if the child's household is living in a different municipality from the one in which they lived when applying, and equal to 0 otherwise. *Municipal Poverty level* is the average poverty level of the municipality in which the child lives four years after applying. Each dot represents the mean of the corresponding outcome for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a voucher offer.

Figure 9: The Effect of the Homeownership Voucher on Education - Children



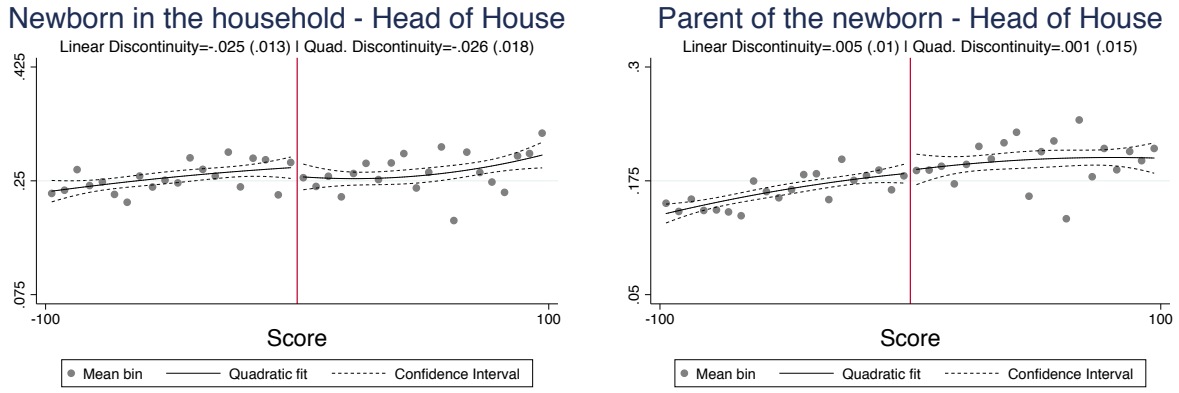
Notes: Data is for children of legal working age, four years after they apply to 2010 and 2011 offer rounds. *Enrolled in School or Tertiary Education* is a dummy variable equal to 1 if the child is enrolled in a school or in a higher educational institution, and equal to 0 otherwise. *Enrolled Full-Time* is a dummy variable equal to 1 if the student child is enrolled full-time in school or in a higher educational institution, and equal to 0 otherwise. Each dot represents the mean of the corresponding outcome for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a voucher offer.

Figure 10: The Effect of the Homeownership Voucher on Employment and Education by Years After Applying



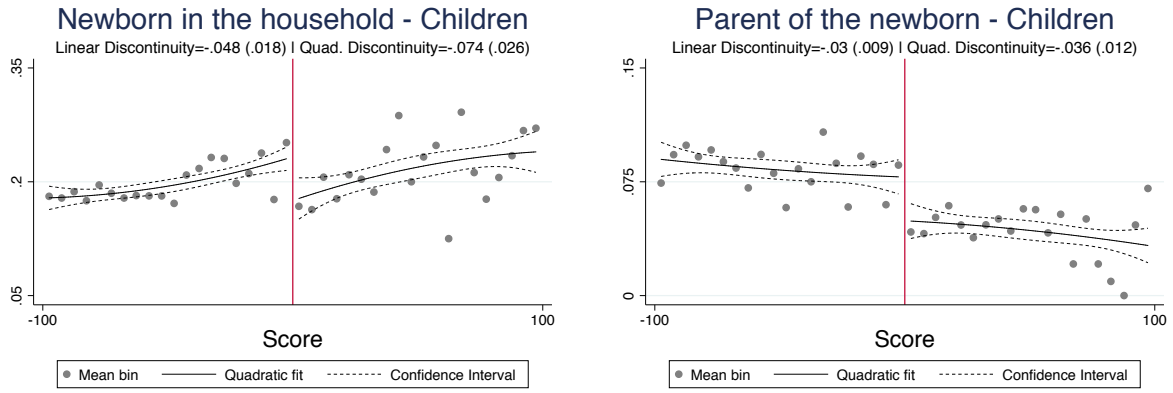
Notes: Each dot is the coefficient of the point estimate for the ITT estimation in each particular year after applying. The confidence intervals are set at the 95 percent level.

