

Information Frictions in Rental Voucher Programs: Experimental Evidence from Chile

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Motivation

- Imperfect take-up of social assistance has been documented in welfare programs.
 - Evidence suggests that barriers include large transaction costs, stigma, and lack of information about benefits, rules and application procedures. Tend to be higher for the most disadvantaged. (Bertrand, Mullainathan, & Shafir, 2004; Bhargava & Manoli, 2015; Chareyron, Domingues, & Lieno-Gaillardson, 2021; Currie, 2006; Giannella, Homonoff, Rino, & Somerville, 2023; Goldin, Homonoff, Javaid, & Schafer, 2022; Mani, Mullainathan, Shafir, & Zhao, 2013; Moffitt, 1983; Shah, Mullainathan, & Shafir, 2012)
- Take-up in rental voucher programs has not received much attention in the literature. (Finkel & Buron, 2001).
 - Recent data for the US HCVP (Section 8) showed that 4 out of 10 rental voucher holders failed to use their benefits. (Ellen, O'Regan, & Strochak, 2024)
 - The reasons why families, who applied and waited for a rental voucher, ultimately gave up to such a generous benefit remain unknown.
- While some of the barriers for traditional welfare programs may apply to rental vouchers, additional demand and supply-side barriers may emerge from housing search in the private rental market.

Motivation

- Understanding take-up barriers and their impact on different groups of voucher holders is key for designing cost-effective policies and assessing the welfare implications of rental voucher programs.
- Motivated by large positive neighborhood effects, the literature has focused on understanding barriers to neighborhood choice for rental voucher holders instead of the barriers to unconditional voucher utilization. (Aliprantis, Martin, & Tauber, 2020; Bergman et al., 2023; DeLuca & Rosenblatt, 2017; Kling, Liebman, & Katz, 2007; Schwartz, Mihaly, & Gala, 2017)
- Evidence on housing mobility programs suggests that families need assistance to use their vouchers in high-opportunity areas. Intensive customized counseling seems to work by supporting and motivating families throughout the housing search process. (Bergman et al., 2023; Galiani, Murphy, & Pantano, 2015; Shroder, 2002).
- Intensive customized counseling is expensive and have not changed (already high) take-up rates. By combining services, it is difficult to disentangle barriers to design cost-effective policies to increase voucher utilization. (Bergman et al., 2023).

This Research

We use a large-scale experiment in Chile to study one type of demand-side barrier to voucher utilization: information frictions.

- Do families lack information about how to use their vouchers, neighborhood effects on children, and/or neighborhood characteristics?
- Does a light-touch online counseling program providing information to reduce these barriers increase voucher use?

This Research

- In March 9th 2022, we launched the light-touch online counseling platform “Aprendo y Arriendo” (Learn and Rent).
- Through the platform, we randomly vary access to information for 11,149 rental voucher recipients who had not used their vouchers into four groups:
 - T1:** Voucher status, lease-up instructions, Q&A, Blog, frequent reminders encouraging platform and voucher use.
 - T2:** T1+ video explaining the benefits of growing up in better neighborhoods for children (almost the entire sample has children)
 - T3:** T2 + “*Neighborhood Browser*”, where they can search for any location and learn its characteristics.
 - C:** Pure control
- Online but tries hard to provides support, help and motivate families to search on their own, use their vouchers and live in better neighborhoods.

This Research

- We collected monthly data on all leases created (successful or not) in government's platform by March 2024.
- Implemented a follow up survey in Sept. 2022 (6-8 months post-treatment) and track all the activity in the platform.

Preview of Preliminary Results

We found large information frictions restricting voucher use:

1. A&A increased successful lease-up by 5.1 percentage points (28%) in six months. Effects were persistent in the long run. However, it did not change neighborhood characteristics, rents or housing/neighborhood satisfaction 6-8 months post-treatment.
2. In the short run, neighborhood information reduced the gains from the most basic information:
 - Basic information (T1) increased lease-up by 6.4 pp (35%) in six months.
 - In the long run, accessing information about neighborhood characteristics (T3) led to a higher number of lease attempts, but did not translate into a larger effect on successful lease-ups.
3. Large heterogeneity across groups with different potential supply side barriers.
No differences across demographic and socioeconomic characteristics.
 - Groups with stronger supply side barriers mostly responded when given access to information about neighborhood characteristics.

Contribution

- **Incomplete take-up of social programs** (Bhargava & Manoli, 2015; Carneiro, Flores, Galasso, Ginja, & de Paula, 2016; Currie, 2006; Giannella et al., 2023; Goldin et al., 2022)
 - We study a different type of program, that provides benefits through the private market, and found important information frictions, that interact with supply side barriers.
- **Barriers to rental voucher utilization** (Bergman, Chan, & Kapor, 2020; Bergman et al., 2023; Collinson & Ganong, 2018; DeLuca & Rosenblatt, 2017; Ellen et al., 2024; Kling et al., 2007; Schwartz et al., 2017):
 - We focus on voucher use and quantify specific barriers.
 - First national experimental evaluation of (online) counseling program to rental voucher recipients. Heterogeneity across rental markets may help to reconcile previous mixed results.

Today's Agenda

1. The Chilean Rental Subsidy

2. Experimental Design

3. Data

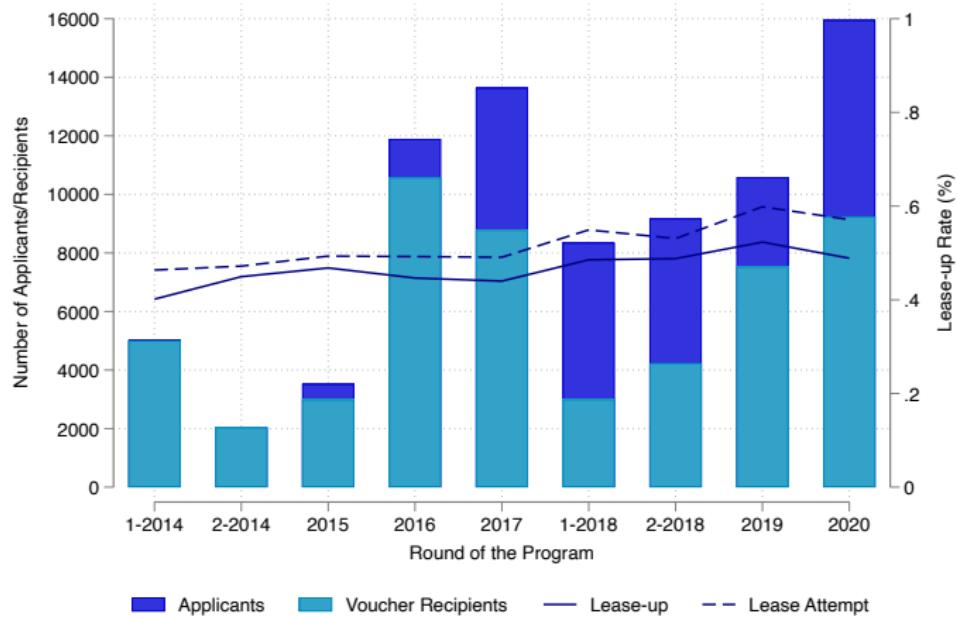
4. Results

5. Conclusion

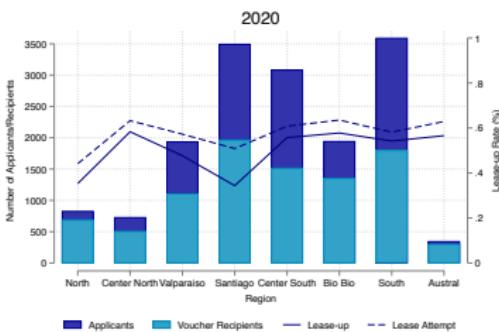
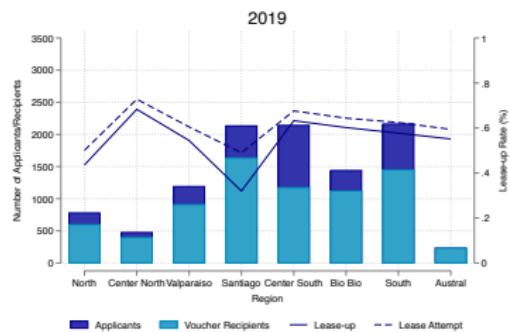
The Chilean Rental Voucher

- Targets 18 or older hh in the bottom 70% of the national vulnerability index (RSH). Income (US\$270-US\$900) and savings to buy a house (US\$155) requirements.
- Provides US\$6,500 in fixed monthly installments of US\$167 to pay rents below the national rent payment standard (US\$420) for 3 years. Voucher \leq 80% rent.
- Higher payment standard (US\$498) and voucher (US\$187) in the extreme north, south and Santiago.
- Annual rounds may include multiple assignment periods. Rolling application: non-voucher recipients in the 1st period are considered with new applicants in the 2nd period.
- Voucher recipients have 24 months to find an eligible unit (minimum size, certificates and legal documents) and a landlord (not a extended family member) willing to participate in the program in the private market.
- No rent negotiation or pre-rent inspection. MINVU collects co-payment and transfers entire rent to the landlord. 3 months guarantor.
- Doubled-up need to move. Tenants may stay if the unit and the landlord met the requirements.

