PRICE DISCRIMINATION AGAINST VOUCHER TENANTS[†]

Konhee Chang[*]

March 2026
Link to the latest version

Preliminary and incomplete. Please contact before citing or circulating.

Abstract

The Housing Choice Voucher (HCV) program is the largest U.S. rental assistance program, costing more than $30 billion annually. I document systematic pricing differences between voucher and market-rate tenants using administrative unit-level panel data on rents, tenants, and landlords for both market-rate and voucher units. Landlords charge voucher tenants 6% higher rents and 7% higher security deposits for the same unit. At tenant turnover, rents increase by roughly $96 more when the incoming tenant is a voucher holder, nearly doubling the typical rent increase. Leveraging variation in voucher generosity arising from program design, I show that these price differentials reflect a combination of tenant-side price insensitivity and strategic pricing by landlords. Voucher premia are largest where subsidy standards are more generous relative to market rents such that tenants' out-of-pocket payments are less sensitive to contract rent, and they increase with landlords' experience participating in the HCV program. These patterns are difficult to reconcile with cost-based explanations and instead point to systematic price discrimination against voucher tenants.

JEL: R23, R31, R38.
Keywords: Vouchers. Renters. Landlords. Price discrimination.

[†] This paper is a revised version of Chapter 3 of my dissertation at the University of California, Berkeley. I am grateful to Cecile Gaubert, Amir Kermani, Nick Tsivanidis, Nancy Wallace, and Danny Yagan for their guidance. I thank Raheem Chaudhry, Junseok Lee, and Elif Taşar and the organizers and participants of the Consumer Law Scholars Conference for valuable feedback. I also thank Brad Lipton and Carolina Reid for helpful discussion.
[*] Federal Reserve Board of Governors (e-mail: konhee.chang@frb.gov). The analysis and conclusions contained in this paper are those of the author and do not necessarily reflect the views of the Board of Governors of the Federal Reserve System, its members, or its staff.

1. Introduction

The Housing Choice Voucher (HCV) program, also known as Section 8, provides rental assistance to more than two million low-income renters and is the largest form of federal rental subsidy in the United States. Established in 1974, the program was designed to expand housing access and geographic mobility by enabling households to rent in the private market outside of public housing (Chyn 2018). Voucher recipients typically contribute 30% of their income toward rent, while the local housing authority pays the remaining portion directly to the landlord, up to a location-specific payment standard.

Despite its scale and policy motivation, the promise of the HCV program remains unrealized for many eligible renters. Many voucher recipients struggle to lease a unit at all: nearly 40% fail to use their voucher before expiration, often after spending years on the waitlist (Chyn et al. 2021; Ellen et al. 2024). Even when voucher households are successful in finding a unit, they remain concentrated in lower-opportunity neighborhoods (Bergman et al. 2024; Collinson and Ganong 2018; Lens et al. 2011). To explain and remedy these patterns, researchers and policymakers have recently focused on the role of private landlords whose willingness to lease to voucher tenants ultimately determines whether and where vouchers translate to housing access. Notably, a large body of research has documented widespread landlord discrimination against voucher recipients, motivating source of income (SOI) protections that prohibit landlords from explicitly refusing to rent to voucher recipients.

Yet, relatively little is known about how landlords treat voucher tenants differently from market-rate tenants conditional on acceptance. Similarly, there is limited empirical evidence on the mechanisms that drive landlords' differential behaviors towards voucher tenants. This paper addresses this gap by studying landlords' pricing behavior for voucher and market-rate tenants. I ask whether landlords charge different rents or deposits to voucher tenants and comparable market-rate tenants for the same unit, and what mechanisms drive any such differences.

At the center of my empirical analyses is an administrative rent registry data from a large urban housing market. The dataset is a unit-level panel data that track rents, deposits, tenancy status, and landlords over time. The rent registry covers both voucher and market-rate tenancies for the same unit across time, allowing me to condition on unit fixed effects and compare rents for the identical unit across tenant types. To the best of my knowledge, this study is the first to implement a *within-unit* research design in the rental market context. Datasets that have been commonly used in previous studies, such as administrative records

from the U.S. Department of Housing and Urban Development (HUD), only contain information about tenants who receive housing subsidies and lack comparable information on market-rate tenants, making it challenging to control for unobservable unit characteristics.

I proceed in two steps. First, I document systematic pricing disparities between voucher and market-rate tenants. Using a repeat-rent specification that compares the same unit over time, I find that voucher tenants pay about 6% higher rents and 7% higher security deposits for the same unit. These results are stable across specifications that control for local market conditions using building-by-year, building-by-quarter, and building-by-month fixed effects. The repeat-rent design controls for time-invariant, unobserved unit characteristics that may influence estimates of the voucher rent premia.

However, the repeat-rent estimates may still reflect time-varying changes in unit quality that coincide with voucher tenancies. For example, units may be in a better condition when occupied by voucher tenants because landlords are subject to annual inspections. I therefore complement this approach with a movers design that focuses on rent-setting at tenant turnover, comparing how much landlords raise rents when the incoming tenant is a voucher holder rather than a market-rate tenant. In this design, landlords raise rents by roughly $85 to $105 more when the incoming tenant is a voucher holder, nearly doubling the typical rent increase.

Second, I investigate the mechanisms behind these pricing differences and find evidence consistent with landlords' price discrimination against voucher tenants. I test three potential channels: differences in tenants' effective price sensitivity, differences in the marginal cost of supplying voucher units, and strategic pricing behavior by landlords.

To study tenant price sensitivity, I exploit multiple sources of variation in the generosity of voucher subsidies relative to market rents. First, I compare units whose prior rents were above the voucher payment standard—where voucher tenants are likely to face out-of-pocket payments that increase with contract rents—to units where the payment standard is unlikely to bind and the tenants are less sensitive to contract rent. Second, I compare neighborhoods within the same city where the same nominal payment standards are more or less generous relative to prevailing rents due to locational differences. Third, I use within-year variation generated by the program rule: nominal payment standards that determine the maximum subsidy update discretely while market rents evolve continuously, making voucher subsidies less generous in real terms over the course of the effective window for a fixed payment standard.

Across these tests, voucher premia are largest where tenants are likely to be less price

sensitive. Premia are attenuated for units whose rents are already close to the payment standard and tenants are more likely to face binding constraints, higher in lower-rent market segments where the voucher covers a larger share of rent, and decline as the contract date moves further from the reset of the payment-standard and the real generosity of the subsidy declines. These patterns are consistent with a mechanism in which landlords can charge higher prices when voucher tenants' out-of-pocket payments are less responsive to contract rent.

Next, I investigate whether the observed premia reflect higher marginal costs of supplying voucher units rather than markup. If annual inspections and the administrative burden of working with the local public housing authorities make voucher units costlier to supply, these cost differences may be reflected in the prices that landlords charge to voucher tenants. To test this mechanism, I leverage the idea that the potential administrative burdens are likely to be most salient when landlords first work with the voucher program and decline with their experience and expertise in the program.

Instead, I find the opposite pattern. Voucher rent premia increase with landlords' experience serving voucher tenants and with the share of voucher tenants in the landlords' portfolio. Furthermore, the premia is smaller when the unit, the building, and the landlord first hosts a HCV tenant and the landlord would incur upfront costs engaging with the HCV program. This evidence is difficult to reconcile with a cost-pass-through explanation and instead points to strategic pricing that strengthens as landlords learn how to navigate the HCV program.

Finally, I examine whether the voucher rent premia can be explained by mechanical pricing at voucher payment standards. While there is some bunching of voucher rents just below the maximum voucher subsidy level determined by the program's payment standard, the overall distribution of rents for voucher tenants is shifted upward relative to market-rate tenants, and premia appear throughout the distribution rather than only at the cap. This suggests that bunching plays a limited role and that broader pricing differences—arising from tenant price insensitivity and landlord strategic pricing—are central to explaining the observed rent differentials.

Together, these results provide evidence that landlords systematically price discriminate against voucher tenants. Landlords charge voucher tenants more than market-rate tenants for the same unit. This finding has implications for both policy and program administration. First, charging different rents based on voucher status violates program rules. HCV program rules require that landlords charge voucher tenants rents that are comparable to what they

would charge market rate tenants. However, concerns that landlords "overcharge" voucher tenants have recently prompted scrutiny from regulators and housing authorities (Thompson 2024). I find evidence consistent with these allegations. Second, if voucher tenants systematically pay higher rents, part of the HCV program subsidy is captured by landlords rather than improving affordability or expanding access to higher-opportunity neighborhoods. Third, these pricing patterns create fiscal externalities. Because voucher recipients' out-of-pocket payments are tied to income rather than contract rent for the vast majority of tenants whose rent does not exceed the payment standard, higher rents are largely borne by local public housing authorities and ultimately, taxpayers.

Related Literature. This paper contributes to several strands of literature in public and urban economics.