Figure 11: The Effect of the Homeownership Voucher on Family Newborns - Heads of Households



Notes: Data is for heads of households of legal working age, four years after applying to 2010 and 2011 offer rounds. *A newborn in the household* is a dummy variable equal to 1 if the household has had a newborn within four years of applying, and equal to 0 otherwise. *Parent of the Newborn - Head of House* is a dummy variable equal to 1 if the household has had a newborn within four years of applying and either: 1) the youngest child at the moment of application was less than 5 years old; or, 2) there are no children of legal working age. Each dot represents the mean of the corresponding outcome for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a voucher offer.

Figure 12:
The Effect of the Homeownership Voucher on Family Newborns - Children



Notes: Data is for children of legal working age, four years after applying to 2010 and 2011 offer rounds. *A newborn in the household* is a dummy variable equal to 1 if the household has had a newborn within four years of applying, and equal to 0 otherwise. *Parent of the Newborn - Children* is a dummy variable equal to 1 if the household has had a newborn within four years of applying and the youngest child at the moment of application was more than 5 years old, and equal to 0 otherwise. Each dot represents the mean of the corresponding outcome for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a voucher offer.

A Additional Figures and Tables

Table A1: The Effect of the Homeownership Voucher on Employment and Wages Using the Optimal Bandwidth

VARIABLES	ITT				IV			
	Employment		Wage (USD)		Employment		Wage (USD)	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Children								
Homeownership Voucher	-0.0225**	-0.0415**	-4.963	-15.91*	-0.0371**	-0.0738**	-8.350	-27.41*
	(0.0106)	(0.0191)	(4.851)	(8.751)	(0.0172)	(0.0335)	(7.969)	(15.01)
Observations	16,063	16,063	16,381	16,381	16,063	16,063	16,381	16,381
R-squared	0.176	0.176	0.198	0.198	0.175	0.163	0.198	0.187
BANDWIDTH	93	93	94	94	93	93	94	94
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES
CONTROL MEAN	.21	.21	82.726	82.726	.21	.21	82.726	82.726

Notes: Data is for children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Employment* is a dummy variable equal to 1 if the person is working four years after applying, and equal to 0 otherwise. *Wage USD* is the observed wage four years after applying. The optimal bandwidth is the one proposed by Calonico et al. (2014). *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, disabled family member, employment status before applying and wage before applying. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table A2: The Effect of the Homeownership Voucher on Employment by Family Structure - ITT

VARIABLES	No Single Adult		Single Adult		Without a Child		With a Child	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Head of Household								
Homeownership Voucher	0.0208	0.0297	-0.0219*	0.0141	-0.0167	-0.00936	0.00113	0.0505**
	(0.0242)	(0.0332)	(0.0119)	(0.0183)	(0.0161)	(0.0230)	(0.0154)	(0.0225)
Observations	6,570	6,570	16,558	16,558	10,891	10,891	12,237	12,237
R-squared	0.250	0.250	0.180	0.180	0.173	0.173	0.227	0.228
CONTROL MEAN	.337	.337	.352	.352	.363	.363	.335	.335
Children								
Homeownership Voucher	-0.0358*	-0.0924***	-0.0228**	-0.0300				
	(0.0195)	(0.0311)	(0.0111)	(0.0189)				
Observations	5,217	5,217	13,525	13,525				
R-squared	0.175	0.176	0.168	0.168				
CONTROL MEAN	.195	.195	.193	.193				
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, disabled family member, employment status before applying and wage before applying. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table A3:
The Effect of the Homeownership Voucher on Employment by Area - ITT