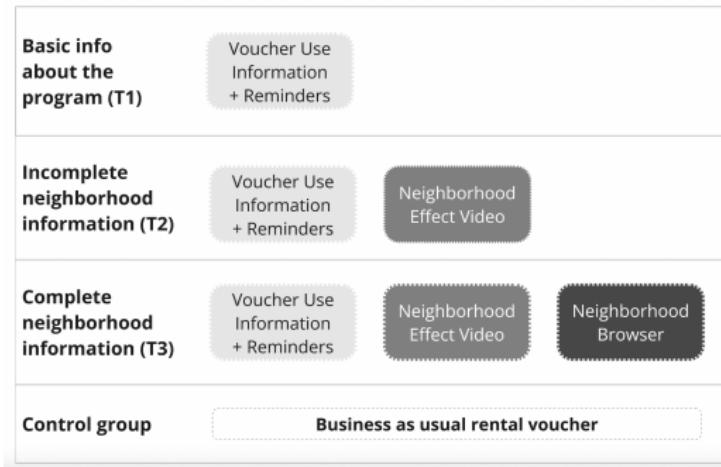
The Chilean Rental Voucher



The Chilean Rental Voucher



Experimental Design



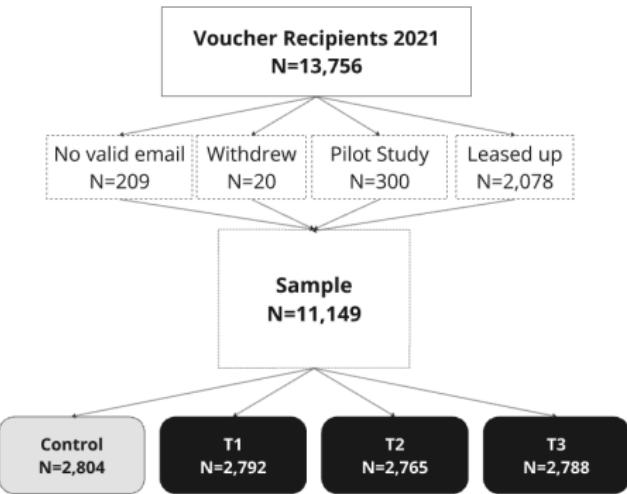
Randomization: stratified by region, assignment period (July 29th, Oct 21st, Dec 9th and 30th), tenure, children in school age, baseline survey response (online). Power to detect a 4.3pp effect on voucher use.

Sample

11,149 from the 2021 round of vouchers with a valid email who had not leased up by March 9th 2022.

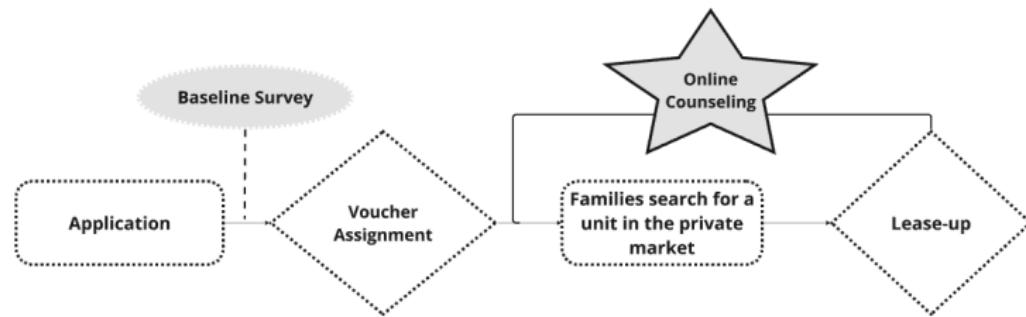
Families with potentially stronger barriers: more recent applicants, families that cannot lease-up in place, in Santiago and in counties with no PHA. Very small differences in socioeconomic characteristics.

Balance in multiple baseline characteristics using admin and survey data, including previous lease attempt.



Balance

Intervention Timeline



- Fieldwork launched on 9-11th March 2022.
- Frequent (weekly or bi-weekly) reminders. Last reminder on July 26th.

Information Design: Lack of information about the program

Voucher Status: "Do you know you hold a voucher?"

Clear guidance to lease up.

A Q&A section clarifying rules.

Blog (questions via WhatsApp, email or the platform; answers posted in a Blog).

Frequent reminders.



Hola Laura Manzal,

¿Sabes que eres beneficiario del Subsidio de Arriendo? ¿Sabes cómo usarlo?

Te presentamos Aprendo y Arriendo, el NUEVO sitio web para beneficiarios del Subsidio de Arriendo.

Al ingresar tendrás información relevante para utilizar tu subsidio y podrás enviarlos tus consultas. También podrás aprender sobre los lugares donde te gustaría usar tu Subsidio de Arriendo en el NUEVO Navegador de Barrios.

¡Todo en un solo lugar! Usa tu subsidio y arrienda en el mejor barrio posible para ti y tu familia.

Para ingresar aprieta el botón "Ingresá acá".

Ingresá Acá

Más informados y más conectados!

No te quedes sin usar TU beneficio!

Atentamente,

Equipo Subsidio de Arriendo

www.mivc.gob.cl/SubsidiodeArriendo/Equipo.html

Si deseas corroborar la veracidad de este correo y su contenido ingresa a www.mivc.gob.cl/SubsidiodeArriendo/



¿Cómo funciona el Subsidio de Arriendo?

Este subsidio complementa el que obtienes mensualmente por tu hogar. Ayuda a pagar tu alquiler de acuerdo con tu situación económica actual (el monto máximo que puedes recibir es de \$12.412,42). El subsidio no reemplaza ningún otro subsidio.

Los beneficiarios tienen acceso a una red de proveedores que ofrecen servicios de calidad y a precios más bajos.



Preguntas Frecuentes | Consulta las más frecuentes de forma rápida y sencilla

Information Design: Lack of information about neighborhood effects

Benefits for children of growing up in better neighborhoods, and how age matters.

Simple, clear and friendly.

The screenshot shows a digital interface with a blue and white color scheme. At the top, the text 'Aprendo y Mienndo' is displayed. Below it, a large button with the text '¡El entorno donde vives sí importa!' is prominent. A smaller text below the button reads: 'Ahora que eres beneficiario del Subsidio de Arriendo: ¿Sabes qué vivienda te gustaría arrendar con tu subsidio? ¿Conoces o has recorrido otros barrios?' Below this, there is a section titled '¡Atención!' with a message: 'Tenemos un mensaje importante para ti en este video. No olvides subir el volumen para poder escuchar.' To the right, there is a video player with the same title '¡El entorno donde vives importa' and a play button. Below the video player, there is a link 'Ver en YouTube'. At the bottom of the screen, there are two buttons: 'Volver' and 'Continuar'.



Information Design: Lack of information about neighborhood characteristics

Survey data and qualitative research to determine relevant information and design.

Neighbor's age and education, school quality, public lightning, and access to services (health care, schools, police stations, groceries, bakeries, pharmacies, green areas, banks/ATM.).

More

The image displays two screenshots of a survey application titled "Encuestas de Barrios".

Screenshot 1: Neighborhood Characteristics

Question: ¿Qué características tiene el entorno?
 Instructions: Agrupa en el cuadro (1) y desplaza las respuestas a los siguientes grupos:
 1. ¿Qué características tienen los vecinos?
 2. ¿Existe en la zona algún establecimiento de noche en este entorno?
 3. ¿Qué tipo de VENICE tienen las viviendas más cercanas?

Screenshot 2: Neighborhood Services

Question: ¿Qué servicios tiene este entorno?
 Instructions: En el siguiente mapa te mostraremos los servicios que existen en los alrededores de tu barrio en la dirección que ingresas.
 El entorno tiene una extensión de 0,62 km² de área verde, 3 servicios de salud, 2 parques, los 9 viveros, 6 bancos, 9 farmacias, 2 supermercados y 1 comisaría.
 Mapa: Aerial view of a neighborhood area with various service icons (schools, clinics, parks, banks, etc.) marked on the map.

Identification

$$Y_i = \beta_0 + \beta_1 T_i + X'_i \omega + \phi_s + \epsilon_i \quad (1)$$

$$Y_i = \beta_0 + \sum_{j=1}^3 \delta_j T_{i,j} + X'_i \omega + \phi_s + \epsilon_i \quad (2)$$

- Y_i outcome variable. X_i baseline covariates used in balance tests and ϕ_s are dummies for each randomization strata.
- Parameter of interest (β_1, δ_j) (ITT)

Outcome Data

- Monthly administrative data on all lease attempts, successful or not, 2 to 24 months after treatment.
 - 6,331 leases created in Minvu's platform after treatment. 20% were not successfully activated (17% of voucher holders).
 - Attempts failed when the unit or the landlords did not meet the requirements, or landlord decided not to participate (supply side barriers).
- Implemented a follow up survey between Sept 15th and Nov 15th 2022 to measure additional outcomes and uncover mechanisms. 60% response rate; Higher among the control group but groups remained balanced.
- We track all the activity in the platform (opened email, link, time spent, etc.) to study mechanisms.

