

Why Schools Should Care about Housing Voucher Discrimination

Technical Appendix

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This technical appendix documents the data and methodology that support our analysis of the relationship between landlord housing voucher acceptance and voucher holders' access to high-performing schools. The analysis builds on data collected for Cunningham and colleagues' 2018 research report, *A Pilot Study of Landlord Acceptance of Housing Choice Vouchers*, which measured landlord discrimination against voucher holders in five metropolitan areas. Detailed information on the methodology and findings for that study and the voucher acceptance data used in this analysis are available in the report.

Research Background

Where people live matters, and where children live matters. Research shows moving to neighborhoods with lower poverty rates and more economic and educational opportunities can have major effects on children's success. Children who move to a zip code with less crime, less poverty, and stronger schools have better earnings potential as adults (Chetty, Hendren, and Katz 2016).

Housing vouchers are designed to help low-income families afford decent, safe homes and provide them opportunities to live in low-poverty, resource-rich neighborhoods. In theory, voucher holders can move anywhere they can find an affordable home, but in practice, their housing choices are constrained and depend on finding landlords willing to accept vouchers.

The Urban Institute's 2018 pilot study measured the extent and nature of landlord discrimination against voucher holders in Los Angeles, California; Fort Worth, Texas; Newark, New Jersey; Washington, DC; and Philadelphia, Pennsylvania and found that searching for housing with a voucher

can be extremely difficult, and landlords of voucher-affordable units frequently deny vouchers outright. In four of the five sites included in the study, rejection rates were higher in lower-poverty neighborhoods (where less than 10 percent population living at or below the federal poverty line) typically believed to offer improved resources and amenities.

For this analysis, we further explore how landlord discrimination directly affects voucher holders' access to an important economic mobility mechanism for children: high-performing schools. Specifically, we explore what the high levels of landlord discrimination we found in some neighborhoods and cities might mean for access to educational opportunity by analyzing how voucher acceptance varies by measures of local school performance in each of the sites we tested.

Data Sources

We linked testing data from Cunningham and colleagues' 2018 study to measures of school performance.

Measuring voucher acceptance

To explore landlord voucher acceptance, the discrimination study selected a random sample of rental units for testing in proportion to the prevalence of voucher-affordable housing across different neighborhoods (approximated as zip codes). Testing took place in three stages, beginning with an initial "acceptance test" by phone in five sites and concluding with in-person paired testing in three sites: Newark, Fort Worth, and Los Angeles. Data for this analysis are from the acceptance test phase of testing.

Across the five states, 3,870 acceptance tests were conducted by phone. Female testers called landlords of voucher-affordable rental units advertised in local online sources. The callers, who presented as white and were provided detailed personal profiles, asked whether advertised units were available and, if so, whether the landlord would accept a voucher as partial payment of rent. The landlord's response was then recorded: yes, voucher holders are accepted; no, they are not accepted; the landlord was uncertain of the voucher acceptance policy; or vouchers were only accepted under certain conditions.

Data recorded for each test include the addresses and census tracts. Tests were conducted between April 2016 and July 2017.

Measuring school quality

For our definition of education quality, we combined ED Facts student assessment data¹ for the 2015–16 school year and School Attendance Boundary Survey² data for 2015–16 to link primary school-, middle school-, and high school-level performance to their corresponding catchment areas in each test site. Our performance measure was the share of students proficient in math and reading. We also included the share of underrepresented Black and Hispanic students as a proxy for school segregation. For our analysis, we limited the schools to public schools, excluding charter schools.

School boundary and performance data were significantly missing for Fort Worth, so we omit Fort Worth from our analysis.

Methodology

Linking voucher test results to school performance

There are two ways of linking voucher tests to school performance. The first method is assigning the voucher test to the school catchment boundary it falls into and linking the test result to the respective school's performance. The second method is assigning voucher tests to the school nearest to the tested unit's address—which, in some circumstances, may not be within the unit's assigned school catchment area. Most school districts across the country offer in-boundary enrollment, and the first methodology links voucher tests to the schools that households living at particular addresses are most likely eligible to attend. The second methodology mimics when children go to the nearest school. Both methods are not perfect; according to the National Center for Education Statistics, about 70 percent of students in grades 1 through 12 go to their assigned public school, and 20 percent chose alternative public schools.³ We used both approaches in our analysis and found similar results. We present findings from linking test locations to the schools within each tested unit's assigned school catchment area.

Data analysis

We summarize differences in school performance by voucher denial status using linear regression models of school proficiency rates as a function of denial status, controlling for city- and grade-level fixed effects.

There are some variations across sites, and local context matters. Washington, DC's difference in school performance by denial status was the smallest and was not statistically significant. DC also had

the lowest voucher denial rate in the five-site sample and is the only site where denial rates were similar for both low- and higher-poverty neighborhoods (Cunningham et al. 2018).

