

# Rational Eviction: How Landlords Use Evictions in Response to Rent Control

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## Abstract

Rent control policies seek to ensure affordable and stable housing for current tenants; however, they also increase the incentive for landlords to evict tenants since rents re-set when tenants leave. We exploit variation across zip codes in policy exposure to the 1994 rent control referendum in San Francisco to study the effects of rent control on eviction behavior. We find that for every 1,000 newly rent controlled units in a zip code, there were 12.05 additional eviction notices filed in that zip code and an additional 4.6 wrongful eviction claims. These effects were concentrated in low income zip codes.

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# 1 Introduction

As housing prices rise, more cities are turning to rent control policies with the goal of ensuring long-term affordable housing. In a typical rent control policy, leases must be renewed at statutorily limited rent increases. Rent control policies reduce the returns from operating in the rental market, creating well-studied incentives to leave the rental market. Many rent control policies include “vacancy decontrol” provisions, which allow landlords to reset rents to market rates when tenants move. These policies limit the reductions in returns to operating in the rental market, but create incentives to induce tenant turnover, either through tenants moving or evictions. The more tenants move, the more often a landlord can raise rents to market rates.

In this paper, we examine whether a rent control expansion led to more eviction notices and increased complaints about wrongful evictions in San Francisco. We use a differences-in-differences research design exploiting zip code-level variation created by a 1994 ballot referendum that led to the removal of a rent control exemption for small buildings built before 1980. We find substantial increases in both the number of eviction notices and wrongful evictions claims filed with the San Francisco Rent Board in areas more affected by the policy change.

We first document a sharp increase in eviction notices reported to the Rent Board overall starting in 1995, when rent control is expanded. In San Francisco, under the Rent Ordinance, unless the tenant is in breach of the lease in some way, legal evictions require the landlord or a member of their immediate family to occupy the unit after the tenant leaves, remove all rental units from the rental market under the Ellis Act, or demolish the rental unit. The rise in eviction notices is concentrated in the types of evictions that most related to rent control-based incentives: owner move-in evictions and Ellis Act evictions. These evictions remove units from the rental stock, at least in the short term. We do not observe large increases in evictions that landlords cannot directly control, such as evictions for non-payment.

We also observe a sharp increase in claims of illegal evictions. Illegal evictions would include a misrepresentation of the owner’s plans to the tenant to convince them to leave earlier, incorrect notice being given around an eviction, or a self-help eviction where the landlord either removes the tenant directly or interferes with the habitability of the unit. While there are many ways for a landlord to legally evict, these generally do not allow the landlord to receive the immediate benefit of resetting the rent to the market rate. For example, with an Ellis Act eviction, the owner must remove all units from the rental market. In contrast, illegal or “wrongful” evictions may produce this benefit for the landlord.

We conduct a zip code level difference-in-differences analysis where we compare zip codes with more and fewer units that newly become eligible for rent control based on their age and size. We find an 82% increase in eviction notices filed with the Rent Board and a 124% increase in the number of wrongful eviction claims for zip codes with the average level of new exposure to rent control. The increase in evictions occurs gradually over the five years following the policy change, likely due to market rents (and therefore incentives to evict) increasing over time.

Finally, we document heterogeneity with respect to median income in a given zip code, where effects on low income zip codes are 66%-200% higher than effects in high income zip codes. This heterogeneity is important in the setting of rent control where the goal of the policy is to prevent lower income tenants from being displaced from their homes when rents rise. Understanding the distributional consequences is important for policy makers.

Our paper contributes to the literature on rent control (Autor et al. (2014), Early (2000), Glaeser and Luttmer (2003), Olsen (1972), Sims (2007)) by examining a new measure by which landlords respond to rent control regulations and documenting that this response leads to formal complaints filed by tenants. Much of the literature looking at supply side responses focuses on how supply to the rental market is affected. For example, Diamond et al. (2019) use the same institutional setting and similar research design and find that landlords reduced the rental supply by 15% by selling to owner-occupants and redeveloping buildings. Our analysis examines how landlords who stay in the rental market adjust their business practices when they do not remove units from the market. Our results highlight that landlords are able to use the evictions process to circumvent rent control policies.

Asquith (2019) examines how landlords in San Francisco respond to price increases under rent control using bus lines as an instrument for prices. He finds evidence of an increase in owner move in evictions, consistent with our findings, but no evidence of increases in Ellis Act evictions. We make two additional contributions that complement these findings: we document the effects of an expansion of rent control, which may affect the market differently than price changes, and specifically study “wrongful” eviction claims.

The rest of this paper is organized as follows. Section 2 discusses the institutional details of rent control in San Francisco. Section 3 describes the data, and Section 4 describes our empirical design. Section 5 describes our results where we find an increase in wrongful eviction claims and eviction notices following the removal of a rent control exemption. Finally, Section 6 concludes.

## 2 Background of San Francisco’s Rent Control Policies

In 1979, San Francisco passed its Rent Ordinance. Buildings built and occupied before 1979 above a certain size had rent increases capped at 60 percent of the regional CPI<sup>1</sup>. Under this legislation, rents will likely fall below market rents over time. In 1979, there was an exception for small (less than five units), owner-occupied buildings from rent control. This exemption was lifted by a ballot referendum in 1994<sup>2</sup>, expanding the number of units subject to rent control within San Francisco by about 68% for the average zip code. As of 2015, roughly 60% of San Francisco’s rental stock is rent controlled (40% of the overall housing stock), largely because a sizable amount of the rental stock was built before 1979 (San Francisco Planning Department 2018).

San Francisco’s rent control policy includes “vacancy decontrol,” which allows landlords to reset the rent to market rate when a tenant leaves the unit. These regulations also introduce “just cause” regulations, where landlords must have grounds for a lease termination or eviction<sup>3</sup>. Landlords can only evict tenants for one of 16 specific legal reasons, and they must have an “honest intent, without ulterior motive”.

Landlords can then raise rents to market only in a limited number of situations. First, they can do so when a tenant leaves the apartment. For this reason, landlords might be incentivized to offer a cash buyout to existing tenants to induce them to move. Landlords can also perform an owner-move in eviction where they or an immediate family member begin occupying the unit<sup>4</sup>. On one hand, this is less financially beneficial, since while they can raise the rent after an owner move-in eviction, they would do so on themselves or an immediate family member, and if they re-let the unit before three years has passed, the rent control regulations prohibit them from raising the rent above what the prior tenant would have paid<sup>5</sup>. On the other hand, it is easy for landlords to evade these laws. The Rent Board only audits 10% of units each year, and if a unit’s rent price is found to be higher than what is allowed based on owner tenancy and rent control laws, the landlord

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<sup>1</sup>The initial limit on rental increases was 7 percent per year which was lowered to 4 percent per year in 1984 and to 60 percent of CPI in 1992

<sup>2</sup>The ballot referendum, Proposition I, passed in a close election (51% vs 49%) on November 8, 1994, and went into effect on December 22, 1994. The rent charged on May 1, 1994, was considered to be the “base rent” for newly rent controlled buildings.

<sup>3</sup>Just cause regulations are generally passed at the same time as rent control policies. In San Francisco, the just cause regulations passed with the 1979 Rent Ordinance

<sup>4</sup>In order for an owner move-in eviction to be valid, the owner or relative must move into the unit within three months of an eviction notice, and must occupy the unit for at least 36 continuous months. An immediate family member moving into the unit can be grounds for an owner move-in eviction, but only if the owner already resides in the building. Further, if the owner moves out of the unit before their three-year required tenancy is up, the rent charged to the next tenant must not exceed what would have been charged to the tenant who lived in the unit prior to the landlord moving in.

<sup>5</sup><https://sfrb.org/topic-no-204-evictions-based-owner-or-relative-move>

will be assessed a fee of up to \$1,000 per month when excess rent was charged<sup>6</sup>.

Panel A Figure 1 shows the total number of evictions per year in San Francisco split by type. Prior to the policy change, all eviction types trend comparably. After the policy change, nuisance and non-pay evictions stay constant, while there are increases in owner move-in, breach, and “other” evictions. The evictions that rise are “no-fault” evictions, which landlords directly control and we would expect to rise most in response to a rent control policy. However, these eviction types are also subject to many regulations, and it is possible that many of these eviction notices were wrongfully handled by landlords.

Wrongfully handled “no-fault” evictions are one reason why a tenant might file a wrongful eviction claim with the Rent Board. Other reasons could include being forced out because of repair issues or because of landlord harassment. One of the first steps in fighting a wrongful eviction is filing a claim with the San Francisco Rent Board, which handles reports of evictions that violate Rent Ordinances. If a landlord is found to have wrongfully evicted a tenant in violation of the Rent Ordinances, they face financial penalties, which can be significant.