Attrition Follow-up

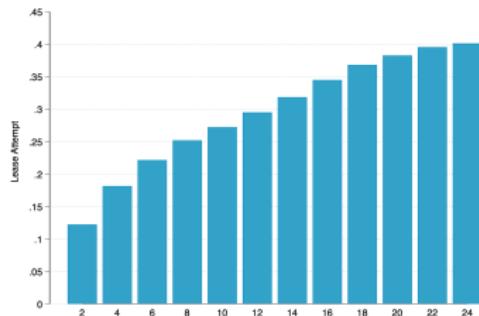
Balance Follow-up

Compliance

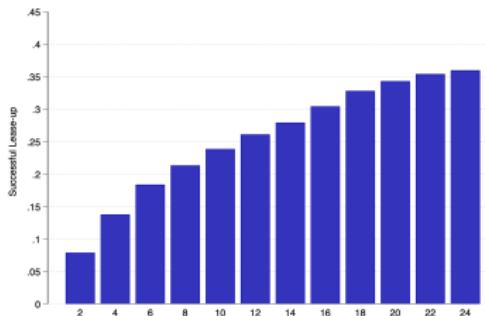
	Email Opened (1)	Platform Clicked (2)	Platform Visits (3)	Platform Minutes (4)
Treatment	0.972*** (0.002)	0.790*** (0.005)	2.607*** (0.033)	13.331*** (0.308)
Treat 1	0.974*** (0.003)	0.811*** (0.007)	2.861*** (0.061)	14.683*** (0.560)
Treat 2	0.971*** (0.003)	0.780*** (0.008)	2.481*** (0.052)	13.815*** (0.510)
Treat 3	0.969*** (0.003)	0.779*** (0.008)	2.479*** (0.050)	11.503*** (0.460)
Observations	11,109	11,109	11,109	11,108
T1=T2=T3	0.625	0.002	0.000	0.000

No statistical differences on the chances of opening the email. Small and statistically significant differences in platform clicks, visits and minutes spent in the platform.

Voucher Use Without Counseling



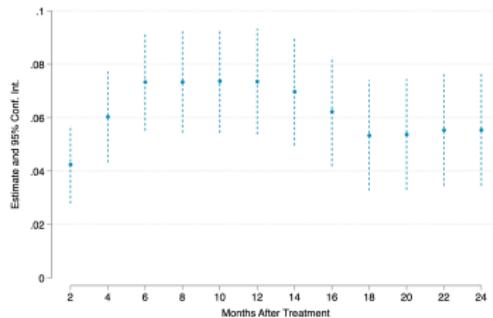
(a) Lease Attempts



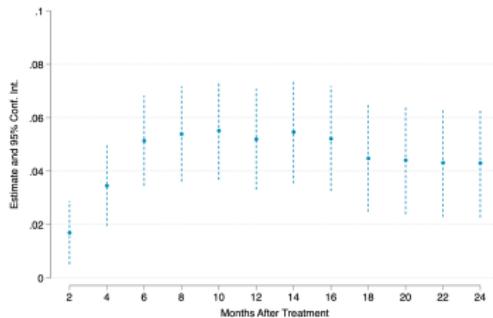
(b) Successful Lease-up

- After 24 months, 19.3% of lease attempts failed in the control group (failure rate).

Treatment Effects on Voucher Utilization



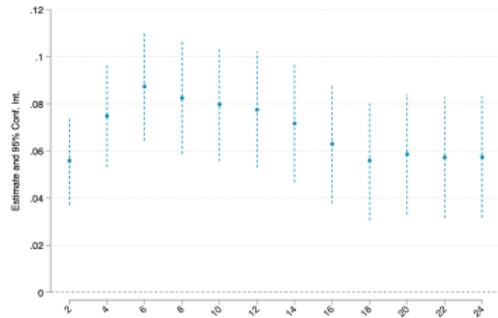
(a) Lease Attempts



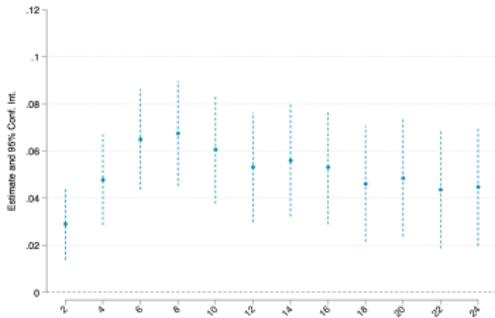
(b) Successful Lease-up

- After 6 months, A&A increased lease attempts in 7.3 pp (33%) and successful lease-up in 5.1 pp (28%). After 24 months, effects were respectively 5.6 pp (14%) and 4.3 pp (12%) → Information not received otherwise.
- After 24 months, 18.8% of lease attempts by the treatment group failed → No impact on failure rate. It did not increase administrative burden at local PHA (SERVIU).

Treatment Arm Heterogeneity: Effect of Most Basic Information (T1)



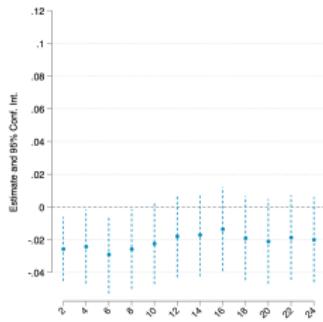
(a) Lease Attempts



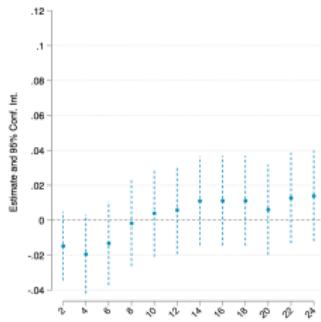
(b) Successful Lease-up

- The most basic information generated the largest response.
- After 6 months, T1 increased lease attempts in 8.7 pp (39.3%) and successful lease-up in 6.4 pp (35%).

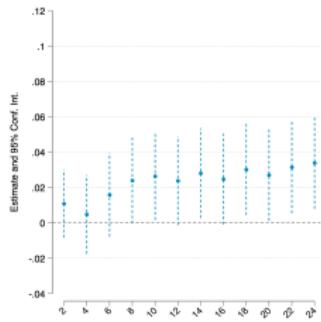
Treatment Arm Heterogeneity: Lease Attempts



$$H_0 : \delta_{T_2} - \delta_{T_1} = 0$$



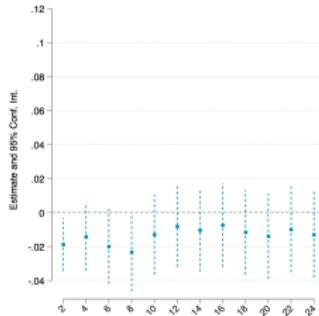
$$H_0 : \delta_{T_3} - \delta_{T_1} = 0$$



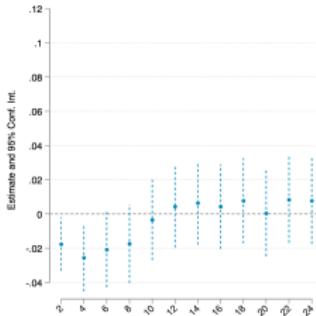
$$H_0 : \delta_{T_3} - \delta_{T_2} = 0$$

- In the short run, providing incomplete or complete neigh. information (T2 and T3) reduced the gains from most basic information (T1).
- But the gap between those who received complete neigh. information (T3) and basic information (T1) disappeared after four months.
- Gap between incomplete (T2) and complete (T3) neigh. information widens over time: encouraging neigh. choice without information about neigh. characteristics (T2) proved to be the least effective approach.

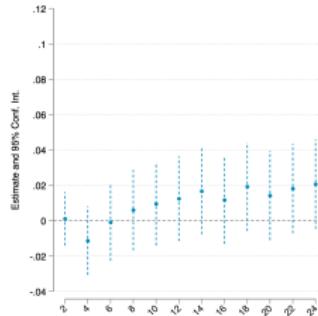
Treatment Arm Heterogeneity: Successful Lease-up



$$H_0 : \delta_{T_2} - \delta_{T_1} = 0$$



$$H_0 : \delta_{T_3} - \delta_{T_1} = 0$$



$$H_0 : \delta_{T_3} - \delta_{T_2} = 0$$

- When we only consider successful leases, the effect of the most basic information was the largest for a longer period of time.
- No statistically significant differences across groups after 8 months.

Heterogeneity Analysis of Treatment effect on Voucher Utilization

- Larger effects among voucher holders from more recent assignment periods or who had to wait longer for voucher assignment (underestimate the effect of scaling up the counseling program).
- No significant differences in treatment effects across demographic characteristics.
- Larger effect in counties with no presence of a local housing authority (PHA).