VARIABLES	Not Metropolitan Area (Linear) (1)	Not Metropolitan Area (Quad.) (2)	Metropolitan Area (Linear) (3)	Metropolitan Area (Quad.) (4)
Head of Household				
Homeownership Voucher	-0.0163	0.0155	0.00504	0.0264
	(0.0132)	(0.0205)	(0.0186)	(0.0238)
Observations	14,137	14,137	8,991	8,991
R-squared	0.181	0.181	0.224	0.224
CONTROL MEAN	.35	.35	.344	.344
Children				
Homeownership Voucher	-0.0305**	-0.0591***	-0.0210	-0.0279
	(0.0121)	(0.0215)	(0.0155)	(0.0282)
Observations	10,510	10,510	8,232	8,232
R-squared	0.167	0.168	0.163	0.163
CONTROL MEAN	.173	.173	.222	.222
BANDWIDTH	100	100	100	100
OFFER ROUND - REGION FE	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, disabled family member, employment status before applying and wage before applying. Standard errors are clustered at the muncipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Table A4: Average Distance for Those who Change Municipality of Residence

VARIABLES	ITT		IV	
	Distance		Distance	
	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)
Head of Household				
Homeownership Voucher	-32.66	-5.442	-55.13	-2.944
	(22.70)	(25.62)	(39.16)	(51.67)
Observations	4,835	4,835	4,835	4,835
R-squared	0.313	0.313	0.314	0.296
CONTROL MEAN	153.931	153.931	153.931	153.931
Children	-52.54	-53.08	-82.47	-104.0
	(34.94)	(37.73)	(57.84)	(69.18)
Observations	2,591	2,591	2,591	2,591
R-squared	0.308	0.308	0.307	0.301
CONTROL MEAN	153.135	153.135	153.135	153.135
BANDWIDTH	100	100	100	100
CONTROLS	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES

Notes: Data is for head of household and children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Distance* is the number of kilometers between the municipality in which the person lived at the moment of application and the municipality in which they lived four years after applying. The sample is restricted to those who change municipality of residence in this four-year window. The optimal bandwidth is the one proposed by Calonico et al. (2014). *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table A5: The Effect of the Homeownership Voucher on Education Using the Optimal Bandwidth

VARIABLES	Enrolled in School or Tertiary Education		Enrolled Full time Uni - School	
	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)
Homeownership Voucher	0.0308**	0.0198	0.0427***	0.0295**
	(0.0135)	(0.0195)	(0.00842)	(0.0119)
Observations	19,631	19,631	19,506	19,506
R-squared	0.018	0.018	0.015	0.015
CONTROL MEAN	.554	.554	.919	.919
BANDWIDTH	110	110	109	109
CONTROLS	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES

Notes: Data is for children of legal working age, four years after applying to 2010 and 2011 offer rounds. *Enrolled in School or Tertiary Education* is a dummy variable equal to 1 if the children is enrolled in a school or in a higher educational institution, and equal 0 otherwise. *Enrolled Full-Time* is a dummy variable equal to 1 if the student child is enrolled full-time in school or in a higher educational institution, and equal to 0 otherwise. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, and disabled family member. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table A6: Continuity of Covariates Around the Cutoff - Spouse

VARIABLES	Employment		Wage USD		Age		Female		Poverty Level		Elderly Fam. Member		Disabled Fam. Member	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Homeownership Voucher	-0.0260	-0.0432	5.130	10.04	-0.0415	-0.0311	0.0200	0.0439	-0.0568	-0.0259	-7.29e-05	0.0101	0.00998	-0.00862
	(0.0240)	(0.0367)	(11.48)	(15.88)	(0.446)	(0.708)	(0.0244)	(0.0350)	(0.0479)	(0.0676)	(0.00733)	(0.00975)	(0.0105)	(0.0145)
Observations	6,557	6,557	6,557	6,557	6,557	6,557	6,557	6,557	6,361	6,361	6,361	6,361	6,361	6,361
R-squared	0.017	0.017	0.029	0.031	0.027	0.027	0.035	0.035	0.953	0.953	0.011	0.011	0.014	0.015
CONTROL MEAN	.417	.417	137.478	137.478	34.961	34.961	.261	.261	12.928	12.928	.02	.02	.038	.038
BANDWIDTH	100	100	100	100	100	100	100	100	100	100	100	100	100	100
CONTROLS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