In general, the eviction process begins when a landlord serves an eviction notice to their tenant. The landlord has ten days to file the eviction notice with the Rent Board, but for no-fault evictions, more notice is required. For example, Ellis Act evictions require the eviction notice to be filed with the Rent Board 120 days before the withdrawal date. If the tenant does not move out before the withdrawal date, then the landlord can file and serve an “Unlawful Detainer Summons and Complaint” to the tenant in order to remove them from the unit, to which the tenant has five days to respond in court. The court will set a trial date and if the landlord wins, a sheriff will carry out the eviction.

A wrongful eviction claim can also be made at any time during the eviction process<sup>7</sup>, though many grounds for wrongful eviction inherently require a notice to be served first<sup>8</sup>. There is no financial cost to filing a wrongful eviction claim; however, the tenant must be aware of the option to do so and pay the hassle cost of doing so. Once a wrongful eviction claim is filed, the Rent Board determines whether there is evidence of an unlawful eviction. If so, there will be an investigatory hearing before an Administrative Law Judge, who prepares a report for the Rent Board of Commissioners. The Rent Board of Commissioners will then determine whether to take further action (including making a referral to the

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<sup>6</sup>A punishment of up to six months of imprisonment in the County Jail is also possible for landlords who violate the rent control laws.

<sup>7</sup>A tenant may also choose to sue the landlord for damages, though this would likely be a more expensive route and may require waiting until the eviction is complete, rather than fighting the eviction so that it never takes place.

<sup>8</sup>For example, a wrongful eviction claim may allege that the “just cause” written on the eviction notice is incorrect or does not apply. The eviction notice must have been served before this wrongful eviction claim can be submitted since it refers to the eviction notice itself.

District Attorney for criminal prosecution <sup>9</sup>). Wrongful eviction claims vary with tenant incentives. The longer a tenant stays in a rent controlled unit, the lower their relative rent, and the higher the benefit to filing a wrongful eviction claim if they are evicted.

### 3 Data

In this section, we describe the data that we use to measure the expansion of this rent control policy at the zip code level and the response to this policy by landlords in terms of eviction notices and wrongful eviction claims filed by tenants.

#### 3.1 Measuring Rent Control

To understand the level of rent control treatment in each zip code, we use data on each unit’s address, the number of units in the building, and the year the building was built for all residential units in the San Francisco Assessor’s Secure Housing Roll from 1999. Since the rent control policy only affected small buildings with fewer than five units that were owner-occupied and built before 1980, we categorize buildings as newly rent-controlled if they have less than five units and were built in 1979 or earlier. The policy only affected owner-occupied units, so we further restrict our definition to buildings with at least two units. We do not have an exact owner-occupancy measure in 1994 when the policy was passed. A map of our measure by zip code is available in Appendix Figure A1.

Some buildings may be counted as treated when they were actually rent-controlled both before and after the policy change due to not being owner-occupied. This mis-categorization may attenuate our results<sup>10</sup>. In Appendix Section 2, we discuss an alternative measure of exposure that attempts to adjust for this owner occupancy element, defining an alternative treatment measure as the number of buildings with between two and four units, which were built before 1980, and which were owner occupied in 1999. Our results are robust to using this different measure. See Appendix Section 2 for a detailed discussion of the creation of the alternative treatment exposure measure, and Appendix Section 1 for a detailed discussion of the data cleaning procedure.

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<sup>9</sup>The Rent Board does not publish statistics on the proportion of eviction notices or wrongful eviction claims that result in criminal prosecution or other legal action.

<sup>10</sup>This attenuation results from the fact that all units we classify as untreated were definitively not treated, but some units we classify as being treated may not have been treated in reality due to not being owner occupied. The treatment effect based on number of treated units may actually be higher on a per-unit basis because the number of treated units is overestimated

### 3.2 Measuring Evictions

We measure the response of landlords to the rent control expansion using the zip code level number of eviction notices and wrongful eviction claims. Both measures originate with the San Francisco Rent Board. Our eviction notices data have information on the address and reason for the eviction. During our sample period, these data are incomplete in terms of the reason for the eviction and the zip code of many units; we discuss these limitations and our attempts to rectify the missing information in Appendix Section 3.

Both wrongful eviction claims and eviction notices can only be submitted by individuals who already live in or are landlords of rental units subjected to rent control. When rent control expands, even if the total number of evictions stays constant, the number of wrongful evictions claims could increase solely due to more tenants living in rent controlled apartments and therefore allowed to submit a wrongful eviction claim to the Rent Board. We discuss the implications of this and rule out that this mechanical effect drives results in Section 4.

Panels B, C, and D of Figure 1 show the average number of eviction notices, owner move in eviction notices, and wrongful evictions claims by zip code for zip codes in the lowest, middle, and highest tercile of the number of units newly treated by rent control as determined by the age and unit size of the building. Before the referendum’s passage in 1994, all three terciles had roughly constant average reports of eviction notices and wrongful eviction claims. Starting in 1996, we see sharp increases in the number of wrongful eviction claims made in zip codes with medium or high levels of units newly exposed to rent control policies. However, in zip codes where relatively few units are newly exposed to rent control, we see that wrongful eviction claims remain roughly constant.

While reliable zip code level data on eviction notice types is not available before 1994, we plot owner move in evictions by treatment terciles starting in 1994 when the data start being available. From this, we see that the increase in owner move in evictions in panel A is driven largely by zip codes in the highest treatment tercile.

Summary statistics for our analysis dataset are displayed in Table 1. Panel A reports characteristics at the zip code level from the 1990 Census. We report these statistics for zip codes overall, for zip codes below the median level of exposure (the “low treatment” group), and for zip codes above the median level of exposure (the “high treatment” group). We also report the difference for each characteristic between the control and treatment groups and test whether this difference is statistically significant. We find no differences between our less treated and more treated zip codes.

Panel B examines housing characteristics. We see that there are differences across our highly treated and less treated zip codes in both pre- and post-period housing character-

istics. Our highly treated zip codes both have more newly rent controlled units as well as more rent controlled units before the policy change. There are also differences in levels of the number of eviction notices and wrongful eviction claims before the policy. This difference should not be surprising, given that there is visual evidence of these differences in levels in Figure 1. We see growing differences in the number of eviction notices and wrongful eviction claims post policy.

## 4 Theoretical Context and Empirical Design

We model landlords as making rational decisions about whether to attempt to evict a tenant by weighing the expected benefit of evicting against the expected costs of pursuing an eviction. The expected benefit is the additional rent a landlord could charge by resetting the rent to market rate. Since renting an apartment generally becomes more expensive over time, incentives to wrongfully evict also increase gradually over time and will be higher in times where the market rents are rising faster than the allowed increase.

Landlords also have the option to fully comply with regulations or willfully attempt a wrongful eviction. Wrongful eviction brings the highest benefit to the landlord, since legal evictions require renting to family members (owner move in evictions), buying out the lease, or removing all units from the rental market<sup>11</sup>.

The costs of evicting include the paperwork costs of initiating the eviction, the likelihood of the tenant fighting the eviction and winning, and the cost to the landlord if that tenant successfully challenges the eviction<sup>12</sup>. A landlord is less likely to wrongfully evict a tenant who the landlord anticipates will fight the eviction or has the means to win a larger settlement in the ensuing legal fight. Tenants with lower incomes or who live in neighborhoods with lower median incomes may be even more likely to face a wrongful eviction, since their landlords may believe that lower income is correlated with a lower likelihood of hiring legal counsel and effectively navigating the legal system.

Altogether, we analyze three hypotheses. First, we expect that the rent control policy will lead to increased evictions. Next, we hypothesize that the increase in eviction notices and complaints will increase gradually over time, rather than a single spike directly after the policy passes. As general equilibrium forces play out and some landlords leave the

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<sup>11</sup>Legal evictions include evicting in order to sell all units in a building (Ellis Act Eviction), paying the tenant to leave voluntarily, or having the landlord or an immediate family member move into the unit. Landlords can also legally evict for breach of contract if tenants do not pay their rent. Apart from non-pay evictions, all legal evictions either present new costs or do not include the benefit of resetting to market rent.

<sup>12</sup>There are other costs to landlords of evicting, such as the cost of retaining an eviction specialist, which are constant across neighborhood and rent control status.



rental market, we expect the eviction level to stabilize, possibly returning back to its initial level. Finally, we explore heterogeneity with respect to median income of zip codes, to understand whether individuals who live in low income neighborhoods are even more likely to receive an eviction notice or submit a complaint of wrongful eviction.

