School Choice under Endogenous Awareness Sets: High Search Costs or Biased Beliefs?

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(with Patrick Agte, Claudia Allende and Adam Kapor)

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  - **Alternative Idea**: Families have incorrect beliefs about the distribution of schools.

Santo Domingo, Dominican Republic

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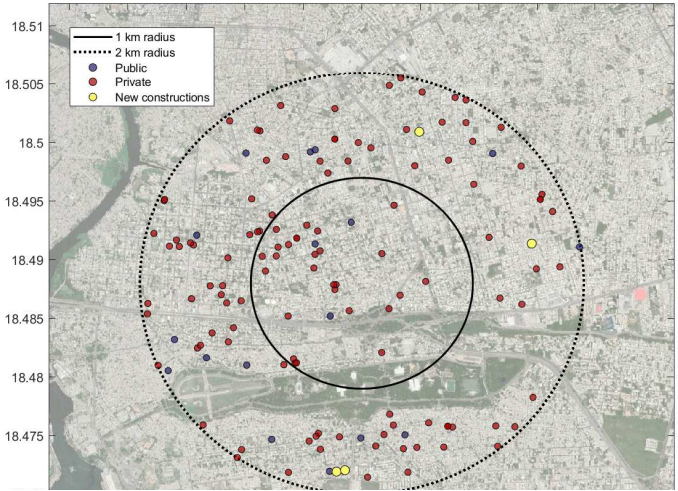

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- Status:
  $\Rightarrow$ Pilot study in the Dominican Republic, won an NSF grant in 2019 to implement the full study in spring 2020.

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- Parents choose the option with the highest utility among the schools that they know (the set Ω_i^T):

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  - How do parents form Ω_i^T?
  - What explains the sequence of search and the evolution of Ω_i^t?

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- They can pay cost ψ_i to draw a school from the true distribution. $(F(x))$
- Every searched school is added to the awareness set (perfect recall)

$$\Omega_i^{t+1} = \Omega_i^t \cup j$$

Optimal search is determined by a cutoff rule based on:

i. Search costs ψ_i

ii. The awareness set in t (Ω_i^t)

iii. Current beliefs. $(\widetilde{F}_i^{t-1}(x))$

Taking Model To Data

- Initial awareness set Ω_i^0:
  - We assume it to be exogenous conditional on family characteristics (SES, location, social network)
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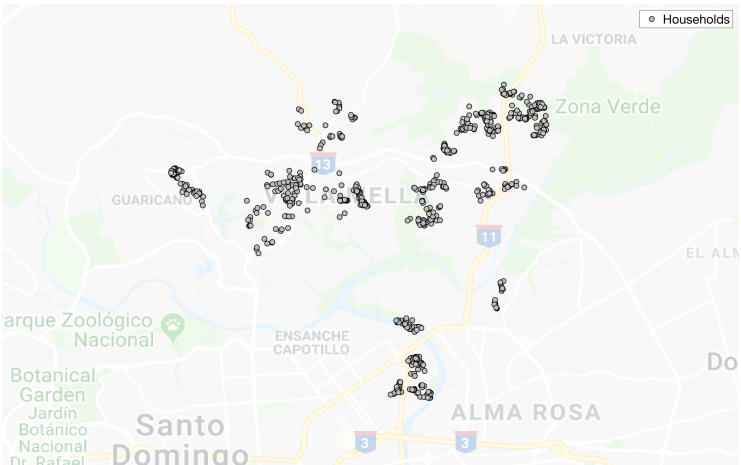
  - We **measure $\widetilde{F}_i^0(x)$ and $\widetilde{F}_i^T(x)$ directly** in the surveys.
- Preference γ_i, ξ_j:
  - We **measure preference rankings directly** in the survey.
  - Observe choice in **administrative data**.

Setting

- Sample area: low-income neighborhoods in Santo Domingo.
- Decentralized school choice mechanism in which parents apply directly to primary schools.
- No fixed admission criteria.
- Many households receive a conditional cash transfer that requires that children aged 5+ years go to school.

