Price Differentials in the Rental Housing Market

Alison Lodermeier*

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Abstract

This paper tests whether different renters pay different prices for housing units of the same quality. I construct a rich dataset of nearly 3 million Australian lease periods matched to tenants, landlords, rent prices, operating costs, and rental income. Using a within-unit repeat lease design, I estimate price differentials for various demographic groups. I document a small premium for immigrant renters (0.9%) and a small discount for renters with a disability (1.1%), neither of which can be explained by cost differences. The immigrant rent premium is highest among recent immigrants and when landlords and tenants have different regions of birth, suggesting a role for information and cultural proximity to landlords. Leveraging ownership changes during ongoing tenancies, I estimate that sorting to high-price landlords can explain at least one-fifth of the immigrant premium, with the remainder arising from within-landlord price differences.

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1 Introduction

Housing is the largest expenditure for most households (U.S. Bureau of Labor Statistics 2025; OECD 2025), making housing prices an important determinant of economic well-being. Households may pay different prices for housing of the same quality, however, if search frictions or discrimination affect the set of available housing choices (Becker 1957; Courant 1978; Yinger 1997) or if bargaining power differs across households. Because these factors are known to vary across demographic groups, systematic differences in prices paid for comparable housing may arise.[1]

While recent studies document price premia for minority home-buyers (Bayer et al. 2017; Box-Couillard and Christensen 2024), less is known about whether these forces translate into price differentials in rental markets—which differ along several key dimensions.[2] Rental contracts are relatively short commitments, which may leave less scope for bargaining to generate large price differences. Yet the ongoing nature of landlord-tenant relationships, in contrast to one-time home sales, may allow greater scope for landlord tastes or beliefs to influence pricing. Therefore, it remains an empirical question whether price differentials for different demographic groups emerge in rental markets.

Empirical evidence on this question is limited because measuring the quality of rental units presents numerous challenges. First, a within-unit design is crucial to account for unobserved unit quality, but this approach requires rich panel data on unit-level rent prices matched to tenant characteristics. Second, controlling for high-frequency changes in neighborhood amenities requires sufficient coverage of rents at nearby units. Even with sufficient data to capture unit quality, distinguishing the sources of any price differentials presents an additional challenge.

In this paper, I overcome these challenges and provide new estimates of price differentials in the rental housing market, along with distinguishing potential mechanisms. Using rich

[1] Audit and correspondence studies conducted in housing markets find evidence that minority groups receive fewer responses to inquiries, are told about fewer available units, and are steered toward certain neighborhoods (e.g. Yinger (1986); Hanson and Hawley (2011); Ewens et al. (2014); Christensen and Timmins (2022)). Krysan et al. (2018) document that racial and ethnic minority renters in the U.S. rely more heavily on social networks than online resources when searching for a rental unit and have lengthier, more geographically disperse, and less successful searches. Harding et al. (2003) finds evidence that women, lower-income, and first-time buyers have less bargaining power in housing markets. Ellen et al. (2024) document that young, Black, and Hispanic voucher-holders are less successful at leasing a unit with a housing voucher, which could suggest these groups face higher search costs, less bargaining power, or discrimination from landlords

[2] Previous studies relying on cross-sectional data (e.g. King and Mieszkowski (1973); Early et al. (2019)) are subject to concerns that price differentials may reflect unobserved differences in unit quality. More credible estimates from Myers (2004) compare rents at the same address over time—similar to this paper's approach—but are based on a limited sample of units in the American Housing Survey between 1985 and 1993.

administrative data from Australia, I construct a novel dataset of nearly 3 million lease periods matched to rent prices, tenant characteristics, landlord characteristics, operating costs, and rental income. Because prices are observed for households receiving some form of government benefits, this sample captures a lower socioeconomic segment of the rental market.[3]

Using this dataset, I adopt a within-unit repeat lease design to estimate price differentials for various demographic groups, including immigrant renters, renters with a disability, and renters with children. This empirical strategy identifies price differentials by leveraging tenant turnover within rental units where tenant characteristics change, and comparing these price differences to price growth in nearby rental units with unchanged tenant characteristics. To achieve these comparisons, the empirical specification includes unit fixed effects, (fine) neighborhood-quarter fixed effects, and time-varying unit characteristics—including proxies for property renovations—to isolate price differentials from fixed quality of rental units, time-varying neighborhood quality, and changing property amenities.

I find evidence of small price differentials. I estimate that immigrant renters pay a 0.9% rent premium, renters with a disability receive a 1.1% rent discount, and renters with children face no economically meaningful price premium or discount. The immigrant premium is largest among South Asian immigrants (2%), and I find minimal evidence of a price premium for immigrants from European countries. Including flexible controls for observable tenant characteristics such as income and tenure in the unit slightly attenuates the price differentials, but significant gaps remain.

While these price differentials are quite modest, it is worth distinguishing their sources, as different mechanisms carry different policy implications. Price differentials may arise due to group differences in tenant costs, outside housing options, unit-specific preferences, or landlord bias.[4] These underlying sources may generate rent premia through sorting or within-landlord price differences. For example, groups with weaker outside housing options may sort to rental units during periods when landlords would charge higher (quality-adjusted) prices to any tenant. Alternatively, landlords may charge group-specific prices for the same unit in the same period, due to group differences in tenant costs or landlord bias.

I first provide suggestive evidence on these potential sources based on patterns of heterogeneity in immigrant price differentials. I find that recent immigrants pay the highest prices, and the immigrant premium declines with time since arrival. This is consistent with

[3]Using rental income data observed for a much broader portion of the market, I can assess whether results extend beyond this segment.

[4]Landlords may exhibit biased pricing if they have group-specific tastes or make group-specific prediction error about the costs of renting to a tenant, leading them to forgo potential earnings when renting to favored groups.

recent immigrants facing weaker outside housing options due to inexperience or less information about Australian rental markets, leading to higher prices. I also find that immigrants pay no meaningful premium when renting to landlords from the same region of origin, but pay higher prices when renting from Australia-born landlords or immigrant landlords from different regions. Similarly, Australia-born tenants pay rent premia when renting from immigrant landlords. This finding suggests that landlords may exhibit bias in favor of tenants with similar cultural backgrounds, leading them to forgo potential rental earnings by offering discounts to these favored groups.

Next, I leverage unique data on landlord-reported costs and earnings to test for group differences in costs and payment rates. I find that maintenance costs are significantly lower when immigrant tenants occupy units, which is inconsistent with immigrant cost differences driving premia and if anything, suggests potential under-investment in immigrant-occupied units.[5] I also find that units occupied by immigrant tenants generate higher rental income, by a similar magnitude to the estimated price premium, suggesting that differences in payment rates are unlikely to explain the immigrant premium.

To distinguish whether these factors generate price differentials through sorting or within-landlord pricing differences, an ideal experiment would randomly-assign tenants to landlord-unit pairs, removing any relationship between tenant group and the type of landlords they rent from. Comparing price differentials under random assignment to price differentials that arise when landlords choose tenants would identify the sorting component of rent differentials. Since random assignment of tenants to landlords cannot be achieved in practice, I leverage property sales during ongoing tenancies, which quasi-randomly reassign incumbent tenants to new landlords. I find that the immigrant premium among incumbents drops sharply after a change in property ownership. Under the assumption that incoming landlords do not sort on incumbent tenant characteristics within neighborhoods, the magnitude of the decrease implies that sorting can explain at least one-fifth of the immigrant rent premium.

Since these results are based on a benefit-recipient segment of the rental market, the question remains as to whether these findings extend to other market segments. To assess this question, I leverage the fact that rental income can be observed for a much broader set of units than prices. I find that the magnitude by which landlords earn higher rental income when renting to immigrants is strikingly similar in the broader sample, suggesting that the immigrant price premium is not specific to benefit-recipient segment. However, the disability-related gaps in rental income vary across samples, suggesting that the estimated disability discount may be specific to the benefit-recipient segment.[6]

[5] I find no differences in operating costs when units are occupied by tenants with a disability.

[6] These comparisons are suggestive, however, since rental income reflects both prices and payment rates.

This work builds upon a large literature on housing market disparities. Correspondence experiments vary group characteristics on fictional rental inquiries and find evidence of discrimination via lower response rates (Carpusor and Loges 2006; Ahmed and Hammarstedt 2008; Ahmed et al. 2010; Bosch et al. 2010; Hanson and Hawley 2011; Jacquemet and Yannelis 2012; Ewens et al. 2014; Acolin et al. 2016; Edelman et al. 2017; Murchie and Pang 2018; Flage and Le Gallo 2025; Mourelatos and Oikarinen 2026). Evidence also suggests landlords exhibit more subtle forms of discrimination such as steering (Christensen and Timmins 2022). Beyond differences in housing search, other work documents disparities in housing returns (Goldsmith-Pinkham and Shue 2023; Diamond and Diamond 2024; Kermani and Wong 2026), property assessments (Avenancio-León and Howard 2022), exposure to housing cycles (Bayer et al. 2016), and pollution exposure (Christensen et al. 2022).

Within this literature, this paper relates most closely to work testing whether different groups pay housing price premia (King and Mieszkowski 1973; Myers 2004; Ihlanfeldt and Mayock 2009; Bayer et al. 2017; Box-Couillard and Christensen 2024). Recent work in this area uses repeat-sales designs in housing markets to estimate home price differentials (Bayer et al. 2017; Box-Couillard and Christensen 2024).[7] I adapt this approach to the rental market, where the evidence on price differentials is more limited. Myers (2004) is a notable exception that uses American Housing Survey (AHS) data to estimate racial rent premia using a specification with address fixed effects and finds no evidence of racial price differentials.[8]

An advanatage of my analysis relative to the within-address analysis in Myers (2004) is my use of large-scale administrative data on rents and ability to distinguish the sources of price differentials. The 1985, 1989, and 1993 AHS data analyzed in Myers (2004) includes 8,500 rental units, with 279 changes in tenant race between survey waves that are used to identify price differentials. In contrast, I analyze nearly 800,000 rental units over a 14 year period. This allows me to precisely estimate price differentials across numerous demographic groups and flexibly account for time-varying neighborhood amenities, defining neighborhoods as areas containing an average of 400 residents.[9] I also extend this literature by leveraging the scale and richness of these data to provide new evidence on the sources of price differentials, including testing for group differences in costs and using ownership changes to distinguish

[7]Other recent studies on housing price differentials focus on historical contexts, finding evidence that Black renters paid large premia and landlords exercised pricing power over Black renters during the Great Migration (Akbar et al. 2025; Nicholas and Spaenjers 2026).

[8]Other studies on rent differentials rely on cross-sectional data (e.g. King and Mieszkowski (1973); Early et al. (2019)) and face the challenge that unobserved unit quality may vary across groups.

[9]This approach using (fine) neighborhood-month fixed effects is also much more flexible than census tract-year fixed effects used in repeat-sales designs such as Bayer et al. (2017) and Box-Couillard and Christensen (2024).

the role of sorting to high-price landlords.

This paper also relates to literature on the role of landlords in rent price determination. Recent studies document that landlords pass through tax shocks and financing costs to tenants and find evidence of pricing power in rental markets (Watson and Ziv 2025; Hughes 2022; Baker 2025). Other related work studies the role of institutional landlords and algorithmic pricing (Gurun et al. 2022; Coven 2023; Gorback et al. 2025; Calder-Wang and Kim 2026; Barbieri and Dobbels 2026). This literature motivates the possibility that some groups may pay higher quality-adjusted prices because they disproportionately match to high-price landlords. I contribute to this literature by providing evidence that price differentials in rental markets can be attributed in part to sorting across landlords types.

The remainder of this paper continues as follows. Section 2 provides background information on the Australian rental market. Section 3 provides a theoretical framework to illustrate the potential channels through which rent premia may arise. Section 4 describes the Australian administrative data. Section 5 outlines the empirical strategy used to estimate price differentials and reports estimates of group premia. Section 6 tests whether costs or payment differences could explain price differentials. Section 7 provides a decomposition of sorting and within-landlord components of price differentials. Section 8 concludes.