Demographics

Assignment Period

Delayed assignment

PHA

Heterogeneity Analysis of Treatment effect on Voucher Utilization

- Large heterogeneity across the country. Most effective in the extreme north and the south.
 - In Santiago, complete neighborhood information (T3) had the largest effects on lease attempts, although it was not enough to increase lease-up rate.
 - Large differences across initial tenure. Most effective on families renting to non family member and least effective on families renting to a family member (even more so than doubled-up families).
 - In the long run, complete neighborhood information (T3) increased lease-up rates among families renting to a family member.
- Providing complete neighborhood information seemed particularly helpful in groups with (expected) stronger supply-side barriers.

Region Tenure

Additional Outcomes using the Follow-up Survey

- Survey data consistent with administrative data:
 - Large effect on voucher utilization.
 - Significant differences in treatment effects across treatment arms; basic information about the program was most effective to increasing voucher utilization.
- In the short run, A&A increased residential mobility in 2 pp (14%) and leased up in place in 4.7 pp (19%).
- However, it did not change tenure, rents paid by voucher recipients, their neighborhood characteristics, housing or neighborhood satisfaction.

Voucher Use (Survey)

Tenure, Rents, Neighborhood

Residential Mobility

Mechanisms: 1. How did the intervention increase voucher use?

- 1 Initial email may have raised voucher status awareness, and constant reminders could have motivated its use.
 - Awareness about voucher status increased by 19.1pp (28%). We cannot isolate the effect of reminders.
- 2 Learned about the program in the platform: unit and landlord requirements, benefits from renting and the rental voucher program.
 - The share of recipients that did not know housing and landlord requirements decreased by 10.4 pp (40%) and 10.5 pp (34%).
 - Significant change in beliefs, only among T2 and T3:
 - T2 (T3) 4.7 pp (6.1 pp) more likely to believe that the subsidy could provide access to better neighborhoods.
 - T2 (T3) 4.1 pp (4.7 pp) less likely to consider rent as a waste of money.

Knowledge

Beliefs

Mechanisms 2: Why did T1 produce the largest effect in the short term?

- 1 Different platform experience: neigh. information may have reduced access to the most basic information.
 - T1 was more likely to access information about how to lease-up, Q&A and the Blog.
 - However, results are not consistent with smaller differences between T1 and T2, and large differences between T2 and T3.
- 2 Different search behavior: neigh. information may have expanded their search to different locations or increased search effort to remain in the area (i.e. ↑ supply-side barriers). Alternatively, learning about neighborhood effects may have reduced search effort.
 - T3 and T2 were more likely to search for a different unit
 - T3 was more likely to encounter landlords that were not willing to accept a voucher.

Platform experience

Search behavior survey

Mechanisms 2: Why did T1 produce the largest effect in the short term?

- New survey data will be collected to further understand the effects on search behavior and neighborhood characteristics.
- Looking at admin data on lease attempts:
 - Compared to the other groups, information about neighborhood characteristics delayed lease activation.
 - BUT, 24 months post- treatment, T3 was more likely to attempt and successfully leased-up in a different county.

Search time admin

Search behavior admin

Discussion

- Many families gave up their rental vouchers due to a lack of information about the program.
- A light-touch online counseling program effectively reduced these barriers and increased voucher utilization without increasing PHA's administrative burden.
- Families also lack neighborhood information. However, informing families about neighborhood effects and their characteristics merely delayed voucher utilization and did not change neighborhood characteristics (at least in the short term).
- Online assistance is cost-efficient to increase voucher utilization, but understanding additional barriers is crucial to tailoring assistance effectively. There is no one-size-fits-all solution to increasing voucher utilization.
 - Each additional family that takes up a voucher through the platform costs \$52.5 (administrative and software maintenance costs).

Thanks!

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Information Design: Lack of information about neighborhood characteristics

**Edad**

De cada 30 personas que viven en el entorno de Av. Sta. María (3340), 1 son niños, 2 son jóvenes, 5 son adultos y 1 son adultos mayores.

Habitantes
Niños 33.3%
Adultos 66.7%

Adultos
Adultos mayores 16.7%

Educación

De cada 30 personas que viven en el entorno de Av. Sta. María (3340), 5 han asistido al menos un año a la universidad y 2 han asistido al menos un año a centros de formación técnica.

Solo
Universidad 16.7%
Técnica 16.7%
Total
asistieron
alguno

**Puntaje SIMCE**

En el gráfico podrás ver el puntaje SIMCE promedio de las 4 escuelas más cercanas a la dirección que Ingresa, en un radio de 0.75 Km.

El puntaje promedio de estos establecimientos en lenguaje es de 249 puntos y en matemática es de 267. El rango promedio en matemática es de 283 de un puntaje máximo de 300.

¿Cómo se comparan estas escuelas respecto al desempeño comunitario? El puntaje promedio de la comuna en lenguaje es de 267 y el de matemática es de 275.

Lenguaje
Promedio 249 pts.
Rango 100-300 pts.

Promedio escuelas cercanas 249 pts.

Matemática
Promedio 267 pts.
Rango 200-300 pts.

Promedio escuelas cercanas 267 pts.

Go back

Balance

[Go back](#)

	Mean C. (1)	Mean T1 (2)	Mean T2 (3)	Mean T3 (4)	T vs C (5)	T1-T2-T3(p) (6)
Female	0.820 (0.305)	0.828 (0.377)	0.820 (0.304)	0.830 (0.378)	0.006 (0.008)	0.639
Age	34.958 (10.412)	34.687 (10.285)	34.727 (10.370)	34.739 (10.415)	-0.197 (0.220)	0.997
Married	0.191 (0.303)	0.188 (0.301)	0.192 (0.304)	0.186 (0.309)	-0.003 (0.009)	0.934
Migrant	0.137 (0.344)	0.152 (0.359)	0.147 (0.354)	0.156 (0.363)	0.014** (0.007)	0.689
Family size	2.909 (0.966)	2.906 (0.956)	2.897 (0.969)	2.903 (0.969)	-0.011 (0.017)	0.908
Child 0-5	0.517 (0.500)	0.532 (0.499)	0.512 (0.500)	0.524 (0.499)	0.007 (0.009)	0.343
Elder	0.024 (0.153)	0.023 (0.151)	0.018 (0.133)	0.024 (0.153)	-0.001 (0.003)	0.268
Disability	0.037 (0.108)	0.030 (0.170)	0.035 (0.103)	0.032 (0.175)	-0.004 (0.004)	0.541
Income (UF)	13.871 (5.995)	13.924 (6.064)	13.911 (6.004)	13.692 (5.964)	-0.058 (0.139)	0.206
Savings (UF)	23.875 (26.415)	24.267 (30.506)	22.741 (31.730)	23.672 (30.365)	-0.492 (0.648)	0.166
40% RSH	0.926 (0.262)	0.909 (0.268)	0.915 (0.278)	0.921 (0.269)	-0.010* (0.008)	0.148
House	0.638 (0.401)	0.633 (0.402)	0.628 (0.403)	0.642 (0.479)	-0.004 (0.010)	0.478
Formal shelter	0.779 (0.415)	0.768 (0.422)	0.775 (0.418)	0.775 (0.418)	-0.000 (0.009)	0.801
Basic Sanitation	0.888 (0.315)	0.885 (0.319)	0.880 (0.325)	0.889 (0.318)	-0.005 (0.007)	0.668
Not crowded	0.610 (0.408)	0.595 (0.491)	0.607 (0.408)	0.595 (0.491)	-0.009 (0.009)	0.494
No geocoded location	0.107 (0.309)	0.106 (0.308)	0.119 (0.324)	0.115 (0.319)	0.006 (0.007)	0.287
Days to assignment	85.790 (47.416)	86.662 (48.821)	87.306 (49.666)	85.675 (46.678)	0.580 (0.750)	0.265
Online	0.835 (0.371)	0.834 (0.372)	0.829 (0.378)	0.840 (0.367)	-0.000 (0.008)	0.481
Created a lease pre-AyA	0.061 (0.236)	0.072 (0.298)	0.068 (0.252)	0.057 (0.221)	0.005 (0.008)	0.033
Prior Application	0.119 (0.324)	0.111 (0.314)	0.106 (0.308)	0.112 (0.315)	-0.009 (0.008)	0.602
Score	368.418 (83.266)	368.680 (83.167)	366.647 (81.238)	369.331 (82.668)	-0.234 (1.403)	0.321
PHA in the County	0.481 (0.500)	0.471 (0.499)	0.484 (0.500)	0.455 (0.498)	-0.010 (0.010)	0.055
Observations	2,804	2,792	2,765	2,788	11,149	11,149
Total F (p)	6.01					

Table 1: Balance

Balance Strata

[Go back](#)