Sample Area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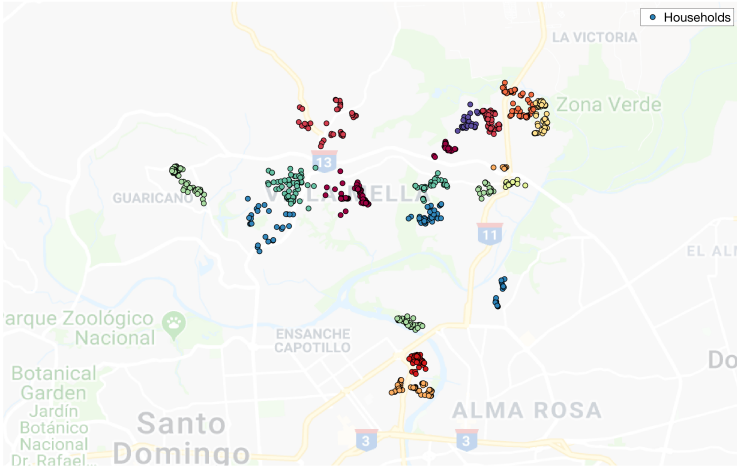
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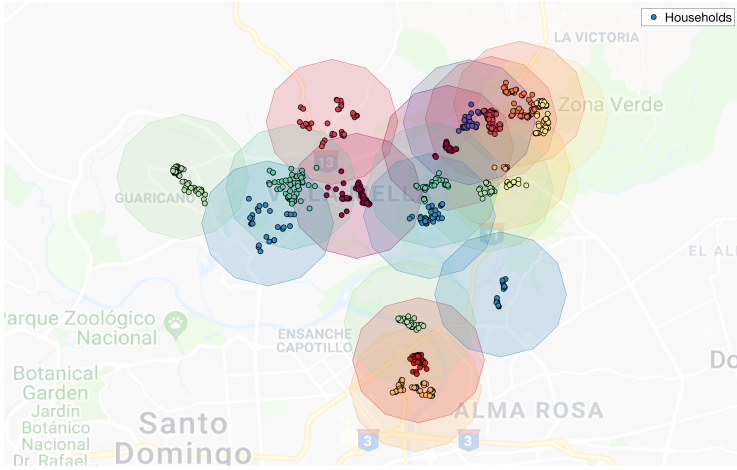
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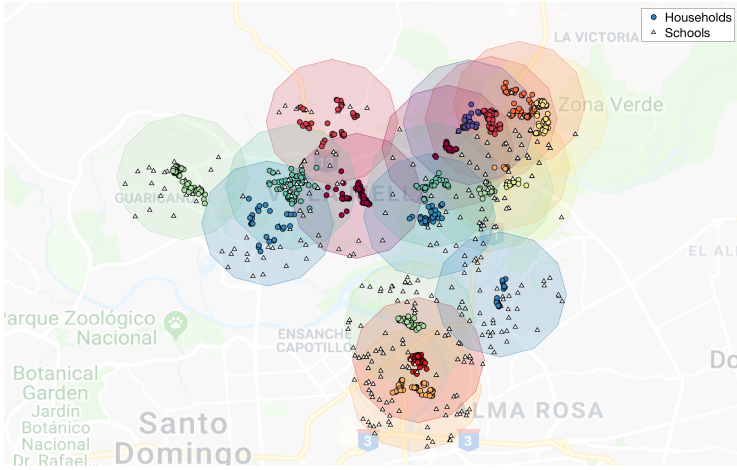
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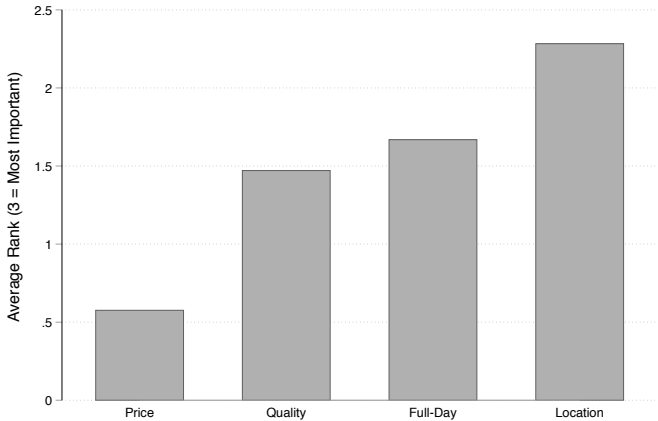
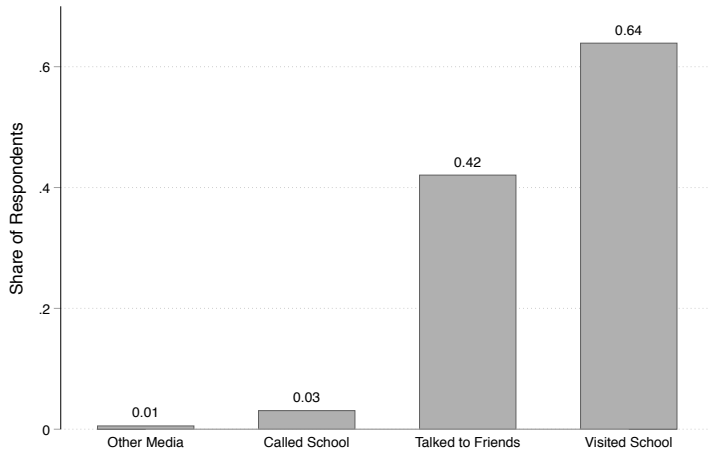
What Do Parents Value?

