Housing Search Frictions: Evidence from Detailed Search Data and a Field Experiment

Peter Bergman
Teachers College, Columbia University

Eric Chan
Babson College

Adam Kapor
Princeton University

November 15, 2019
Significant variation in school quality within and across neighborhoods (cf. Reardon, 2019)
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• Most school choice is residential choice (National Center for Education Statistics, 2019)
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Low-income families live in neighborhoods with racially segregated, low-performing schools (Sanbonmatsu et al, 2006; Jacob, Kapustin, & Ludwig, 2014; Sard and Rice, 2016; Ellen, Horn & Schwartz, 2016)
• Significant variation in school quality within and across neighborhoods (cf. Reardon, 2019)
• Most school choice is residential choice (National Center for Education Statistics, 2019)
• Low-income families live in neighborhoods with racially segregated, low-performing schools (Sanbonmatsu et al, 2006; Jacob, Kapustin, & Ludwig, 2014; Sard and Rice, 2016; Ellen, Horn & Schwartz, 2016)

⇒ Why don’t low-income families live in areas with better schools?
Does providing school-quality information affect search and location decisions?
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2. What implications do the results have for models of neighborhood choice?
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To answer, need data + variation + model of residential choice.
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- School “quality” data on near-universe of public schools
1. Does providing school-quality information affect search and location decisions?
2. What implications do the results have for models of neighborhood choice?

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- School “quality” data on near-universe of public schools
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- Universe of residential data on voucher recipients
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2. What implications do the results have for models of neighborhood choice?

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- School “quality” data on near-universe of public schools
- Nationwide RCT adding school-quality info to online search platform
- Detailed search data
- Universe of residential data on voucher recipients
- Model of housing search incorporating imperfect information
Outline

1 Background
2 Intervention description
3 Descriptive results
4 RCT results
5 Model
6 Ongoing work
“Section 8”/Housing Choice Voucher program.

- \( \approx 2.2 \text{m families in U.S} \)
- Administered by local housing authorities
- Typical features:
  - Income cutoff
  - Waitlist
  - Limited time to use voucher (typically 60-120 days)
  - Tenant typically pays 30% of income toward rent and utilities
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GoSection8.com

- Largest listings platform Housing Choice Voucher market
- Intake survey, provide properties viewed, inquiries, property characteristics
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GreatShools.org
- Nonprofit organization rating $\approx$ 200,000 PK-12 schools nationwide
- Ratings 1-10, based on test scores; 5 median within each state
Study Partners and Data

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US Department of Housing and Urban Development
- Assign endline living location to PS, MS, HS
- Construct mean rating
Outline

1. Background
2. Intervention description
3. Descriptive results
4. RCT results
5. Model
6. Ongoing work
Find Affordable Rentals

About GoSection8

Find a great place to live with the largest affordable housing listing service in the nation - whether you have a section 8 voucher or are just looking for a good deal.

Our close relationship with hundreds of municipalities and government agencies has made it possible for us to help millions of families with their housing needs. Search GoSection8 and you'll find that we offer more affordable rental listings than any other housing website.

You'll be able to find your next home on GoSection8 for free and we never charge landlords to post their vacancies.
Are you willing to participate in a research study by Columbia University Teachers College that tests new features of GoSection8? All participants are entered into a raffle to receive a $100 dollar gift card.

No  Yes
$1,500 / Month
2 Bed, 1 Bath Apt
(213) 293-8126
PLEASE CALL 515-339-7977 FOR MORE INFORMATION AND VIEWING.
AVAILABLE FOR SECTION 8, NOW ACCEPTING.
J. BEDROOM CITY VOUCHERS ONLY.
723 W 2ND ST, LOS ANGELES, CA 90014

$1,400 / Month
2 Bed, 1 Bath Apt
(213) 773-8126
PLEASE CALL 515-339-7977 FOR MORE INFORMATION AND VIEWING.
AVAILABLE FOR SECTION 8, NOW ACCEPTING.
J. BEDROOM CITY VOUCHERS ONLY.
723 W 2ND ST NO 2, LOS ANGELES, CA 90014