2 Institutional Context

In 2021, approximately 31% of Australian households were renters, most of which (26% of Australian households) rent from private landlords (ABS 2022a). Compared to other housing situations, private market renters are more likely to be low-income households, single-parent households, recipients of government benefits, and immigrants (Productivity Commission 2019). Housing costs (adjusted for inflation) among renters in the private market have increased by 50% between 2000 and 2020, and in FY 2019-20, more than 30% of renter-occupied households were considered rent-burdened—spending more than 30% of income on housing (ABS 2022b).

The vast majority of rental property owners in Australia are individuals, and the role of institutional investors and corporate landlords is limited. In FY 2021-22, over 2.2 million individuals reported rental income (ATO 2025), while the 2021 Census captured 2.5 million occupied private rental dwellings (ABS 2022a).[10] Of these individuals with rental income, 71% had interest in only one rental property.

[10]These 2.2 million individuals include taxpayers that solely or jointly owned rental properties for at least part of the year (in cases of mid-year property sales). Other rental property owners not reflected in this figure include partnerships, trusts, or incorporated entities.

These Australian landlords have broad discretion over setting rents. With no national rent control policy, landlords can generally increase rents freely between tenancies. In recent years, however, states have introduced various restrictions on rent increases within tenancies. Australian Capital Territory allows tenants to dispute rental increases above a certain threshold. States also limit the frequency of rent increases, typically to once every six or twelve months, with varying notice requirements. More generally, anti-discrimination law in Australia prohibits housing providers from imposing different terms on the basis of race, sex, age, disability, and other protected characteristics, but landlords may vary rent prices for many valid reasons such as contract length and market conditions.

3 Theoretical Framework

In this section, I provide a framework to illustrate the various channels that may generate price differentials in the rental housing market. I abstract from unit quality and market conditions and focus on the landlord-tenant interaction at a given unit that determines the observed contract rent.[11] The model is written as a static bargaining problem where a landlord selects a tenant for a one-period lease.

3.1 Setup

Consider a vacant rental unit owned by a landlord l. There are two types of potential tenants: $g \in \{a, b\}$. The landlord's payoff from a one-period lease with a group g tenant at price r is:

$$U_{lg}(r) = r - c_g - \phi_l + \tau_{lg} \tag{1}$$

where $c_g \geq 0$ is the expected cost of renting to group g (e.g. tenant-specific maintenance expectations, default risk), ϕ_l is the per-period cost of owning the unit regardless of occupancy status (e.g. financing costs, insurance, or property taxes) and τ_{lg} captures the landlord's taste for group g tenants.[12] The landlord's outside option of rejecting the applicant is:

$$U_l^o = -\phi_l + V_l^{search} \tag{2}$$

[11] This is consistent with the empirical approach which estimates price differences adjusting for quality and market conditions.

[12] τ_{lg} could also capture landlord-specific prediction error about the costs of renting to group g tenants, which capture indirect statistical discrimination (Bordalo et al. 2016; Bohren et al. 2025).

where V_l^{search} is the option value of renting to a future applicant. This means that the landlord's reservation price for a group g tenant is:

$$\rho_{lg} = c_g - \tau_{lg} + V_l^{search} \tag{3}$$

The tenant's payoff from renting the unit for a one-period lease term at price r is $v_g - r$, where v_g is her valuation of the unit. The prospective tenant's outside option is valued as v_g^o, capturing the value of remaining in her current housing or continuing to search.[13]. Therefore, the tenant's maximum willingness to pay for the unit is:

$$w_g = v_g - v_g^o \tag{4}$$

The total surplus available from the potential landlord-tenant match is the difference between the tenant's maximum willingness to pay for the unit and the landlord's reservation price for a type g tenant:

$$S_{lg} = w_g - \rho_{lg} = \left(v_g - v_g^o\right) - \left(c_g - \tau_{lg} + V_l^{search}\right) \tag{5}$$

3.2 Rent Determination

The landlord lists the unit for rent at price $r_l^{list} \geq 0$. A prospective tenant type g observes r_l^{list} and decides whether to apply. I assume she does not know the landlord's reservation price, but hold rational beliefs based on the true distribution of reservation prices given a listed price: $F_g(\rho|r_l^{list})$.

The tenant's expected gain from applying is the share of the surplus determined by her bargaining weight $\beta \in [0, 1]$:

$$\Pi_g(r_l^{list}) = \beta \int_{-\infty}^{w_g} (w_g - \rho) \mathrm{d}F_g(\rho|r_l^{list}) \tag{6}$$

She applies if her expected gain from applying is greater than the application cost $\eta > 0$:

$$A_{lg} = \mathbb{1}[\Pi_g(r_l^{list}) \geq \eta] \tag{7}$$

Since $\Pi_g(r_l^{list})$ is increasing in w_g, tenants with higher willingness to pay—due to high unit valuations or weak outside options—are more likely to apply. Tenant beliefs about ρ_{lg} also influence application decisions, meaning that the true dependence of ρ_{lg} on c_g and τ_{lg} also

[13]The tenant's outside option term captures the role of information, where a group with less information about alternative units has a lower perceived outside option v_g^o.

influences application decisions.

After receiving a rental application from a group g applicant, the landlord and applicant bargain over rent.[14] When $S_{lg} \geq 0$, the landlord and applicant reach an agreed rent price characterized by the Nash bargaining solution and enter into a lease agreement.[15] I denote the landlord and tenant entering into a lease agreement as:

$$\begin{aligned} D_{lg} &= \mathbb{1}[A_{lg} = 1]\mathbb{1}[S_{lg} \geq 0] \\ &= \mathbb{1}\left[\beta \int_{-\infty}^{v_g - v_g^o} (v_g - v_g^o - \rho) \mathrm{d}F_g(\rho | r_l^{list}) \geq \eta\right] \mathbb{1}\left[\left(v_g - v_g^o\right) - \left(c_g - \tau_{lg} + V_l^{search}\right) \geq 0\right] \end{aligned} \tag{8}$$

The observed contract rent determined by the Nash bargaining solution is:

$$R_{lg}^* = \underset{r}{\operatorname{argmax}} \Big(v_g - r - v_g^o\Big)^{\beta} \Big(U_{lg}(r) - U_l^o\Big)^{1-\beta} \tag{9}$$

The first order condition yields:

$$R_{lg}^* = (1-\beta)(v_g - v_g^o) + \beta(c_g - \tau_{lg} + V_l^{search}) \tag{10}$$

3.3 Price Differentials

Next, I decompose the sources of differences in contract rent across groups. This exercise conditions on landlord-unit pairs where a mutually agreeable rent exists for both groups ($S_{la} \geq 0$ and $S_{lb} \geq 0$).[16] The observed rent gap between tenant groups a and b is:

$$\Delta R = \mathbb{E}[R_{la}^* | D_{la} = 1] - \mathbb{E}[R_{lb}^* | D_{lb} = 1] \tag{11}$$

[14] Prior to bargaining, landlords may screen tenants and decide whether to engage in bargaining or reject the applicant immediately. While formalizing this earlier screening stage would allow the framework to capture differential callback rates observed in correspondence experiments, the same sources of price differentials are apparent without modeling this stage, so I omit it from this framework for simplicity.

[15] I assume that landlords and tenants have complete information post-application.

[16] Similarly, the empirical strategy restricts to units accessible by both groups by identifying price differences using a repeat lease design with unit fixed effects. For notational simplicity, I denote $\mathbb{E}[R_{lg}^* | D_{lg'} = 1, S_{lg} \geq 0, S_{lg'} \geq 0]$ as $\mathbb{E}[R_{lg}^* | D_{lg'} = 1]$ going forward.

Adding and subtracting $\mathbb{E}[R^*_{la}|D_{lb}=1]$ and rearranging terms yields the following expression[17]:

$$\Delta R = \underbrace{\mathbb{E}[R^*_{la}|D_{la}=1] - \mathbb{E}[R^*_{la}|D_{lb}=1]}_{sorting} + \underbrace{\mathbb{E}[R^*_{la} - R^*_{lb}|D_{lb}=1]}_{within-landlord\ differences} \tag{12}$$

The sorting component captures group differences in matching to units during periods when landlords would charge higher prices to any occupant. When substituting Equation 10 for R^*_{la}, the sorting component can be written as[18]:

$$\begin{aligned}&\mathbb{E}[R^*_{la}|D_{la}=1] - \mathbb{E}[R^*_{la}|D_{lb}=1] = \\ &\quad \beta\Big(\mathbb{E}[V_l^{search} \mid D_{la}=1] - \mathbb{E}[V_l^{search} \mid D_{lb}=1]\Big) - \beta\Big(\mathbb{E}[\tau_{la} \mid D_{la}=1] - \mathbb{E}[\tau_{la} \mid D_{lb}=1]\Big).\end{aligned} \tag{13}$$

From this expression, sorting generates price differentials if the landlords of units that each group applies to differ in the average value of the landlord-side reservation price components V_l^{search} and τ_{la}. Group-specific factors (v_g, v_g^o, c_g) affect the sorting channel through the application decision A_{lg}. For example, a group with weaker outside options v_g^o would be more likely to apply to higher listed prices than groups with strong outside housing options. If listed prices are correlated with landlord components of reservation prices, groups with weaker outside options systematically apply to different landlords.

The within-landlord component captures the degree to which the same landlord would charge different prices to groups a and b for the same unit in the same period. Substituting Equation 10 for R^*_{lg}, the within-landlord component can be rewritten as:

$$\begin{aligned}&\mathbb{E}[R^*_{la} - R^*_{lb}|D_{lb}=1] \\ &\qquad = \mathbb{E}[(1-\beta)\Big((v_a - v_a^o) - (v_b - v_b^o)\Big) + \beta(c_a - c_b) - \beta(\tau_{la} - \tau_{lb})|D_{lb}=1] \\ &\qquad = \underbrace{(1-\beta)\Big((v_a - v_a^o) - (v_b - v_b^o)\Big)}_{willingness\ to\ pay} + \underbrace{\beta(c_a - c_b)}_{costs} - \underbrace{\mathbb{E}[\beta(\tau_{la} - \tau_{lb})|D_{lb}=1]}_{landlord\ tastes}.\end{aligned} \tag{14}$$

The within-landlord component of price differentials reflects three potential underlying channels. First, landlords may charge different prices to different tenant groups due to differences in their willingness to pay for rental units, which reflects differences in unit preferences or outside options. Second, groups that generate higher costs when occupying rental units

[17] Alternatively, adding and subtracting $\mathbb{E}[R^*_{lb}|D_{la}=1]$ would yield $\Delta R = \mathbb{E}[R^*_{lb}|D_{la}=1] - \mathbb{E}[R^*_{lb}|D_{lb}=1] + \mathbb{E}[R^*_{la} - R^*_{lb}|D_{la}=1]$. Under this decomposition, the counterfactual rent prices are based on unit-landlord pairs that matches to group a tenants.

[18] The terms $(1-\beta)(v_a - v_a^o)$ and βc_a are modeled as group constants that do not vary across landlords, so they cancel out of this expression.

would pay higher prices. Third, the taste channel reflects landlords deviating from profit-maximizing prices due to preferences for tenant groups.

Other channels may contribute when considering a model where tenants can remain in rental units for multiple periods and prices adjust at lease renewals. Any group differences in unit valuations and outside options may generate different retention rates. This may lead to across-period sorting where tenants have varying exposure to high-tenure prices which may differ from early-tenure prices due to tenure discounts. It is also possible that within-landlord price differences may arise from differences in expected retention rates.

While this framework demonstrates that rent premia may emerge through multiple channels that carry different policy implications, establishing whether price differentials exist and quantifying their size is a first-order empirical question. In the next sections of the paper, I describe the data and empirical approach used to estimate price differentials for various groups—immigrant renters, renters with a disability, and renters with children. After documenting various quality-adjusted price differentials, I return to the question of which channels contribute to observed premia in Sections 6 and 7.

4 Data

4.1 Data Sources

I use the Person Level Integrated Data Asset (PLIDA) from the Australian Bureau of Statistics (ABS) to combine micro-data from various Australian administrative data sources.