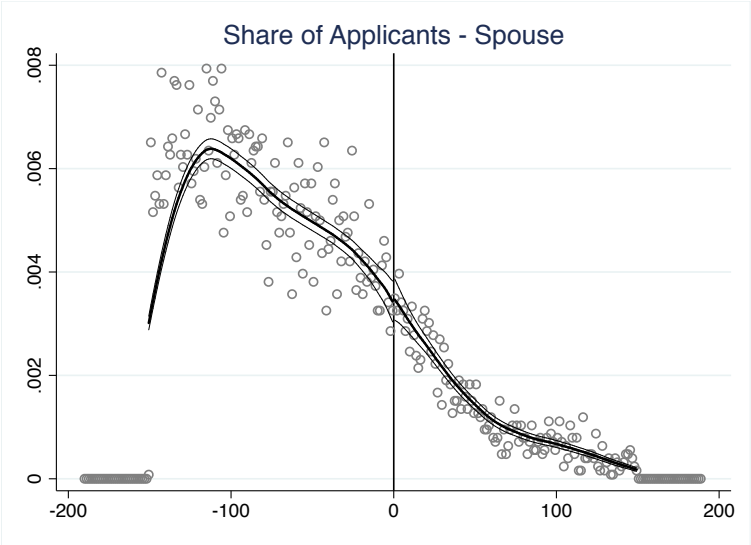
Notes: Data is for spouses of legal working age, four years after applying to 2010 and 2011 offer rounds. *Age* is the age in years. *Female* is a dummy variable equal to 1 if the spouse is female and 0 otherwise. *Employment* is a dummy variable equal to 1 if the spouse was working before applying, and equal to 0 otherwise. *Wage* is the wage of spouse before applying. *Poverty Level* is the percentile of the family poverty level with respect to the Chilean population. *Elderly Fam. Member* is a dummy variable equal to 1 if the family has an elderly family member when applying, and equal to 0 otherwise. *Disabled Fam. Member* is a dummy variable equal to 1 if the family has a disabled family member when applying, and equal to 0 otherwise. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for applicants in the bandwidth who are below the cutoff score. *** p<0.01, ** p<0.05, * p<0.1

Table A7:
The Effect of the Homeownership Voucher on Employment and Wages - Spouse

VARIABLES	ITT				IV			
	Employment		Wage (USD)		Employment		Wage (USD)	
	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)	(Linear)	(Quad.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Spouse								
Homeownership Voucher	-0.0406*	-0.00983	-30.43*	-11.99	-0.0656*	-0.0146	-48.56*	-19.27
	(0.0228)	(0.0352)	(16.98)	(27.20)	(0.0372)	(0.0648)	(27.96)	(49.81)
Observations	6,557	6,557	6,557	6,557	6,557	6,557	6,557	6,557
R-squared	0.269	0.269	0.291	0.291	0.268	0.266	0.290	0.289
CONTROL MEAN	.462	.462	262.432	262.432	.462	.462	262.432	262.432
BANDWIDTH	100	100	100	100	100	100	100	100
CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
OFFER ROUND - REGION FE	YES	YES	YES	YES	YES	YES	YES	YES