$1,750 / Month
3 Bed, 2 Bath Apt
(213) 293-8126
LARGE 3 BEDROOM, 2 BATHROOMS, UPPER UNIT, NEW KITCHEN, UNIT INCLUDES DRYER & WASHER, HARDWOOD FLOORS, NEW KITCHEN, NEW STAINLESS STEEL APPLS, 7.5, NEW PORCELAIN TILES, NEW LAMINATE FLOORING, NG WASHER DRYER INCLUDED. INCLUDES WATER & 2 GATED PARKING SPOTS.
674 S SAN PEDRO ST APT B, LOS ANGELES, CA 90031

$1,650 / Month
3 Bed, 2 Bath Apt
(626) 367-2460
515A HABLA ESPANOL.
4904 IVANICA AVE 2, LOS ANGELES, CA 90032

$1,600 / Month
3 Bed, 1 Bath Apt
(323) 292-7040
REALY SPACIOUS APARTMENT, CLEAN ENVIRONMENT. BUILDING WELL-MAINTAINED, QUIET NEIGHBORHOOD.
193 W 41ST PL, LOS ANGELES, CA 90037

$1,395 / Month
2 Bed, 1 Bath Apt
(323) 292-7040
RENOVATED 2 BD / 1 BA - DON'T MISS IT!
6812 11TH AVE 2F, LOS ANGELES, CA 90032

No Voucher Necessary
2 Bed, 1.5 Bath Apt for $1,500/Month

Property Details

- Type: Apt
- Rent: $1,500
- Deposit: $1,700
- Pet Negotiable: No
- Bed/Bath: 2 / 1.5
- Square Feet: 1,100
- Year Built: N/A

Property Description

Los Angeles County Section 8 accepted. Spacious rooms, unobstructed parking, laundry on premises. GDP LA COUNTY SECTION 8ubblerH. MAKE OFFERS. MAY OCCUR TOO SLOW. Very nice 2bed over 1.5bathroom house apartment. Security deposit can be a deposit on two installments.

Contact this Landlord

Don't Get Scammed! Wire transfers & long distance charges are often scams. Learn More +

Nancy Wilson
(323) 206-6139

First Name: Eric
Last Name: Chan
Email: eric2368@lscolumbia.edu
Phone:

Your Message to this Landlord

Send Message

Resources

Avoid Scams and Fraud

Housing Authority Search

FAQs
4 Bed, 2 Bath Duplex for $1,200.00

GreatSchools Ratings

Filter Schools:
- [ ] Pre
- [ ] K-8
- [ ] Middle
- [ ] High
- [ ] Above Average
- [ ] Average
- [ ] Below Average
- [ ] No Rating
- [ ] NP

Click any marker to view its School Zone.
Note: Not all schools have a School Zone.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Grades</th>
<th>Distance</th>
<th>Assigned</th>
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<tbody>
<tr>
<td>Ruggles Elementary School</td>
<td>public</td>
<td>PK-8</td>
<td>0.41</td>
<td>✔️</td>
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<tr>
<td>Hirsch Metropolitan High School</td>
<td>public</td>
<td>9-12</td>
<td>0.43</td>
<td></td>
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<tr>
<td>Tanner Elementary School</td>
<td>public</td>
<td>PK-8</td>
<td>0.45</td>
<td></td>
</tr>
</tbody>
</table>

Data provided by GreatSchools.org
364 Rindge Ave Cambridge Middlesex County 02140

Scores

Walk Score

Very Walkable
Most errands can be accomplished on foot

Transit Score

Excellent Transit
Transit is convenient for most trips

Bike Score

Very Bikeable
Outline

1. Background
2. Intervention description
3. Descriptives
4. RCT results
5. Model
6. Ongoing work
Geography of the study sample
Voucher holders attend lower-quality schools