In Los Angeles, New Jersey, and Philadelphia, school performance is higher in areas where vouchers are more likely to be denied, and the difference in school performance between neighborhoods where vouchers were accepted and denied is statistically significant. Although we dropped Fort Worth in this analysis because of missing school boundary data, when we assigned voucher tests to the school nearest to the tested unit’s address, Fort Worth showed similar results as Los Angeles, New Jersey, and Philadelphia. This alternative method did not change our results for DC, Los Angeles, Newark, and Philadelphia.

FIGURE 1
Association between School Performance and Denial Status

	Los Angeles, CA		Newark, NJ		Philadelphia, PA		Washington, DC	
	Reading	Math	Reading	Math	Reading	Math	Reading	Math
Voucher denied	6.393*** (-1.056)	6.316*** (-0.980)	4.117*** (-1.190)	3.636*** (-1.300)	6.492*** (-1.46)	4.829*** (-1.34)	-3.414 (-2.086)	-3.85 (-2.380)
Adjusted R²	0.224	0.06	0.051	0.037	0.03	0.027	0.087	0.088
N	2,818	2,818	911	911	889	889	1,122	1,122

Sources: EDFacts SY 2015–16 Achievement Results for State Assessments in Mathematics and Reading/Language Arts and the SY 2015–16 School Attendance Boundary Survey.

Notes: N = number of vouchers. R² = proportion of the variance in the dependent variable that is predictable from the independent variable(s). Robust standard errors in all models. All localities included school-level fixed effects.

* p<.05; ** p<.01; *** p<.001

Limitations

There are several limitations of this preliminary analysis that could be addressed in future research.

Some voucher-affordable units may be absent from the study sample

The testing study was based on a random sample of available rental units selected to match the geographic distribution of voucher-affordable rental units in each site, based on special tabulations of zip code–level, five-year 2008–12 American Community Survey data for occupied two- and three-bedroom units with tenants paying rents at or below the local housing authority’s payment standards. In some cases, zip codes with very small numbers of voucher-affordable units were combined to create testing targets.

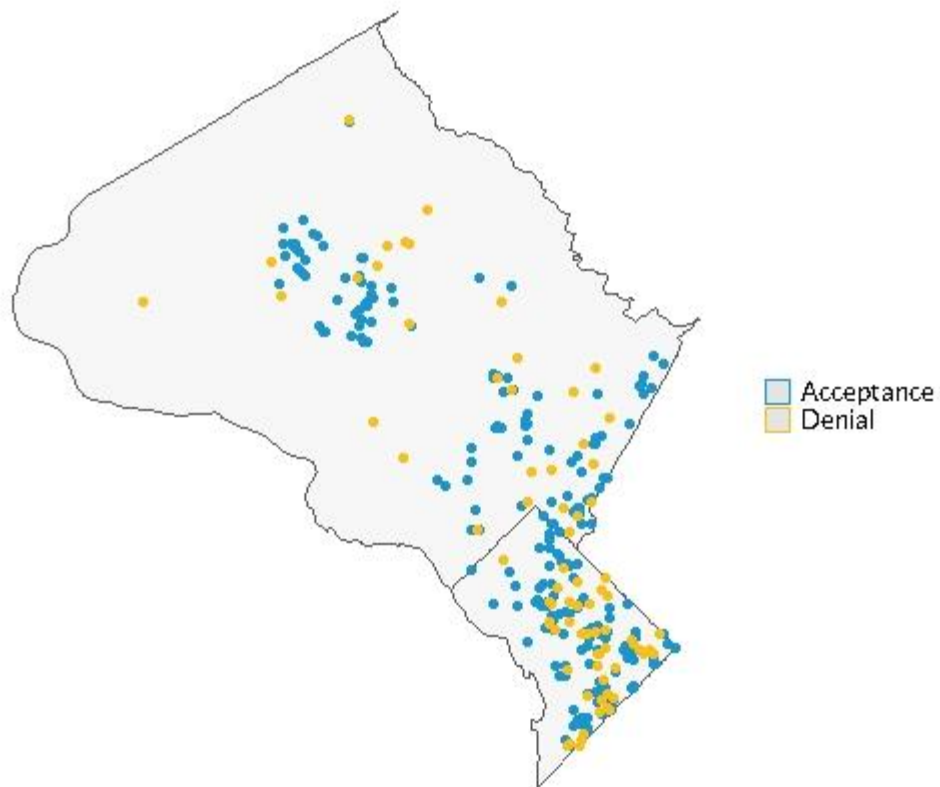
During testing, some neighborhoods identified as having affordable rental units in census data lacked advertised voucher-affordable units available for rent. In addition, testing staff suggested that landlords at the lower rent level faced higher demand and were often unresponsive to inquiries. It is possible some landlords of voucher-affordable units in these neighborhoods did not advertise units through online sources or did not respond to inquiries and were not included in the study sample. These limits meant that some units might be removed from the potential study sample.