First, this paper provides the first large-scale evidence of price discrimination in rental housing markets, contributing to the literature on pricing disparities in housing markets. A large literature documents racial differences in home purchase prices (Bayer et al. 2017; Box-Couillard and Christensen 2024; Ihlanfeldt and Mayock 2009; Kain and Quigley 1975; Myers 2004), housing returns (Diamond and Diamond 2024; Kermani and Wong 2026), and mortgage costs (Bartlett et al. 2022; Bhutta and Hizmo 2021). However, relatively little is known about rent disparities.[1] I isolate rent and deposit differentials *within* the same unit using a unique administrative unit-level panel data. I leverage policy variation to show that these pricing gaps reflect differential markups rather than quality or cost differences.[2]

Second, a separate literature studies discrimination in rental housing markets, including differential treatment of minority tenants (Christensen and Timmins 2022; Christensen and Timmins 2023) and outright rejection of voucher applicants (Aliprantis et al. 2022; Blanco and Song 2024; Cunningham et al. 2018; Moore 2017; Phillips 2017). These studies focus primarily on the search stage—whether landlords respond to inquiries from voucher tenants or accept voucher applications—and link such behavior to search frictions. In contrast, much less is known about how landlords treat tenants differentially beyond the initial tenant screening. This paper studies landlords' pricing behavior for voucher tenants conditional

[1] A handful of historical studies document racial gaps in rental prices and suggest higher costs of providing rental housing (King and Mieszkowski 1973) and long-run costs in the form of a sharper depreciation (Akbar et al. 2025) as potential mechanisms.

[2] The most closely related study, Desmond and Perkins (2016), shows that voucher tenants pay higher rents than market-rate tenants for hedonically similar units using cross-sectional survey data from Milwaukee, Wisconsin. Olsen (2019) reviews mixed evidence from related studies led by HUD and highlights that it is difficult to draw firm conclusions on pricing differentials due to limited data on unit quality.

on acceptance and the mechanisms that generate these disparities.[3]

Third, a growing literature evaluates the effectiveness of the HCV program and the role of private landlords in shaping voucher outcomes. Prior work evaluates interventions such as personalized search assistance (Bergman et al. 2024), the Small Area Fair Market Rents (SAFMR) policy that varies subsidy standards across smaller geographic areas (Collinson and Ganong 2018; Ellen et al. 2025; Eriksen et al. 2025; Reina et al. 2019), and source of income protections that prohibit explicit discrimination against voucher recipients (Blanco and Song 2024; Ellen et al. 2023; Galvez and Knudsen 2024). While these papers document improvements in voucher take-up and access to high-opportunity neighborhoods, they also highlight substantial fiscal costs and the importance of understanding the underlying market structure to quantify subsidy incidence. This paper complements this literature by documenting a channel through which voucher program design can generate substantial fiscal costs and externalities: landlords' pricing responses to voucher rules. I show that voucher rent premia increase with subsidy generosity and landlord experience in the program, implying that part of the HCV subsidy is captured by landlords through higher rents.

The remainder of the paper proceeds as follows. Section 2 provides institutional background on the HCV program and local policy context. Section 3 describes the data and variable construction. Section 4 presents the empirical strategy and main results on voucher rent premia. Section 5 investigates mechanisms driving the pricing differentials. Section 6 discusses policy implications. Section 7 concludes.

2. Background

This section describes institutional details about the HCV program.

2.1. *Background on the HCV Program*

The HCV program, formerly known as Section 8, is the largest tenant-based rental assistance program in the United States. The program serves approximately 2.3 million low-income households and is administered by over 2,000 public housing authorities (PHAs) using federal funding from the HUD. Eligible households receive a subsidy that covers the difference between a locally determined payment standard and 30% of the household's ad-

[3] A necessary condition for the type of third-degree price discrimination documented here is that landlords face downward-sloping residual demand (Watson and Ziv forthcoming). I provide reduced-form evidence consistent with this using variation in voucher tenants' price sensitivities generated by program design. This relates to recent works on the pass-through of idiosyncratic costs to rents, which implicitly assume landlord pricing power (Baker 2024; Hughes 2022; Lee 2024).

justed income. Voucher recipients are responsible for finding a rental unit in the private market, and landlords are required to comply with program rules including passing annual housing quality inspections.

The main goal of the HCV program is to provide recipients with the ability to move into neighborhoods with better employment prospects, lower crime rates, and higher-performing schools. Yet, a persistent challenge has been the limited success of voucher holders in leasing in high-opportunity areas, with many concentrated in segregated and high-poverty neighborhoods (Collinson and Ganong 2018). Recent literature has highlighted the role of systematic barriers in explaining this pattern such as search costs, landlord participation, and discriminatory tenant screening practices (Aliprantis et al. 2022; Bergman et al. 2024; Blanco and Song 2024; Cunningham et al. 2018; Garboden et al. 2018; Garboden et al. 2024; Moore 2017; Phillips 2017).

2.2. *How Rents and Subsidies are Set for HCV Units*

The maximum voucher subsidy is determined by the local public housing authority's payment standard, which is typically set between 90 and 110% of the Fair Market Rent (FMR) for the area. FMR is determined by HUD and is intended to approximate the 40th percentile of rents. Up to the payment standard, voucher tenants generally contribute about 30% of their adjusted income toward rent, and the housing authority pays the difference between the contract rent and the tenant contribution directly to the landlord. If the contract rent exceeds the payment standard, tenants cover the difference out of pocket.

The traditional FMR framework applies a single rent benchmark for each unit size across the local public housing authority's entire jurisdiction. This uniform standard has raised concerns that it fails to capture within-metro variation in housing costs, making it difficult for voucher holders to lease units in high-opportunity neighborhoods where rents are typically higher. In response, HUD introduced Small Area Fair Market Rents (SAFMR), which set rent benchmarks at the more granular, ZIP Code-level. SAFMRs allow for higher payment standards in more expensive neighborhoods and lower ones in less expensive areas, aligning subsidy levels more closely with local rent distributions (Collinson and Ganong 2018).

The city studied in this paper was not designated for mandatory SAFMR implementation during the sample period (2018–2023).

Another requirement under the HCV program is that contract rent set by private landlords must pass a "rent reasonableness" test. This rule requires that the rent be comparable

to similar unassisted units in the local market. This rule explicitly prohibits landlords from charging voucher tenants different prices from what they would charge market-rate tenants for the same unit. The rent reasonableness requirement applies under both FMR and SAFMR regimes.

2.3. *Anti-Discrimination Laws*

Federal fair housing law does not explicitly prohibit discrimination based on prospective tenants' source of income. That is, landlords can refuse to rent to prospective tenant upon learning that they will pay rent using a voucher. Due to concerns that landlord discrimination limits the efficacy of the HCV program, state and local governments have enacted anti-discrimination laws—commonly known as source of income protections—that bar landlords from explicitly rejecting applicants who intend to pay with a voucher or from using exclusionary languages in rental advertisements (e.g., "No Section 8"). As of 2022, these protections are estimated cover approximately 57% of voucher households nationwide (Knudsen 2024).

Enforcement mechanisms vary. Some laws allow voucher recipients and local public housing authorities to sue for damages. Others rely on complaint-based systems with limited oversight (Greene et al. 2020). In jurisdictions without source of income protections, landlords can legally refuse to accept vouchers, contributing to high denial rates and potentially reinforcing patterns of segregation. Even in areas with source of income laws, certain landlord tactics such as setting unattainable income or credit score requirements make enforcement challenging. And so, recent high-profile audits and lawsuits alleging violation of local source of income laws have highlighted ongoing discrimination despite formal legal protections (Khouri 2024).

3. Data

This section describes the rent registry data, variable construction, and summary statistics.

3.1. *Administrative Rent Registry Panel*

I draw on administrative unit-level panel data obtained from a rent registry program in one of the twenty largest cities in the United States. Each year, the city's housing department collect unit-level information directly from the landlords. The city uses the data to monitor and support rental market regulation, including compliance with rent control ordinances.

The rent registry data is not publicly accessible. While tenants may access information about their own unit to check its accuracy, there is no public database of unit-level information. The data were obtained through direct collaboration with the city under the agreement that it will be used for research purposes only and kept confidential.

The dataset covers the period from 2018 to part of 2023 and includes all units in multifamily apartments that are subject to city's rent stabilization ordinance. Each observation corresponds to a unique housing unit in a given year and includes rich administrative details. Key variables include the unit's monthly rent, security deposit, number of bedrooms, unit number, and full building address. The data also report the names of the property owner and the property manager, the unit's tenancy status (e.g., vacant, owner-occupied, renter-occupied), whether the current tenant is an HCV recipient, and the exact date of tenancy changes. Where applicable, the data also record the stated reason for turnover from a list of 15 categories, such as voluntary move-out, owner move-in, and eviction for criminal activity. Rent changes are documented with precise effective dates.

The rent registry data offers several advantages over traditional survey or audit data commonly used in the voucher literature. Most notably, it provides a large and comprehensive panel at the unit level for *both* voucher and market-rate tenants. In contrast, data commonly used in the literature relies on administrative HUD data that tracks only voucher tenants. This feature of the rent registry data allows me to identify rent differentials between voucher and market-rate tenants within buildings, over time, and around tenancy turnovers, while holding fixed unit characteristics.

Furthermore, the rent registry data is unique in that it contains information about contract rent unlike other data sources commonly used in the rental housing literature that primarily record listing rents. Similar administrative data have been used in recent housing studies, such as Baker (2024) and Baker and Wroblewski (2025), who analyze rent registry data from Berkeley, California. However, the Berkeley rent registry program exempted landlords of subsidized units from the reporting requirements until November 2024.

3.2. *Variables*

Key variables used in the analysis are as follows.