#### 4.1 Effect of Rent Control on Eviction Notices

To explore whether zip codes with more newly rent controlled units experience increased eviction rates, we use a continuous treatment difference-in-differences design. This design exploits variation across zip codes in the number of units who become exposed to rent control policies after the passage of the voter referendum in late 1994.

The parameter we identify is the average causal response (ACR), which indicates the additional increase in evictions due to an additional treated unit (Angrist and Imbens (1995)). In order to identify the ACR, we must make three assumptions: the Stable Unit Treatment Value Assumption (SUTVA), parallel trends, and the homogeneity of the treatment effect across differently treated groups (Callaway et al. (2021)).

The Stable Unit Treatment Value Assumption requires that there are no spillovers between our treatment groups. This assumption could be violated in our setting if there are either anticipatory effects or spillovers across different zip codes. We find no evidence of anticipatory effects in our raw data plots in Figure 1. Additionally, given that the ballot referendum passed by a small margin, it is unlikely that tenants or landlords would have known whether the referendum would pass ahead of time (Harrison 1994).

A bigger concern is spillovers across units. In order to interpret our results as causal effects, we must assume units in less treated areas are not increasingly (or decreasingly) evicted due to price equilibrium effects caused by the policy change. This is more likely to be true in areas that were previously heavily rent controlled, since the high stock of rent controlled units would lead to stronger equilibrium effects. While we cannot measure overall rent effects due to lack of data, we can control for the number of previously treated units. We also can sign the size of the bias under the assumption that removing more units from market rents would create upward pricing pressure on market rents. This pricing pressure would create incentives for landlords in all rent controlled units to evict tenants, so if neighborhoods that are less treated by the policy still experience an increase in evictions due to the policy, our estimated effects will be a lower bound.

We also make a parallel trends assumption which requires that neighborhoods would have experienced similar trends in eviction levels had they been assigned a different number of treated units. Our raw data plots support this assumption.

Finally, we must assume the homogeneity of treatment effects across differently treated

groups. Regardless of the number of rent controlled units of zip codes, the treatment effect of adding an additional rent controlled unit must be the same. This assumption would be violated if zip codes (or the individuals who live there) could select into different levels of treatment, since the covariates of individuals in neighborhoods who selected into different levels of treatment may affect their potential treatment effect. If this was the case, we would expect to see differences in characteristics potentially related to effect sizes based on the number of treated units. We find no evidence of differences in characteristics across groups in Panel A of Table 1. In Appendix Table A2, we examine these relationships in a linear regression framework and also find no evidence of demographic characteristics predicting treatment.

To identify the ACR, we estimate the following linear regression model:

$$Y_{it} = \alpha_i + \tau_t + \beta \cdot \text{Post}_t \times \text{Number Treated}_i + \epsilon_{it} \quad (1)$$

where  $\alpha_i$  are zip code level fixed effects,  $\tau_t$  are year fixed effects,  $\text{Post}_t$  is an indicator for whether the year is 1995 or after, and  $\text{Number Treated}_i$  is the number of newly treated units at the zip code level, calculated as discussed in Section 3.

We do not include time varying zip code controls due to lack of availability of data during the time period we study. We additionally estimate specifications that include treatment-tercile-specific linear time trends to bolster our parallel trends assumption and specifications that include the interaction between the number of previously treated units and the post period to account for spillovers.

## 4.2 Dynamics

To explore the hypotheses that the effects occur gradually over time, and possibly decline after the market has had time to react, we break down the “pre” and “post” periods into individual years in an event study specification. We interact each year with the number treated units in a given zip code. There is a single treatment time in our setting, so event time and calendar time are equivalent. Our event study specification is:

$$Y_{it} = \alpha_i + \tau_t + \sum_{t \neq 1994} \beta_t \cdot \text{Year}_t \times \text{Number Treated}_i + \epsilon_{it} \quad (2)$$

We normalize to 1994, the year that the policy passed.

### 4.3 Heterogeneity by Median Income

Finally, we explore heterogeneity by median income in the 1990 census. We group zip codes into whether their median income in the 1990s Census is above or below the median across zip codes. We estimate the following specification:

$$Y_{it} = \alpha_i + \tau_t + \gamma_t \times \text{Low Income}_i + \beta_1 \cdot \text{Post}_t \times \text{Number Treated}_i + \beta_2 \text{Post}_t \times \text{Number Treated}_i \times \text{Low Income}_i + \epsilon_{it} \quad (3)$$

where  $\text{Low Income}_i$  is an indicator for whether a zip code’s median income was below the median for San Francisco in the 1990 Census and  $\gamma_t$  are year-high income fixed effects.

## 5 Results

### 5.1 Effect of Rent Control on Eviction Notices

Table 2 reports our coefficient estimates from Equation 1. We examine the effects of rent control expansion on eviction notices in Panel A and on wrongful eviction claims in Panel B. Column 1 reports the main difference-in-differences effect in thousands of treated units. For every additionally 1,000 newly rent controlled apartments, there are 12.05 additional eviction notices filed in that zip code and an additional 4.6 wrongful eviction claims. Since there were about 2791 newly rent controlled units in each zip code on average, these effects constitute an 82% and 122% increase over the pre-treatment average level of evictions for the averagely-treated zip code<sup>13</sup>.

In Column 2, we add treatment tercile specific fixed effects. In Column 3, we control for the effect of previously rent controlled units by including the interaction term between the number of previously rent controlled units and the post period. Our results are robust to the inclusion of these additional controls.

We cluster standard errors at the zip code level, our level of treatment variation. Since there are only 25 zip codes, we report p-values from a wild cluster bootstrap, which more accurately estimates clustered standard errors when the number of clusters is small

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<sup>13</sup>In Appendix figure A8, we show that wrongful evictions increase as a constant fraction of eviction notices.

(Cameron, Colin A. et al. (2008); Canay et al. (2021)). P-values for each relevant regression estimate are calculated using the routine provided by Roodman et al. (2019).

## 5.2 Dynamics

Figure 2 reports our event study coefficient estimates of Equation 2. While there is very little difference between the high and low exposure zip codes before the policy changed, supporting the parallel trends assumption, after the policy changed, we see that both eviction notices and wrongful eviction claims rise only in zip codes with higher levels of exposure. The effect increases over time, consistent with the changing incentives to evict. We report our difference-in-difference estimates in the dashed line.

Evaluating the direct effects of the policy on rent is difficult as rent data at the zip code level from the 1990s is difficult to find. In Appendix Figure A7, we look at the effects of the policy on rent using zip code level rents from the 1980, 1990, and 2000 Census and find weak evidence that rents zip codes that were heavily exposed to this rent control expansion experienced small declines relative to other zip codes, possibly due to the direct effects of the policy change.

We focus primarily on the short-run effects, as the parallel trends assumptions for our identification strategy become harder to justify in the longer run. However, in Appendix Figure A6, we present suggestive evidence on the longer term effects on eviction notices and compare these effects to the difference between aggregate rent prices and statutorily allowed rent increases. The effects converge to the expected mechanical increase of 57% by the early 2000s and are higher in periods where rent prices are rising faster than the statutorily allowed rent increases.

## 5.3 Heterogeneous Effects By Income

Table 2 Columns 4-6 report the results of Equation 3, evaluating whether low income zip codes are more likely to experience higher evictions. We find that low income zip codes are significantly more affected by the increases in rent control, both in terms of eviction notices and wrongful eviction claims. Low income neighborhoods experience 15 additional evictions per 1,000 treated units, compared to only 9 additional eviction notices in high income zip codes. Likewise, low income tenants file nearly 7 additional wrongful eviction complaints per 1,000 treated units, compared to only 2.5 in high income zip codes. Low income neighborhoods are experiencing eviction notices at rates at a level 67% higher than high income zip codes, and many evictions are handled incorrectly by landlords. We additionally plot equivalent event study estimates in Figure 3 where we compare the effect over time for low and high income zip codes.

## 5.4 Additional Robustness Checks

Beyond the alternative specifications already discussed, we perform additional robustness checks in the appendix. First, we use a binary measure of treatment, which discretizes exposure, to address concerns that rent control exposure should not enter the specification linearly. We compare neighborhoods with above-median numbers of newly rent controlled units to those with below-median exposure. We find large effects comparable to our main specifications.

Second, we use an alternative measure of the number of newly rent controlled units to address concerns that we have mis-measured treatment by not accounting for the fact that buildings needed to be owner-occupied to be eligible for the exemption to rent control prior to 1994. In Appendix Section 2, we detail the steps we take to account for this regulatory feature. We find that use of this alternative measure of policy exposure does not substantively change our results; while our estimates change in size, this change is proportional to the change in our treatment variable.