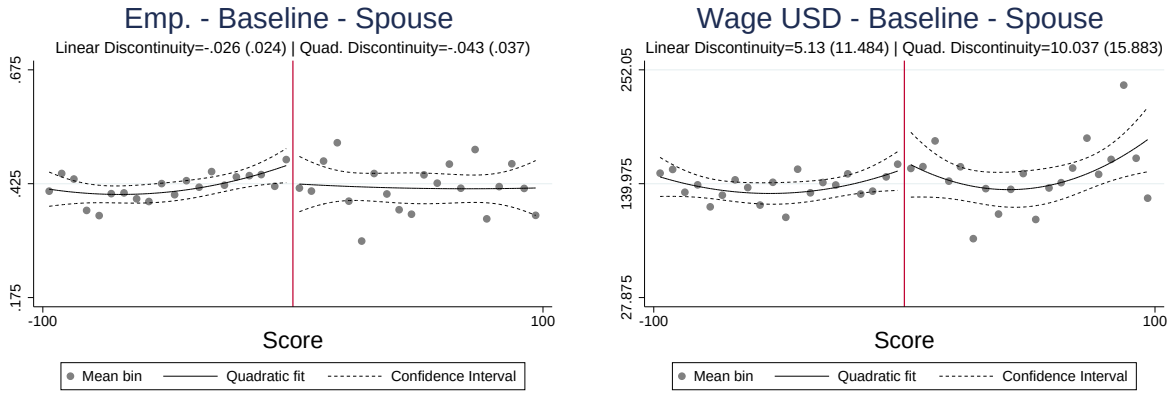
Notes: Data is for spouses of legal working age, four years after applying to 2010 and 2011 offer rounds. *Employment* is a dummy variable equal to 1 if the spouse is working four years after applying, and equal to 0 otherwise. *Wage USD* is the observed wage four years after applying. *Linear* employs polynomials of order 1 and *Quad.* polynomials of order 2 in $\text{Score}_{i,r,c}$ on either side of the cut-off. *Control Mean* is the mean of the corresponding outcome variable for spouses in the bandwidth who are below the cutoff score. Controls include gender, age, poverty level, elderly family member, disabled family member, employment status before applying and wage before applying. Standard errors are clustered at the municipal-year level. *** p<0.01, ** p<0.05, * p<0.1

Figure A1: The Continuity of the Share of Applicants Around the Cutoff - Spouse



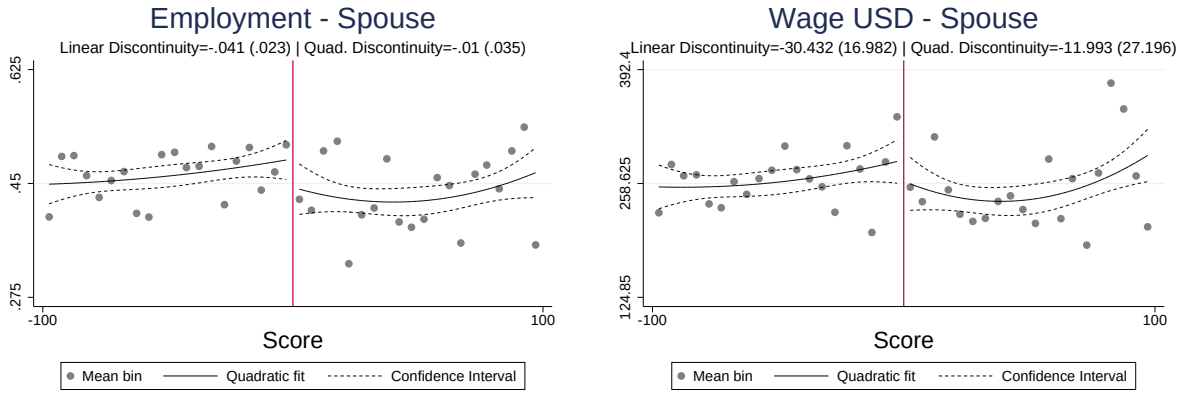
Notes: Notes: Data is for spouses of legal working age, four years after applying to 2010 and 2011 offer rounds. Each circle represents the share of applicants of legal working age in a particular bin. The manipulation of the cutoff is rejected with a t-stat of 0.1190 and a p-value of 0.9053.

Figure A2: Continuity of Covariates around the Cutoff - Spouse



Notes: Data is for spouses of legal working age, four years after applying to 2010 and 2011 offer rounds. *Emp. - Baseline* is a dummy variable equal to 1 if the spouse was working before applying, and equal to 0 otherwise. *Wage Baseline* is the corresponding wage before applying. Each dot represents the mean of the pre-determined covariates for spouses in a particular bin. The vertical line in each panel represents the cutoff score for receiving a voucher offer.

Figure A3:
The Effect of the Homeownership Voucher on Employment and Wages - Spouse



Notes: Data is for spouses of legal working age, four years after applying to 2010 and 2011 offer rounds. *Employment* is a dummy variable equal to 1 if the person is working four years after applying, and equal to 0 otherwise. *Wage USD* is the observed wage four years after applying. Each dot represents the mean of the corresponding outcome variable for the applicants in a particular bin. The vertical line in each panel represents the cutoff score for receiving a homeownership voucher offer.