- Contract Rent. The monthly rent reported by the landlord for each occupied unit. This value reflects the contract rent charged to the tenant and is updated whenever there is a rent increase or new tenancy.

- Rent Effective Date. The date contract rent took effect.
- Rent Increase. Value amount of a rent increase.
- Rent Increase Date. The specific date on which a rent increase took effect.
- Security Deposit. The amount required as a security deposit for each tenancy.
- Tenancy Change Date. The date on which a change in occupancy occurred, such as when a new tenant moves in or an existing tenant vacates.
- Reason for Tenancy Change. A categorical variable describing the landlord-reported reason for turnover. There are 15 categories, including voluntary move-out, eviction, owner move-in, and breach of lease due to criminal activity.
- Voucher Status. A binary indicator for whether the unit is occupied by a tenant using an HCV.

3.3. *Descriptive Statistics*

Table 1 reports the descriptive statistics. The dataset contains 140,355 unit-level registrations covering 37,198 unique units between 2018 and 2023. Of these, 8,018 unit-year observations involve occupancy by voucher tenants. This corresponds to a voucher share of 5.7%, consistent with national estimates: approximately 2.3 million households participate in the HCV program nationwide, representing roughly 5% of all renter households. Voucher units are concentrated among a subset of landlords and properties. Out of 2,755 unique property owners in the dataset, 958 (35%) have ever housed a voucher tenant during the sample period. Similarly, 3,121 out of 37,198 unique units (8%) have ever had a voucher tenant.

4. Empirical Research Design and Results

This section presents the empirical strategies that I use to estimate the rent and deposit differentials between voucher and non-voucher tenants and reports the results. I leverage the panel structure of the rent registry data which allows for within-unit and within-building comparisons over time. I implement two complementary approaches. First, I compare the same unit over time, under voucher and non-voucher tenancies. Second, I leverage rent changes at the point when a new tenant moves in, comparing outcomes for voucher and market-rate tenants entering the same unit. Together, these designs provide evidence on

whether landlords charge higher rents or deposits to voucher tenants compared to market-rate tenants for the same unit.

4.1. *Repeat Rent Design*

Empirical Approach. This subsection estimates the rent premium paid by voucher tenants using a repeat-rent design. The key advantage of this approach is that I can compare the same housing unit over time as it hosts voucher and non-voucher tenants. By controlling for unit fixed effects, the analysis holds constant all time-invariant characteristics of the unit such as size, location, and unobserved qualities that may affect rents.

The estimating equation takes the following form.

$$\ln(y_{it}) = \beta \textit{Voucher}_{it} + \alpha_i + \delta_{b(i)\times\tau(t)} + X_{it}'\gamma + \varepsilon_{it}, \tag{1}$$

$\ln(y_{it})$ is the log of the monthly contract rent or the security deposit for unit i in period t, depending on the specification. $\textit{Voucher}_{it}$ is an indicator for whether the unit is occupied by a voucher tenant, α_i denotes unit fixed effects, and $\delta_{b(i)\times\tau(t)}$ are building-by-time fixed effects. The vector X_{it} includes time-varying covariates such as indicator variables for tenancy type—new or incumbent—and the number of bedrooms to control for rare cases where the same unit is renovated to add or remove bedrooms. Standard errors are clustered at the building level.

The identification assumption underlying this design is that, after accounting for unit fixed effects, building-by-time fixed effects, and observed characteristics, whether a unit is rented to a voucher tenant is not systematically related to other unobserved factors that affect rent. In other words, for the same unit in the same building and time period, differences in rent between voucher and non-voucher tenants are assumed to reflect tenant type rather than unobserved differences in quality or trends.

Results. Table 2 reports the repeat-rent estimates for contract rents and security deposits. Panel A presents results for rents, and Panel B presents the corresponding estimates for security deposits.

Column (1) of Panel A is the preferred specification, which compares the same unit over time while controlling for building-by-year fixed effects. The estimate implies that voucher tenants pay about 5.8% higher rents than non-voucher tenants. Columns (2) and (3), which replace building-by-year fixed effects with building-by-quarter and building-by-month fixed effects, yield similar estimates of 5.8% and 6.1%, respectively, indicating that the result is

not sensitive to the choice of time controls.

Columns (4) and (5) illustrate the importance of controlling for unit fixed effects. Column (4), which includes unit fixed effects but omits building-time controls, produces a somewhat larger, but similar estimate of 6.8% to the baseline specification. In contrast, Column (5), which omits unit fixed effects and instead controls only for building-by-year variation, yields a much larger estimate of 12.5%. This comparison indicates that voucher tenants are more likely to occupy higher-rent units on average, and that failing to compare the same unit over time substantially overstates the rent premium. Conditioning on unit fixed effects therefore plays a central role in isolating rent differences associated with tenant type rather than selection into more expensive units.[4]

The fact that voucher tenants occupy higher-rent units within the same building may appear surprising at first. However, several mechanisms can explain this pattern. First, the rent registry data used in this study covers only rent-controlled properties, which are typically older and lower-rent than non-rent-controlled properties due to local laws. In this context, voucher tenants may disproportionately occupy newer or better-maintained units relative to other rent-controlled units, even within the same building. This is potentially due to the requirement that landlords pass annual quality inspections for voucher units, which may lead landlords to allocate better-maintained or upgraded units to voucher tenants. Second, existing research has documented that voucher usage is geographically concentrated in lower-income neighborhoods. Within such contexts, voucher-eligible units may be of relatively higher quality than the surrounding rental stock.

Panel B applies the repeat-rent design to security deposits. Column (1), the baseline specification which includes unit and building-by-year fixed effects, shows that voucher tenants pay about 7.1% higher deposits than non-voucher tenants in the same unit. Columns (2) and (3), which instead use building-by-quarter and building-by-month fixed effects, yield similar estimates of 6.8% and 6.9%, respectively.

Together, Table 2 shows that voucher tenants pay higher contract rents and security deposits relative to market-rate tenants for the same unit.

Remaining Threats to Identification. While the repeat-rent design provides strong controls for unit-level heterogeneity, several threats to identification remain. First, there may

[4] The rent registry data makes this research design possible by tracking both voucher and market-rate tenancies over time. In contrast, commonly used administrative sources such as HUD data primarily observe voucher tenancies and lack information on market-rate tenants in the same units, making it difficult to implement within-unit comparisons.

be time-varying unit characteristics that may be correlated with voucher tenancy that also affects rents and deposits. For example, units may be in a better shape during voucher tenancy due to maintenance or upgrades required to comply with annual inspections. Second, if voucher tenants experience higher turnover and landlords repeatedly lease particular units to voucher households, landlords may update rents more frequently for those units. This is particularly salient in this paper's setting where the rent control ordinance restricts rent increases absent tenant turnovers. Both mechanisms could bias the estimated voucher premium upward.

To address these concerns, the next subsection implements a complementary movers design that compares newly signed leases and their contract rents and deposits to terms from the previous tenancy. By focusing on rent and deposit changes at the point of tenant turnover within the same property and time period, this approach mitigates concerns about time-varying unit qualities or differential rent updating and provides a robustness check on the repeat-rent estimates.

4.2. *Movers Design*

Empirical Approach. This subsection presents an alternative research design that compares rent and deposit increases at the point of tenant turnover. I refer to this as the movers design. The key idea is to measure how much more landlords raise rents when the incoming tenant is a voucher recipient rather than a market-rate tenant entering the same unit. This approach focuses directly on rent-setting behavior at lease initiation and helps mitigate concerns about within-tenure quality changes or administrative frictions that may affect rent updates mid-lease.

The estimating equation is as follows.

$$y_{it} = \beta \textit{Voucher}_{it} + \alpha_i + \delta_{b(i)\times\tau(t)} + X_{it}'\gamma + \varepsilon_{it}, \tag{2}$$

where y_{it} denotes the change in rent or deposit for unit i at time t, measured as the difference between the new lease and the previous lease in the same unit. $\textit{Voucher}_{it}$ is an indicator for whether the incoming tenant is a voucher holder. α_i denotes unit fixed effects, and $\delta_{b(i)\times\tau(t)}$ are building-by-time fixed effects that flexibly control for local market conditions and landlord-level pricing trends. The vector X_{it} includes time-varying controls such as the number of bedrooms. Standard errors are clustered at the building level.

This specification restricts the sample to units that experience a tenancy change and

for which both the previous and current rents or deposits are observed. The identification assumption is that, conditional on unit fixed effects, building-by-time fixed effects, and observed characteristics, the identity of the incoming tenant is not systematically related to unobserved changes in unit quality or desirability that would independently affect rent setting.

To address the possibility that larger rent increases reflect renovations or unit preparation prior to leasing, I also incorporate measures of vacancy duration. Days vacant proxy for the time available for repairs, upgrades, or other adjustments between tenants. If higher premia for voucher tenants were driven primarily by renovation activity, controlling for vacancy duration would attenuate the estimates.

Results. Table 3 reports estimates from the movers design. Panel A presents results for rent increases at turnover, and Panel B presents the corresponding estimates for deposit increases.