ATO Rental Property Schedule The Australian Taxation Office (ATO) Rental Property Schedule contains data on annual rental property income and expenses for property owners that are individuals, trusts, or partnerships (Australian Taxation Office 2025). This notably excludes any rental properties owned by institutional investors. These data are reported at the (de-identified) owner-address level, which makes it possible to observe any changes in property ownership over time.

DOMINO The Data Over Multiple Individual Occurrences (DOMINO) data product provides longitudinal data on individual interactions with the Department of Social Services (DSS) (Department of Social Services 2025). These data include details of benefit receipt, demographic information, and, importantly, details on housing situations of benefit recipients. For benefit recipients who are renters, DOMINO contains rent prices and corresponding start and end dates for a given weekly rent price. The DSS collects rent information from

these individuals because benefit receipt automatically triggers eligibility for rental assistance if rent falls above a certain amount and the individual lives in an eligible accommodation.[19]

Core Locations The Core Location file includes de-identified address codes and geographic attributes of individuals over time (Australian Bureau of Statistics 2025). Address information is consolidated by the ABS from various sources, including the ATO Client Register, DOMINO, and the Medicare Consumer Directory. The address codes are based on underlying address text data that includes, where applicable, unit numbers. Therefore, I interpret address codes as identifying individual units in cases of multi-unit buildings.[20]

Core Demographics The Core Demographics file records individuals' date of birth, date of death, and country of birth (Australian Bureau of Statistics 2025). This information is consolidated by the ABS from various sources, including the ATO Client Register, DOMINO, the Medicare Consumer Directory, death registrations, and the 2011 Census.

4.2 Sample Construction and Data Quality Checks

I begin with a base set of rental units that include addresses ever captured in the ATO Rental Property Schedule dataset. I match these addresses to the Core Location file to identify which individuals lived in these rental units at any point between January 1, 2006 and December 31, 2019. Using start and end dates associated with individual address records, I identify groups of co-habitating tenants at an address based on overlapping residency spells.

To construct a panel of (approximate) lease terms, I first create an observation for every tenant group corresponding to their first date living in a rental unit.[21] I then create additional observations for every consecutive year on the same day of the year until the tenant group no longer resides at the address. I retain all lease terms with dates between 2006 and 2019 that meet data quality requirements discussed below.

Next, I attach various characteristics of tenants, landlords, and rental units to this panel of lease terms. For each individual occupant, I observe characteristics such as age, income,

[19]Individuals receiving the following benefits may be eligible for rental assistance: ABSTUDY Living Allowance, Age Pension, Austudy, Carer Payment, Disability Support Pension, Family Tax Benefit - Part A at more than the base rate, Farm Household Allowance, JobSeeker Payment, Parenting Payment, Special Benefit, Youth Allowance. See `https://www.servicesaustralia.gov.au/who-can-get-rent-assistance?context=22206` for more details.

[20]The address codes correspond to identifiers in the Address Register maintained by the ABS to support the sampling frame for the Census and other households surveys. The ABS indicates that Address Register identifiers include "flats, units or apartments." See `https://www.abs.gov.au/statistics/research/abs-address-register-users-guide` for more details.

[21]I define this first lease term date as 30 days after the individual's start date at the address to avoid short overlaps with previous tenants.

Table 1: Sample Restrictions

	Rental Units	Lease Terms
	(1)	(2)
All units in Rental Property Schedule	4,301,875	
... with matched tenant(s)	3,996,636	
... that are private houses or apartments	3,649,711	
... with valid lease term	3,003,490	16,368,934
... with observed rent	1,417,101	4,305,209
... with repeat leases + multiple leases per SA1-quarter	775,859	2,915,706

This table reports the number of observations after applying various sample restrictions. An address ID is considered a private house or apartment if it is listed as a private dwelling in the ABS Address Register and the 2011 Census, and the structure is a separate house, semi-detached house, or flat/apartment. A lease term is considered valid if the unit never has more than 10 occupants, does not have more than 6 bedrooms in the 2011 Census, does not match to multiple dwellings in the 2011 Census, has geolocation information, never has more than 5 individual owners, and constructed occupancy periods align with occupancy periods reported in the RPS. Rent is observed if a tenant associated with a lease term can be matched to reported rent in DOMINO for a non-shared living arrangement and if rent does not conflict among household members, with the amount of any rental assistance received, or with rental income reported in the RPS.

benefit receipt, country of birth, and disability status from the Core Demographics file, 2011 Census, ATO data, and DOMINO data. I then collapse these measures to the unit level to capture household characteristics at each lease term date. I also attach information on property ownership, annual costs, and annual rental earnings associated with the address from ATO Rental Property Schedules. Finally, I attach rent prices to a subset of unit-date observations when any individual living in the unit on the date had their rent reported in DOMINO. I focus on the subset of units with observed rent on at least two lease dates (repeat-lease sample) for all of the analysis conducted in the paper.[22]

I apply the following sample restrictions to reduce the likelihood of measurement error in rent and which occupants reside in a housing unit. Table 1 reports the number of observations dropped from these restrictions. I restrict to private housing units that are houses or apartments. I also exclude units with more than ten occupants on any lease date, units with more than six bedrooms in the 2011 Census, units with address IDs that match to multiple dwellings in the 2011 Census, and units that ever have more than five individual owners in a year.[23] When constructing lease periods, I require tenant residency spells to be at least 90 days and exclude short periods of overlapping tenant spells. I only include rent observations from DOMINO for non-shared living arrangements and exclude cases where multiple occu-

[22] I also require at least two lease terms per SA1-quarter for my preferred specification that includes SA1-quarter fixed effects.

[23] These restrictions are intended to exclude any address IDs that may correspond to multiple units in a building.

pants of the same unit report conflicting rent amounts.[24] I further refine rent observations by excluding cases where rental assistance received is larger than reported rent. Additionally, I impose that the rent and occupancy periods I construct align with information reported by landlords in the Rental Property Schedule. I drop observations where the unit appears occupied in the analysis sample for more weeks of the year than the landlord reported. I exclude rent observations where landlord-reported rental income is more than 10% higher or more than 50% lower than would be implied by on-time payment at the observed rent price.

To verify the accuracy of rents observed in this analysis sample, I match the August 2011 subset of the sample to the 2011 Census (Census of Population and Housing 2011). Figure A1 plots a histogram of deviations in rent reported in the 2011 Census compared to DOMINO. Rent prices match for more than 60% of matched housing units, and most of the remaining units have only small differences in observed rents.[25] Importantly, Table A1 confirms that the degree to which rent differs across these two data sources does not statistically differ for any of the groups that I focus on in the analysis—immigrant renters, renters with children, and renters with a disability.

4.3 Descriptive Statistics

Table 2 describes the repeat-lease sample and compares it to the overall Australian rental market captured in the 2011 Census. In column 1, the average lease term in the full analysis sample corresponds to a rental unit with just over three occupants. Half of units are occupied by at least one child, 42% are occupied by immigrant tenants, and 23% have a tenant with a disability. Most (68%) of the rental units in the sample are separate houses, with the remaining are in semi-attached townhouses or multi-unit buildings. Since only rental units that undergo a change in tenant characteristic identify price differentials, I report characteristics of these sub-samples of units in Table A2.[26]

Column 2 of Table 2 reports characteristics of the subset of lease terms in the repeat-lease sample in 2011, and column 3 reports the characteristics of all private renter-occupied households captured in the 2011 Census. Despite the fact that the repeat-lease sample is based on benefit recipients, the average weekly rents, immigrant shares, education levels, and

[24]The restriction to non-shared living arrangements is meant to exclude units occupied by roommates who are splitting rent because for these cases, DOMINO-reported rents may only capture a fraction of the price of the unit.

[25]I hypothesize that these differences could reflect reporting bias in the Census because the DSS collects proof of rent arrangements that appear in the DOMINO data. See https://www.servicesaustralia.gov.au/proof-rent-arrangements-for-rent-assistance?context=22206 for more details on how the DSS verifies information on rent arrangements.

[26]A unit may undergo a change in tenant characteristics within a tenant spell (e.g. a child being born) or across different sets of tenants.

Table 2: Sample Comparison to 2011 Census

	Full Repeat-Lease Sample	2011 Subset of Repeat-Lease Sample	2011 Census Renter Households
	(1)	(2)	(3)
Lease Characteristics			
Weekly rent	325.11 (108.30)	297.36 (93.37)	312.90 (248.41)
Tenant Characteristics			
Household members	3.095 (1.770)	3.070 (1.750)	2.484 (1.430)
Any immigrant member	0.419 (0.493)	0.403 (0.491)	0.403 (0.491)
Any disabled member	0.230 (0.421)	0.218 (0.413)	0.089 (0.285)
Any child member	0.511 (0.500)	0.509 (0.500)	0.347 (0.476)
Weekly household income + benefits			
0-999 AUD	0.376 (0.484)	0.417 (0.493)	0.448 (0.497)
1000-1999 AUD	0.379 (0.485)	0.391 (0.488)	0.277 (0.447)
2000+ AUD or unknown	0.245 (0.430)	0.193 (0.394)	0.276 (0.447)
Highest educational attainment			
$\leq$ Year 12	0.358 (0.479)	0.366 (0.482)	0.383 (0.486)
Certificate	0.185 (0.388)	0.206 (0.405)	0.195 (0.396)
Advanced Diploma or Diploma	0.079 (0.270)	0.088 (0.284)	0.100 (0.300)
Bachelor Degree	0.100 (0.300)	0.114 (0.318)	0.184 (0.387)
Graduate Diploma or Certificate	0.012 (0.109)	0.014 (0.118)	0.022 (0.147)
Postgraduate Degree	0.030 (0.170)	0.036 (0.186)	0.066 (0.249)
Unknown	0.237 (0.425)	0.175 (0.380)	0.050 (0.218)
Unit Characteristics			
Structure			
Separate house	0.680 (0.466)	0.694 (0.461)	0.533 (0.499)
Rowhouse/townhouse	0.169 (0.375)	0.162 (0.369)	0.159 (0.366)
Apartment/flat or other	0.151 (0.358)	0.143 (0.350)	0.308 (0.462)
Location			
New South Wales	0.262 (0.440)	0.267 (0.442)	0.325 (0.468)
Victoria	0.227 (0.419)	0.216 (0.411)	0.224 (0.417)
Queensland	0.289 (0.453)	0.297 (0.457)	0.225 (0.418)
South Australia	0.083 (0.276)	0.083 (0.275)	0.075 (0.264)
Western Australia	0.101 (0.301)	0.102 (0.303)	0.099 (0.299)
Tasmania	0.025 (0.156)	0.026 (0.159)	0.022 (0.147)
Northern Territories	0.004 (0.066)	0.004 (0.062)	0.012 (0.109)
Australian Capital Territory or OT	0.008 (0.088)	0.006 (0.080)	0.018 (0.132)
Observations (Lease Terms)	2,915,706	198,108	2,133,971
Number of Rental Units	775,859	198,108	2,133,971

This table reports mean characteristics of the full repeat-lease sample in column 1, the 2011 subset of the repeat-lease sample in column 2, and all renter-occupied households in the 2011 Census in column 3.

the geographic locations of rental units align quite closely with the overall rental market in 2011. The repeat-lease sample over-represents households with children and households with a member with a disability and under-represents high-income households, which is expected

given that these groups are more common among benefit recipients.[27] The analysis sample also over-represents rental units that are separate houses, which is likely a product of restricting to rent observations for non-shared accommodations (i.e. no unrelated roommates). For the remainder of the paper, I interpret all results derived from the analysis sample as reflecting patterns in a benefit-receiving segment of the rental housing market. In section 6, I assess whether the results derived from this sample extend to other segments of the market, using landlord-reported rental income that can be observed for a much broader portion of the rental market.