Finally, we investigate whether our effects can be attributed to the mechanical increase in the number of units whose evictions would be reported to the Rent Board. Only units covered by the Rent Ordinance will generate either eviction notices or wrongful eviction claims. We compare the average number of eviction notices and wrongful eviction claims to the number of units covered by the Rent Ordinance. In 1994, there were 1,068 evictions recorded with the Rent Board across San Francisco (360 owner move in and Ellis Act evictions) and 122,052 total rent controlled units. This represents a 0.8 percent eviction rate for rent controlled units. By 1997, there are 2,836 evictions (1,412 owner move in and Ellis Act Evictions) with 191,840 rent controlled units, a 1.5 percent eviction rate, an almost doubling of the eviction rate. In Appendix Figure A5, we show a time series of the number of eviction notices and wrongful eviction claims, which shows a jump up in the ratio of evictions to rent controlled units following the policy change.

## 5.5 Discussion

Several behavioral changes could drive our results: landlords could increase lawful evictions, landlords could increase wrongful evictions, and tenants could change how they challenge evictions. In order to see our results, landlord behavior must be changing, since we see large increases in eviction notices, which are unlikely to be influenced by tenant behavior. These eviction notices are particularly concentrated in owner-move in evictions, which are in the direct control of the landlord.

This change in evictions could be driven either by an increase in wrongful or legal evictions. We don't find evidence of large changes in the proportion of wrongful eviction

claims per eviction notice at the zip code level (there were 0.25 claims per notice pre-policy and 0.34 claims per notice post-policy), suggesting that landlords post-policy are not increasing the proportion of evictions that cause tenants to complain, although the absolute number of wrongful eviction claims increases.

Newly rent-controlled tenants may behave differently in response to an eviction notice than previously rent controlled tenants. This change could go in either direction; if the policy change coincided with greater awareness of tenant’s rights, there could be an increase in the number of wrongful eviction claims for rent controlled tenants. However, newly rent controlled tenants may either have less incentive to file a claim (their rent is not as far removed from market rent as a long-term rent controlled tenant) or may be less aware of the regulations around just-cause evictions, making them less likely to file a wrongful eviction claim.

## 6 Conclusion

San Francisco’s expansion of rent control in 1994 led to a dramatic increase in rent control. Landlords of newly rent controlled units faced new incentives to turn over the units in order to raise the rents to market levels. One mechanism through which they could do this was eviction, either lawfully or unlawfully. We study the effects of the policy change on both eviction notices and wrongful eviction claims and find substantial increases in both in zip codes that were heavily affected by the policy change.

San Francisco’s rent control policy change lead to an increase of 4.6 wrongful eviction claims per 1,000 buildings treated with rent control. Since San Francisco has roughly 2,791 treated units per zip code and 25 zip codes, we estimate that the rent control policy lead to 840 more eviction notices and 320 more wrongful eviction claims than would have happened otherwise. These effects are fairly persistent; it takes about seven years for our effect sizes to fall to the levels that would be predicted by the increase in rent controlled units that are subject to reporting requirements to the San Francisco Rent Board. The effects are also concentrated in low-income areas, with effect sizes 66%-200% larger in those areas.

We are cautious about interpreting our results too broadly, as the policy change we study only affects a particular kind of rental unit: small buildings that are owner occupied. “Mom-and-pop” landlords may be more willing to get out of the rental business altogether in response to changes in rent control regulation. In particular, they may be positioned to take advantage of owner-move-in evictions in a way larger landlords are not. Additionally, small landlords may be more likely to skirt the legal restrictions, either because they are

not aware of the correct legal proceedings or because they are more willing to take legal risk than a large scale landlords.

Even so, our estimates imply that San Francisco's rent control expansion is responsible for a large portion of the increase in evictions in the 1990s. The 840 additional evictions comprise 51% of the increase in evictions overall in San Francisco from 1994 to 2000.

## References

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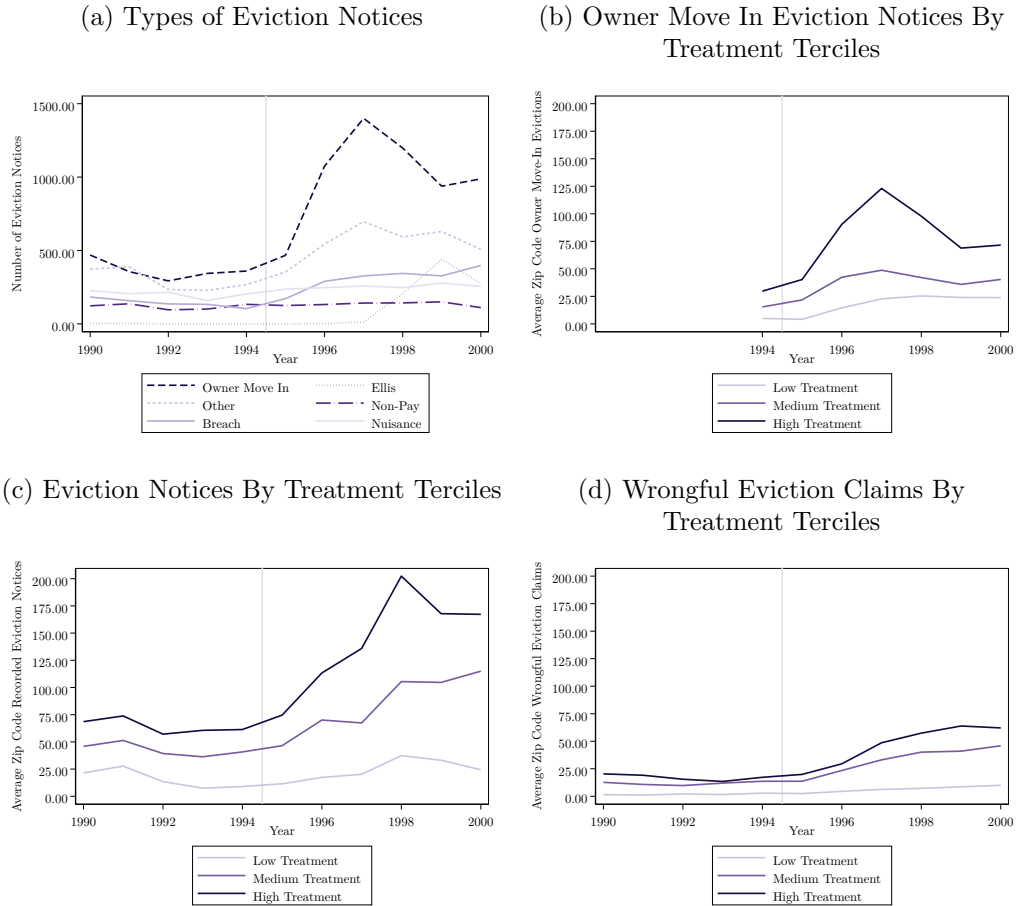
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## 7 Figures

Figure 1: Eviction Notices and Wrongful Eviction Claims Over Time

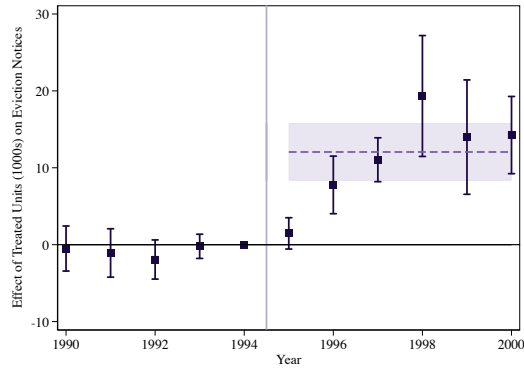


*Notes:* Panel A breaks down the number of eviction notices filed with the San Francisco by type over time. Owner move in and Ellis Act evictions can be initiated by the landlord without some violation of the lease contract by the tenant. Non-payment, breach, and nuisance evictions all require some kind of action by the tenant. It is not possible to further breakdown evictions classified as “Other”. Panel B splits owner move in eviction notices by treatment terciles for zip codes. These data are not available with any reliability at the zip code level before 1994. Panels C and D show the average number of eviction notices and the average number of alleged wrongful eviction reports made to the San Francisco Rent Board, respectively, by year for three treatment tercile groups. In Panels C-D, low treatment zip codes are those in the lowest tercile of units newly exposed to rent control after the policy change. Middle treatment zip codes are those in the middle tercile. High treatment are those in the highest tercile. Our treatment is measured by the number of units that are newly rent controlled. They are in buildings that were built before 1980 and have 2-4 units. The timing of the policy change is marked by a vertical line.