Column (1) of Panel A is the preferred specification, which compares rent changes within the same unit while controlling for building-by-year fixed effects. The estimate implies that landlords raise rents by about $96 more when the incoming tenant is a voucher holder than when the incoming renter is a market-rate tenant entering the same unit. Instead of building-by-year fixed effects, columns (2) and (3) include building-by-quarter and building-by-month fixed effects, and yield similar estimates of approximately $104 and $103, respectively. Column (4) incorporates controls for vacancy duration by interacting voucher status with number of days vacant and includes building-by-month fixed effects. The estimated premium remains sizable at $84, and the interaction with days vacant is small and imprecisely estimated. This suggests that the higher rent increases for voucher tenants are not primarily driven by longer vacancy spells or renovation efforts prior to lease-up.

Panel B reports analogous estimates for deposit increases. Across specifications, the point estimates are positive but imprecisely estimated and cannot be distinguished from zero. This partly reflects more limited and noisier information on deposits in the turnover sample, which reduces statistical power. While the estimates suggest that deposit increases may be larger when the incoming tenant is a voucher holder, the substantial variation in deposit changes prevents firm conclusions in this setting.

Taken together, the movers results show that landlords raise rents more at the point of lease initiation when the incoming tenant is a voucher recipient, even within the same unit and controlling for local market conditions.

This design complements the repeat-rent analysis by focusing directly on pricing be-

havior at turnover. Whereas the repeat-rent design compares rents for the same unit across voucher and non-voucher tenancies over time, the movers design isolates how rents are reset when a new tenant enters. The consistency of the rent premia across both designs strengthens the interpretation that landlords systematically charge higher prices to voucher tenants compared to market-rate tenants.

5. Mechanisms

This section discusses mechanisms that can rationalize the rent and deposit premia charged to voucher tenants relative to market-rate tenants for the same unit.

Price differentials between voucher and market-rate tenants can arise through two broad channels: markups and marginal costs. First, landlords may charge higher markups to voucher tenants if they face less elastic residual demand. This may occur because program rules make voucher tenants less sensitive to rents than market-rate tenants, or because discrimination against voucher holders constrains their housing choices and weakens outside options. Second, prices may differ if the marginal cost of supplying voucher units exceeds that of market-rate units, for example due to additional administrative burdens associated with annual inspections required for voucher units or tenant-related risks such as high turnovers.

In this section, I evaluate the empirical relevance of these two channels. While both are plausible *ex ante*, the empirical patterns I document are more consistent with markup-based pricing than with marginal cost differences.

5.1. *The Role of Tenants: Price Insensitivity of Voucher Tenants*

Background. Two features of the voucher program may make voucher recipients relatively price insensitive compared to market-rate tenants. First, up to the maximum voucher subsidy—or rent ceiling—tenants' out-of-pocket rent burden only depends on their income, and not the contract rent. As a result, voucher tenants may be less responsive to price differences below this threshold. Second, landlords' discrimination against voucher holders constrains their choice sets, weakening outside options. This can reduce voucher tenants' search intensity or bargaining over rents due to the higher likelihood of failed search or rejection. Together, these features imply that landlords may face a less elastic residual demand curve when setting prices for voucher tenants.

Empirical Approach and Results. I test this mechanism using three sources of variation in voucher tenants' effective price sensitivity.

First, I examine whether overcharging is smaller in rental market segments where rents are already close to the voucher payment standard determined by FMRs. In these settings, rents are likelier to exceed the rent ceiling, in which case voucher tenants will incur additional out-of-pocket rent burdens that increase with prices. In this setting, voucher tenants will be more sensitive to price differences.

Column (1) of Table 4 interacts voucher tenancy with an indicator for units that have previously been priced at or above the payment standard. The estimates show that voucher premia are sharply attenuated in these segments: the coefficient of -0.103 implies that a baseline premium of about 6% falls by roughly 10 percentage points for units near the cap, effectively eliminating the premium where tenants are most likely to face binding constraints and become more price sensitive.

Second, I study how voucher premia vary across low-, middle-, and high-rent markets within the same city. Because FMR is set at the city level, but rents vary substantially across neighborhoods, voucher subsidies are more generous relative to prevailing rents in lower-cost areas and less generous in higher-rent neighborhoods. In lower-rent markets, tenants' out-of-pocket payments are less likely to vary with the contract rent—because rents often remain below the payment standard—and tenants may therefore be less responsive to price. In higher-rent markets where the voucher covers a smaller share of rent, tenants are more likely to be price sensitive.

Columns (2)–(4) show a gradient consistent with this mechanism. Voucher premia are largest in low-rent ZIP codes (6.8%), remain sizable in middle-rent markets (6.0%), and are substantially smaller in high-rent areas (2.5%). Moving from low- to high-rent markets therefore corresponds to a decline of more than 4 percentage points in the estimated premium.

Third, I exploit within-year changes in the real generosity of vouchers that arise from program design. I leverage the fact that nominal payment standards update at discrete points in time—typically once per year as HUD resets FMR—while market rents adjust continuously. As a result, the effective generosity of the voucher declines over the course of an FMR year: as rents rise but the payment standard remains fixed, the voucher covers a smaller share of the contract rent and tenants' out-of-pocket exposure increases. Figure 2 illustrates this variation. Panel A shows the timing of FMR updates and the discrete windows over which payment standards remain fixed. Panel B shows a steady decline in the residu-

alized ratio of the payment standard to contract rent (i.e., real voucher subsidy generosity) over the effective FMR window.

When tenants search earlier in the FMR window—when the payment standard is relatively generous and out-of-pocket costs are less sensitive to rent—landlords may be able to charge higher prices. As the year progresses and the effective subsidy declines in real terms, tenants become more price sensitive, limiting landlords' ability to charge a premium. Importantly, voucher recipients have limited control over the timing at which they receive a voucher and begin searching for housing due to long waitlists and administrative processing. Combined with the fact that FMR updates occur at predetermined dates, this generates plausibly exogenous variation in the real generosity of the subsidy at the time voucher recipients search for housing.

Column (5) interacts voucher tenancy with time since the FMR reset, normalized to be between 0 (inclusive) and 1 (exclusive).[5] The negative coefficient implies that voucher premia decline as the rental contracts are signed further away from the start of the effective FMR window and the subsidy becomes less generous in real terms. This time-series evidence mirrors the cross-sectional patterns documented above.

Discussion. Taken together, these results provide evidence that voucher tenants' price sensitivity plays a key role in explaining observed rent differentials. Overcharging is attenuated in segments where payment standards are likely to bind, smaller in higher-rent markets where vouchers are less generous relative to prevailing rents, and declines over the FMR cycle as the real value of the subsidy erodes. Importantly, this condition allows landlord-side mechanisms to translate into higher observed prices: when tenants' effective demand is inelastic landlords can charge markup in the form of rent premia.

5.2. *The Role of Landlords: Costs and Experience*

Background. An alternative explanation for voucher rent premia is that they reflect higher landlord-side costs rather than differences in markup. Participating in the voucher program involves administrative requirements, annual inspections, and coordination with local public housing authorities, all of which may raise the marginal cost of renting to voucher tenants. If these costs are important, premia should be largest when landlords first begin hosting voucher tenants and incur upfront costs, and should decline as landlords gain expe-

[5] I define time since reset as the number of days since the start of the FMR effective window divided by the total number of days in the effective window (i.e., size of the window). And so, time since reset equal to 0 implies the date the FMR is reset.

rience and learn to navigate the program more efficiently.

Empirical Approach and Results. Table 5 evaluates this mechanism using two complementary approaches. Panel A examines whether the voucher rent premia are higher when a unit, building, or landlord hosts a voucher tenant for the first time. Panel B studies how the premia vary with accumulated experience hosting voucher tenants and with the share of voucher tenants in a landlord's portfolio.

Column (1) of Panel A shows that when a unit hosts a voucher tenant for the first time, the estimated premium is about 2.5 percentage points *smaller* relative to the baseline. A similar attenuation appears for buildings hosting their first voucher tenant (about 1.0 percentage point; Column 2), while the estimate for landlords' first exposure is small and statistically indistinguishable from zero (Column 3). If upfront costs of hosting voucher tenants were the primary driver of premia, one would expect the opposite pattern—larger premia at first exposure that decline with experience. Instead, premia appear slightly smaller when a unit, landlord, or building hosts voucher tenants for the first time.

Panel B shows that premia tend to increase, rather than decrease, with experience. Accumulated building-level and landlord-level experience hosting voucher tenants is associated with larger voucher premia (Columns 5 and 6), and landlords with a higher portfolio share of voucher tenants charge substantially higher rents to voucher tenants overall (Column 7). The coefficient on landlord voucher share implies that moving from no voucher exposure to a fully voucher-oriented portfolio is associated with roughly an 8 percentage point larger premium. Unit-level experience shows little systematic relationship with premia (Column 4), suggesting that the experience effects operate primarily at the building or landlord level.

Discussion. Taken together, these results are difficult to reconcile with a cost-based explanation for the voucher rent premia. The premium is not largest when landlords first enter the voucher market and hence face upfront costs, and in fact smaller. Similarly, the premium does not decline with expertise in the HCV program and instead, increases with building- and landlord-level experience and with the landlord's specialization int the voucher market. This finding is consistent with landlords learning how to price voucher units more effectively over time or developing pricing strategies for the voucher segment.