<table>
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<tr>
<th>US Primary Schools vs. HUD vs. Study Sample</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td><strong>US Elem Schools</strong></td>
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<tr>
<td>GreatSchools Rating</td>
</tr>
<tr>
<td>Share Black</td>
</tr>
<tr>
<td>Share Hispanic</td>
</tr>
<tr>
<td>Share White</td>
</tr>
<tr>
<td>Share Asian</td>
</tr>
<tr>
<td>Share FRPL</td>
</tr>
<tr>
<td>Pupil-FTE Ratio</td>
</tr>
<tr>
<td>Observations</td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>HH female</td>
</tr>
<tr>
<td>HH white</td>
</tr>
<tr>
<td>HH Black</td>
</tr>
<tr>
<td>HH Hispanic</td>
</tr>
<tr>
<td>Total HH members</td>
</tr>
<tr>
<td>Number bedrooms</td>
</tr>
<tr>
<td>Total income</td>
</tr>
<tr>
<td>Rent to owner</td>
</tr>
<tr>
<td>Utility allowance</td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td>HH female</td>
</tr>
<tr>
<td>HH Hispanic</td>
</tr>
<tr>
<td>HH Black</td>
</tr>
<tr>
<td>HH white</td>
</tr>
<tr>
<td>Annual income</td>
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<td>Total household members</td>
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<tr>
<td>Moving to work (MTW)</td>
</tr>
<tr>
<td>HUD Count children &lt;18</td>
</tr>
<tr>
<td>Intend to move within 3 months</td>
</tr>
<tr>
<td>Moving for schools</td>
</tr>
<tr>
<td>HUD user matched to Go8 user</td>
</tr>
</tbody>
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Omnibus Test P-value: 0.19
<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Mean</th>
<th>T - C Difference</th>
<th>P-value</th>
<th>N</th>
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<tbody>
<tr>
<td>HH female</td>
<td>0.88</td>
<td>−0.02</td>
<td>0.31</td>
<td>1,921</td>
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<tr>
<td>HH Hispanic</td>
<td>0.15</td>
<td>−0.03**</td>
<td>0.03</td>
<td>1,921</td>
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<tr>
<td>HH Black</td>
<td>0.59</td>
<td>0.01</td>
<td>0.55</td>
<td>1,932</td>
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<tr>
<td>HH white</td>
<td>0.24</td>
<td>0.01</td>
<td>0.63</td>
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<tr>
<td>Annual income</td>
<td>14,512.75</td>
<td>103.54</td>
<td>0.84</td>
<td>1,921</td>
</tr>
<tr>
<td>Total household members</td>
<td>3.05</td>
<td>−0.07</td>
<td>0.39</td>
<td>1,921</td>
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<tr>
<td>Moving to work (MTW)</td>
<td>0.18</td>
<td>−0.04**</td>
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<tr>
<td>HUD Count children &lt;18</td>
<td>1.84</td>
<td>−0.06</td>
<td>0.43</td>
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<td>0.76</td>
<td>0.01</td>
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<td>HUD user matched to Go8 user</td>
<td>0.66</td>
<td>−0.01</td>
<td>0.49</td>
<td>2,968</td>
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Omnibus Test P-value: 0.19
Outline

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Search behaviors: small/no effects on number of views
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Treatment effect on total views: 1.80 (4.21)
Search behaviors: Positive impacts on number of inquiries

Inquiries per Week

Time until Move (Weeks)

Treatment

Control

0.05 0.1 0.15 0.2 0.25

-24 -20 -16 -12 -8 -4 0 4

Inquiries per Week

Time until Move (Weeks)
Search behaviors: Positive impacts on number of inquiries

![Graph showing the impact of search behaviors on inquiries per week. The graph compares Treatment and Control groups over the time until move, in weeks. The treatment effect on total inquiries is indicated as 0.80* (0.45).]
More and better inquiries if treated

![Graph showing the number of inquiries and rating (1-10) of schools associated with rental unit, with treatment and control means, and 95% CI for treatment effect.](image)
### Endline Choice: Schools Assigned to Where Families Live

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<tr>
<td>Ave. School Quality</td>
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<td>0.26***</td>
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<tr>
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<tr>
<td>HS Rating</td>
<td>4.01</td>
<td>0.20*</td>
<td>0.11</td>
<td>0.06</td>
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<tr>
<td>MS Rating</td>
<td>3.52</td>
<td>0.36***</td>
<td>0.11</td>
<td>0.00</td>
<td>1,888</td>
</tr>
<tr>
<td>PS Rating</td>
<td>3.47</td>
<td>0.23**</td>
<td>0.11</td>
<td>0.03</td>
<td>1,864</td>
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<tr>
<td>Mean share FRPL</td>
<td>0.72</td>
<td>−0.02**</td>
<td>0.01</td>
<td>0.04</td>
<td>1,866</td>
</tr>
<tr>
<td>Share Black/Hispanic</td>
<td>0.66</td>
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School-Rating Density