Tables 1 and 2 inform the share of the Australian rental market that the analysis sample captures. My constructed panel of valid lease terms with observed rent prices captures 32.9% of rental units ever recorded in Rental Property Schedules (Table 1, row 5). After the final restriction to repeat lease observations, my analysis sample captures 18% of these units in the RPS data (Table 1, row 6). Units recorded in Rental Property Schedules capture a very high share of rental units in Australia, but notably exclude units owned by institutional investors.[28] Comparing instead to Census data in Table 2, the 2011 subset of the repeat-lease sample contains 9.3% of private rental units captured in the 2011 Census.

Besides capturing the characteristics of tenants, my constructed sample also offers new insights into the costs of operating rental properties. Figure 1 reports the frequency and amounts of various landlord-reported costs (from Rental Property Schedules) among unit-years included in the repeat-lease sample. The majority of landlords pay council rates, insurance, water charges, interest on loans, property agent fees, and claim depreciation. Other expenses such as tenant advertising and legal fees are less common. By far, the largest expense reported by landlords is interest on loans.[29]

5 Price Differentials

5.1 Repeat-Lease Design

I model the rent of unit i on lease term date t as:

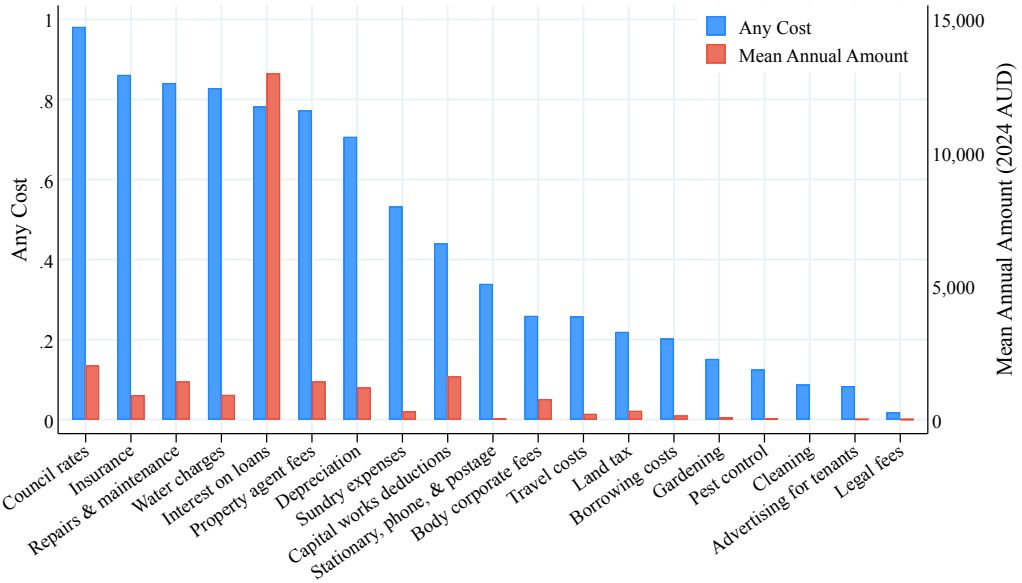
$$LogRent_{it} = \alpha_i + \delta_{n(i),q(t)} + X'_{it}\lambda + TenantChar_{it}\beta + \varepsilon_{it} \tag{15}$$

[27] Table A2 reports that a large share (over 68%) of the sample includes tenants receiving rental assistance. In Australia, these rental assistance payments are transfers to the tenants and included when calculating tenants' annual income and benefits.

[28] From Section 2, over 2.2 million individuals reported rental income in Rental Property Schedules in FY 2021-22 while the 2021 Census captured 2.5 million occupied private rental dwellings.

[29] Note that any repayments of principal against loan balances are not reported in Rental Property Schedules.

Figure 1: Cost Breakdown



This figure plots cost statistics in the repeat-lease sample. The blue bars report the share of lease terms where the landlord reported any costs in a given category in that financial year. The red bars report the average cost amounts in a given cost category in that financial year.

where α_i is a unit fixed effect, $\delta_{n(i),q(t)}$ is a neighborhood-quarter-year fixed effect, X_{it} is a vector of time-varying unit characteristics, $TenantChar_{it}$ is a vector of tenant characteristics. In the vector X_{it}, I include proxies for the age of the rental unit and proxies for recent renovation timing and renovation costs.[30] Standard errors are clustered at the unit level.

Group-specific price differentials are captured by β. The unit fixed effect imposes that β is identified from tenant turnover within units, where the group characteristics of the tenant(s) change. By including neighborhood-quarter-year fixed effects, this approach compares any within-unit price changes between different tenant groups to within-unit price changes at nearby units that experienced no change in tenant characteristics over the same period. The identifying assumption is that any omitted unit quality not captured by the unit fixed effects, neighborhood-quarter-year fixed effects, or X_{it} does not vary with the group characteristic

[30] In the Rental Property Schedule, owners report the date they first ever rented the unit. The proxy measure of the age of the rental unit is the time since the earliest date any owner of the unit began renting the unit. To proxy for recent renovations, I use the number of years since any increase in the amount of capital works deductions claimed in the Rental Property Schedule. I also interact this time variable with the amount of the deduction in the year of the initial increase. The capital works deduction applies to structural improvements to the property and not repairs or maintenance. See `https://www.ato.gov.au/individuals-and-families/investments-and-assets/property-and-land/residential-rental-properties/rental-expenses/capital-expenses` for more details.

of the tenant occupying the unit. Under this assumption, β captures group-specific rent premia conditional on unit quality. This assumption could be violated if certain groups tend to move into rental units after the unit undergoes some improvement not captured by X_{it}. The inclusion of proxies for property renovations in X_{it} should alleviate concerns about any such violation, and I also report results using the sub-sample of units with no evidence of any major renovation during the sample period and find consistent results.

This empirical strategy is similar to the repeat sales design used by Bayer et al. (2017) to measure racial price differentials in home sales, but has two notable advantages. First, my preferred specification uses much more granular neighborhood-time fixed effects (SA1-quarter-year) compared to census tract-year fixed effects in Bayer et al. (2017).[31] SA1s are Australian statistical areas corresponding to an area containing 400 residents on average, which is much smaller than census tracts which tend to contain 4,000 residents. This means that my specification controls more flexibly for time-varying neighborhood attributes that may affect the value of the rental unit. This granularity is possible because of much higher data coverage of rents at nearby units than the limited number of nearby home sales in the same period of time.

Second, my application of this approach to the rental market reduces concerns about selection bias. When relying on repeat home sales, many properties that transact infrequently are omitted. Any relationship between buyer group characteristic and the likelihood of having a second transaction in the sample period could introduce selection bias if properties held longer (transacted less frequently) appreciate at different rates. Compared to home sales, rental unit prices are observed much more frequently due to regular lease renewals, limiting selection concerns.

5.2 Results

I report the results of estimating Equation 15 in Table 3. Columns 1 and 2 include coarse neighborhood-quarter-year fixed effects, defining neighborhoods at the SA2 level, which contain 10,000 residents on average. Columns 3 and 4 include fine neighborhood-quarter-year fixed effects, defining neighborhoods at the preferred SA1 level. My preferred specifications in columns 5 and 6 additionally include time-varying rental unit controls to account for unit age and recent renovations.

In column 5, I find that immigrant tenants pay a 0.92% rent premium, tenants with a disability receive a 1.07% rent discount, and renters with children pay nearly equivalent rent prices on average (<0.2% rent premium) compared to renters without children. Column 6

[31] Box-Couillard and Christensen (2024) adopts a similar repeat sales design to test for racial minority price premia in home sales and also uses census tract-year fixed effects.

Table 3: Price Differentials

	Log Weekly Rent					
	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant	0.0101***	0.0122***	0.0093***	0.0113***	0.0092***	0.0113***
	(0.0004)	(0.0005)	(0.0004)	(0.0005)	(0.0004)	(0.0005)
Child	-0.0034***	-0.0054***	-0.0026***	-0.0044***	-0.0016***	-0.0033***
	(0.0002)	(0.0003)	(0.0002)	(0.0003)	(0.0002)	(0.0003)
Disability	-0.0129***	-0.0161***	-0.0110***	-0.0140***	-0.0107***	-0.0137***
	(0.0003)	(0.0005)	(0.0003)	(0.0005)	(0.0003)	(0.0005)
Immigrant × Child		-0.0011**		-0.0012***		-0.0015***
		(0.0004)		(0.0005)		(0.0005)
Immigrant × Disability		-0.0076***		-0.0067***		-0.0066***
		(0.0008)		(0.0009)		(0.0009)
Child × Disability		0.0116***		0.0104***		0.0102***
		(0.0006)		(0.0006)		(0.0006)
Immigrant × Child × Disability		0.0025***		0.0021**		0.0022**
		(0.0009)		(0.0010)		(0.0010)
Observations	2,915,706	2,915,706	2,915,706	2,915,706	2,915,706	2,915,706
Control Weekly Rent	287.50	287.50	287.50	287.50	287.50	287.50
Unit FE	✓	✓	✓	✓	✓	✓
SA2 × Quarter FE	✓	✓				
SA1 × Quarter FE			✓	✓	✓	✓
Unit Controls					✓	✓

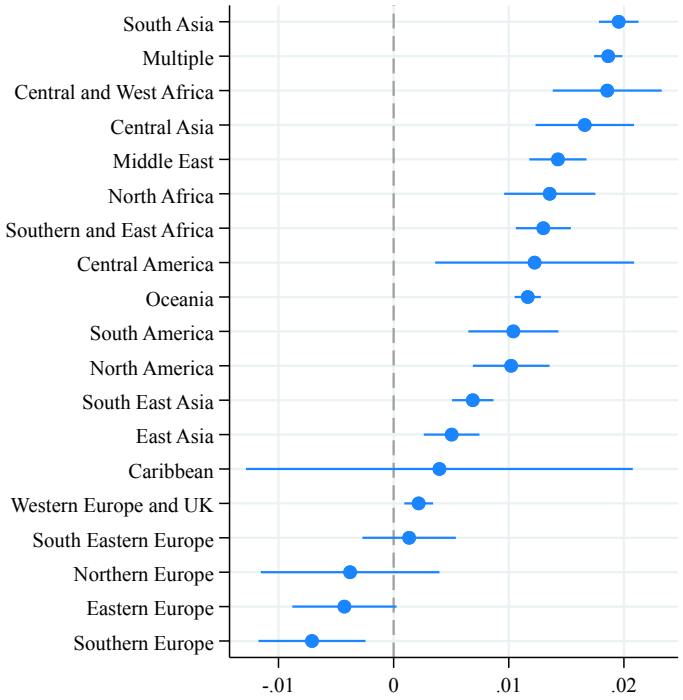
*p< 0.1, **p< 0.05, ***p< 0.01. This table reports results from estimating Equation 15. The sample includes all repeat lease terms. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous price differentials are also estimated in these regressions but not reported. Singleton observations at the unit or SA1-quarter level are excluded. Standard errors are clustered at the unit level and reported in parentheses.

estimates any interactions between these group characteristics. I find little evidence of (meaningful) additional price differentials for immigrants with children, relative to immigrant-only or child-only households. Immigrant tenants with a member with a disability receive an additional discount, and tenants with children and a member with a disability pay an additional premium. In Table A3, I verify that these estimates are robust to more conservative sample restrictions.

The immigrant premium appears to vary significantly by region of origin. Figure 2 demonstrates that immigrant premia are largest for South Asian tenants (1.96%), multi-origin immigrant households (1.86%), Central and West African tenants (1.86%), and Central Asian tenants (1.66%). In contrast, I find minimal evidence that any European immigrants receive any rent premium.