5.3. *The Role of Program Design: Strategic Bunching at Voucher Payment Caps*

Background. A natural explanation for the voucher rent premia consistent with both tenants' price insensitivity and landlords' strategic pricing is mechanical pricing at the maximum voucher subsidy. As described in Section 5.1, rents charged to voucher tenants are subject to a maximum allowable level, which is largely determined by FMRs. Upon learning that a prospective tenant uses a voucher, landlords may therefore have an incentive to raise rents up to the allowable ceiling.

Empirical Approach and Results. If such pricing behavior is prevalent, voucher rents should bunch just below the payment standard. I therefore examine whether the distribution of voucher rents displays a sharp concentration near the cap.

Panel A of Figure 3 presents the distribution of rents relative to the payment standard for voucher and market-rate tenants within a narrow window around FMR. Voucher rents display some excess mass just below the cap, consistent with a degree of strategic pricing at the payment standard. However, the distribution does not exhibit a pronounced spike at the threshold. Instead, rents remain dispersed within the window rather than clustered at the ceiling.

Panel B shows the full distribution of contract rents. The entire distribution for voucher tenants is shifted to the right relative to that of market-rate tenants, indicating higher rents across the support rather than only at the cap.

Taken together, these patterns suggest that while some landlords price at or near the payment standard, bunching alone fails to explain voucher rent premia. Instead, the premium appears throughout the distribution, consistent with broader pricing differences rather than a purely mechanical response to the cap.

The evidence in this section points to the voucher rent premia arising from voucher tenants' relatively inelastic demand and landlord pricing behavior rather than from higher marginal costs and mechanical pricing at caps. Premia are largest where vouchers are most generous and tenants are least price sensitive, and they attenuate where payment standards bind more tightly. At the same time, landlords with greater experience in the voucher market and larger voucher exposure appear better able to extract these premia. Overall, the results are most consistent with a mechanism in which landlord price discriminate on tenants' voucher status.

6. Discussion and Policy Implications

This section discusses policy implications of the voucher rent premia.

6.1. *Is Price Discrimination Against Voucher Tenants Legal?*

Charging different rents based on voucher status violates program rules. The HCV program requires that rents for voucher tenants be comparable to those charged to market-rate tenants for similar units, and recent concerns about overcharging have prompted investigation by regulators and local public housing authorities (Thompson 2024). The evidence in this paper suggests that such practices may be more widespread than previously documented and may occur predominantly among landlords most familiar with the HCV program.

More broadly, it is not obvious whether price discrimination against voucher tenants is illegal. From an antitrust perspective, price discrimination requires some form of pricing power on the producer's side. However, while the Clayton Act of 1914 and the Robinson-Patman Act of 1936 prohibit certain types of price discrimination, their main focus is not on price discrimination against consumers (Gillis 2025). It is also unclear whether charging different rents on the basis of voucher status violates the Fair Housing Act because voucher tenants are not a protected class. Legal analyses of landlord price discrimination against voucher tenants is forthcoming.

6.2. *Who Benefits from the Housing Choice Voucher Program?*

Voucher premia weaken the affordability benefits of the voucher program. If voucher tenants systematically pay higher rents for the same unit, part of the subsidy is captured by private landlords. In effect, the purchasing power of the voucher is reduced: the same pool of subsidy supports fewer units and tenants. Importantly, these fiscal effects arise without improving housing affordability or neighborhood access for voucher recipients.

Yet, the welfare effects of price discrimination is unclear *ex ante*. The ability to price discriminate increases consumer welfare if it allows producers to serve market segments that a monopolist would otherwise not serve, thereby increasing total output (Varian 1985). For example, cinemas may charge college students lower ticket prices than regular moviegoers, benefitting students who are more price sensitive. Generally, price sensitive consumers are lower-income and belong to disadvantaged groups. However, in the context of this study, landlord price discrimination against voucher tenants may imply that price-insensitive voucher tenants cross-subsidize higher-income market-rate tenants, not the other

way around. Formal welfare analyses are forthcoming.

6.3. *Fiscal Externalities and Implications for Program Design*

The voucher rent premia implies that a part of the subsidy is captured by private landlords through higher rents instead of benefitting voucher tenants. Furthermore, the rent premia generate fiscal externalities. Because voucher tenants' out-of-pocket rent contributions are typically tied to their income rather than contract rent, increases in rent largely translate into higher subsidy payments from housing authorities. As a result, overcharging increases the cost of serving each household and ultimately, taxpayer burden.

A simple back-of-the-envelope calculation illustrates the magnitude. The repeat-rent estimates imply that voucher tenants pay roughly 6% higher rents for the same unit. In the present subsidy, 77% of contract rent is paid for through the voucher subsidy on average. This implies that around 8% of the total voucher subsidy is captured by private landlords in the form of higher rents alone.

In dollar terms, at a representative monthly rent of about $1,900, the rent premia corresponds to an additional $114 per month, or roughly $1,370 per voucher household per year. Scaling this calculation to the national level suggests sizable aggregate fiscal effects. The HCV program serves more than two million households in the United States. Applying the per-household estimate above implies that rent premia of the magnitude documented in this paper could increase annual program expenditures by several billion dollars, on the order of $2 to $3 billion per year.

These estimates are intended as approximations and depend on assumptions about average rents and the share of the rent increase borne by housing authorities. However, it highlights that pricing distortions may have meaningful budgetary consequences. Enforcement of rent comparability rules and program design features that reduce opportunities for strategic pricing may improve the efficiency of the HCV program.

7. Conclusion

This paper studies an understudied margin of discrimination that HCV recipients face in the rental market: price discrimination by landlords. Landlords charge 6% higher rents and 7% higher deposits to voucher tenants compared to other market-rate tenants. This reflect landlords' strategic pricing behavior and voucher tenants' relative price insensitivity generated by the HCV program design.

These findings imply that a significant portion of the HCV subsidy is captured by private

landlords and not the voucher recipients. The additional costs generated by the voucher rent premia are mostly borne not by the voucher tenants, but by the local public housing authorities and taxpayers, generating substantial fiscal externalities.

These findings broaden our understanding of how and why landlords treat voucher recipients differently, and what policy reforms may improve the efficiency of the HCV program.

References

Akbar, Prottoy A., Sijie Li Hickly, Allison Shertzer, and Randall P. Walsh (2025) "Racial Segregation in Housing Markets and the Erosion of Black Wealth Unavailable," *The Review of Economics and Statistics*, 107 (1), 42–54. [4]

Aliprantis, Dionissi, Hal Martin, and David Phillips (2022) "Landlords and Access to Opportunity," *Journal of Urban Economics*, 129, 103420. [4 and 6]

Baker, Sarah (2024) "Property Tax Pass-Through to Renters: A Quasi-Experimental Approach." [5 and 8]

Baker, Sarah and Caleb Wroblewski (2025) "Five Facts About (Rental) Prices: Landlord Heterogeneity and the Dynamics of Shelter Inflation." [8]

Bartlett, Robert, Adair Morse, Richard Stanton, and Nancy Wallace (2022) "Consumer-Lending Discrimination in the FinTech Era," *Journal of Financial Economics*, 143 (1), 30–56. [4]

Bayer, Patrick, Marcus Casey, Fernando Ferreira, and Robert McMillan (2017) "Racial and Ethnic Price Differentials in the Housing Market," *Journal of Urban Economics*, 102, 91–105. [4]

Bergman, Peter, Raj Chetty, Stefanie DeLuca, Nathaniel Hendren, Lawrence F. Katz, and Christopher Palmer (2024) "Creating Moves to Opportunity: Experimental Evidence on Barriers to Neighborhood Choice," *American Economic Review*, 114 (5), 1281–1337. [1, 5, and 6]

Bhutta, Neil and Aurel Hizmo (2021) "Do Minorities Pay More for Mortgages?" *Review of Financial Studies*, 34 (2), 763–789. [4]

Blanco, Hector and Jaehee Song (2024) "Discrimination Against Housing Vouchers: Evidence From Online Rental Listings." [4, 5, and 6]

Box-Couillard, Sebastien and Peter Christensen (2024) "Racial Discrimination and Housing Outcomes in the United States Rental Market," Working Paper 32815, National Bureau of Economic Research. [4]

Christensen, Peter and Christopher Timmins (2022) "Sorting or Steering: The Effects of Housing Discrimination on Location Choice," *Journal of Political Economy*, 130 (8), 2110–2163. [4]

——— (2023) "The Damages and Distortions From Discrimination in the Rental Housing Market," *The Quarterly Journal of Economics*, 138 (4), 2505–2557. [4]

Chyn, Eric (2018) "Moved to Opportunity: The Long-Run Effects of Public Housing Demolition on Children," *American Economic Review*, 108 (10), 3028–56. [1]

Chyn, Eric, Joshua Hyman, and Max Kapustin (2021) "Housing Voucher Take-Up and Labor Market Impacts," *Journal of Policy Analysis and Management*, 38 (1), 65–98. [1]

Collinson, Robert and Peter Ganong (2018) "How Do Changes in Housing Voucher Design Affect Rent and Neighborhood Quality?" *American Economic Journal: Applied Economics*, 10 (2), 62–89. [1, 5, and 6]

Cunningham, Mary, Martha Galvez, Claudia L. Aranda et al. (2018) "A Pilot Study of Land-

lord Acceptance of Housing Choice Vouchers," report, U.S. Department of Housing and Urban Development. [4 and 6]

Desmond, Matthew and Kristin L. Perkins (2016) "Are Landlords Overcharging Housing Voucher Holders?" *City and Community*, 15 (2), 137–162. [4]