	Mean C (1)	Mean T1 (2)	Mean T2 (3)	Mean T3 (4)	T vs C (5)	T1=T2=T3(p) (6)
Child 6-18	0.621 (0.485)	0.622 (0.485)	0.625 (0.484)	0.624 (0.484)	0.003 (0.011)	0.982
Tenant	0.720 (0.449)	0.718 (0.450)	0.720 (0.449)	0.721 (0.448)	0.000 (0.010)	0.973
Santiago	0.256 (0.436)	0.260 (0.439)	0.252 (0.434)	0.259 (0.438)	0.001 (0.010)	0.736
Voucher: July 29th	0.160 (0.366)	0.162 (0.368)	0.160 (0.367)	0.161 (0.367)	0.001 (0.008)	0.979
Voucher: October 21st	0.216 (0.412)	0.213 (0.410)	0.216 (0.411)	0.212 (0.409)	-0.003 (0.009)	0.938
Voucher: December 9th	0.397 (0.489)	0.394 (0.489)	0.394 (0.489)	0.399 (0.490)	-0.001 (0.011)	0.916
Voucher: December 30th	0.227 (0.419)	0.231 (0.421)	0.230 (0.421)	0.229 (0.420)	0.003 (0.009)	0.985
Responded BS	0.803 (0.398)	0.795 (0.404)	0.798 (0.401)	0.797 (0.403)	-0.006 (0.009)	0.961
Observations	2,804	2,792	2,765	2,788	11,149	11,149

Table 2: Balance in variables used in stratification

Attrition

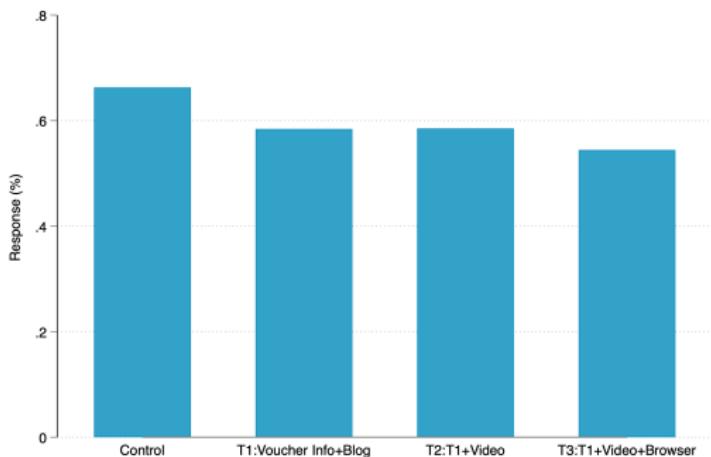


Figure 6: Follow up Sample Attrition

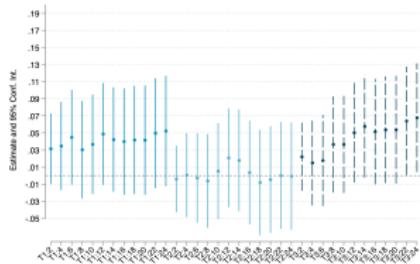
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Balance Follow-up Survey

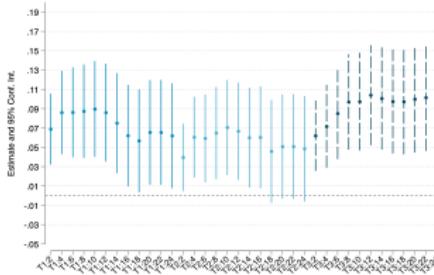
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	Mean C. (1)	Mean T1 (2)	Mean T2 (3)	Mean T3 (4)	T vs C (5)	T1=T2=T3(p) (6)
Female	0.823 (0.302)	0.841 (0.306)	0.832 (0.314)	0.847 (0.301)	0.014 (0.010)	0.723
Age	34.963 (9.180)	34.779 (9.083)	34.536 (9.346)	34.480 (9.302)	-0.374 (0.282)	0.437
Married	0.194 (0.396)	0.181 (0.385)	0.195 (0.396)	0.186 (0.309)	-0.006 (0.011)	0.364
Migrant	0.161 (0.300)	0.170 (0.316)	0.178 (0.303)	0.189 (0.302)	0.017* (0.010)	0.553
Family size	2.955 (0.907)	2.929 (0.905)	2.944 (0.907)	2.954 (0.944)	-0.025 (0.022)	0.602
Child 0-5	0.516 (0.500)	0.527 (0.499)	0.510 (0.500)	0.522 (0.500)	0.007 (0.012)	0.404
Elder	0.026 (0.159)	0.023 (0.151)	0.021 (0.143)	0.022 (0.146)	-0.003 (0.004)	0.744
Disability	0.033 (0.178)	0.029 (0.169)	0.033 (0.180)	0.025 (0.156)	-0.003 (0.009)	0.287
Income (UF)	13.959 (6.065)	14.020 (6.183)	14.007 (5.960)	13.835 (5.931)	-0.081 (0.185)	0.566
Savings (UF)	23.302 (29.280)	23.573 (29.645)	22.030 (25.241)	23.417 (20.878)	-0.326 (0.794)	0.142
40% RSH	0.925 (0.265)	0.904 (0.269)	0.915 (0.279)	0.913 (0.282)	-0.014* (0.007)	0.731
House	0.643 (0.479)	0.631 (0.483)	0.628 (0.484)	0.628 (0.483)	-0.012 (0.013)	0.830
Formal shelter	0.789 (0.408)	0.774 (0.419)	0.786 (0.410)	0.777 (0.416)	-0.007 (0.011)	0.851
Basic Sanitation	0.895 (0.307)	0.882 (0.322)	0.878 (0.327)	0.892 (0.311)	-0.011 (0.009)	0.473
Not crowded	0.605 (0.499)	0.607 (0.499)	0.606 (0.499)	0.582 (0.493)	-0.009 (0.012)	0.284
No geocoded location	0.101 (0.302)	0.107 (0.309)	0.119 (0.304)	0.113 (0.318)	0.014* (0.008)	0.532
Days to assignment	85.145 (46.590)	87.947 (48.842)	87.532 (46.760)	86.006 (48.205)	2.217** (0.943)	0.512
Online	0.842 (0.364)	0.851 (0.356)	0.847 (0.360)	0.850 (0.357)	0.007 (0.010)	0.955
Created a lease pre-AyA	0.074 (0.261)	0.090 (0.288)	0.083 (0.278)	0.061 (0.240)	0.004 (0.007)	0.001
Prior Application	0.114 (0.317)	0.101 (0.301)	0.103 (0.304)	0.106 (0.306)	-0.009 (0.008)	0.702
Score	368.986 (83.921)	367.621 (83.571)	367.126 (83.035)	370.774 (82.206)	-0.731 (1.790)	0.439
PHA in the County	0.477 (0.500)	0.470 (0.499)	0.495 (0.500)	0.453 (0.498)	-0.003 (0.013)	0.093
Observations	1,859	1,631	1,618	1,518	6,626	6,626
Total F (p)	0.248					

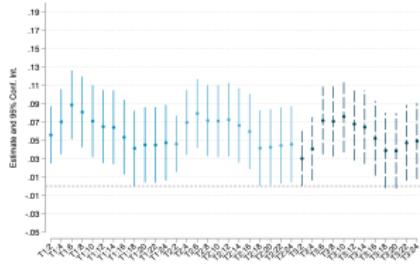
Balance in Follow-up Sample

Heterogeneity by Assignment Period: Lease Attempts [Go Back](#)

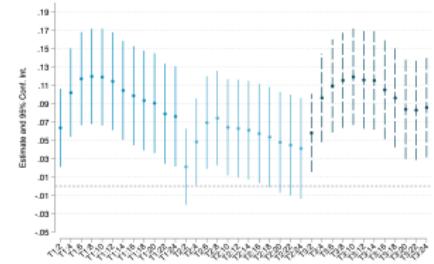
(a) July 29th



(b) Oct 21st

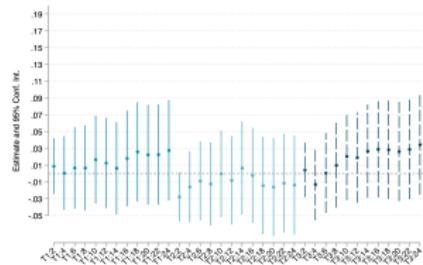


(c) Dec 9th

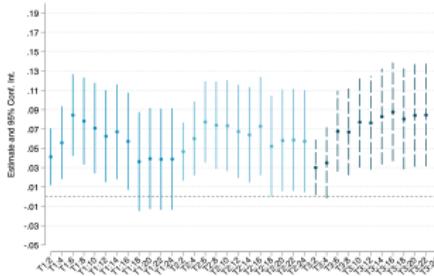


(d) Dec 30th

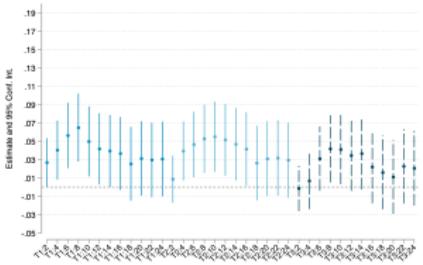
Heterogeneity by Assignment Period: Successful Lease-up