School choice needs to be further explored

We linked voucher tests to school quality using two Geographic Information System procedures. First, we linked the geographic location of the voucher tests to school attendance boundaries (“catchment zones”) as reported by the School Attendance Boundary Survey. Second, we used school location data from the US Department of Education’s Common Core of Data and linked schools to voucher tests by finding the public school (traditional or magnet) nearest to the test location for each school grade level. Though the literature on school choice suggests residential proximity and school catchment zones play big roles in school attendance decisions (Mandic et al. 2017), other factors could also affect enrollment, such as special educational needs (Jessen 2012) and school racial and peer quality (Abdulkadiroğlu et al. 2020). In addition, the search for housing for voucher holders may also affect their specific education needs and priorities, in addition to just affordability and availability. Future research could link voucher tests to alternative assumptions about how voucher holders choose and sort into schools.

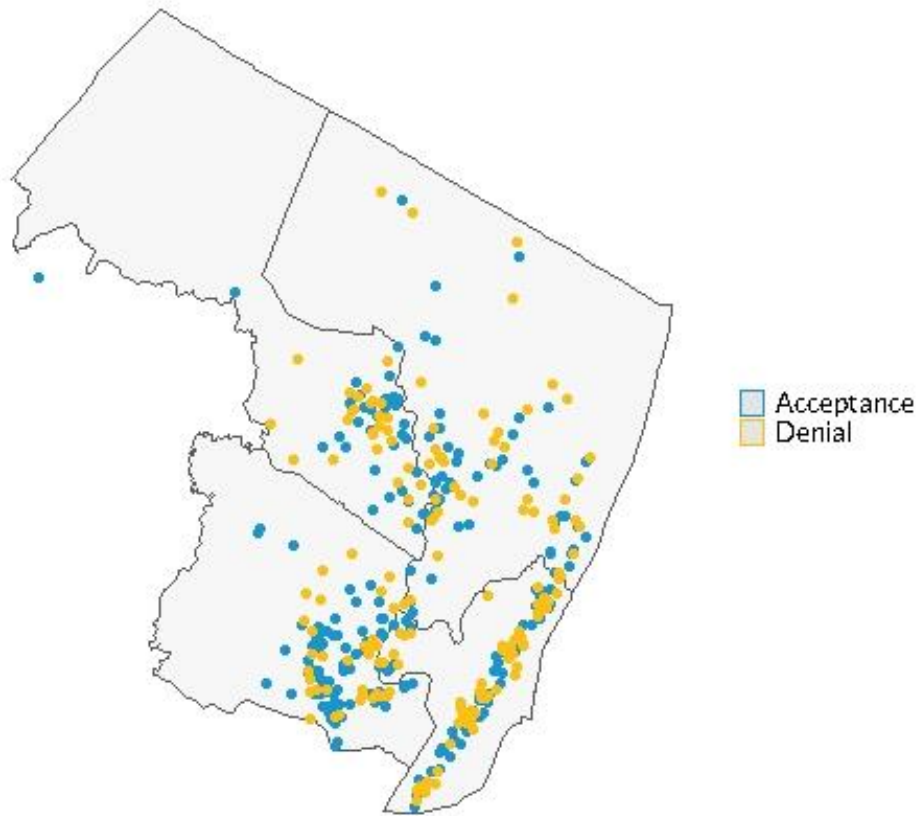
Appendix: Location of Voucher Acceptance Tests within Each Site

Voucher Tests in Washington, DC and Montgomery County, Maryland



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Voucher Tests in Newark, New Jersey