Diamond, Rebecca and William F. Diamond (2024) "Racial Differences in the Total Rate of Return on Owner-Occupied Housing," Working Paper 32916, National Bureau of Economic Research. [4]

Ellen, Ingrid Gould, Katherine M. O'Regan, and Katharine W. H. Harwood (2023) "Advancing Choice in the Housing Choice Voucher Program: Source of Income Protections and Locational Outcomes," *Housing Policy Debate*, 33 (4), 941–962. [5]

Ellen, Ingrid Gould, Katherine O'Regan, and Sarah Strochak (2025) "Pricing for Opportunity: The Impact of Spatially Varying Rent Subsidies on Housing Voucher Neighborhoods and Take-Up," *Journal of Public Economics*, 250 (105465). [5]

Ellen, Ingrid Gould, Katherine O'Regan, and Sarah Strochak (2024) "Race, Space, and Take Up: Explaining Housing Voucher Lease-Up Rates," *Journal of Housing Economics*, 63, 101980. [1]

Eriksen, Michael D., Eunjee Kwon, and Guoyang Yang (2025) "Scaling of Small-Area Fair Market Rents: Evidence on Neighborhood Choices of Voucher Recipients," *Available at SSRN 5468847*. [5]

Galvez, Martha and Brian Knudsen (2024) "Discrimination Against Voucher Holders and the Laws to Prevent It: Reviewing the Evidence on Source of Income Discrimination," *Cityscape: A Journal of Policy Development and Research*, 26 (2), 145–161. [5]

Garboden, Philip M. E., Eva Rosen, Stefanie DeLuca, and Kathryn Edin (2018) "Taking Stock: What Drives Landlord Participation in the Housing Choice Voucher Program," *Housing Policy Debate*, 28 (6), 979–1003. [6]

Garboden, Philip M. E., Eva Rosen, and Isaiah Fleming-Klink (2024) "Landlords and Housing Vouchers: 50 Years of Feedback," *Cityscape: A Journal of Policy Development and Research*, 26 (2), 107–122. [6]

Gillis, Talia B. (2025) ""Price Discrimination" Discrimination," *Harvard Business Law Review*, 15 (1). [19]

Greene, Solomon, Patrick Spauster, Martha Galvez, and Daniel Teles (2020) "State and Local Voucher Protection Laws," note, Urban Institute. [7]

Hughes, Sam (2022) "How Mortgage Financing Costs Affect Rental Housing: Pass-Through & Pricing." [5]

Ihlanfeldt, Keith and Tom Mayock (2009) "Price Discrimination in the Housing Market," *Journal of Urban Economics*, 66 (2), 125–140. [4]

Kain, John F. and John M. Quigley (1975) *Housing Markets and Racial Discrimination: A Microeconomic Analysis*, New York, NY: National Bureau of Economic Research. [4]

Kermani, Amir and Francis Wong (2026) "Racial Disparities in Housing Returns," *American Economic Review*, 116 (1), 287–331. [4]

Khouri, Andrew (2024) "Housing Nonprofit Alleges Widespread Discrimination Against

Section 8 Tenants in California," *Los Angeles Times*. [7]

King, A. Thomas and Peter Mieszkowski (1973) "Racial Discrimination, Segregation, and the Price of Housing," *Journal of Political Economy*, 81 (3), 590–606. [4]

Knudsen, Brian (2024) "Expanded Protections for Families With Housing Choice Vouchers," policy brief, Poverty & Race Research Action Council. [7]

Lee, Jaeyeon (2024) "Asymmetric Pass-Through of Interest Rates to Rental Prices." [5]

Lens, Michael C., Ingrid Gould Ellen, and Katherine O'Regan (2011) "Do Vouchers Help Low-Income Households Live in Safer Neighborhoods? Evidence on the Housing Choice Voucher Program," *Cityscape: A Journal of Policy Development and Research*, 13 (3), 135–159. [1]

Moore, Mary F. (2017) "Rental Market Discrimination in the Housing Choice Voucher Program." [4 and 6]

Myers, Caitlin Knowles (2004) "Discrimination and Neighborhood Effects: Understanding Racial Differentials in U.S. Housing Prices," *Journal of Urban Economics*, 56 (2), 279–302. [4]

Olsen, Edgar O. (2019) "Does HUD Overpay for Voucher Units, and Will SAFMRs Reduce the Overpayment?" *Cityscape: A Journal of Policy Development and Research*, 21 (3), 89–102. [4]

Phillips, David C. (2017) "Landlords Avoid Tenants Who Pay With Vouchers," *Economics Letters*, 151, 48–52. [4 and 6]

Reina, Vincent, Arthur Acolin, and Raphael W. Bostic (2019) "Section 8 Vouchers and Rent Limits: Do Small Area Fair Market Rent Limits Increase Access to Opportunity Neighborhoods? An Early Evaluation," *Housing Policy Debate*, 29 (1), 44–61. [5]

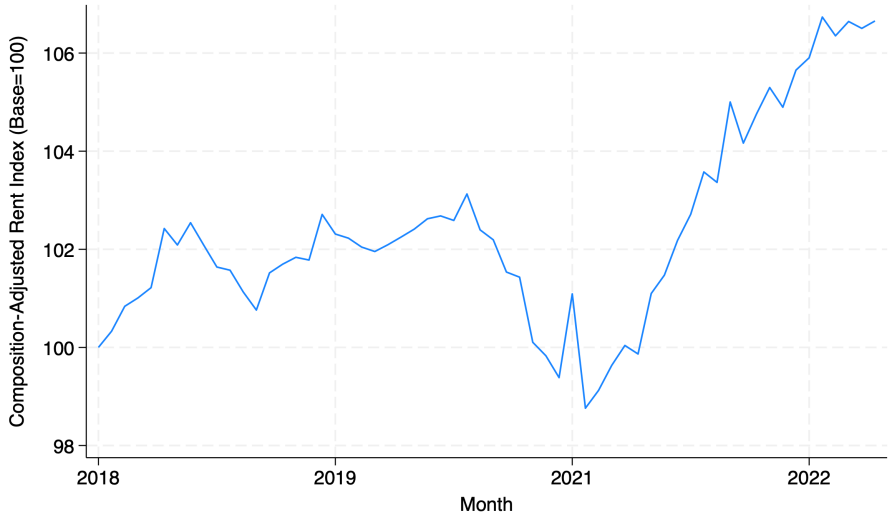
Thompson, Steve (2024) "HUD Investigates Whether D.C. Landlords Overcharge for Voucher Units," *The Washington Post*. [4 and 19]

Varian, Hal R. (1985) "Price Discrimination and Social Welfare," *American Economic Review*, 75 (4), 870–875. [19]

Watson, Luke C. and Oren Ziv (forthcoming) "A Test for Pricing Power in Urban Housing Markets," *Review of Economics and Statistics*. [5]

Figures

Figure 1. Composition-Adjusted Rent Index Over Time

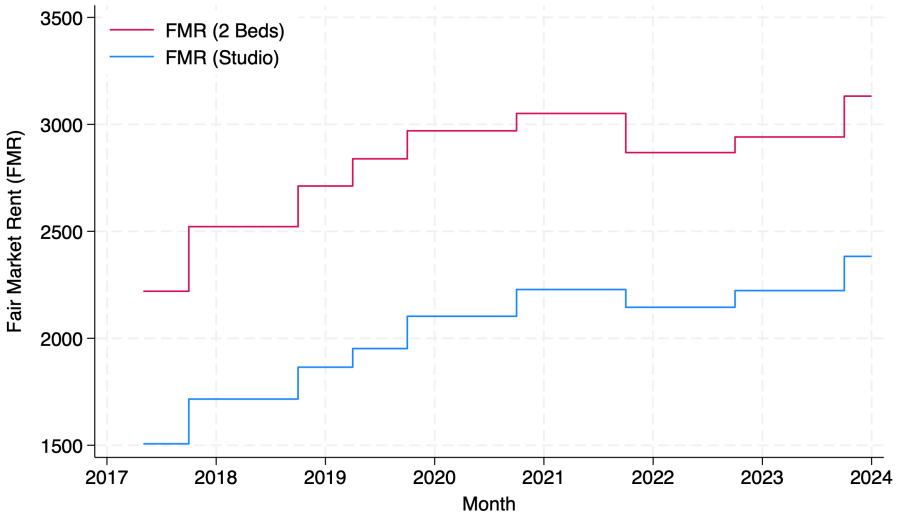


Notes. This figure plots a composition-adjusted monthly rent index constructed from administrative unit-level rent registry data. The outcome is the log of contract rent. The series is residualized using unit fixed effects and controls for tenant status and number of bedrooms, then averaged by month based on the effective date of the new rent. The index is normalized to 100 in the first month of the sample period.