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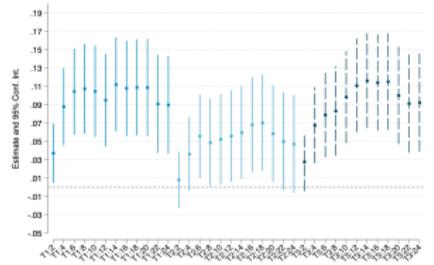
(a) July 29th



(b) Oct 21st

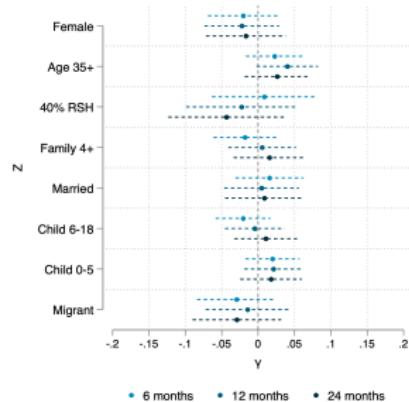


(c) Dec 9th

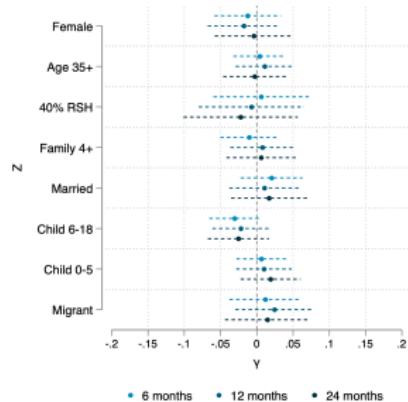


(d) Dec 30th

Heterogeneity by Demographic Characteristics (γ)



(a) Lease attempts

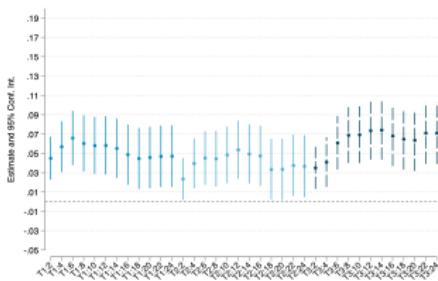


(b) Successful lease-up

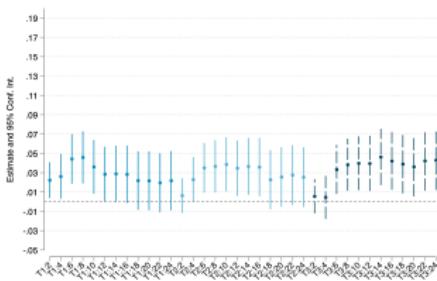
$$Y_i = \alpha_0 + \beta_1 T_i + T_i * I(Z_i = 1)\gamma + X'_i \delta + \phi_s + \epsilon_i$$

[Go Back](#)

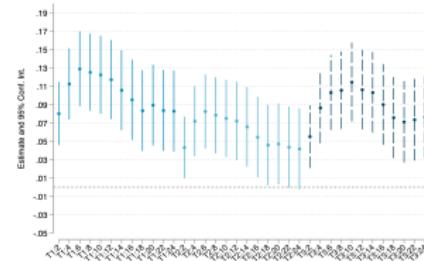
Heterogeneity by Delayed Assignment

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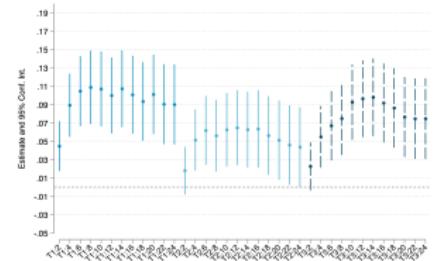
(a) Immediate: lease attempt



(b) Immediate: successful leases

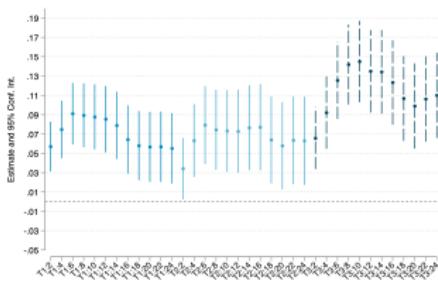


(c) Delayed: lease attempt

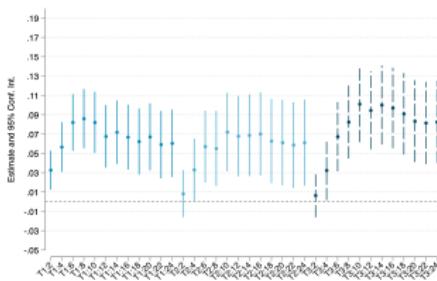


(d) Delayed: successful leases

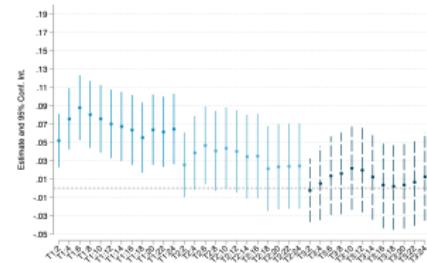
Heterogeneity by PHA presence in the county

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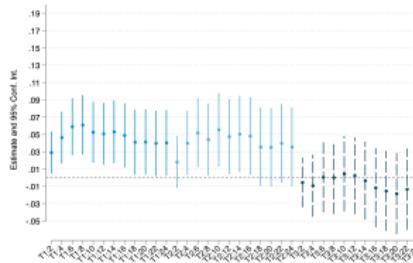
(a) No PHA: lease attempt



(b) No PHA: successful leases

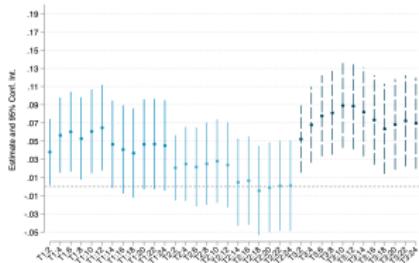


(c) PHA: lease attempt

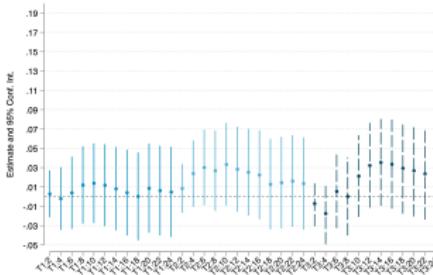


(d) PHA: successful leases

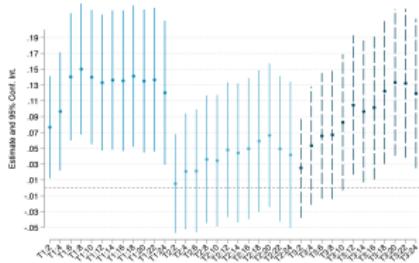
Heterogeneity by Region

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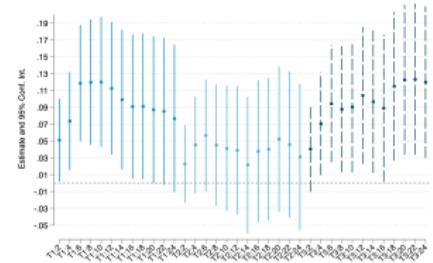
(a) Santiago: attempts



(b) Santiago: leased-up

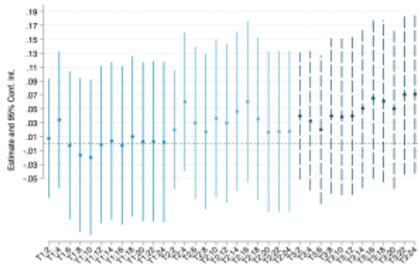


(c) North: attempts

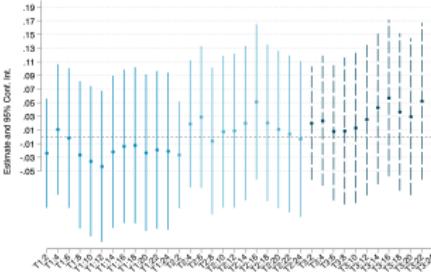


(d) North: leased-up

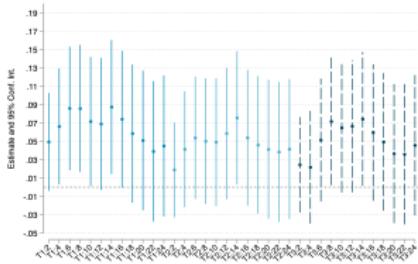
Heterogeneity by Region

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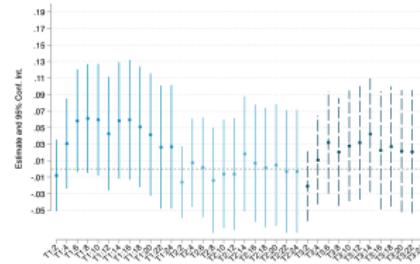
(a) Center North: attempts