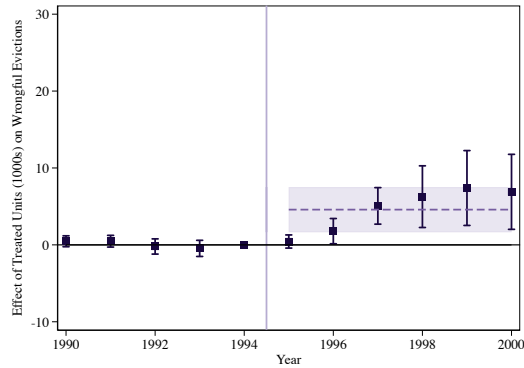
Data Sources: 1999 San Francisco Assessor’s Secure Housing Roll (Office of the Assessor-Recorder (1999)), San Francisco Rent Board Evictions Notices and Wrongful Evictions Claims (San Francisco Rent Board (2021))

Figure 2: Effect of Removing Rent Control Exemptions On Eviction Notices and Wrongful Eviction Claims

(a) Effect on Eviction Notices



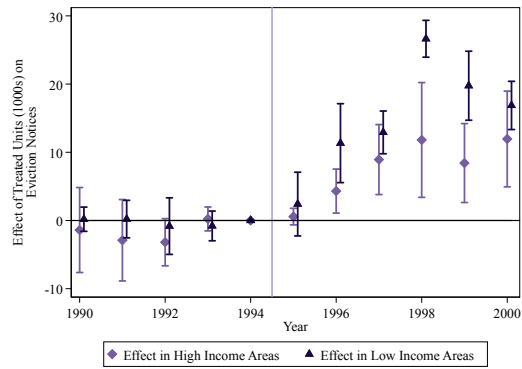
(b) Effect on Wrongful Evictions Claims



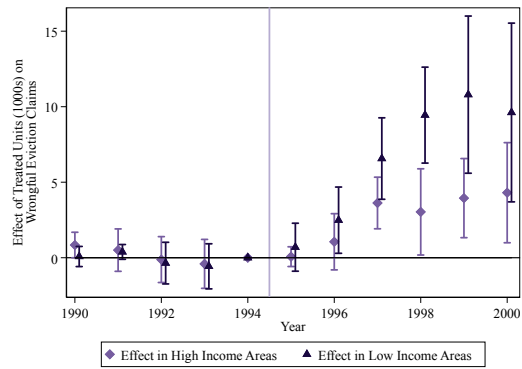
*Notes:* This figure shows our event study coefficient estimates on the interaction between year dummies and the number of treated units in a zip code. We normalize 1994 to be zero. Error bars shown are for the 95% confidence interval. The difference-in-differences estimate for the interaction of the post-period with the number of treated units is shown as a grey dashed line with the 95% confidence interval shown as a shaded region on the graph. Standard errors are clustered at the zip code level. Effects are scaled to be the effect per 1,000 treated units. The average number of treated units in a zip code is 2,791. Data Sources: 1999 San Francisco Assessor’s Secure Housing Roll (Office of the Assessor-Recorder (1999)), San Francisco Rent Board Evictions Notices and Wrongful Evictions Claims (San Francisco Rent Board (2021))

Figure 3: Heterogeneous Effects By Income

(a) Effect on Eviction Notices



(b) Effect on Wrongful Evictions Claims



*Notes:* This figure shows our event study coefficient estimates on the interaction between year dummies and the number of treated units in a zip code (light purple) and this added to the interaction of these estimates with the triple interaction with low income (dark purple). We normalize 1994 to be zero. Error bars shown are for the 95% confidence interval. Standard errors are clustered at the zip code level. Effects are scaled to be the effect per 1,000 treated units. The average number of treated units in a zip code is 2,791.

Data Sources: 1999 San Francisco Assessor’s Secure Housing Roll (Office of the Assessor-Recorder (1999)), San Francisco Rent Board Evictions Notices and Wrongful Evictions Claims (San Francisco Rent Board (2021))

## 8 Tables

Table 1: Comparison Between Low and High Treated Zip Codes

<b>Panel A: Demographics</b>				
Variable	(1) Full Sample	(2) Low Treatment	(3) High Treatment	(4) Difference
Median Income	45,698.680 (14,511.698)	43,180.000 (19,397.973)	48,023.617 (6,919.199)	4,843.615 (6,029.751)
1990 Median Rent	869.280 (214.579)	848.500 (295.540)	888.462 (86.582)	39.962 (90.281)
2000 Median Rent	1,006.360 (340.219)	993.583 (471.591)	1,018.154 (133.736)	24.571 (143.728)
Share Black	0.120 (0.134)	0.160 (0.164)	0.083 (0.084)	-0.077 (0.054)
Share White	0.555 (0.176)	0.504 (0.187)	0.602 (0.151)	0.099 (0.070)
Share Owner Occupied	0.316 (0.231)	0.306 (0.297)	0.326 (0.146)	0.021 (0.097)
Share Welfare	0.108 (0.076)	0.129 (0.097)	0.089 (0.041)	-0.040 (0.031)
<b>Panel B: Treatments and Outcomes</b>				
Total Housing Units	12,622.280 (7,729.700)	6,793.833 (5,011.453)	18,002.385 (5,602.846)	11,208.552*** (2,162.969)
# Prev. Rent Controlled	4,882.080 (4,931.616)	2,496.250 (2,627.953)	7,084.385 (5,512.001)	4,588.135** (1,738.801)
# Treated	2,791.280 (2,793.579)	596.833 (602.742)	4,816.923 (2,472.819)	4,220.090*** (720.929)
Pre-Policy Eviction Notices	41.040 (33.328)	23.200 (26.731)	57.508 (30.325)	34.308*** (10.123)
Post-Policy Eviction Notices	84.173 (73.627)	39.417 (38.097)	125.487 (74.494)	86.071*** (19.532)
Pre-Policy Wrongful Claims	10.320 (10.149)	4.983 (7.120)	15.246 (10.075)	10.263*** (3.233)
Post-Policy Wrongful Claims	28.927 (30.457)	13.833 (14.913)	42.859 (34.356)	29.026*** (8.838)
Observations	275	132	143	275

Standard errors in parentheses

\* $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

*Notes:* This table reports the averages of key variables. Column 1 reports averages for the full sample, while Columns 2 and 3 report averages for zip codes with above and below the median level of treatment, measured by the number of newly rent controlled units. The difference between the zip codes with higher exposure to the policy change and lower exposure to the policy change is reported in Column 4. Stars represent p-values of a t-test comparing the difference in Column 4 to zero. The analysis data contains information from 25 zip codes across 11 years for a total of 275 observations. Data Sources: 1999 San Francisco Assessor's Secure Housing Roll (Office of the Assessor-Recorder (1999)), San Francisco Rent Board Evictions Notices and Wrongful Evictions Claims (Board (2005)), U.S. Census Bureau and Social Explorer (2022)

Table 2: Difference-in-Difference Estimates of the Effects of Rent Control on Wrongful Evictions Claims

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A: Eviction Notices</b>						
Num Treated $\times$ Post	12.05*** (1.807)	9.186*** (2.313)	11.67*** (1.863)	9.116*** (1.406)	4.185 (2.500)	9.094*** (1.374)
Num Treated $\times$ Post $\times$ Low Income				6.117*** (1.529)	7.469*** (2.071)	6.108*** (1.548)
Treatment Tercile		X			X	
Prev. Treated Control			X			X
N	275	275	275	275	275	275
$R^2$	0.882	0.889	0.882	0.892	0.901	0.892
P-value # Treated $\times$ Post	0.00	0.006	0.00	0.005	0.178	0.006
P-value # Treated $\times$ Post $\times$ Low Income	.	.	.	0.009	0.017	0.0130
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel B: Wrongful Eviction Claims</b>						
Num Treated $\times$ Post	4.586*** (1.422)	4.250** (1.668)	4.312*** (1.508)	2.510*** (0.704)	1.220 (1.400)	2.402*** (0.684)
Num Treated $\times$ Post $\times$ Low Income				4.183** (1.584)	4.584** (1.937)	4.141** (1.664)
Treatment Tercile		X			X	
Prev. Treated Control			X			X
N	275	275	275	275	275	275
$R^2$	0.829	0.840	0.831	0.848	0.859	0.848
P-value # Treated $\times$ Post	0.00	0.086	0.00	0.015	0.442	0.009
P-value # Treated $\times$ Post $\times$ Low Income	.	.	.	0.147	0.129	0.196

*Notes:* This table shows estimates from difference-in-difference regressions. In Panel A, the outcome variable is wrongful eviction claims, and in Panel B, the outcome is eviction notices. For both panels, Column 1 shows the results from our preferred specification, a difference-in-differences regression using the number of treated units at the zip code level as a continuous treatment measure. Column 2 adds heterogeneity by median income. Columns 3 and 4 add treatment tercile specific linear time trends to the regression, and Columns 5 and 6 add 1990 median rent linear time trends. Treatment is measured in 1,000s of newly rent controlled units. Data Sources: 1999 San Francisco Assessor’s Secure Housing Roll (Office of the Assessor-Recorder (1999), San Francisco Rent Board Evictions Notices and Wrongful Evictions Claims (Board (2005)), U.S. Census Bureau and Social Explorer (2022)

## A Data Appendix

### A.1 Assessor Data Cleaning Details

In our analysis, we use data from the San Francisco Assessor’s Secure Housing Roll from 1999. The apartment address data from the Assessor’s office does not include unit zip codes, so we merge the Assessor’s data to the San Francisco’s Addresses with Units - Enterprise Addressing System dataset (SFA). The SFA includes complete addresses with

zip codes, using the parcel number or unit address. While we can match most units with this procedure, some are either missing from the SFA data or do not have unit address information in the Assessor’s data. For these, we either use the Google Map’s API to determine zip code based on SITUS or use the San Francisco Planning tool to determine the unit’s address based on its parcel number.