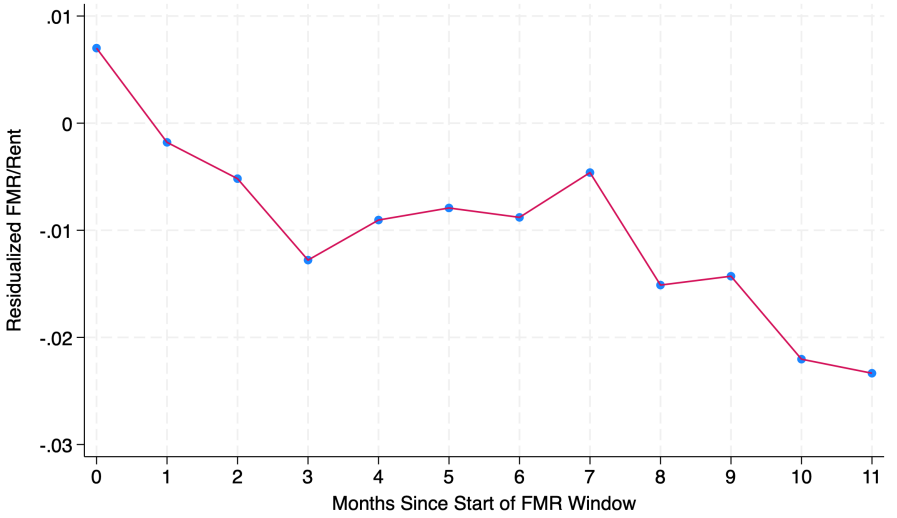
Return to Section 3.

Figure 2. Fair Market Rent (FMR) Effective Windows

A. FMR Effective Windows Over Time



B. Real FMR Generosity Decline Within the FMR Window

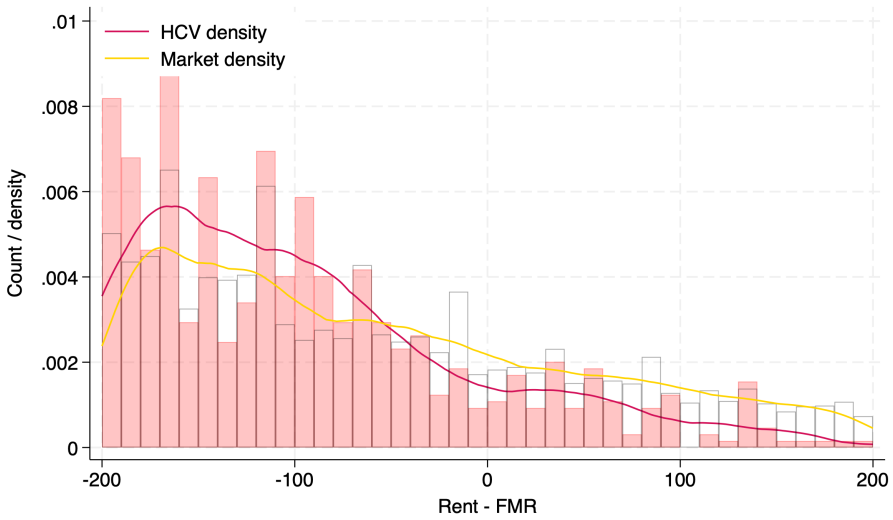


Notes. Panel A illustrates the effective windows during which the Fair Market Rent (FMR) remains fixed before the next update. Panel B plots the evolution of relative voucher generosity within the FMR cycle using the ratio of FMR to contract rent, residualized with unit and calendar-month fixed effects. The horizontal axis measures months since the start of the FMR window, and each point is the mean residualized FMR-to-rent ratio within a month. A downward drift reflects declining real voucher generosity over the cycle as contract rents adjust while the FMR remains fixed.

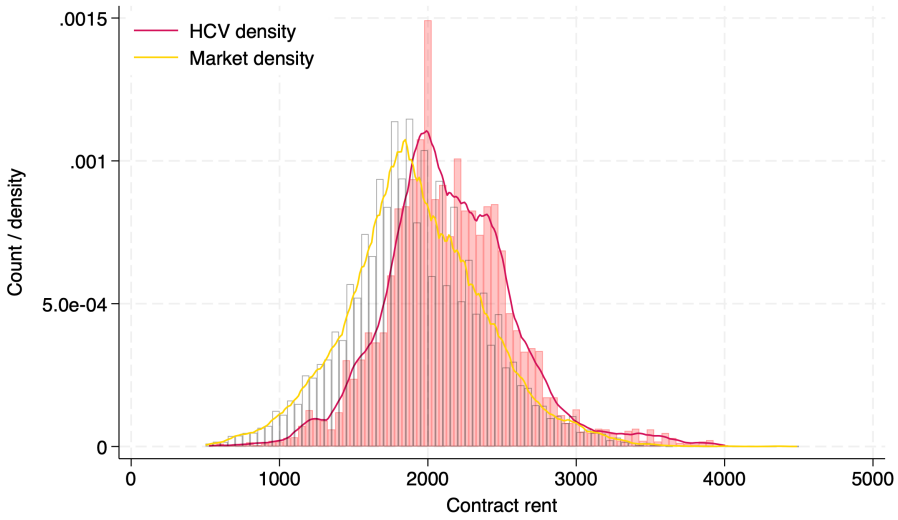
Return to Section 5.

Figure 3. Distributions of Rents and Gaps to FMR: Voucher vs. Market Tenants

A. Rent Minus FMR (Within ±$200)



B. Distribution of Rent



Notes. This figure compares the distribution of contract rents and gaps to the Fair Market Rent (FMR) between voucher and non-voucher tenants. Panel A shows the distribution of rent minus the FMR within a ±$200 window around the threshold. Panel B plots the distribution of contract rents. Each panel overlays a histogram and kernel density estimate for voucher tenants and market-rate tenants.

Return to Section 5.

Tables

Table 1. Estimates of Premia Charged to Voucher Tenants

	N	Mean	p50	S.D.	Min	Max
Num. Observations	140,335					
w/ Voucher Occupancy	8,018					
Num. Unique Buildings	4,092					
w/ Voucher Occupancy	1,236					
Num. Unique Units	37,198					
w/ Voucher Occupancy	3,121					
Num. Unique Landlords	2,755					
w/ Voucher Occupancy	958					
Rent ($)	140,335	1,941	1,902	467	501	7,000
Deposit ($)	132,504	1,034	900	798	0	10,000
Number of Bedrooms	140,335	1.45	1.00	0.71	0	6
New Tenant Share	140,335	0.18	0.00	0.38	0.00	1.00
Rent Increase at Turnover ($)	24,781	59	35	276	-1,950	2,000

Notes. This table reports descriptive statistics for the administrative unit-level rent registry records. The data cover rental registrations from 2018 through part of 2023 and include information on contract rents, security deposits, unit characteristics, landlord identifiers, and voucher status. Voucher Occupancy indicates whether the tenant uses a housing voucher. Rent and Deposit are measured in U.S. dollars at the time of registration. New Tenant Share indicates observations associated with tenancy turnover. Rent Increase at Turnover is defined as the change in contract rent when a new tenant moves into the unit.

Return to Section 3.

Table 2. Estimates of Premia Charged to Voucher Tenants

A. Rent Premia

	Dependent Variable: Log Rent				
	(1)	(2)	(3)	(4)	(5)
Voucher Tenant	0.0578***	0.0581***	0.0607***	0.0681***	0.125***
	(0.00948)	(0.00950)	(0.0117)	(0.00812)	(0.0292)
Unit F.E.	×	×	×	×	
Building-Year F.E.	×				×
Building-Quarter F.E.		×			
Building-Month F.E.			×		
N	138,259	136,882	135,431	138,762	139,883
R-squared	0.965	0.967	0.967	0.945	0.806

B. Deposit Premia

	Dependent Variable: Log Deposit				
	(1)	(2)	(3)	(4)	(5)
Voucher Tenant	0.0705**	0.0678**	0.0694**	0.0879***	0.0523*
	(0.0287)	(0.0294)	(0.0314)	(0.0286)	(0.0278)
Unit F.E.	×	×	×	×	
Building-Year F.E.	×				×
Building-Quarter F.E.		×			
Building-Month F.E.			×		
N	112,977	111,649	110,375	114,162	115,745
R-squared	0.872	0.873	0.875	0.851	0.494

Notes. This table reports estimates of rent and deposit premia charged to voucher tenants from unit-level repeat-rent specifications. The dependent variable is the log of contract rent in Panel A and the log of the security deposit in Panel B. Estimates are obtained from the following specification.

$$\ln(y_{it}) = \beta \, \textit{Voucher}_{it} + \alpha_i + \delta_{b(i)\times\tau(t)} + X_{it}'\gamma + \varepsilon_{it}$$

y_{it} denotes the outcome (rent or deposit) for unit i at time t, $\textit{Voucher}_{it}$ is an indicator for a voucher tenant, α_i are unit fixed effects, and $\delta_{b(i)\times\tau(t)}$ are building-by-time fixed effects. Additional controls X_{it} include tenant status and number of bedrooms. Standard errors are clustered at the building level and reported in parentheses. $^{*}p < 0.10, ^{**}p < 0.05, ^{***}p < 0.01$.

Return to Section 4.