B The Homeownership Subsidies Act

Act 174 (Chilean National Congress, 2006), from the Ministry of Housing and Urban Planning (MINVU, from its Spanish name *"Ministerio de Vivienda y Urbanismo"*), regulates all homeownership subsidies that the Chilean government provides to the poorest 40 percent of the population.[27] Chapter XV of this Act describes the specific rules regarding the program studied in this paper, "Adquisicioń de Vivienda Construida" (AVC).

This chapter establishes that people who wish to be considered in a given offer round must submit their supporting documents for the application to their regional MINVU office. The government then ensures that the basic eligibility requirements are met: 1) having had savings of at least 400 USD in a bank account for a year; 2) belonging to the poorest 40 percent of the population; 3) having applied to receive the voucher in only one region; and 4) that no household member already owns a house. If the individual meets all requirements, they are provided with a certificate of application and they then become an applicant.

The homeownership score and all that follows is carried out for applicants and the same rules apply nationwide.

B.1 The Homeownership Score

In 2010, the score was calculated using the following factors:

1. *Family Poverty Level:* Corresponds to the difference between the underlying *household poverty score* that is used to determine the 40 percent poverty level in the population (maximum score for an application to be valid) and the applicant's own poverty score, divided by 10. The poverty score assigned to the poorest person in the Chilean population is 2,042 points and the poverty score that determines the 40 percent threshold is 11,734 points.

2. *Family Group:* 10 points is added for each household member accredited in the *household poverty record*. If the applicant has no other accredited family members, he/she will receive a score of zero.

3. *Children in the Family:* The government calculates the share of household members accredited in the *household poverty record* who are 15 years of age or younger, deter-

[27] Act 174 was later replaced by Act 49 (Chilean National Congress, 2011).

mined by their age in the year of the offer round. The applicant receives 1 point for each percentage point of the share calculated in this category.

4. *Disabled Family Members:* The government calculates the share of household members accredited in the *household poverty record* who are disabled. The applicant receives 1 point for each percentage point of the share calculated in this category.

5. *Elderly Family Members:* The government calculates the share of household members accredited in the *household poverty record* who are 60 years of age or older, determined by their age in the year of the offer round. The applicant receives 1 point for each percentage point of the share calculated in this category.

6. *Single Parent:* 20 points are offered if the head of household is not living with the parent of any of his/her children.

In 2011, MINVU introduced several changes regarding the calculation of these factors. These changes were as follows:

1. *Family Group:* 40 points are given for each household member accredited in the *household poverty record*, excluding the main applicant. If the applicant has no other accredited family members, he/she will no obtain extra points.

2. *Children in the Family:* 30 points for each household member accredited in the *household poverty record* who are 5 years of age or younger, determined by their age in the year of the offer round.

3. *Young Family Members:* 20 points for each household member accredited in the *household poverty record* who is between 6 and 18 years of age, determined by their age in the year of the offer round.

4. *Single Adult:* 40 points are offered if the head of household is not living with any other person above the age of 25 who is not his/her son or daughter.

5. *Politically Persecuted* 25 points if any household member accredited in the *household poverty record* is recognized as having been politically persecuted by Pinochet's military regime.

6. *Maximum Score:* The sum of all of the aforementioned scores cannot be higher than 400 points.

In both of the years studied, the score was calculated using the sum of the factors listed above for each offer round. The poverty level score represents around 60 percent of the total score for the average applicant.

B.2 The Homeownership Voucher Selection Process

The homeownership voucher selection process is determined using the following steps:

1. Vouchers are assigned to applicant families strictly following the order given by the application score, from the applicant with the highest score to the applicant with the lowest score. In a given offer round, the regional office will provide vouchers until the budget for this round is exhausted in the region.[28]

2. If two or more applicants have the same score in a particular offer round and region, and availability of funds prohibits all from receiving a voucher, the applicant who has the highest score in the poverty level factor will have preference. If the tie still remains, a lottery will be conducted to determine the recipient.