The price differentials reported in Table 3 could reflect price differentials arising directly on the basis of place of birth or disability status, or they could reflect price differentials on

Figure 2: Immigrant Price Differentials by Region of Birth



This figure reports results from estimating Equation 15. The sample includes all repeat lease terms. Immigrant origin is the country of birth of any occupant of the rental unit born outside of Australia. The specification includes unit fixed effects, SA1-quarter fixed effects, unit controls, and indicators for other tenant characteristics—indigenous, disability status, child. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Singleton observations at the unit or SA1-quarter level are excluded. 95% confidence intervals are based on standard errors clustered at the unit level.

the basis of income or other characteristics observed by the landlord that vary across demographic groups. Table 4 includes controls for a number of additional tenant characteristics: tenure, income and benefits, rental assistance, education level, and number of occupants. Column 2 adjusts for the length of the tenant's tenure in the unit. Tenants typically receive tenure discounts, and if, for example, immigrants move more frequently than native-born tenants, they may accrue smaller tenure discounts, generating the price differential. However, the immigrant premium if anything widens after adjusting for tenure. On the other hand, disability discounts shrink after adjusting for tenure, which is consistent with less frequent moves by tenants with a disability allowing them to accrue larger tenure discounts. Tenure-

Table 4: Price Differentials with Tenant Controls

	Log Weekly Rent					
	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant	0.0092***	0.0108***	0.0086***	0.0086***	0.0084***	0.0069***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Child	-0.0016***	0.0043***	0.0034***	0.0039***	0.0039***	-0.0013***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)
Disability	-0.0107***	-0.0080***	-0.0080***	-0.0073***	-0.0072***	-0.0083***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Observations	2,915,706	2,915,706	2,915,706	2,915,706	2,915,706	2,915,706
Unit FE	✓	✓	✓	✓	✓	✓
SA1 × Quarter FE	✓	✓	✓	✓	✓	✓
Unit Controls	✓	✓	✓	✓	✓	✓
Tenure FE		✓	✓	✓	✓	✓
Income + Benefit Controls			✓	✓	✓	✓
Rental Assistance Flag				✓	✓	✓
Education Controls					✓	✓
Number of Tenants						✓

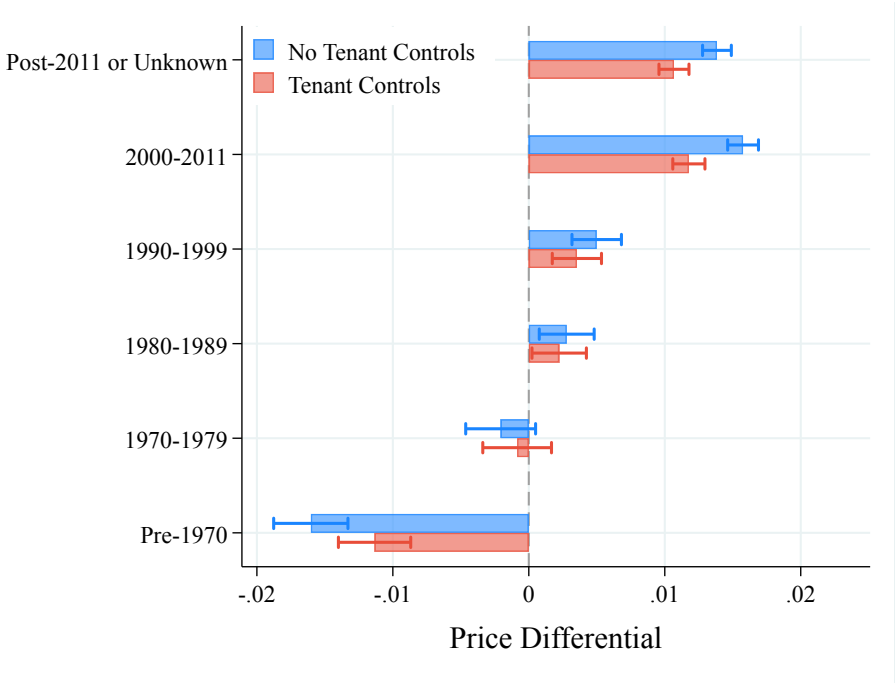
*p< 0.1, **p< 0.05, ***p< 0.01. This table reports results from estimating Equation 15. The sample includes all repeat lease terms. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Tenure fixed effects are years since the tenant moved into the unit. Income controls include a cubic in annual household income in the current year. Household income includes income and benefits, sourced from ATO income tax returns. For individuals with missing income tax returns, income is based on payment summaries from employers. Any benefits received from the DSS that are not reported on income tax returns are also included. Education controls are bins representing the highest level of educational attainment across current household members. Indigenous price differentials are also estimated in these regressions but not reported. Singleton observations at the unit or SA1-quarter level are excluded. Standard errors are clustered at the unit level and reported in parentheses.

specific premia plotted in Figure A2 reveal that immigrant and disability price differentials are quite stable over tenure.

The estimates in column 3 are adjusted for flexible functions of tenants' income and benefit receipt. If tenants with lower income are more likely to default on rent, landlords may insure against default risk with higher prices. Differences in income can explain some of the immigrant premium, but no more of the disability discount. Price differentials remain fairly consistent after adding controls for rental assistance and education in columns 4 and 5. In column 6, I find that adjusting for the number of tenants in the units can explain an additional portion of the immigrant premium. This could reflect crowding as a response to higher prices, or it could reflect landlords pricing in the costs of additional occupants.

Taken together, Table 4 suggests that much of the immigrant premium and disability discount cannot be explained by group differences in tenure, income, government benefits,

Figure 3: Immigrant Price Differentials by Arrival Period



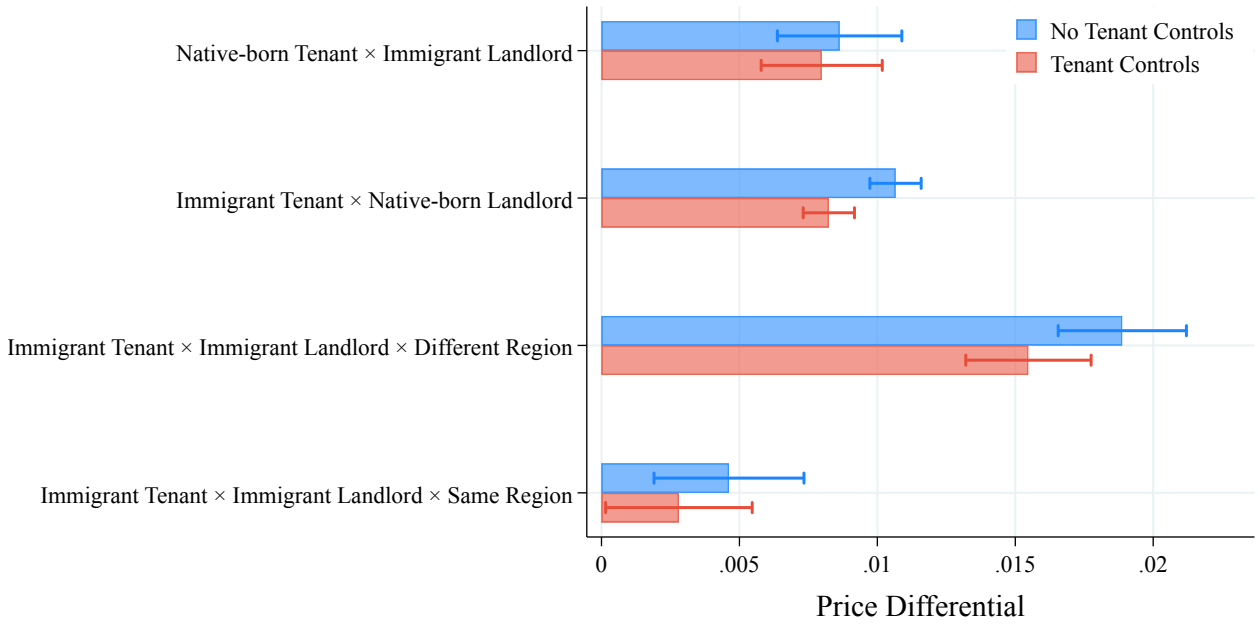
This figure reports results from estimating Equation 15. The specification includes unit fixed effects, SA1-quarter fixed effects, and unit controls. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. The specification also includes indicators for whether any tenant is indigenous, has a child, or has a disability, but these coefficients are not plotted. The estimates plotted in red are also controlled for additional tenant covariates. Tenant controls include tenure fixed effects, a cubic function of annual household income (including government benefits) in the current year, fixed effects for the highest level of educational attainment across current household members, an indicator for receiving any rental assistance, and fixed effects for the number of tenants. Singleton observations at the unit or SA1-quarter level are excluded. 95% confidence intervals are based on standard errors clustered at the unit-tenant level.

education, or number of occupants.

5.3 Heterogeneity

Next, I report results that characterize how immigrant price differentials vary according the period when immigrant tenants arrived in Australia and landlords' regions of birth. Figure 3 demonstrates that the immigrant premium is highest among immigrants that arrived in Australia since 2000. Recent immigrants plausibly face greater search frictions and have fewer outside housing options, given that they may have less information about local

Figure 4: Immigrant Price Differentials by Landlord Region of Birth



This figure reports results from estimating Equation 15. The specification includes unit fixed effects, SA1-quarter fixed effects, and unit controls. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. The specification also includes indicators for whether any tenant is indigenous, has a child, or has a disability, but these coefficients are not plotted. The estimates plotted in red are also controlled for additional tenant covariates. Tenant controls include tenure fixed effects, a cubic function of annual household income (including government benefits) in the current year, fixed effects for the highest level of educational attainment across current household members, an indicator for receiving any rental assistance, and fixed effects for the number of tenants. Singleton observations at the unit or SA1-quarter level are excluded. 95% confidence intervals are based on standard errors clustered at the unit level.

rental markets and limited local networks. The finding that immigrant price differentials are largest for recent arrivals and decline with time since arrival is therefore consistent with these frictions contributing to the immigrant premium.

Figure 4 plots price differentials by landlord origin. This specification includes the full interaction of tenant and landlord immigrant status, such that the estimated premia are reported relative to prices paid by Australia-born tenants with Australia-born landlords. I find that immigrant tenants pay the largest premium when renting from Australia-born landlord or immigrant landlords from different regions. When immigrant renters share the same region of birth as the landlord, they pay a negligble price premium. Interestingly, Australia-

born tenants also pay a premium when renting from immigrant landlords. If landlords are more likely to exhibit bias against tenant groups with different cultural backgrounds, then the finding that price differentials vary according to cultural proximity between landlords and tenants would be consistent with landlord bias contributing to immigrant premia.

6 Cost and Payment Differences

While the heterogeneity analysis provides suggestive evidence that information on outside housing options and landlord bias may contribute to the immigrant premium, another potential source outlined in Section 3 is group differences in costs. If tenants vary in the maintenance costs they generate while occupying a unit or differ in their risk of defaulting on rent, landlords may require higher prices for different groups of tenants. In this section, I test for differences in costs and payment rates by tenant demographic group, which informs whether observed price differentials could be consistent with statistical discrimination based on tenant costs.

Because I observe costs and rental income at the annual level, I construct a dataset at the unit-year level that includes the fraction of the year a given unit was occupied by a given type of tenant (or vacant). Using this dataset, I estimate specifications of the following form:

$$Y_{iy} = \alpha_i + \delta_{n(i),y} + X'_{iy}\lambda + \sum_g \beta_g ShareTenant^g_{iy} + \mu ShareVacant_{iy} + \upsilon_{iy}. \tag{16}$$

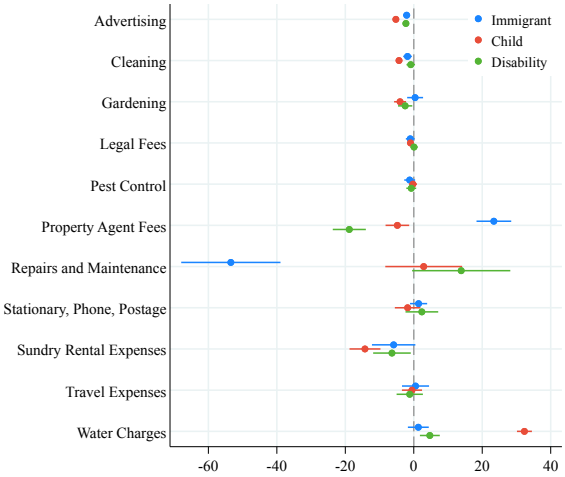
Y_{iy} is annual costs or earnings from unit i in year y. $ShareTenant^g_{iy}$ corresponds to the fraction of weeks in year y that unit i was occupied by a tenant belonging to group g. $ShareVacant_{iy}$ is the fraction of weeks in year y that unit i was vacant. Consistent with the main repeat-lease design, I include unit fixed effects α_i, neighborhood-quarter-year fixed effects $\delta_{n(i),y}$, and time-varying unit controls X_{iy}.