Figure: Rank of School Attributes



How Do Parents Search?



Belief Elicitation

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Beliefs vs. True Distribution

Figure: True and Believed Quality Distribution

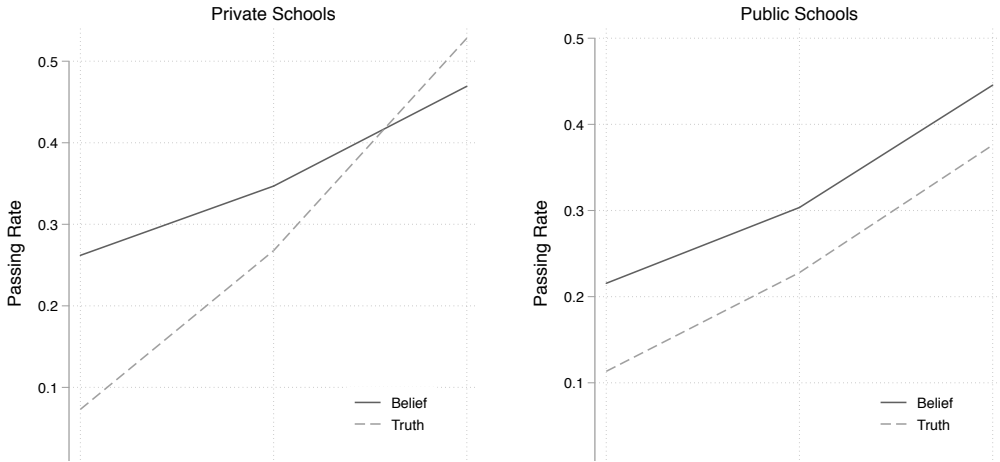

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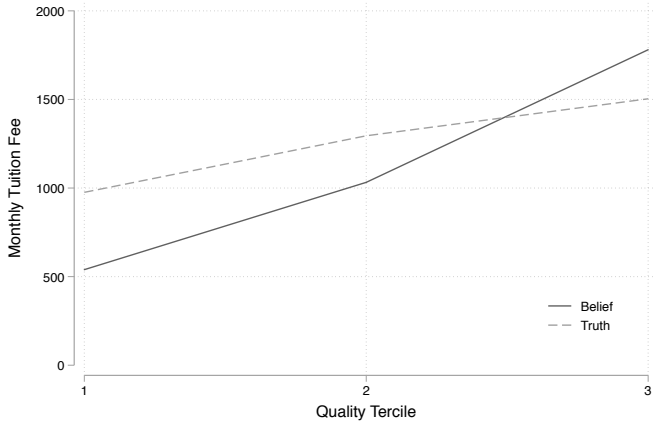
Figure: True and Believed Joint Distribution (Private Schools)