To fill in missing fields in the Assessor’s dataset, which come from hand-filled forms, we do the following. First, if any building is listed as having zero units, we replace the number of units using the median number of units based on that building’s class code. This means that, since Multi-Family Residences with class codes of “Flats and Duplex” have a median of two units, any Multi-Family Residences with that class code will be reassigned to have two units if it has zero units listed in the dataset. Next, for any building that is missing information on the year built, we assume that it was built before 1980 since the median year built of all buildings in San Francisco is 1925.

In Appendix Table A1, we compare the number of rental units in our dataset from 1999 to those in the 2000 census to ensure we have correctly categorized and in some cases, imputed, the building size correctly. The differences between measures from our dataset and the census are quite small, and could be due to buildings being built or demolished between 1999 and 2000.

In Appendix Table A2, we report results of a regression of various zip code characteristics on the number of treated units in our sample to show that the number of treated units in each neighborhood was not confounded with neighborhood characteristics. We find no significant differences on any observable characteristics of neighborhoods. While this is not necessary to interpret our difference-in-differences results as causal effects, it helps establish credibility for the required (and untestable) identification assumptions: that neighborhoods with different levels of treatment would have trended similarly if the policy had not passed, and that treatment effects are homogeneous across neighborhoods with different levels of treatment intensity.

## **A.2 Alternative Treatment Measure**

While we do not know whether owners occupied their units in 1994 when the policy changed, we can approximate this using a 1999 measure of owner occupancy. To create this, we determine whether the owner’s mailing address listed in the Assessor’s dataset matches the physical address of the unit. We use this measure of owner occupancy to create an alternative measure of exposure, defined as the number of units in a zip code that had between two and four units, were built before 1980, and were owner-occupied in 1999 (the earliest year of Assessor data available). This alternative measure of exposure

to the rent control policy is displayed in Appendix Figure A2. While some areas become more or less exposed based on this alternative measure, the distribution of exposure to rent control looks largely similar to that in Appendix Figure A1.

In Appendix Figure A2 we display a map of San Francisco, where zip codes with higher numbers of treated buildings are shown in darker blue. This figure uses the treatment definition that includes 1999 owner occupancy. In comparing to our preferred measure of treatment which does not account for owner occupancy, it is clear that the two definitions of treatment affect the same neighborhoods to roughly the same extent.

Finally, in Appendix Figure A3, we show the event study results of running our main event study regression using the measure of treatment which includes a 1999 measure of owner occupancy. The pattern of results is the same as those in Figure 2, which does not use any measure of owner occupancy to measure treatment status. While the magnitudes of effects are much larger, since the average number of owner-occupied treated units is lower than the measure which does not take owner-occupancy into account, the proportional effects are similar to those in our main specification.

### **A.3 Validating and Cleaning Eviction Notice Data**

To measure evictions, we use data from the San Francisco Rent Board, who publishes two measures. First, the Rent Board publishes counts of eviction notices from 1990 and onward for San Francisco as a whole. These counts include eviction notices that were verified by the Rent Board. This dataset is not available at the individual rental unit level before 1997 due to missing fields in the pre-1997 data. However, the total number of annual evictions are published each year starting in 1990. The Rent Board also publishes a zipcode-year level dataset of wrongful eviction claims from 1990 and onward. This dataset includes all allegations of wrongful evictions made by tenants, regardless of whether their eviction was legal or not, and regardless of whether the eviction went through.

The Rent Board has provided us with their pre-1997 individual-level eviction notices data with the caveat that the data are missing fields and have not been audited or checked. First, we check that the pre-1997 data are not missing observations. To do this, we compare the annual number of evictions in the pre-1997 + post-1997 dataset to the published annual number of evictions, finding that the numbers match between the pre-1997 data and the published statistics. If substantial numbers of observations were missing in the data, we would expect to see fewer evictions in the pre-1997 data. Since we do not see this, we proceed assuming all evictions are accounted for in the data.

Next, we evaluate missing fields in the pre-1997 dataset. We find that 32% of fields



are missing zip codes, and 30% of fields are missing the reason for the eviction. Only 0.06% of fields are missing an address. For those observations that are missing zip codes, we use Google Maps Places API, searching for the unit's address, and filling in the zip code that Google Maps associates with the address. We find zip codes for all but 124 of the 2,649 rows with missing zip codes, so that overall we have zip codes for 98% of the data. To ensure the Google Maps API accurately assigns zip codes, we compare Google Maps zip codes to the zip codes included in the data. We find that 88% of zip codes are correctly identified by the Google Maps API. We proceed by using the zip code given by the eviction notices data unless it is missing, in which case we use zip code given by the Google Maps API, acknowledging the existence of some measurement error in the zip code variable. Since there is no way to fill in missing cause of eviction, we proceed with the understanding that eviction cause data may be unreliable.

## B Additional Robustness Checks

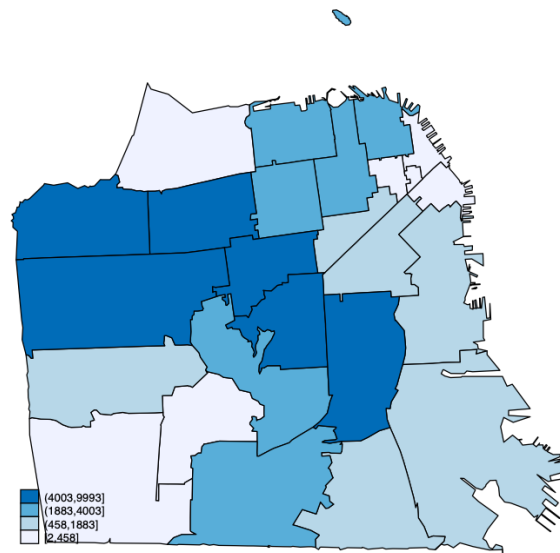
We report alternative specifications that evaluate the sensitivity of our results to how we measure treatment in Appendix Tables A3 and A4. Columns 1 and 2 are the same as the main specifications reported in the paper. Columns 3 and 4 use a measure of treatment that accounts for owner occupancy. Columns 5 and 6 instead use a binary measure of treatment based on whether zip codes are above or below the median level of treatment.

Since only those in rent controlled units were eligible to submit eviction notices and wrongful eviction claims to the Rent Board, we worry that the effect of rent control on evictions is not due to a behavioral change, but instead mechanical. Suppose 1% of tenants are evicted regardless of rent control status. If an additional 100 buildings are subjected to rent control, then an increase of 1 eviction would be expected, mechanically. To explore whether the effects we find are mechanical or due to behavioral change, we examine the proportion of rent controlled tenants that face eviction notices before and after the policy change. If the rate of eviction stays constant over time, then the effects are purely mechanical, whereas if the rate increases at the time of the policy change, then effects are likely due to behavioral changes by landlords. In Appendix Figure A5, we display the number of eviction notices per number of rent controlled units, which increases after 1994, when the policy was passed.

Appendix Figure A5 suggests that just after rent control expands, landlords adjust by evicting tenants, many times wrongfully. The gradual increase after the policy change makes sense; as time passes from the policy change, the difference between market rent, which can freely increase, and rent controlled rents, which can increase by at most about 2% each year, increases. With it increases the incentive to evict a tenant in order to reset

the rent to market rate or convert the building to condos. Indeed, Diamond et al. (2019) find an 8 percentage point increase in condo conversions following this same rent control expansion.