I first report differences in costs by the characteristics of tenants that occupy rental units in Figure 5. In panel 5a, I report group differences in costs that could plausibly be impacted by tenants: repairs and maintenance, advertising for tenants, property agent fees or commission, cleaning, gardening, pest control, legal fees, sundry rental expenses, stationary/phone/postage, travel expenses, and water charges. Most strikingly, repairs and maintenance costs are significantly lower for immigrant tenants.[32] This is inconsistent with immigrants paying higher prices due to higher costs, and if anything, may reflect underinvestment in immigrant-occupied rental properties.

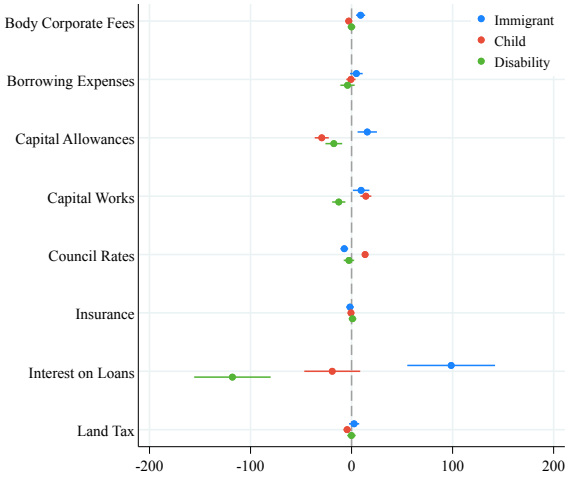
[32] I also find evidence of higher property agent fees when immigrant tenants occupy units, but of a smaller magnitude than the difference in repairs and maintenance costs.

Figure 5: Cost Differentials

(a) Tenant-Related Operating Costs



(b) Other Costs



This figure plots cost differentials from separately estimating Equation 16 for each owner-reported cost reported in rental property schedules. Each cost outcome is measured in 2024 AUD. The sample is unit-year level data that includes all unit-years represented in the repeat-lease sample. The specification includes unit fixed effects, SA1-year fixed effects, and unit controls. The plotted coefficients are the cost differentials when units are occupied by a given type of tenant. Coefficients for the fraction of the year with an unknown tenant type and the fraction of the year vacant are estimated but not plotted. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous cost differentials are also estimated in these regressions but not reported. Singleton observations at the unit or SA1-year level are excluded. 95% confidence intervals are based on standard errors are clustered at the unit level.

In panel 5b, I report cost differentials for costs that are unlikely to be directly affected by tenant identities, but provide context for differences in the financial conditions of landlords that rent to different demographic groups. I find that interest payments on loans are higher when a unit is occupied by an immigrant tenant and lower when occupied by a tenant with a disability. This motivates the possibility that groups may sort by landlords' financial situations, which may influence price differentials if landlords pass through financing costs to tenants.[33]

Next, I turn to the question of whether differences in payment behavior could explain the

[33]If instead, the gaps in financing- and capital-related costs by tenant group indicate differences in some unobserved component of unit quality, then the previous estimates of price differentials may be biased by omitted quality differences. To address this concern, I re-estimate price differentials adding controls for current and lagged cost categories reported by landlords in Table A4 and confirm that estimates of price differentials are largely unchanged after adjusting more flexibly for cost differences.

Table 5: Annual Rental Income Differentials

	Repeat Lease Sample		Full Sample	
	Log Rental Income	Log Gross Rental Income	Log Rental Income	Log Gross Rental Income
	(1)	(2)	(3)	(4)
Fraction of Year with Immigrant Tenant	0.01173***	0.01156***	0.01160***	0.01155***
	(0.00053)	(0.00053)	(0.00032)	(0.00032)
Fraction of Year with Tenant with Disability	-0.00560***	-0.00553***	0.00234***	0.00246***
	(0.00051)	(0.00051)	(0.00041)	(0.00041)
Fraction of Year with Child Tenant	0.00942***	0.00989***	0.00824***	0.00920***
	(0.00037)	(0.00038)	(0.00030)	(0.00030)
Observations	2,666,797	2,666,797	14,688,011	14,693,490
Unit FE	✓	✓	✓	✓
SA1 × Year FE	✓	✓	✓	✓
Unit Controls	✓	✓	✓	✓

*p< 0.1, **p< 0.05, ***p< 0.01. This table reports results from estimating Equation 16. The sample is unit-year level data. Columns 1 and 2 include all unit-years represented in the repeat-lease sample. Columns 3 and 4 include all unit-years represented in rental property schedules, regardless of observing rent prices. Gross rental income includes rental income and any rental-related income, such as any retained deposits or insurance payouts. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. The specification also controls for the fraction of the year the unit is occupied by a tenant with unknown characteristics, the fraction of the year the unit is vacant, and the fraction of the year the unit is occupied by an indigenous tenant. Singleton observations at the unit or SA1-year level are excluded. Standard errors are clustered at the unit level and reported in parentheses.

observed price differentials. Table 5 reports differences in rental income by the characteristics of tenants occupying rental units. Columns 1 and 2 use the sample of unit-years in the repeat-lease sample (i.e. those in which prices can be observed at some point during the year). In this sample, the direction of rental income gaps is largely consistent with price gaps: units generate more rental income when occupied by immigrant tenants and less rental income when occupied by a tenant with a disability.[34] The immigrant gap in rental income (1.1%) is similar in magnitude to the price premia (0.9%), which is consistent with little difference in payment rates between immigrants and Australia-born tenants. The disability gap in rental income is somewhat smaller than the price discount, which may indicate higher payment rates among tenants with a disability compared to tenants with no disability.[35]

Because rental income is observed for a broader set of unit-years than prices, I can also use differences in rental income to assess the extent to which price differentials extend to other segments of the rental market. Columns 3 and 4 of Table 5 report rental income

[34]Interestingly, renters with children appear to generate much higher rental income despite a negligible price premium.

[35]This is plausible because the repeat-lease sample is drawn from a lower-income, benefit-receiving segment of the rental market. Within this segment, it is possible that tenants with a disability have more stable income due to more regular benefit receipt, and therefore are more likely to fulfill rent payments.

gaps for this broader sample, which includes higher-income renters and those not receiving government benefits. In this larger sample, the rental income gap for immigrant tenants is strikingly similar to estimates using only the repeat lease sample. This is consistent with immigrant premia persisting across all income segments of the Australian rental market. However, landlords earn slightly higher rather than lower rental income from tenants with a disability in the broader sample. This may reflect that the estimated disability discount is specific to lower socioeconomic segments of the rental market. I highlight, however, that these comparisons provide only suggestive evidence on other market segments because rental income combines prices and payment rates.

7 Sorting vs. Within-Landlord Differences

Among the possible sources of price differentials discussed in Section 3, I find little evidence of cost differences generating price premia, but find suggestive evidence from heterogeneity by landlord origin and arrival period that landlord bias and search frictions may contribute. A remaining question is whether these factors generate price differentials through sorting or through within-landlord pricing differences. Sorting may generate rent premia if certain groups disproportionately match to units during periods when landlords would charge any tenant higher prices, for example because tenants with weaker outside housing options accept high-price matches. Within-landlord differences may contribute if landlords would charge group-specific prices for the same unit in the same period, for example because of landlord bias. In this section, I leverage property sales during ongoing tenancies to decompose price differentials into sorting and within-landlord components.

An ideal experiment would compare price differentials under observed landlord-tenant matches to price differentials under random assignment of tenants to landlords, which removes the possibility of sorting. The difference between rent differentials under the two regimes would identify the sorting component. Absent true random assignment, I turn to property sales during ongoing tenancies, which reassign incumbent tenants to new landlords. If new landlords do not sort by incumbent tenant characteristics and can freely adjust prices, then price premia among incumbent tenants after receiving a new landlord reflect only within-landlord factors. Comparing these pre- and post-sale premia among incumbents provides a decomposition of initial price differentials into sorting and within-landlord components.

To conduct this decomposition, I estimate the following regression using the repeat-lease

sample:

$$
\begin{aligned}
LogRent_{it} = \pi^{pre}_{n(i)} Incumbent_{it} \times PreSale_{it} + \sum_g \theta^{pre}_g Incumbent_{it} \times PreSale_{it} \times Group^g_{it} + \\
\pi^{post}_{n(i)} Incumbent_{it} \times PostSale_{it} + \sum_g \theta^{post}_g Incumbent_{it} \times PostSale_{it} \times Group^g_{it} + \\
\pi_{n(i)} NonIncumbent_{it} + \sum_g \theta_g NonIncumbent_{it} \times Group^g_{it} + \\
\alpha_i + \delta_{n(i),q(t)} + X'_{it}\lambda + \varepsilon_{it}.
\end{aligned}
\tag{17}
$$

$Incumbent_{it}$ is an indicator that the tenant in unit i on lease term date t was the incumbent prior to an ownership change. I define incumbency as the last tenant occupying a rental unit prior to any ownership change.[36] $NonIncumbent_{it}$ is an indicator that the tenant in unit i on date t is not exposed to any ownership change. $PreSale_{it}$ is an indicator that an ownership change has not yet occurred within the current tenant's spell in unit i. $PostSale_{it}$ is an indicator that an ownership change has occurred by date t within the current tenant's spell in unit i. $Group^g_{it}$ is an indicator that the tenant of unit i at time t has some group characteristic g. As in the previous analysis, I include unit fixed effects α_i, neighborhood-year-quarter fixed effects $\delta_{n(i),q(t)}$, and time-varying unit and tenant controls X_{it}.

The $\pi^{pre}_{n(i)}$, $\pi^{post}_{n(i)}$, and $\pi_{n(i)}$ parameters absorb common differences in price levels in periods before sales, after sales, and in periods not around sales (i.e. when the current tenant is not considered an incumbent). Since I allow these parameters to vary by neighborhood $n(i)$, the θ_g parameters capture price differentials in each sale-relative period compared to same-neighborhood tenants at the same sale-relative period. Under the assumption of no incoming landlord sorting by incumbent tenant type within sales in the same neighborhood, θ^{post}_g identifies the within-landlord component of price differentials among incumbent tenants.[37] Therefore, $(\theta^{post}_g/\theta^{pre}_g)$ captures the within-landlord share of initial premia and $1-(\theta^{post}_g/\theta^{pre}_g)$ captures the sorting share of initial premia. Notice that this decomposition uses the pre-sale price differential among incumbents as the denominator, which accounts for the possibility that the types of units that sell exhibit different baseline price differentials than never-sold units.

[36] This definition allows for the possibility that tenants move out in response to the ownership change. I test for compositional changes to the incumbent sample around property sales in Appendix Table A5.

[37] I provide evidence consistent with this assumption in Appendix Figure A3. Before a change in ownership, incumbent tenants tend to differ by group in the financial characteristics of landlords, where immigrant tenants and tenants with a disability tend to rent from landlords with higher and lower financing costs, respectively. After a change in ownership, however, I largely detect no significant difference across groups in the financing costs reported by landlords.