(b) Center North: leased-up

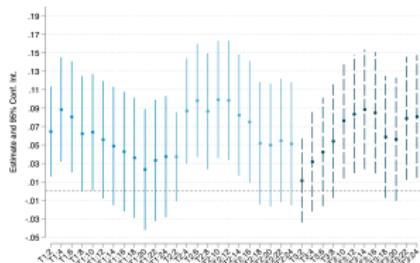


(c) Valparaiso: attempts

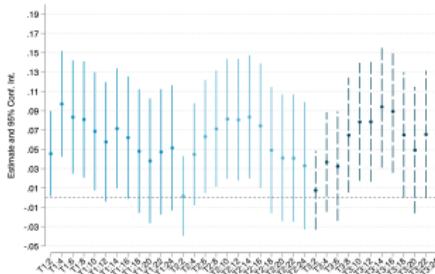


(d) Valparaiso: leased-up

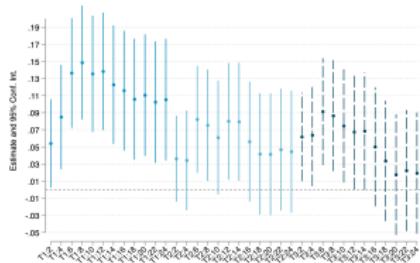
Heterogeneity by Region

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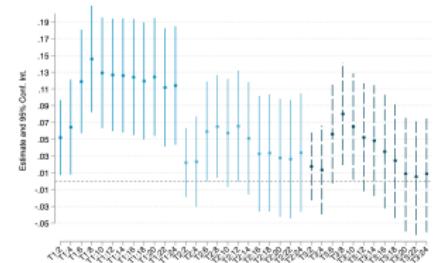
(a) Center South: attempts



(b) Center South: leased-up

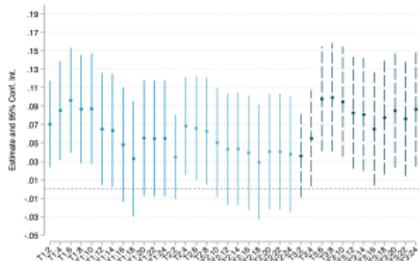


(c) Bio Bio: attempts

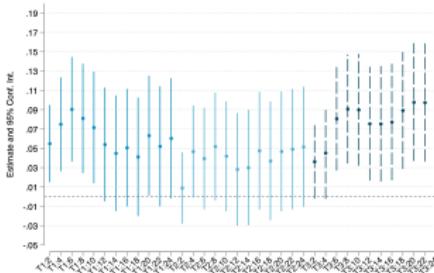


(d) Bio Bio: leased-up

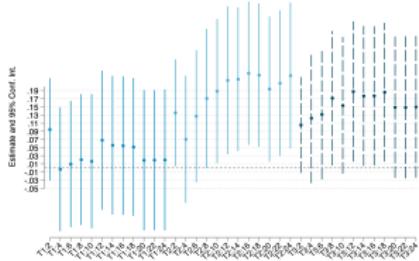
Heterogeneity by Region

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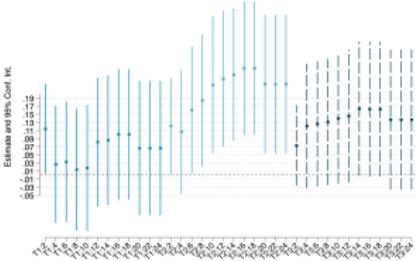
(a) South: attempts



(b) South: leased-up

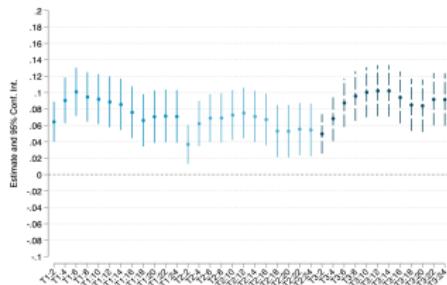


(c) Austral: attempts

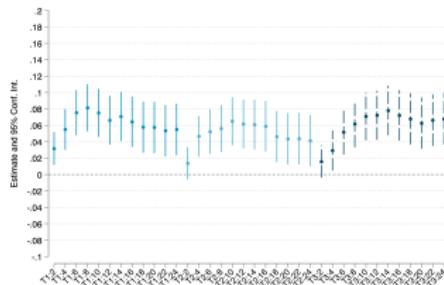


(d) Austral: leased-up

Heterogeneity by Tenancy

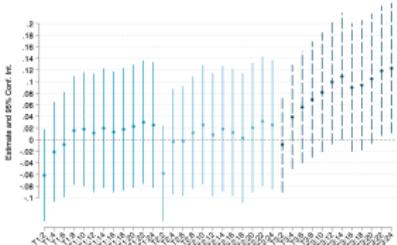
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(a) Tenant, no family: attempt

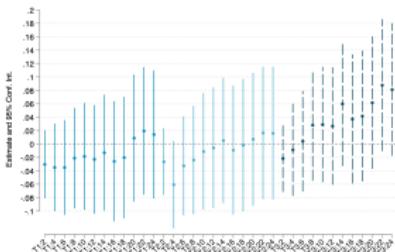


(b) Tenant, no family: leased-up

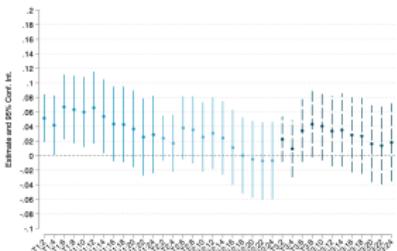
Heterogeneity by Tenancy

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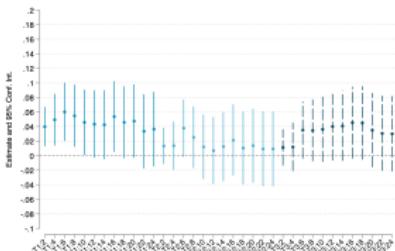
(a) Tenant, family: attempt



(b) Tenant, family: leased-up



(c) Doubled up: attempt



(d) Doubled up: lease-up

Follow-up Survey

Outcome	N	Control Mean	All Treat	Treat 1	Treat 2	Treat 3	T1=T2=T3	T1=T2	T2=T3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Lease up 4m	11,149	0.14	0.035*** (0.008)	0.048*** (0.010)	0.034*** (0.010)	0.022** (0.009)	0.038	0.186	0.217
Lease up 6m	11,149	0.18	0.051*** (0.009)	0.065*** (0.011)	0.045*** (0.011)	0.044*** (0.011)	0.116	0.089	0.848
Lease up 8m	11,149	0.21	0.054*** (0.009)	0.067*** (0.011)	0.044*** (0.011)	0.050*** (0.011)	0.129	0.055	0.693
Current Voucher Use	4,284	0.28	0.108*** (0.015)	0.141*** (0.020)	0.105*** (0.020)	0.076*** (0.020)	0.016	0.106	0.214

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Outcome	N (1)	Control Mean (2)	All Treat (3)	T1 (4)	T2 (5)	T3 (6)	T1-T2-T3 (7)	T1-T2 (8)	T1-T3 (9)
Tenant: Not Family	5,793	0.654	0.004 (0.013)	0.024 (0.017)	0.007 (0.017)	-0.020 (0.017)	0.044	0.331	0.013
Tenant: Family	5,793	0.171	1.000 (0.011)	0.745 (0.014)	1.000 (0.014)	0.745 (0.014)	0.339	0.996	0.196
Doubled Up	5,793	0.145	-0.005 (0.010)	-0.019 (0.012)	-0.001 (0.012)	0.005 (0.012)	0.116	0.127	0.050
Signed Lease	4,823	0.755	0.043 (0.014)***	0.065 (0.016)***	0.024 (0.017)	0.039 (0.017)**	0.041	0.013	0.117
Rent (UF)	4,699	9.148	0.015*** (0.086)	0.008 (0.104)	0.121 (0.105)	0.146 (0.110)	0.390	0.283	0.211
Nearby Childcare	5,116	0.505	0.083 (0.016)*	1.000 (0.019)	0.745 (0.020)**	0.745 (0.020)	0.375	0.189	0.835
Nearby School	5,116	0.702	0.007 (0.014)	-0.004 (0.018)	0.018 (0.018)	0.007 (0.018)	0.501	0.240	0.572
Nearby Park	5,116	0.726	0.005 (0.014)	0.000 (0.018)	0.016 (0.018)	-0.001 (0.018)	0.573	0.376	0.946
Nearby Pharmacy	5,116	0.439	0.026 (0.015)*	0.037 (0.019)**	0.028 (0.019)	0.011 (0.019)	0.427	0.667	0.199
Nearby Primary Care	5,116	0.483	0.047 (0.016)***	0.048 (0.020)**	0.046 (0.020)**	0.046 (0.020)**	0.994	0.921	0.937
Nearby Bus/Subway Stop	5,116	0.808	-0.013 (0.012)	-0.017 (0.015)	-0.014 (0.015)	-0.007 (0.016)	0.822	0.847	0.539
Violence	4,841	0.240	-0.012 (0.014)	-0.007 (0.017)	-0.030 (0.017)	0.002 (0.017)	0.177	0.187	0.615
<30min to Job	4,233	0.582	0.005 (0.017)	0.009 (0.021)	0.009 (0.021)	-0.005 (0.022)	0.777	0.991	0.539
<30min to school	4,476	0.769	-0.009 (0.014)	-0.015 (0.018)	-0.006 (0.018)	-0.005 (0.018)	0.844	0.620	0.612
Neighbors: Family	4,860	0.549	0.025 (0.016)	0.002 (0.020)	0.021 (0.020)	0.055 (0.020)***	0.042	0.353	0.013
Neighbors: House/child care	4,894	0.581	0.013 (0.016)	-0.017 (0.020)	0.009 (0.020)	0.049 (0.020)**	0.007	0.226	0.002
Neighbors: Econ help	4,891	0.166	-0.006 (0.012)	-0.020 (0.015)	-0.006 (0.015)	0.009 (0.016)	0.190	0.384	0.068
House Satisfaction	5,209	0.235	0.012 (0.014)	0.022 (0.017)	0.023 (0.017)	-0.011 (0.017)	0.091	0.949	0.061
Neigh. Satisfaction	5,271	0.335	0.009 (0.015)	-0.010 (0.018)	0.029 (0.019)	0.007 (0.019)	0.126	0.042	0.377