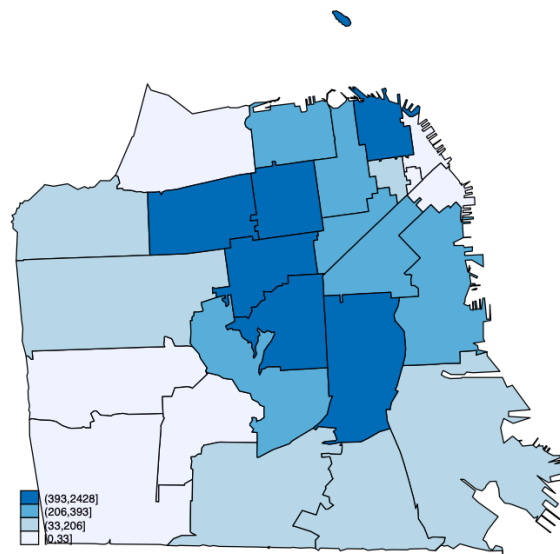
Figure A1: Zip Code Level Exposure to Change in Rent Control Policy



*Notes:* This map depicts exposure at the zip code level for the San Francisco policy change. Exposure is measured as the number of units in a zip code in buildings with 2-4 units that were built prior to 1979. Data source: 1999 San Francisco Assessor's Secure Housing Roll and authors' calculations.

## C Appendix Figures

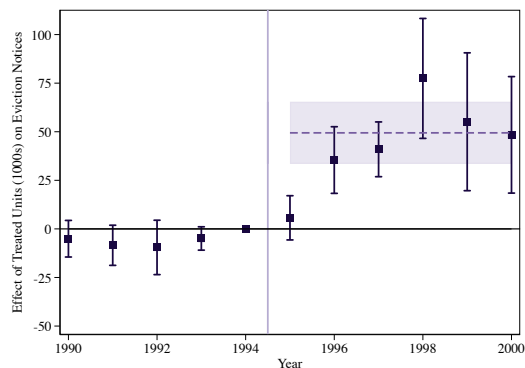
Figure A2: Zip Code Level Exposure to Change in Rent Control Policy: Owner Occupancy



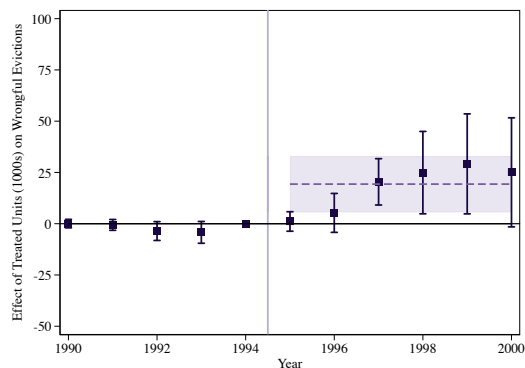
*Notes:* This map depicts exposure based on owner-occupancy at the zip code level for the San Francisco policy change. Exposure is measured as the number of units in a zip code in buildings with 2-4 units that were built prior to 1979 where the owners' address matches that of the building. Data source: 1999 San Francisco Assessor's Secure Housing Roll and authors' calculations.

Figure A3: Effect of Removing Rent Control Exemptions on Eviction Notices and Wrongful Eviction Claims: Owner Occupancy Robustness

(a) Effect on Eviction Notices



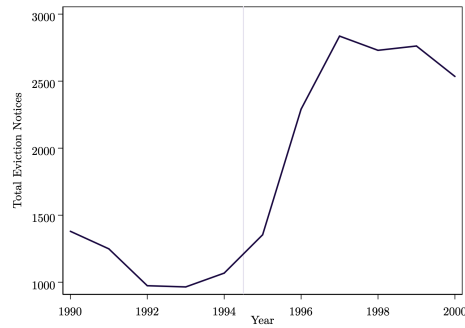
(b) Effect on Wrongful Evictions



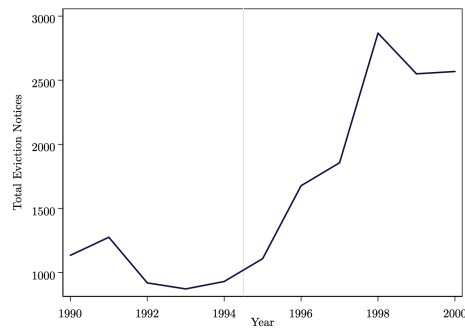
*Notes:* This figure shows the robustness of event study coefficient estimates to an alternative measure of treatment where we attempt to condition treatment on the building being owner occupied. We show our estimated coefficients on the interaction between year dummies and the number of treated units in a zip code. We normalize 1994 to be zero. Error bars shown are for the 95% confidence interval. The difference in difference estimate for the interaction of the post period with the number of treated units is shown as a grey dashed line with the 95% confidence interval shown as a shaded region on the graph. Standard errors are clustered at the zip code level. Panel A reports effects on eviction notices, while Panel B reports effects on wrongful eviction claims. Effects are scaled to be the effect per 1,000 treated units. The average number of treated units in a zip code is 2,791. Data Sources: 1999 San Francisco Assessor’s Secure Housing Roll and San Francisco Rent Board Eviction Notices and Wrongful Eviction Claims

Figure A4: Eviction Notices Over Time

(a) Published Data

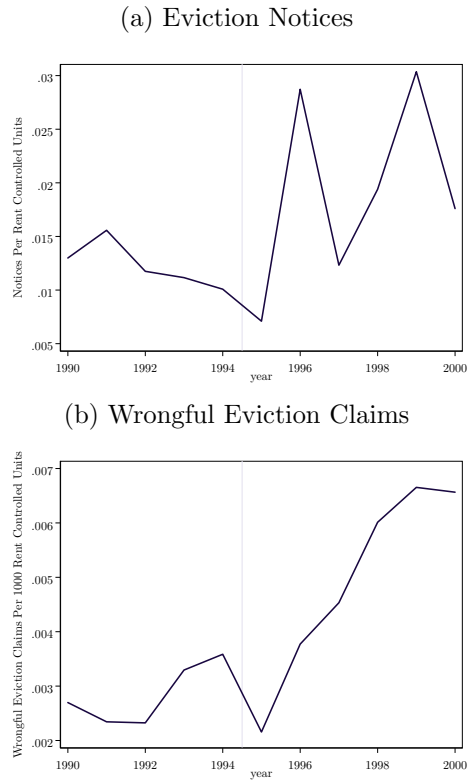


(b) Unpublished Individual-Level Data



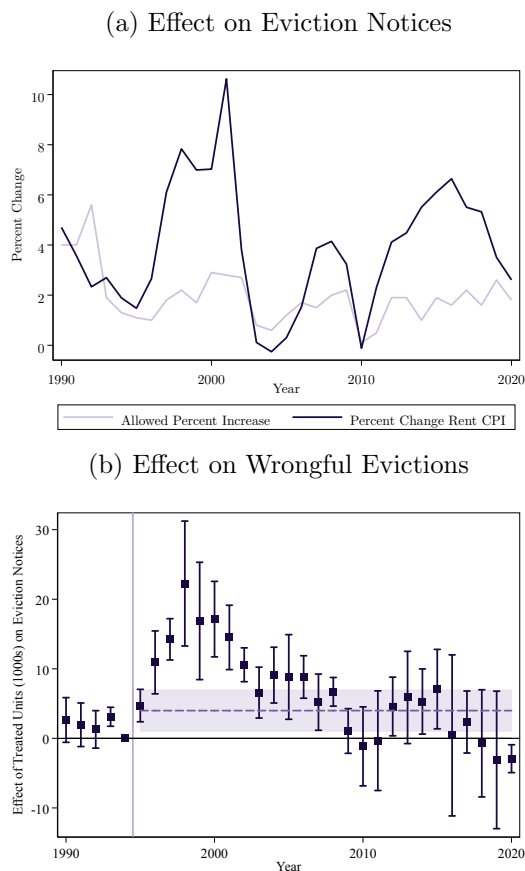
*Notes:* These figures shows the total number of evictions notices by year. Panel A displays the overall number of eviction notices over time published by the Rent Board, while Panel B reports the same measure based on the unpublished individual-level data. Data Sources: San Francisco Rent Board Eviction Notices, published and un-published datasets

Figure A5: Number of Evictions per Number of Rent Controlled Units



*Notes:* These figures plot the average fraction of eviction notices (Panel A) and wrongful eviction claims (Panel B) as a fraction of the number of rent controlled units in a given zip code over time. Data Sources: 1999 San Francisco Assessor's Secure Housing Roll and San Francisco Rent Board Eviction Notices and Wrongful Eviction Claims

Figure A6: Effect of Removing Rent Control Exemptions On Eviction Notices and Wrongful Eviction Claims