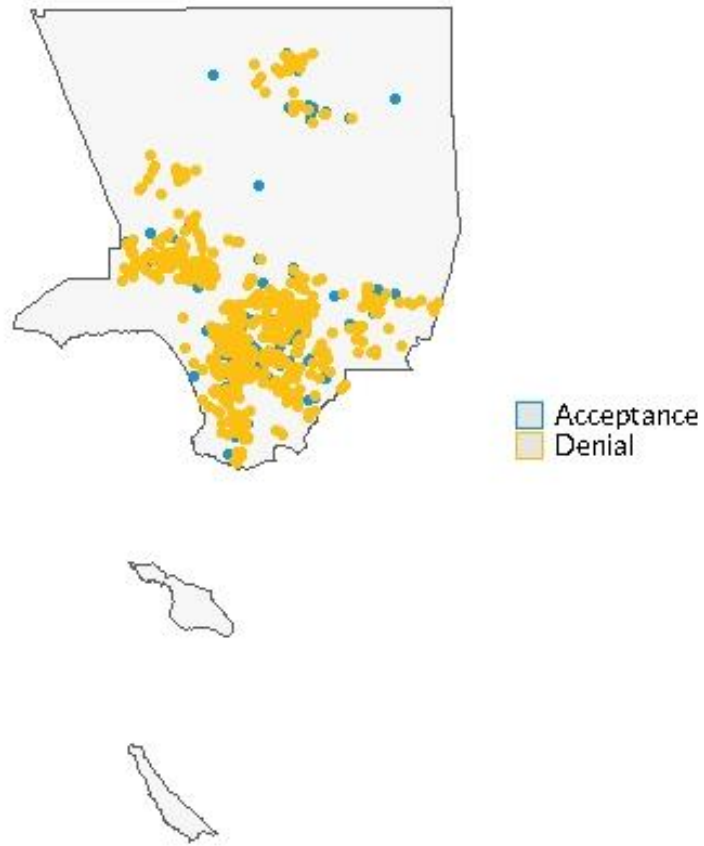
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Voucher Tests in Fortworth, Texas



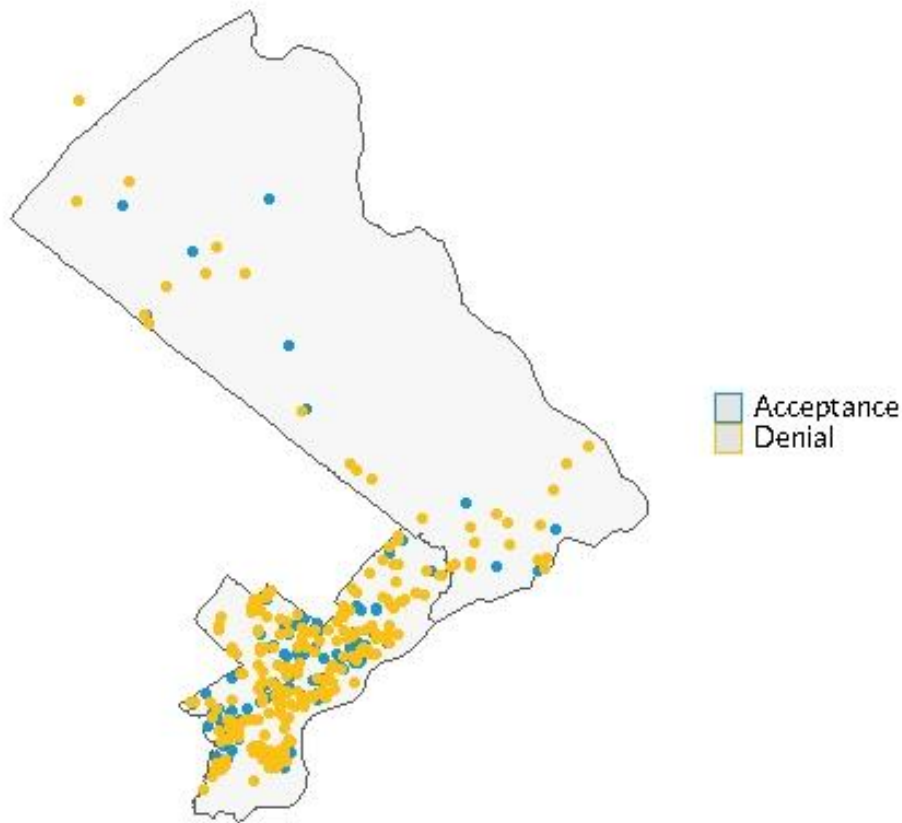
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Voucher Tests in Los Angeles, California



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Voucher Tests in Philadelphia, Pennsylvania



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Notes

¹ US Department of Education, EDFacts Data Files: SY 2015–16 Achievement Results for State Assessments in Mathematics and SY 2015–16 Achievement Results for State Assessments in Reading/Language Arts, last updated March 23, 2020, <https://www2.ed.gov/about/inits/ed/edfacts/data-files/index.html>.

² National Center for Education Statistics, School Attendance Boundary Survey Public Use: SY 2013–14 Single File, accessed June 26, 2020, <https://nces.ed.gov/programs/sabs/default.aspx>.

³ National Center for Education Statistics, Table 206.30: “Percentage Distribution of Students Enrolled in Grades 1 through 12, by Public School Type and Charter Status, Private School Orientation, and Selected Child and Household Characteristics: 2016,” accessed June 26, 2020, https://nces.ed.gov/programs/digest/d18/tables/dt18_206.30.asp?current=yes.

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