3. Once funds are exhausted, applicants who did not receive the voucher will be removed from MINVU records. They will be able to apply in a future offer round, but will be required to submit an entire new application.

B.3 Use of the Homeownership Voucher

Once the selection procedure is finished and voucher recipients have been informed, the regional office has 15 days to issue a certificate accrediting their voucher receipt. This certificate will have:

1. The name and the national ID number of the voucher recipient.

2. Date of receipt and expiration date for the voucher.

3. Region of application and value of the voucher.

[28]The regional budget is set the preceding year in national budget law.

The voucher must be used in the 24 months following the applicant's notification of the offer round results.

Once the voucher recipient has found a house, the regional MINVU office must "accompany" them in the buying process. Here, government officials have the following duties:

1. Estimating the commercial price of the property.[29] The price of the house set by the seller cannot be 20 percent higher than the price given by the MINVU. If this is the case, the transaction cannot be continued, and that particular property is excluded from the properties available to that person.

2. Confirming that the house to be purchased satisfied basic habitability requirements (e.g. having a solid concrete floor or potable water supply).

3. Providing advice to the voucher recipient for the legal paperwork required in the buying process.

Once this has been completed, the voucher will cover the difference between the market price of the house and the amount of savings accredited by the family at the time of application, up to a maximum of 25,000 USD. The process here is as follows: the voucher recipient, the seller and the government sign the house purchase contract. After this, the house is transferred, the voucher recipient pays the amount of savings reported in the application, and the government pays the remainder to the seller.

B.4 Restrictions

The Act states in its restrictions that this voucher cannot be used to buy a house from relatives up to the second degree - meaning grandparents, grandchildren, aunts, uncles, nephews, nieces or half-siblings. Also the price of the house cannot exceed a price of around 40,000 USD

Furthermore, AVC voucher recipients are not permitted to take out a housing mortgage, nor can they sell or rent the property (or part of it) in the 5 years after taking ownership. Finally, families are not permitted to use the home as a collateral for credit for a 5-year period.

[29]This pricing process is determined by Resolution N 347 from the MINVU.

C The Poverty Index

The poverty index is the main criteria used by the government to deliver social benefits, and aims to capture the "risk of a family of becoming poor". Although families may have a grasp of the broad variables used to compute the index, the exact equation is not public knowledge. The Ministry of Planning provides the following sketch of the poverty index equation:

$$\text{Poverty Index} = \frac{\begin{array}{c}\text{Ability to Generate Income} \\ \text{+ Declared Income}\end{array} \qquad \text{Permanent Income}}{\text{Household Needs}}$$

where each of the terms in this equation are calculated for all family members in the household. The government provides the following description of the variables:

- *Ability to Generate Income:* Potential labor wage that each household member could receive in the labor market. Certain household members have a potential wage of 0 such as those of retirement age, students under 25 years of age, pregnant women, or disabled family members. Two facts are worth noting: 1) the equation used to input potential labor market wages is not known; and 2) factors that could ultimately increase real wages in the labor market (e.g. further years of education) will increase these potential wages for household members.

- *Declared Income:* Labor income as declared by the family. This particular term is not checked against any official record.

These two measures are combined for all household members and used to create one single factor where *Ability to Generate Income* receives 90 percent of the weighting and *Declared Income* receives 10 percent. The labor income thus does play a part in determining this index, but it is far from being its main component.

- *Permanent Income:* Income received from a pension and any other regular transfers. This is self-reported, but also checked against governmental agencies.

- *Household Financial Needs:* Financial needs associated with disabled family members or terminal illnesses.

The weighting of each factor in the equation is not provided by the government.

The system is automatized and updated using administrative information. For example, if a household member turns 65 years old or passes away, the score is recalculated to reflect this new information. After all information has been collected, the government computes a score for each family, where a higher score effectively means "richer" and a lower score means "poorer". The lowest poverty score is 2,042 points, and the two most common thresholds for obtaining social benefits are 8,500 points (poorest 20 percent) and 11,734 points (poorest 40 percent). In the process of applying for a social benefit, families use their score and generally are aware of the maximum scores for applying.