![Graph showing the density of mean ratings for Treatment and Control groups. The x-axis represents mean ratings ranging from 0 to 10, and the y-axis represents density ranging from 0 to 0.2. The graph includes two curves, one blue for Treatment and one red for Control, indicating the distribution of ratings.](image-url)
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<td>Percent Hispanic</td>
<td>0.23</td>
<td>−0.01</td>
<td>0.01</td>
<td>0.14</td>
<td>1,907</td>
</tr>
<tr>
<td>Percent White</td>
<td>0.50</td>
<td>0.01</td>
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<tr>
<td>Percent HS Graduates</td>
<td>0.79</td>
<td>0.01</td>
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<td>0.11</td>
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<tr>
<td>Percent in Poverty</td>
<td>0.25</td>
<td>−0.01**</td>
<td>0.01</td>
<td>0.03</td>
<td>1,919</td>
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<tr>
<td>Walkscore</td>
<td>50.02</td>
<td>−3.87***</td>
<td>1.03</td>
<td>0.00</td>
<td>1,929</td>
</tr>
<tr>
<td>Commute to dwtn</td>
<td>15.36</td>
<td>1.89***</td>
<td>0.67</td>
<td>0.00</td>
<td>1,913</td>
</tr>
<tr>
<td>Residual School Qlty</td>
<td>−0.09</td>
<td>0.19***</td>
<td>0.08</td>
<td>0.01</td>
<td>1,881</td>
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<tr>
<td>Predicted School Qlty</td>
<td>3.74</td>
<td>0.08*</td>
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<td>0.06</td>
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# Neighborhood Characteristics and Other Outcomes

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<td>-0.01</td>
<td>0.01</td>
<td>0.14</td>
<td>1,907</td>
</tr>
<tr>
<td>Percent White</td>
<td>0.50</td>
<td>0.01</td>
<td>0.01</td>
<td>0.51</td>
<td>1,907</td>
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<tr>
<td>Percent Black</td>
<td>0.34</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.44</td>
<td>1,907</td>
</tr>
<tr>
<td>Percent HS Graduates</td>
<td>0.79</td>
<td>0.01</td>
<td>0.00</td>
<td>0.11</td>
<td>1,907</td>
</tr>
<tr>
<td>Percent in Poverty</td>
<td>0.25</td>
<td>-0.01**</td>
<td>0.01</td>
<td>0.03</td>
<td>1,919</td>
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<tr>
<td>Walkscore</td>
<td>50.02</td>
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<td>Commute to dwtn</td>
<td>15.36</td>
<td>1.89***</td>
<td>0.67</td>
<td>0.00</td>
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<tr>
<td>Residual School Qlty</td>
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<td>0.19***</td>
<td>0.08</td>
<td>0.01</td>
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<tr>
<td>Predicted School Qlty</td>
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<td>0.08*</td>
<td>0.04</td>
<td>0.06</td>
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No impacts on unit characteristics

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<tr>
<th>Variable</th>
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<th>Treatment Effect</th>
<th>Std Error</th>
<th>P-value</th>
<th>N</th>
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<tr>
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<td>19.35</td>
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<td>Bedrooms</td>
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<td>−0.04</td>
<td>0.04</td>
<td>0.38</td>
<td>1,921</td>
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</tbody>
</table>
Outline

1. Background
2. Intervention description
3. Descriptive results
4. RCT results
5. Model
6. Ongoing work
• Are families trading off other amenities for school quality?
• Are families trading off other amenities for school quality?
• If we ignored uncertainty, how much do families appear to value school quality?
Understanding preferences and information

- Are families trading off other amenities for school quality?
- If we ignored uncertainty, how much do families appear to value school quality?
- What can we say about families beliefs about school quality?
Model Overview

- Single-agent dynamic decision problem
- In each period, each active household chooses:
  1. Platform use: Yes: pay search cost, discover on- and off-platform units. No: don't pay search cost, discover only off-platform units.
  2. Which subset of units to inquire/visit: Pay inquiry cost per unit, learn perf. shock.
  3. Whether to accept a unit: Yes: stop, receive pay off. No: continue to next period, no recall (units get taken).
- Finite horizon: must use voucher within 3 months or zero pay off.
- Noisy signal of school quality vs. known school quality.
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- Finite horizon: must use voucher within 3 months or zero payoff
- Noisy signal of school quality v. known school quality
Timing and payoffs