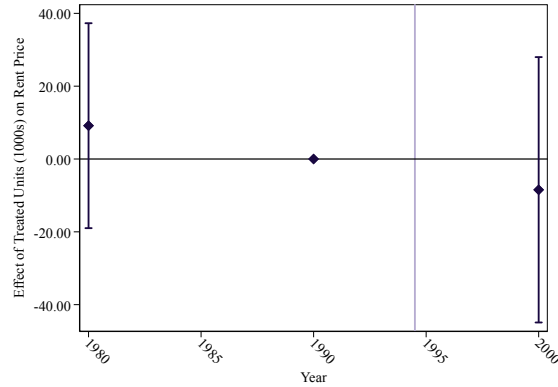


*Notes:* Panel A shows allowed rent increases and San Francisco rent price index, both in percent changes year over year. The allowable increase is set to be 60% of the percent increase in the consumer price index in San Francisco, calculated annually for the one-year period ending each October 31st. Panel shows our event study coefficient estimates on the interaction between year dummies and the number of treated units in a zip code over the longer time horizon from 1990 until 2020. We normalize 1994 to be zero. Error bars shown are for the 95% confidence interval. The difference-in-differences estimate for the interaction of the post-period with the number of treated units is shown as a grey dashed line with the 95% confidence interval shown as a shaded region on the graph. Standard errors are clustered at the zip code level. Effects are scaled to be the effect per 1,000 treated units. The average number of treated units in a zip code is 2,791.

Data Sources: Rent Arbitration Board Rent Arbitration (2022), U.S. Bureau of Labor Statistics, 1999 San Francisco Assessor's Secure Housing Roll (Office of the Assessor-Recorder (1999), San Francisco Rent Board Evictions Notices and Wrongful Evictions Claims (Board (2005))

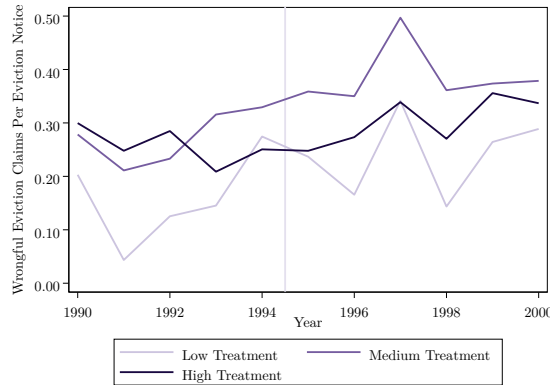


Figure A7: Effect on Rent Prices



*Notes:* This figure shows our event study coefficient estimates on the interaction between year dummies and the number of treated units in a zip code on self-reported rents from the 1980, 1990, and 2000 decennial census. We normalize 1990 to be zero. Error bars shown are for the 95% confidence interval. Effects are scaled to be the effect per 1,000 treated units. The average number of treated units in a zip code is 2,791. Data Sources: 1999 San Francisco Assessor’s Secure Housing Roll and 1980-2000 U.S. Census

Figure A8: Wrongful Eviction Claims Per Eviction Notice Over Time by Tercile of Policy Exposure



*Notes:* This figure shows the average fraction of wrongful evictions per eviction notice in zipcodes, broken into terciles of policy exposure. We assign a value of zero for zip codes with no eviction notices. Low treatment terciles are those in the lowest tercile of units newly exposed to rent control after the policy change. Middle treatment zip codes are those in the middle tercile. High treatment are those in the highest tercile. The timing of the policy change is marked by a vertical line. Data Sources: 1999 San Francisco Assessor’s Secure Housing Roll, San Francisco Rent Board Eviction Notices and Wrongful Evictions Claims

## D Appendix Tables

Table A1: Comparison of Housing Stock Against US Census

Building Size	Assessor Data - 1999	Census 2000
Single Family Home	118,078	111,125
Two to Four Units	72,646	80,168
Five to Nine Units	34,671	38,940
Ten to Nineteen Units	32,900	34,996
Twenty or More Units	65,838	79,469
Total Units	324,133	344,698

*Notes:* We construct aggregate measures for all of San Francisco of the number of units that fall in each category of building and compare them to the same measures from the 2000 Decennial Census. Data Sources: 1999 San Francisco Assessor's Secure Housing Roll and 2000 U.S. Census.

Table A2: Relationship Between Zip Code Census Covariates and Number of Treated Units

	(1)
	Number of Treated Units
Median Rent	-0.00623 (0.00670)
Median HH Income	-0.0000139 (0.000155)
% Population Black	-3.958 (5.004)
% Population White	4.626 (5.410)
% Owner Occupied	3.029 (4.491)
% Welfare	-10.13 (15.56)
Constant	6.890 (6.059)
N	25
$R^2$	0.130

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

*Notes:* We regress the number of treated units on census demographic variables to determine whether highly treated zip codes were different demographically than less-treated zip codes. Treatment is measured by the number of apartments in the zip code with between two and four units and that was built prior to 1980. Specifically, we regress  $\text{Num Treated}_j = \beta_0 + \beta_1 1990 \text{ rent}_j + \beta_2 \text{Income}_j + \beta_3 \text{Prop Black}_j + \beta_4 \text{Prop White}_j + \beta_5 \text{Prop Owners}_j + \beta_6 \text{Prop on Welfare}_j + \epsilon_j$  for characteristics of zip code  $j$ . Data Sources: 1990 U.S. Census and 1999 San Francisco Assessor's Secure Housing Roll.

Table A3: Difference-in-Difference Estimates of the Effects of Rent Control on Eviction Notices

	(1)	(2)	(3)	(4)	(5)	(6)
Num Treated $\times$ Post	12.05*** (1.807)	9.116*** (1.406)				
Num Treated $\times$ Post $\times$ Low Income		6.117*** (1.529)				
Owner Occupied $\times$ Post			49.43*** (7.728)	33.12*** (10.26)		
Owner Occupied $\times$ Post $\times$ Low Income				24.23** (11.15)		
Treated $\times$ Post					51.76*** (11.56)	32.37*** (9.893)
Treated $\times$ Post $\times$ Low Income						42.58*** (8.425)
N	275	275	275	275	275	275
$R^2$	0.882	0.892	0.873	0.878	0.852	0.882
Wild Bootstrap P-Value	0.00	0.006	0.00	0.074	0.00	0.003
Wild Bootstrap P-Value	.	0.005	.	0.366	.	0.0590

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

*Notes:* This table shows estimates from difference-in-difference regressions on eviction notices. Column 1 shows the results from our preferred specification, a difference-in-differences regression using the number of treated units at the zip code level as a continuous treatment measure. Column 2 adds heterogeneity by median income. Columns 3 and 4 replace the treatment measure with the number of units eligible for the rent control policy that were also owner occupied in 1999. Columns 5 and 6 replace the treatment variable with an indicator for the number of treated units in the zip code exceeding the median number of treated units across zip codes. Data Sources: 1990 U.S. Census, 1999 San Francisco Assessor's Secure Housing Roll, San Francisco Rent Board Eviction Notices.

Table A4: Difference-in-Difference Estimates of the Effects of Rent Control on Wrongful Eviction Claims

	(1)	(2)	(3)	(4)	(5)	(6)
Num Treated $\times$ Post	4.586*** (1.422)	2.510*** (0.704)				
Num Treated $\times$ Post $\times$ Low Income		4.183** (1.584)				
Owner Occupied $\times$ Post			19.32*** (6.639)	7.928** (3.588)		
Owner Occupied $\times$ Post $\times$ Low Income				16.77** (7.555)		
Treated $\times$ Post					18.76*** (6.129)	9.263* (5.407)
Treated $\times$ Post $\times$ Low Income						20.47** (8.245)
N	275	275	275	275	275	275
$R^2$	0.829	0.848	0.825	0.836	0.800	0.839
Wild Bootstrap P-Value	0.001	0.0110	0.006	0.160	0.003	0.106
Wild Bootstrap P-Value	.	0.134	.	0.316	.	0.109

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

*Notes:* This table shows estimates from difference-in-difference regressions on wrongful eviction claims. Column 1 shows the results from our preferred specification, a difference-in-differences regression using the number of treated units at the zip code level as a continuous treatment measure. Column 2 adds heterogeneity by median income. Columns 3 and 4 replace the treatment measure with the number of units eligible for the rent control policy that were also owner occupied in 1999. Columns 5 and 6 replace the treatment variable with an indicator for the number of treated units in the zip code exceeding the median number of treated units across zip codes. Data Sources: 1990 U.S. Census, 1999 San Francisco Assessor's Secure Housing Roll, San Francisco Rent Board Wrongful Eviction Claims.