Table 6: Decomposition

	Log Weekly Rent			
	(1)	(2)	(3)	(4)
Incumbent × Pre-Sale × Immigrant	0.0154***	0.0154***	0.0132***	0.0132***
	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Incumbent × Post-Sale × Immigrant	0.0122***	0.0112***	0.0085***	0.0074***
	(0.0015)	(0.0015)	(0.0015)	(0.0015)
Incumbent × Pre-Sale × Disability	-0.0145***	-0.0139***	-0.0119***	-0.0110***
	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Incumbent × Post-Sale × Disability	-0.0083***	-0.0078***	-0.0084***	-0.0078***
	(0.0014)	(0.0013)	(0.0013)	(0.0013)
Immigrant Sorting Share	0.2071 (0.1046)	0.2765 (0.1047)	0.3598 (0.1144)	0.4411 (0.1145)
Immigrant Within-Landlord Share	0.7929 (0.1046)	0.7235 (0.1047)	0.6402 (0.1144)	0.5589 (0.1145)
Disability Sorting Share	0.4306 (0.0979)	0.4411 (0.1026)	0.2922 (0.1233)	0.2940 (0.1343)
Disability Within-Landlord Share	0.5694 (0.0979)	0.5589 (0.1026)	0.7078 (0.1233)	0.7060 (0.1343)
Observations	2,915,580	2,897,298	2,915,580	2,897,298
Unit FE	✓	✓	✓	✓
SA1 × Quarter FE	✓	✓	✓	✓
Unit Controls	✓	✓	✓	✓
Tenant Controls			✓	✓
Sale Status × SA2 FE	✓		✓	
Sale Status × SA2 × Sale Period FE		✓		✓

*p< 0.1, **p< 0.05, ***p< 0.01. This table reports results from estimating Equation 17. The sample includes all repeat lease terms. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous and child price differentials around sales are estimated in these regressions but not reported. Sale status is a categorical variable that indicates whether the unit is occupied by an incumbent tenant and the lease date is prior to an ownership change, whether the unit is occupied by an incumbent tenant and the lease date is after an ownership change, or whether the unit is occupied by a tenant not exposed to an ownership change. Sale period fixed effects are two-year bins corresponding to the time of the ownership change (including a bin for no ownership change when the current tenant is not classified as an incumbent). Tenant controls include tenure fixed effects, a cubic function of annual household income (including government benefits) in the current year, fixed effects for the highest level of educational attainment across current household members, an indicator for receiving any rental assistance, and fixed effects for the number of tenants. All specifications exclude singleton observations for the fixed effects used. Standard errors are clustered at the unit level and reported in parentheses.

Table 6 reports the results of estimating equation 17. I find that the immigrant premium among incumbent tenants falls after ownership changes, implying that sorting explains between 21% and 44% of the initial immigrant premium. Appendix Figure A4 plots coefficients from an event study analogue of Equation 17 and shows that the reduction in immigrant premia occurs sharply at the time of the ownership change. I also find evidence that the disability discount narrows after ownership changes, implying that sorting may explain a similar share of the disability-related price differentials.

I interpret these estimates as a lower bound on the sorting component for two reasons. First, if new landlords are unlikely to lower prices for incumbent tenants, some share of existing high prices attributable to sorting may persist after the sale. This would mean that

the difference ($\theta_g^{post} - \theta_g^{post}$) understates the true role of sorting in initial price differentials. Second, I find evidence that incumbent tenants differ by group in their likelihood of moving out of rental units after sale. Specifically, Appendix Table A5 demonstrates that the immigrant share of incumbent tenants is 1 to 2 percentage points higher after ownership changes relative to before the sale. Assuming that the excess attrition by Australia-born incumbents are those that would counterfactually pay the highest quality-adjusted prices, selection bias would lead to over-stating the post-sale immigrant premium and therefore, attenuate the estimate of the sorting component.

8 Conclusion

In this paper, I estimate price differentials in the Australian rental housing market and leverage unique data on operating costs and ownership changes to distinguish potential mechanisms. I find evidence that immigrant renters pay modest rent premia and renters with a disability receive a modest rent discount. Immigrant premia and disability discounts are stable over tenure and are only slightly attenuated by adjusting for differences in tenure, income, and other tenant characteristics.

I find minimal evidence that price differentials are driven by underlying differences in tenant costs, but find suggestive evidence of other channels. The immigrant premium declines with time since arrival in Australia, which is consistent with greater search frictions for recent immigrants leading them to pay higher quality-adjusted prices. The immigrant premium is also higher when landlords have a different region of birth than tenants and negligible when they share a region of birth, which suggests landlord may exhibit biased beliefs or preferences based on social or cultural proximity to tenants. When incumbent tenants are reassigned to new landlords after a property sale, the immigrant premium declines, implying that these sources generate immigrant premia in part due to differential sorting to high-price landlords.

Overall, these estimates of rent differentials are smaller than price differentials in home sales documented for racial minority groups in other contexts (Bayer et al. 2017; Box-Couillard and Christensen 2024). The difference in magnitude could be explained by price negotiations being less common in rental markets, limiting the scope for bargaining to generate large price premia for groups with weaker outside housing options. It is also possible that competitive pressures in the Australian rental market make differential pricing costly for landlords to sustain (Becker 1957). Distinguishing these potential explanations remains an important area for future work.

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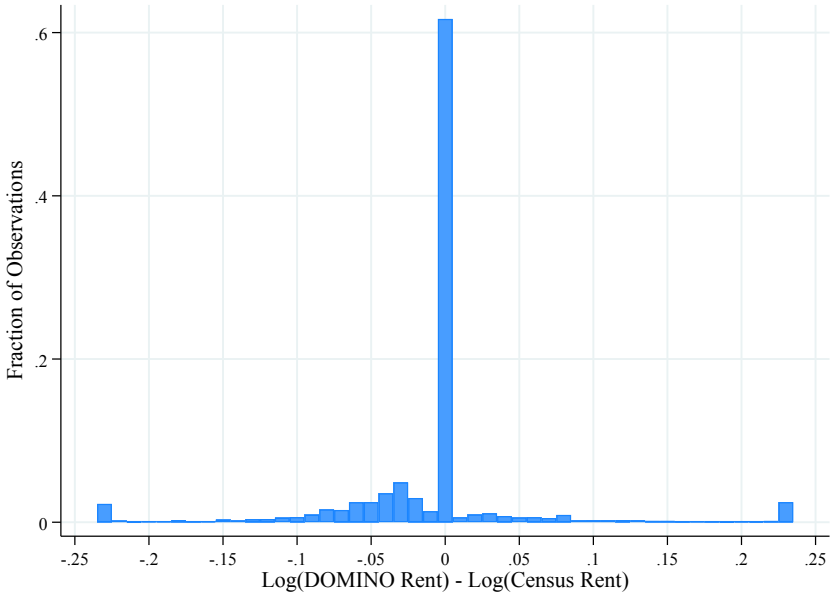
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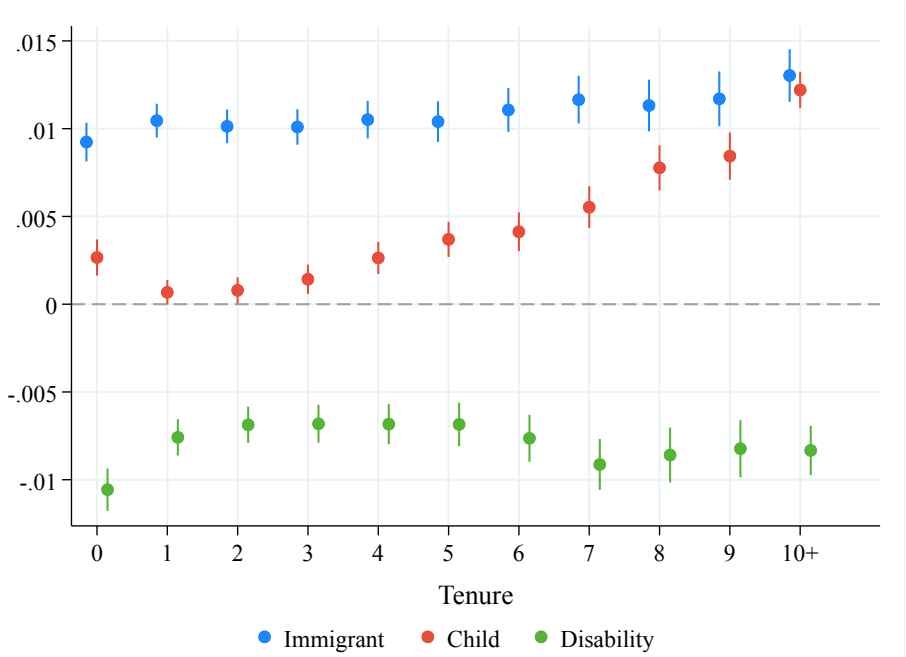
A Supplemental Tables and Figures

Figure A1: Census Rent Validation



This figure plots a histogram of the deviation between unit-level rents constructed from DOMINO and unit-level rents constructed from the 2011 Census. The sample includes August 2011 lease terms in the repeat-lease sample where at least one occupant that could be matched to a renter-occupied dwelling in the 2011 Census.

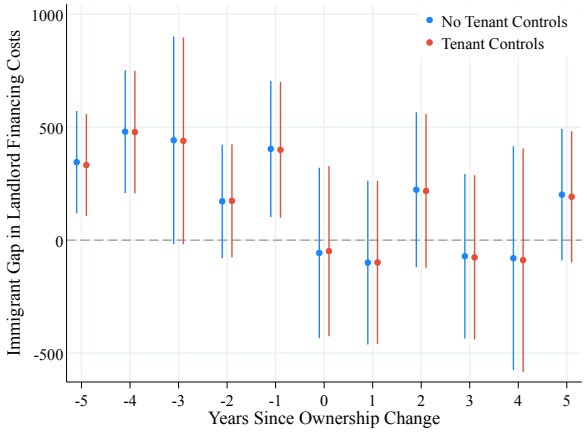
Figure A2: Heterogeneity by Tenure



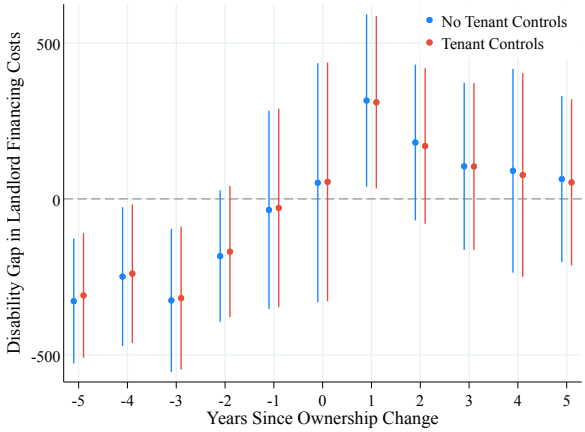
This figure reports results from estimating Equation 15. The sample includes all repeat lease terms. The plotted estimates are coefficients of tenant characteristics interacted with current tenure. The specification includes unit fixed effects, SA1-quarter fixed effects, unit controls, and tenure fixed effects. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Singleton observations at the unit or SA1-quarter level are excluded. 95% confidence intervals are based on standard errors clustered at the unit level.

Figure A3: Financing Cost Differences Around Ownership Changes

(a) Immigrant Gap



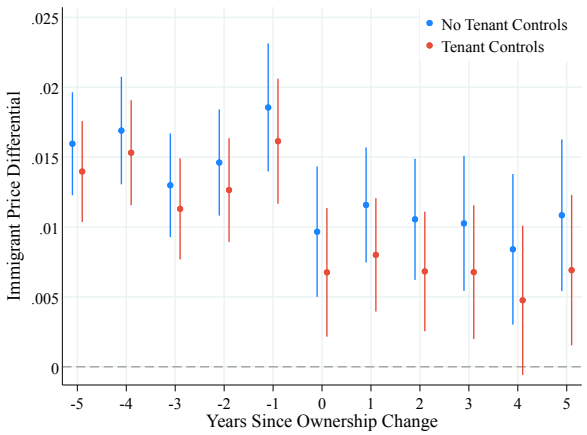
(b) Disability Gap



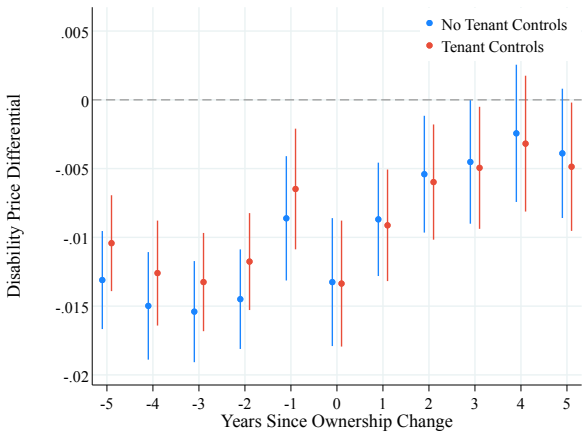
This figure reports results from estimating an event study analogue of Equation 17 where the outcome variable is landlords' financing costs (interest payments on loans and borrowing costs). The sample includes all repeat lease terms. The specification includes unit controls which include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous and child price differentials around sales are estimated in these regressions but not reported. The specifications also include fixed effects for the interaction of sale status, sale period, and the SA2 of the unit. Sale status is a categorical variable that indicates whether the unit is occupied by an incumbent tenant and the lease date is prior to an ownership change, whether the unit is occupied by an incumbent tenant and the lease date is after an ownership change, or whether the unit is occupied by a tenant not exposed to an ownership change. Sale period fixed effects are two-year bins corresponding to the time of the ownership change (including a bin for no ownership change when the current tenant is not classified as an incumbent). Tenant controls include tenure fixed effects, a cubic function of annual household income (including government benefits) in the current year, fixed effects for the highest level of educational attainment across current household members, an indicator for receiving any rental assistance, and fixed effects for the number of tenants. Singleton observations at the unit or SA1-quarter level are excluded. 95% confidence intervals are based on standard errors clustered at the unit level.