- If \( i \) chooses an apartment \( j \) before time \( T \), \( i \) receives

\[
  u_{ij} = x_j \beta^x + q_j \beta^q + \epsilon_{ij}^0 + \epsilon_{ij}^1 + v_{ij}
\]

- \( x_j \): constant, nbhd poverty, nbhd % black, walkscore, distance to downtown
- \( q_j \): school quality
- \( \epsilon_{ij}^0 \): unobservables known when \( i \) views listing
- \( \epsilon_{ij}^1 \): unobservables known only after inquiry/visit
- \( \beta \): constant and coef on race differ by race; constant differs by outside option

- No discounting. ("\( i \)'s lease begins at time \( T \)"")
Information

- Treated households observe $q$ perfectly.
- Control households observe $q$ with measurement error $\eta$, believe
  \[
  \begin{pmatrix}
    q \\
    q + \eta
  \end{pmatrix}
  | x \sim N
  \left(
  \begin{pmatrix}
    x' \gamma \\
    x' \gamma
  \end{pmatrix},
  \begin{pmatrix}
    \sigma^q \\
    \sigma^q \sigma^q + \sigma^\eta
  \end{pmatrix}
  \right).
  \]
  - $x' \gamma$: subjective prior mean, not necessarily correct.
  - (We also allow treated hh to have measurement error in off-platform units.)
Indirect utility and apparent valuations

- Measurement error on $q \iff$ put weight $s \equiv \frac{\sigma^2_q}{\sigma^2_q + \sigma^2_\eta}$ on signal, $(1 - s)$ on prior.
- Expected utility (at time of discovery) when $i$ observes $\hat{q} = q + \eta$:

$$\hat{v}_{ij} \equiv \hat{E}(v_{ij} | x_j, \hat{q}_{ij}, \epsilon_{ij}^0)$$

$$= x_j \beta^x + \left( s \hat{q}_{ij} + (1 - s)x'_j \gamma \right) \beta^q + \epsilon_{ij}^0.$$

$$= x_j \left( (1 - s)\beta^q \gamma + \beta^x \right) + q_j s \beta^q + (s \beta^q \eta_{ij} + \epsilon_{ij}^0)$$

$$= x_j \tilde{\beta}^x + q_j \tilde{\beta}^q + \tilde{\epsilon}_{ij}^0.$$
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- "Control” households act like fully-informed households with different **apparent valuations**
Indirect utility and apparent valuations

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  \[= x_j \beta^x + (s \hat{q}_{ij} + (1 - s)x_j' \gamma) \beta^q + \epsilon_{ij}^0.\]
  
  \[= x_j (q_j \beta^q + (1 - s)\beta^x) + q_j s \beta^q + (s \beta^q \eta_{ij} + \epsilon_{ij}^0)\]
  
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  \[
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  \]

  \[
  = x_j ( (1 - s)\beta^q \gamma + \beta^x ) + q_j s \beta^q + (s\beta^q \eta_{ij} + \epsilon^0_{ij})
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- “Control” households act like fully-informed households with different apparent valuations

$$\Rightarrow \tilde{\beta}^{pov} \text{ more negative than } \beta^{pov}$$
Rest of model

- Distribution of units:
  - On-platform: drawn from empirical distribution of sets of viewed properties.
  - Off-platform: same population of units, arrival rate $\lambda$.
- Viewing costs: Lognormal, iid across periods.
- Cost per inquiry/visit: also Lognormal, iid across periods.
- Preference shock on viewing a listing ($\epsilon_{ij}^0$): iid mean-0 Normal.
- Preference shock after visit ($\epsilon_{ij}^1$): iid Gumbel.
So how can we learn households’ subjective priors?

Key idea: treatment is informative about residual quality not predicted by observables.
So how can we learn households’ subjective priors?

Key idea: treatment is informative about residual quality not predicted by observables

- Updates should be orthogonal to (correctly specified) $E(q|x)$

$\hat{E}(q|x) < E(q|x)$ for units that are systematically more attractive to treated households.
So how can we learn households’ subjective priors?

Key idea: treatment is informative about residual quality not predicted by observables

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- Units for which

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Are households pessimistic or overoptimistic about school quality?
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$$\hat{E}(q|x) < E(q|x)$$

are systematically more attractive to treated hh.

Are households pessimistic or overoptimistic about school quality?