Table 3. Estimates of Additional Rent and Deposit Increases for New Voucher Tenants

A. New Rent Relative to Previous Rent

	Dependent Variable: Rent Increase			
	(1)	(2)	(3)	(4)
Voucher Tenant	96.07***	104.3***	103.0***	84.46**
	(35.56)	(34.31)	(34.36)	(38.55)
× Days Vacant				0.221
				(0.171)
Unit F.E.	×	×	×	×
Building-Year F.E.	×			×
Building-Quarter F.E.		×		
Building-Month F.E.			×	
N	6,687	6,338	6,224	6,687
R-squared	0.666	0.679	0.681	0.666

B. New Deposit Relative to Previous Deposit

	Dependent Variable: Deposit Increase			
	(1)	(2)	(3)	(4)
Voucher Tenant	206.5	110.9	105.0	187.9
	(207.3)	(197.8)	(219.6)	(226.4)
× Days Vacant				-1.869
				(2.026)
Unit F.E.	×	×	×	×
Building-Year F.E.	×			×
Building-Quarter F.E.		×		
Building-Month F.E.			×	
N	2,869	2,645	2,589	2,589
R-squared	0.526	0.570	0.580	0.581

Notes. This table reports estimates of rent and deposit premia charged to voucher tenants at tenancy turnover. The dependent variable is the rent increase in Panel A and the deposit increase in Panel B. Estimates are obtained from the following specification.

$$y_{it} = \beta \, \textit{Voucher}_{it} + \alpha_i + \delta_{b(i)\times\tau(t)} + X_{it}'\gamma + \varepsilon_{it}$$

y_{it} denotes the outcome (rent increase or deposit increase) for unit i at time t, $\textit{Voucher}_{it}$ is an indicator for a voucher tenant, α_i are unit fixed effects, and $\delta_{b(i)\times\tau(t)}$ are building-by-time fixed effects. Additional controls X_{it} include tenant status and number of bedrooms. Standard errors are clustered at the building level and reported in parentheses. $^{*}p < 0.10, ^{**}p < 0.05, ^{***}p < 0.01$.

Return to Section 4.

Table 4. Mechanism: Tenant Price Sensitivity

	Dependent Variable: Log Rent				
	(1)	(2)	(3)	(4)	(5)
Voucher Tenant	0.0612***	0.0682***	0.0597***	0.0253**	0.0633***
	(0.00947)	(0.0208)	(0.0119)	(0.0104)	(0.0117)
× Unit Above FMR	-0.103***				
	(0.0214)				
× Time Since Reset					-0.0593***
					(0.0200)
Subsampling		Low-Rent ZIP	Mid-Rent ZIP	High-Rent ZIP	New Tenant
Unit F.E.	×	×	×	×	×
Building-Year F.E.	×	×	×	×	
Building-FMR F.E.					×
N	138,259	20,568	101,650	16,041	10,814
R-squared	0.965	0.970	0.961	0.956	0.957

Notes. This table reports evidence on tenant price sensitivity in the determination of voucher rent premia. The dependent variable is the log of contract rent. Column (1) estimates specifications with interaction terms.

$$\ln(\textit{Rent}_{it}) \;=\; \beta\, \textit{Voucher}_{it} \;+\; \lambda\, Z_{it} \;+\; \theta\big(\textit{Voucher}_{it} \times Z_{it}\big) \;+\; \alpha_i \;+\; \delta_{b(i)\times\tau(t)} \;+\; X_{it}'\gamma \;+\; \varepsilon_{it}$$

$\textit{Voucher}_{it}$ is an indicator for a voucher tenant, Z_{it} denotes the mechanism-specific variable, α_i are unit fixed effects, and $\delta_{b(i)\times\tau(t)}$ are building-by-time fixed effects. Columns (2)–(4) estimate the baseline specification without interactions,

$$\ln(\textit{Rent}_{it}) \;=\; \beta\, \textit{Voucher}_{it} \;+\; \alpha_i \;+\; \delta_{b(i)\times\tau(t)} \;+\; X_{it}'\gamma \;+\; \varepsilon_{it}.$$

Additional controls X_{it} include tenant status and number of bedrooms. In Column (1), Z_{it} is an indicator for whether the unit is likely to have previously been priced at or above the FMR, testing whether premia are attenuated in segments where voucher tenants are more price sensitive. Columns (2)–(4) report baseline voucher effects estimated separately in low-, middle-, and high-rent ZIP codes to assess heterogeneity in voucher premia across local market conditions. Column (5) estimates specifications with interaction terms, but with building-by-FMR regime fixed effects $\delta_{b(i)\times\omega(t)}$ instead of the standard building-by-registration year fixed effects $\delta_{b(i)\times\tau(t)}$, and estimation sample restricted to new tenants.

$$\ln(\textit{Rent}_{it}) \;=\; \beta\, \textit{Voucher}_{it} \;+\; \lambda\, Z_{it} \;+\; \theta\big(\textit{Voucher}_{it} \times Z_{it}\big) \;+\; \alpha_i \;+\; \delta_{b(i)\times\omega(t)} \;+\; X_{it}'\gamma \;+\; \varepsilon_{it}$$

Z_{it} is the normalized number of days since FMR reset, defined as the number of days since reset divided by the total number of days in the effective FMR window (i.e., window size). This variable captures within-year variation in the real generosity of the voucher and tests whether premia respond to changes in the effective subsidy over the FMR cycle as illustrated in Panel A of Figure 3. All specifications include the main effect of Z_{it} in addition to the interaction term; coefficients on the main effects are omitted from the table for brevity. Standard errors are clustered at the building level and reported in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Return to Section 5.

Table 5. Mechanism: Landlord Costs and Experience

A. Unit, Building, or Landlord's First Time Hosting HCV

	Dependent Variable: Log Rent		
	(1)	(2)	(3)
Voucher Tenant	0.0659***	0.0602***	0.0591***
	(0.0143)	(0.0103)	(0.0101)
× First Unit HCV	-0.0254**		
	(0.0125)		
× First Building HCV		-0.0100*	
		(0.00530)	
× First Landlord HCV			-0.00795
			(0.00540)
Unit F.E.	×	×	×
Building-Year F.E.	×	×	×
N	138,259	138,259	138,259
R-squared	0.965	0.965	0.965

B. Unit, Building, or Landlord's Experience Hosting HCV

	Dependent Variable: Log Rent			
	(1)	(2)	(3)	(4)
Voucher Tenant	0.0554***	0.0489***	0.0477***	0.0303***
	(0.00858)	(0.00705)	(0.00690)	(0.00864)
× Unit HCV Experience	-0.00345			
	(0.00646)			
× Building HCV Experience		0.000534***		
		(0.0000316)		
× Landlord HCV Experience			0.000354***	
			(0.0000386)	
× Landlord HCV Share				0.0811***
				(0.0185)
Unit F.E.	×	×	×	×
Building-Year F.E.	×	×	×	×
N	138,259	138,259	138,259	138,259
R-squared	0.965	0.965	0.965	0.965

(continued on next page)

Mechanism: Landlord Costs and Experience (cont'd)

Notes. This table reports evidence on the role of landlord costs and experience in the determination of voucher rent premia. The dependent variable is the log of contract rent. Panel A estimates specifications with indicators for first-time participation in the voucher program, and Panel B estimates specifications interacting voucher status with measures of accumulated voucher experience. The estimated specification is as follows.

$$\ln(\textit{Rent}_{it}) \;=\; \beta\, \textit{Voucher}_{it} \;+\; \lambda\, Z_{it} \;+\; \theta\big(\textit{Voucher}_{it} \times Z_{it}\big) \;+\; \alpha_i \;+\; \delta_{b(i)\times\tau(t)} \;+\; X_{it}'\gamma \;+\; \varepsilon_{it}$$

$\textit{Voucher}_{it}$ is an indicator for a voucher tenant, Z_{it} denotes the landlord mechanism variable, α_i are unit fixed effects, and $\delta_{b(i)\times\tau(t)}$ are building-by-time fixed effects. Additional controls X_{it} include tenant status and number of bedrooms. In Panel A, Z_{it} captures first-time participation at the unit, building, or landlord level, testing whether premia differ when landlords initially enter the voucher market and face higher administrative or informational costs. In Panel B, Z_{it} measures accumulated voucher experience at the unit, building, and landlord levels, as well as the landlord's portfolio share of voucher tenants, testing whether premia evolve with operational experience and scale. Standard errors are clustered at the building level and reported in parentheses. All specifications include the main effect of Z_{it} in addition to the interaction term; coefficients on the main effects are omitted from the table for brevity. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Return to Section 5.

APPENDIX TO
PRICE DISCRIMINATION AGAINST VOUCHER TENANTS

Konhee Chang*

March 2026
Link to the latest version

Preliminary and incomplete. Please do not circulate.

Table of Contents

A Proposed Outline **A.1**

A. Proposed Outline

1. Introduction
2. Background
   (a) The Housing Choice Voucher (HCV) Program
   (b) Policies Governing How Rents are Set for HCV Units
   (c) Anti-Discrimination Laws
3. Data
   (a) Administrative Rent Registry Panel
   (b) Other Data Sources
   (c) Variables
4. Descriptives Statistics
5. Empirical Research Design and Results
   (a) Repeat Rent

* Federal Reserve Board of Governors (e-mail: konhee.chang@frb.gov). The analysis and conclusions contained in this paper are those of the author and do not necessarily reflect the views of the Board of Governors of the Federal Reserve System, its members, or its staff.

(b) Movers

6. Mechanisms Driving "Overcharging" of Rent

   (a) Landlords: Supply-side Explanations

   (b) Tenants: Demand-side Explanations

7. Implications for Policy and Regulation

   (a) Is Price Discrimination Legal?

   (b) Who Bears the Burden of "Overcharging?"

   (c) Implications for Housing Choice Voucher Program Design

8. Conclusion