Figure A4: Price Differentials Around Ownership Changes

(a) Immigrant Differential



(b) Disability Differential



This figure reports results from estimating an event study analogue of Equation 17. The sample includes all repeat lease terms. The specification includes unit controls which include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous and child price differentials around sales are estimated in these regressions but not reported. The specifications also include fixed effects for the interaction of sale status, sale period, and the SA2 of the unit. Sale status is a categorical variable that indicates whether the unit is occupied by an incumbent tenant and the lease date is prior to an ownership change, whether the unit is occupied by an incumbent tenant and the lease date is after an ownership change, or whether the unit is occupied by a tenant not exposed to an ownership change. Sale period fixed effects are two-year bins corresponding to the time of the ownership change (including a bin for no ownership change when the current tenant is not classified as an incumbent). Tenant controls include tenure fixed effects, a cubic function of annual household income (including government benefits) in the current year, fixed effects for the highest level of educational attainment across current household members, an indicator for receiving any rental assistance, and fixed effects for the number of tenants. Singleton observations at the unit or SA1-quarter level are excluded. 95% confidence intervals are based on standard errors clustered at the unit level.

Table A1: Census Rent Validation

	Log(DOMINO Rent) - Log(Census Rent)					
	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant	0.0021			0.0021	0.0019	0.0009
	(0.0034)			(0.0034)	(0.0040)	(0.0063)
Child		-0.0016		-0.0021	-0.0018	-0.0017
		(0.0031)		(0.0031)	(0.0032)	(0.0055)
Disability			-0.0044	-0.0045	-0.0004	0.0025
			(0.0039)	(0.0039)	(0.0042)	(0.0083)
Observations	16,457	16,457	16,457	16,457	16,236	9,576
SA2 FE					✓	
SA1 FE						✓

*p< 0.1, **p< 0.05, ***p< 0.01. This table reports estimates of regressing the deviation between unit-level rents constructed from DOMINO and unit-level rents constructed from the 2011 Census on demographic characteristics of tenants. The sample includes August 2011 lease terms in the repeat-lease sample where at least one occupant that could be matched to a renter-occupied dwelling in the 2011 Census. The specifications reported in columns 4, 5, and 6 also include a parameter for indigenous tenants, but these estimates are not reported. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A2: Descriptive Statistics on Units with Tenant Characteristic Changes

	Repeat-Lease Sample	Δ Immigrant	Δ Disability	Δ Child
	(1)	(2)	(3)	(4)
Lease Characteristics				
Weekly rent	325.11 (108.30)	322.57 (96.00)	295.42 (87.46)	324.91 (98.22)
Tenant Characteristics				
Household members	3.095 (1.770)	3.056 (1.760)	3.033 (1.802)	3.099 (1.675)
Any immigrant member	0.419 (0.493)	0.474 (0.499)	0.352 (0.477)	0.406 (0.491)
Any disabled member	0.230 (0.421)	0.227 (0.419)	0.444 (0.497)	0.217 (0.413)
Any child member	0.511 (0.500)	0.501 (0.500)	0.480 (0.500)	0.538 (0.499)
Tenure (years)	4.729 (3.582)	4.237 (3.503)	4.479 (3.578)	4.325 (3.514)
Annual income + benefits	78,017 (52,677)	77,494 (52,028)	68,910 (46,455)	79,486 (50,775)
Any rental assistance	0.685 (0.464)	0.691 (0.462)	0.773 (0.419)	0.691 (0.462)
Weekly rental assistance / rent	0.153 (0.135)	0.153 (0.134)	0.190 (0.138)	0.153 (0.133)
Unit Characteristics				
Separate house	0.680 (0.466)	0.686 (0.464)	0.722 (0.448)	0.716 (0.451)
Rowhouse/townhouse	0.169 (0.375)	0.186 (0.389)	0.160 (0.366)	0.160 (0.366)
Apartment/flat or other	0.151 (0.358)	0.128 (0.334)	0.118 (0.323)	0.124 (0.330)
Annual gross rental income (2024 AUD)	21,064 (7,178)	20,960 (6,449)	19,218 (5,914)	21,109 (6,589)
Total annual costs (2024 AUD)	24,590 (15,025)	25,353 (14,841)	22,530 (13,500)	25,132 (14,703)
Observations (Lease Terms)	2,915,706	775,045	815,711	1,437,743
Number of Rental Units	775,859	173,436	175,202	328,298

This table reports the means and standard deviations of various characteristics of lease terms in the repeat-lease sample. Column 1 reports characteristics of the full sample. Column 2 reports characteristics for a sub-sample of units that ever switch between any and no immigrant tenants occupying the unit. Column 3 reports characteristics for a sub-sample of units that ever switch between any and no tenants with a disability occupying the unit. Column 4 reports characteristics for a sub-sample of units that ever switch between any and no tenants with children occupying the unit. Total annual costs include council rates, insurance, repairs and maintenance, water charges, interest on loans, property agent fees, depreciation, sundry expenses, capital works deductions, stationary, phone charges, postage, body corporate fees, travel costs, land tax, borrowing costs, gardening, pest control, cleaning, advertising for tenants, and legal fees.

Table A3: Price Differentials in Restricted Samples

	Log Weekly Rent			
	Main Sample	No Stale Tenant Dates	No Recent Renovation	Both
	(1)	(2)	(3)	(4)
Immigrant	0.0092***	0.0092***	0.0095***	0.0093***
	(0.0004)	(0.0004)	(0.0005)	(0.0005)
Child	-0.0016***	-0.0019***	-0.0012***	-0.0013***
	(0.0002)	(0.0002)	(0.0003)	(0.0003)
Disability	-0.0107***	-0.0105***	-0.0090***	-0.0088***
	(0.0003)	(0.0003)	(0.0005)	(0.0005)
Observations	2,915,706	2,734,791	1,598,009	1,482,939
Control Weekly Rent	287.50	290.78	281.89	285.48
Unit FE	✓	✓	✓	✓
SA1 × Quarter FE	✓	✓	✓	✓
Unit Controls	✓	✓	✓	✓

*p< 0.1, **p< 0.05, ***p< 0.01. This table reports results from estimating Equation 15 in restricted samples. Column 1 reports estimates from the full repeat-lease sample. Column 2 excludes lease terms with where tenants were linked as cohabitants due to a tenant with no move out date (a potentially stale record). Column 3 restricts to lease terms with no recent renovation in the sample period, as measured by an increase in capital works deductions claimed by the owner. Column 4 imposes both sample restrictions from columns 2 and 3. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous price differentials are also estimated in these regressions but not reported. Singleton observations at the unit or SA1-quarter level are excluded. Standard errors are clustered at the unit level and reported in parentheses.

Table A4: Price Differentials Controlling for Costs

	Log Weekly Rent					
	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant	0.0092***	0.0092***	0.0092***	0.0091***	0.0090***	0.0091***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Child	-0.0016***	-0.0015***	-0.0015***	-0.0016***	-0.0015***	-0.0016***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Disability	-0.0107***	-0.0106***	-0.0106***	-0.0106***	-0.0106***	-0.0106***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Observations	2,915,706	2,915,706	2,915,706	2,915,706	2,915,706	2,915,706
Control Weekly Rent	287.50	287.50	287.50	287.50	287.50	287.50
Unit FE	✓	✓	✓	✓	✓	✓
SA1 × Month FE	✓	✓	✓	✓	✓	✓
Unit Controls	✓	✓	✓	✓	✓	✓
Capital Cost Controls		✓	✓	✓	✓	
Property Cost Controls			✓	✓	✓	
Financing Cost Controls				✓	✓	
Operating Cost Controls					✓	
Total Cost Controls						✓

*p< 0.1, **p< 0.05, ***p< 0.01. This table reports results from estimating Equation 15. The sample includes all repeat lease terms. Cost controls include a cubic function of annual costs reported in the year of the lease term and a cubic function of costs reported in the year prior to the lease term. Capital costs include depreciation claimed and capital works deductions. Property costs include council rates, land tax amount, body corporate fees, and insurance. Financing costs include interest on loans and borrowing costs. Operating costs include repairs and maintenance, advertising for tenants, property agent fees or commission, cleaning, gardening, pest control, legal fees, sundry rental expenses, stationary/phone/postage, travel expenses, and water charges. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous price differentials are also estimated in these regressions but not reported. Singleton observations at the unit or SA1-quarter level are excluded. Standard errors are clustered at the unit level and reported in parentheses.

Table A5: Compositional Changes Around Ownership Changes

	𝟙{Immigrant Tenant}				𝟙{Tenant with a Disability}			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Sale	0.0208***	0.0211***	0.0112***	0.0127***	0.0096***	0.0071**	-0.0056*	-0.0048
	(0.0030)	(0.0030)	(0.0029)	(0.0029)	(0.0031)	(0.0031)	(0.0031)	(0.0031)
Observations	2,915,690	2,901,112	2,915,690	2,901,112	2,915,690	2,901,112	2,915,690	2,901,112
Pre-Sale Incumbent Mean	0.4007	0.4016	0.4007	0.4016	0.2374	0.2364	0.2374	0.2364
Unit FE	✓	✓	✓	✓	✓	✓	✓	✓
SA1 × Quarter FE	✓	✓	✓	✓	✓	✓	✓	✓
Unit Controls	✓	✓	✓	✓	✓	✓	✓	✓
Tenant Controls			✓	✓			✓	✓
Ever Sold × SA2 FE	✓		✓		✓		✓	
Ever Sold × SA2 × Sale Period FE		✓		✓		✓		✓

*p< 0.1, **p< 0.05, ***p< 0.01. This table estimates of compositional changes in incumbent tenants observed at initial rental units around ownership changes. The sample includes all repeat lease terms. Unit controls include fixed effects for rental age, fixed effects for time since any recent renovation (including a category for no recent renovation), and fixed effects for time since any recent renovation interacted with the continuous size of the renovation. Rental age is defined as years since any owner first reported renting the unit. Time since any recent renovation is measured as years since an increase in capital works deductions claimed by the owner. The size of the renovation is the amount of capital works deductions claimed in the year of the initial increase. Indigenous and child price differentials around sales are estimated in these regressions but not reported. Ever sold is an indicator for the current tenant is ever exposed to an ownership change (i.e. is classified as an incumbent tenant). Sale period fixed effects are two-year bins corresponding to the time of the ownership change (including a bin for no ownership change when the current tenant is not classified as an incumbent). Tenant controls include tenure fixed effects, a cubic function of annual household income (including government benefits) in the current year, fixed effects for the highest level of educational attainment across current household members, an indicator for receiving any rental assistance, and fixed effects for the number of tenants. All specifications exclude singleton observations for the fixed effects used. Standard errors are clustered at the unit level and reported in parentheses.