• $\Rightarrow$ We can estimate $\gamma^{OLS}$ from an OLS regression and compare to $\gamma$ from households
Moments and parameters

- Parameters to estimate:
  - $\beta^x(\text{treat})$, $\beta^q(\text{treat})$, $\beta^x(\text{control})$, $\beta^q(\text{control})$, $\mu_c^{\text{search}}$, $\sigma_c^{\text{search}}$, $\mu_c^{\text{inquire}}$, $\sigma_c^{\text{inquire}}$, $\sigma_\varepsilon(\text{treat})$, $\sigma_\varepsilon(\text{control})$, $Pr(\text{observe inq.})$, $\lambda$, $Pr(\text{passive})$.

- Estimation via MSM. Match following moments within observable bins (treatment groups) $h(x)$:

1. $P(\text{search})$ in period $t$, $t = 1, \ldots, T \times$ basis functions.
2. Mean number of inquiries in $t$, $t = 1, \ldots, T \times$ basis functions.
3. Variance of number of per-period inquiries.
4. 1(lease up at new unit).
5. Mean inquiry characteristics.
6. Mean leased unit characteristics.
### Parameter Estimates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th>SE</th>
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<tbody>
<tr>
<td>$\beta_{\text{commute}}$</td>
<td>$-0.3072$</td>
<td>$(0.0665)$</td>
</tr>
<tr>
<td>$\beta_{\text{quality}}$</td>
<td>$0.2667$</td>
<td>$(0.0221)$</td>
</tr>
</tbody>
</table>

“Exchange rates:”

1. $-\beta_q/\beta_{\text{commute}} \approx 52 \text{ min/pt (treated)}$;

2. Equivalent translation for control: $\approx 27 \text{ min/pt}$
How good are priors? Density of residual quality $q - \hat{E}(q|x)$

Wald test $\gamma_{ols} =\gamma$: $\chi^2 = 57.33$, $p < 0.001$. 

```latex
\text{Wald test } \gamma_{ols} = \gamma: \chi^2 = 57.33, \ p < 0.001.
```
Conclusions

- Information ↑ school quality ≈ 1.2pp on schools’ proficiency rates
- Diversifies schools (slightly)
- To rationalize observed behavior, need misspecified prior on joint distribution of quality and other attributes
- Frictions matter for preference estimates
- Intervention now scaled across the entire platform: implications?
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• Frictions matter for preference estimates
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Ongoing work
• “Best” information to provide?
• Now A/B testing school growth information v. levels
• Optimized site to make search easier
Sort by school quality
2 Bed, 1 Bath Apt for $850.00

Nearby Schools

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<thead>
<tr>
<th>Rating</th>
<th>Grades</th>
<th>School Name</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
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<td>2</td>
<td>K - 5</td>
<td>ELLINGTON ELEMENTARY SCHOOL</td>
<td>0.66 mi</td>
</tr>
<tr>
<td></td>
<td>Elementary School</td>
<td>243 N PARKSIDE AVE, CHICAGO, IL 60644</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6 - 8</td>
<td>ELLINGTON ELEMENTARY SCHOOL</td>
<td>0.66 mi</td>
</tr>
<tr>
<td></td>
<td>Middle School</td>
<td>243 N PARKSIDE AVE, CHICAGO, IL 60644</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>9 - 12</td>
<td>DOUGLASS ACADEMY HIGH SCHOOL</td>
<td>0.42 mi</td>
</tr>
<tr>
<td></td>
<td>High School</td>
<td>543 N WALLER AVE, CHICAGO, IL 60644</td>
<td></td>
</tr>
</tbody>
</table>

Subscribed to Rental Alerts for Elementary school rated 5+. (Text Alerts)

Phone Verified
Your SMS Alerts will be sent to: (312) 708-7749

Get Alerts
- Elementary School
- Middle School
- High School
Model fit by treatment status

The bar chart shows the model fit for different treatment status. The x-axis represents various variables, and the y-axis shows the model moment/data moment ratio. The blue bars represent the treatment group, and the red bars represent the control group. The variables include inq_trend, commute_hud, sq_inq, inq_black, inq_commute, inq_trend_medent, views_trend, constant_trend, inq_quality, inq_walkscore, quality_hud, black_hud, medent_hud, inq_poverty, constant_hud, poverty_hud, and walkscore_hud.