Pilot Study - Stylized Facts

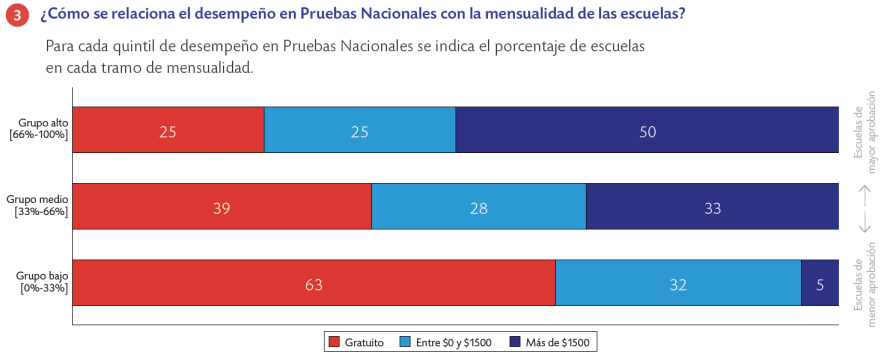
- There is significant price dispersion in the market.
- Parents learn about new schools through visits and friends.
- Parents' beliefs are not aligned with the true distribution:
  - Parents overestimate of the quality of public schools.
  - Parents overestimate the correlation between price and quality for private schools.

Field Experiment

- Sample: 1,000 households in Santo Domingo
- Treatments
  - C: Video + Brochure with general information on schooling.
  - T1: Video + Brochure with information on the quality and price distribution of schools in their cluster.
  - T2: Video + Brochure with information on the quality and price distribution of schools in their cluster + information on attributes of individual schools.

Treatment 1

Joint Distribution of Price and Quality



Treatment 2

LAS ESCUELAS EN DETALLE

	Nombre Centro	Ofrece Nivel Inicial	Ofrece Media	Tanda	Estudiantes por Profesor	Cobro mensual	Aprobacion en PN
1	Abejitas, Las	Sí	Sí	M	11	$2000	94
2	Angeles Sin Paraiso	No	No	V			.
3	C.E. Abc Santo Domingo Norte	Sí	Sí	M	17	$2500	96
4	C.E. Amela	Sí	No	M	12	$1800	99
5	C.E. Huellas Del Saber	No	No	M			75
6	C.E. Nuevo Mella	Sí	Sí	M	14	$1000	82
7	C.E. Vigotsky "Tia Hellen"	Sí	No	M	6	$2000	92
8	Centro Infantil Trencito De Colores	Sí	No	M	13	$800	96
9	Chaparral	Sí	No	V	51	$0	91
10	Ciriaco Maria Fe Y Alegria Marañon Ii	Sí	No	V	17	$0	95
11	Claribel	No	No	M			80
12	Colegio 2000	Sí	No	M	15	$600	74
13	Colegio Cristiano Hidekel	No	No	M			83
14	Colegio Santo Cristo	No	No	M			79

Pilot Results

Treatment Effects on Knowledge

	Knows New Schools		Number of New Schools	
	(1)	(2)	(3)	(4)
T1: Distributions	0.041	0.044	0.225**	0.230**
	[0.061]	[0.061]	[0.096]	[0.098]
T2: Distributions + Info	0.056	0.077	0.139	0.165*
	[0.065]	[0.067]	[0.089]	[0.091]
Controls	No	Yes	No	Yes
Mean of Control Group	0.327	0.327	0.354	0.354
Observations	350	350	350	350

Conclusion

- We propose a new mechanism for why parents make schooling choices with little information.
- Combination of search model and field experiment allows us to study how families search for schools endogenously.
- Use results to evaluate potential policies that could help reduce segregation and inequality in education systems.