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Tenure, Housing and Neighborhood Outcomes

Beliefs

Outcome	N (1)	Control Mean (2)	All Treat (3)	T1 (4)	T2 (5)	T3 (6)	T1=T2=T3 (7)	T1=T2 (8)	T1=T3 (9)
Pref: rent is a waste	4,780	0.617	-0.036 (0.016)**	-0.020 (0.020)	-0.041 (0.020)**	-0.047 (0.020)**	0.402	0.302	0.204
			0.066* (0.016)*	0.197 (0.020)	0.075* (0.020)	0.066* (0.020)**			
Subsidy: More choice	4,790	0.377	0.030 (0.016)*	0.025 (0.020)	0.025 (0.020)	0.042 (0.020)**	0.643	0.975	0.422
			0.083* (0.015)	0.171 (0.019)	0.171 (0.019)*	0.075* (0.019)			
Subsidy: Better house	5,421	0.439	0.018 (0.015)	-0.009 (0.019)	0.033 (0.019)*	0.032 (0.019)	0.056	0.034	0.044
			0.171 (0.015)***	0.333 (0.018)	0.094* (0.018)**	0.103 (0.019)***			
Subsidy: Better neigh	5,421	0.338	0.038 (0.015)***	0.007 (0.018)	0.047 (0.018)**	0.061 (0.019)***	0.018	0.039	0.007 (0.021)**
			0.057* (0.018)	0.356 (0.018)	0.057* (0.018)	0.021** (0.019)***			

Beliefs

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Outcome	N (1)	Control Mean (2)	All Treat (3)	T1 (4)	T2 (5)	T3 (6)	T1=T2=T3 (7)	T1=T2 (8)	T1=T3 (9)	
Assignment Awareness	6,227	0.787		0.155 (0.010)***	0.157 (0.011)***	0.149 (0.012)***	0.160 (0.011)***	0.449	0.374	0.716
Voucher Status Awareness	4,180	0.681		0.191 (0.014)***	0.198 (0.017)***	0.198 (0.017)***	0.177 (0.017)***	0.392	0.968	0.219
Unknow housing requirements	4,647	0.260		-0.104 (0.014)***	-0.112 (0.016)***	-0.099 (0.017)***	-0.101 (0.017)***	0.685	0.422	0.497
Unknow landlord requirements	4,592	0.308		-0.105 (0.015)***	-0.108 (0.018)***	-0.105 (0.018)***	-0.101 (0.018)***	0.923	0.857	0.690
Leased up in Place	5,016	0.253		0.047 (0.014)***	0.064 (0.018)***	0.041 (0.018)**	0.035 (0.018)*	0.278	0.225	0.131
Move: Diff Unit	5,446	0.145		0.020 (0.011)*	0.018 (0.014)	0.026 (0.014)*	0.017 (0.014)	0.809	0.585	0.960
Move: Diff Neigh	5,408	0.109		0.011 (0.010)	0.003 (0.012)	0.019 (0.012)	0.012 (0.012)	0.485	0.230	0.524
Ask their landlord	4,827	0.863		0.041 (0.011)***	0.055 (0.012)***	0.027 (0.013)**	0.039 (0.013)***	0.065	0.021	0.173
Landlord will to accept (current)	4,657	0.723		0.021 (0.015)	0.030 (0.018)*	0.014 (0.018)	0.018 (0.019)	0.660	0.377	0.537
Landlord will to accept (new)	3,360	0.579		-0.048 (0.020)**	-0.034 (0.025)	-0.046 (0.025)*	-0.065 (0.025)**	0.498	0.641	0.240
Conducted search	5,637	0.597		0.023 (0.014)	-0.006 (0.018)	0.030 (0.018)*	0.046 (0.018)**	0.017	0.052	0.006
Search: Diff County	3,425	0.229		-0.011 (0.016)	-0.030 (0.020)	-0.025 (0.020)	0.022 (0.021)	0.031	0.842	0.016

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	N (1)	T3 Mean (2)	Treat 1 (3)	Treat 2 (4)	T1=T2 (5)
Program Info	8,299	0.52	0.212*** (0.013)	0.143*** (0.013)	0.000
N Program Info	8,299	1.23	1.257*** (0.068)	0.618*** (0.057)	0.000
Minutes in Program Info	8,299	8.20	6.444*** (0.694)	3.389*** (0.627)	0.000
Blog	8,299	0.11	0.069*** (0.009)	0.070*** (0.009)	0.874
N Blog	8,299	0.14	0.130*** (0.017)	0.096*** (0.014)	0.062
Q&A	8,299	0.41	0.191*** (0.013)	0.132*** (0.013)	0.000
N Q&A	8,299	4.41	2.648*** (0.227)	1.794*** (0.218)	0.000
Video	5,498	0.65	-0.006 (0.013)		
N Video	5,498	1.72	0.054 (0.057)		
Minutes in Video	5,498	2.37	-0.103 (0.129)		
Neigh Browser	2,788	0.60			
N Neigh Browser	2,788	1.38			
Minutes in Neigh Browser	2,788	0.89			

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Search Time in Admin Data

	Time to Lease Attempt (1)	Time to Lease-up (2)	N. Attempts (3)	Time to Lease Attempt (4)	Time to Lease-up (5)	N. Attempts (6)
T1:Voucher Info+Blog	-36.544*** (7.469)	-50.210*** (8.050)	0.085*** (0.020)	-45.790*** (8.176)	-34.296*** (10.700)	0.019 (0.025)
T2:T1+Video	-27.738*** (7.432)	-36.038*** (7.971)	0.046** (0.020)	-36.807*** (8.182)	-31.055*** (10.822)	0.000 (0.024)
T3:T1+Video+Browser	-33.587*** (7.400)	-51.459*** (7.978)	0.085*** (0.020)	-32.385*** (8.089)	-21.762** (10.611)	0.009 (0.025)
Observations	11,109	11,109	11,109	4,830	4,830	4,830
Control Mean Sample	570.72 All	541.83 All	0.57 All	223.84 Attempts	357.23 Attempts	1.29 Attempts

- A&A reduced the time to attempt to lease and successfully lease-up.
- In the sub-sample of voucher holders who attempted leasing (endogenous), compared to the other groups, information about neighborhood characteristics delayed lease activation.

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Search Behavior in Admin Data

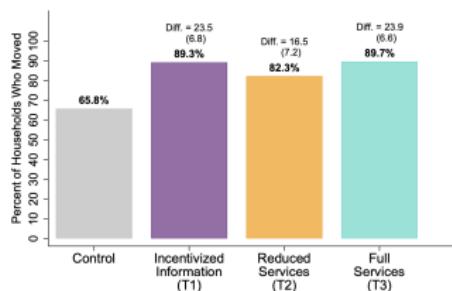
	Search Diff County (1)	Lease-up Diff. County (2)	Search Diff County (3)	Lease-up Diff. County (4)
T1:Voucher Info+Blog	0.001 (0.007)	0.003 (0.007)	-0.020 (0.016)	-0.012 (0.015)
T2:T1+Video	-0.002 (0.007)	-0.001 (0.006)	-0.015 (0.016)	-0.012 (0.015)
T3:T1+Video+Browser	0.023*** (0.008)	0.020*** (0.007)	0.022 (0.017)	0.024 (0.015)
Observations	11,109	11,109	4,830	4,830
Control Mean	0.08	0.06	0.20	0.15
Sample	All	All	Attempts	Attempts

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Take-up in the CMTO

APPENDIX FIGURE 10: Treatment Effects of Phase Two Interventions on Neighborhood Choice

A. Fraction Who Leased Any Unit



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