CITY OF LARKSPUR
Staff Report

June 17, 2024, City Council Special Meeting

DATE: June 13, 2024

TO: Honorable Mayor Candell and the City Council

FROM: Dan Schwarz, City Manager

SUBJECT: IMPACT REPORT FOR INITIATIVE PROPOSING AN ORDINANCE TO LIMIT RENT INCREASES FOR AND EVICTIONS OF TENANTS OF SOME RENTAL UNITS

ACTION REQUESTED

Receive report.

SUMMARY AND BACKGROUND

California Elections Code Section 9212 provides that the City Council may order a report on the effect of a proposed initiative and may refer the initiative measure to any city agency or agencies for such a report. The City may order a report before taking action to submit the proposed ordinance to the voters. In ordering the report, the Council may require that the city agency address a number of issues, including fiscal impact and any matters the Council requests. The report must be presented to the legislative body within 30 days after the elections officer certifies to the legislative body the sufficiency of the petition (Elections Code, Section 9212 (b)). After reviewing and considering this report, the City Council must either adopt the initiative without any amendments or schedule an election for consideration of the initiative by city voters (special election) within 10 days.

On July 13, 2022, the City Council approved Resolution 41/24 accepting a Certificate of Sufficiency of Signatures on a Petition for an Initiative Ordinance to Limit Rent Increases for and Evictions of Tenants of Some Rental Units. The Council deferred taking action calling for the initiative to be placed on the November 5, 2024, ballot. Pursuant to Elections Code Section 9212, the Council requested that staff provide a 9212 Impact Report of the effects of the Initiative within 30 days.

In 2023, the City Council adopted ordinances creating local rent stabilization and eviction protection rules for certain rental units in the City of Larkspur. The ordinance establishing local rent stabilization survived a referendum on the March 5, 2024, ballot. The ordinances were passed by the City Council following more than a year's public discussion, debate, and process about rent stabilization and eviction protections.

The submitted initiative rescinds the ordinances approved by the City Council and replaces them with a single ordinance containing provisions that in some cases are substantially different from what was passed by the City Council. Within the context of Elections Code 9212, the impacts of the most notable changes, including a lower cap on rent increases and the right for tenants to return to units several years after eviction, are discussed in this report.

A primary purpose of the 9212 Impact Report is to evaluate the potential fiscal impacts of the initiative on the City's budget. The City is in the first year of implementation of the ordinances passed by the City Council and staff has developed a model that complements in-house resources with outside support. Staff's evaluation of the initiative is that its more intense regulatory scheme is beyond the capacity of the staffing model developed for the current ordinances. Should the initiative pass, staff believes that the City will need to reconsider its staffing and support model and likely commit at least one full time management position to the administration of the program. Both the City's current ordinances and the initiative contemplate that the City will recover its costs through the adoption of a fee paid by property owners renting units.

ANALYSIS AND DISCUSSION

Rent stabilization and eviction protections ordinances have existed at the local level in some parts of California since the 1970s. For two decades, local governments were able to enact such ordinances with few constraints specifically imposed by state law. In 1995, the Costa-Hawkins Rental Housing Act (1995) introduced three significant limitations. First, it exempted certain types of rental units from local rent stabilization (most notably single family homes and condominiums). Second, it exempted units built after the February 1, 1995, effective date of the Act. Third, it prohibited "vacancy control." Vacancy control refers to regulating the amount a landlord may charge for a new lease of a vacant unit. Under Costa-Hawkins, when a unit becomes vacant, a landlord is not restricted in the amount of rent charged in a new lease. It was common prior to Costa-Hawkins for rent stabilization ordinances to include vacancy control.

Tenant Protection Act
On January 1, 2020, rent stabilization and eviction protections became state law and took effect in Larkspur with the enactment of the Tenant Protection Act. Notably, the Tenant Protection Act is not subject to Costa-Hawkins and some of its provisions do not adhere to the 1995 limitations.

Provisions of note in the Tenant Protection Act:

- It applies to rental units that are more than fifteen years old.
- It applies to single family homes and condominiums if those units are owned by a real estate trust or corporation.
- It establishes a ceiling or cap on rent increases in a twelve-month period of 5% plus inflation (a local Consumer Price Index) not to exceed 10%.
- It codifies definitions of "at fault" and "no fault" just cause evictions and establishes that when a tenant is evicted under a "no fault" cause – a circumstance beyond the tenant's control – the tenant shall receive compensation equivalent to one month of rent.
- The Act sunsets on January 1, 2030.

The Tenant Protection Act requires no local enforcement – disputes are resolved through the legal system.

City Council Ordinances
In 2022 and 2023, at the request of members of the public, the City Council examined issues relating to rent stabilization and eviction protections, focusing on the adequacy of the Tenant Protection Act to deter tenant displacement. The City Council held a series of public forums and meetings on the subject and ultimately decided to adopt two ordinances amending the Municipal Code – one addressing just cause

evictions and tenant protections and the other concerning rent stabilization. The latter ordinance was subjected to a referendum and was upheld by the voters on the March 5, 2024, ballot.

Provisions of note in the Larkspur Municipal Code:

- Rent stabilization is subject to the restrictions of the Costa-Hawkins Act.
- It defines an effective date for determining a base rate, effectively rolling back rent increases to May 8, 2023.
- It establishes a cap on rent increases in a twelve-month period of 5% plus inflation (local CPI) or 7%, whichever is lower.
- It creates an administrative process for a property owner to petition to exceed the cap in order to realize a fair rate of return on rental property, with the resulting staff determinations appealable to a rent review board appointed by the City Council.
- It reiterates the definitions for just cause evictions found in state law and increases the compensation for a no fault eviction to the greater of the equivalent of three months of rent or $5,000.
- For specific vulnerable populations (terminally ill and elderly), it extends the noticing period for a no fault eviction to allow more time to plan relocation.
- For no fault evictions due to substantial remodel or the intent that the unit shall be occupied by the owner or a member of the owner's family, if the owner desires to restore the unit to the rental market within twelve months of the eviction, the evicted tenant has a right to return to the unit at the rental rate in effect at the time of the eviction.
- The ordinances sunset on January 1, 2030.

To minimize the impact of Larkspur's rent stabilization and eviction protection ordinances on city operations, the Municipal Code follows state law whenever possible. Most of the active enforcement language concerns the evaluation of petitions for a fair rate of return. The remainder of the program is fairly passive or responsive with respect to administrative responsibilities. The language of the ordinances allows the City Council to require registration of rental units and to impose a fee for such registration. The intent of this language is to develop a "rental registry" – a database of rental activity in the community – and to recover costs associated with administering the program.

Citizens' Initiative

The initiative that is the subject of this report (Attachment 1) would remove the City Council's ordinances from the Municipal Code and replace them with a single ordinance addressing both rent stabilization and eviction protections.

Notable provisions of the initiative:

- Rent stabilization is subject to the restrictions of the Costa-Hawkins Act.
- It defines an effective date for determining a base rate, effectively rolling back rent increases to August 3, 2022.
- It establishes a cap on rent increases in a twelve-month period of 60% of CPI or 3%, whichever is lower.
- It creates a public hearing process for a property owner to petition to exceed the cap in order to realize a fair rate of return on rental property, with the ruling of the hearing officer appealable to the City Council.
- It nullifies specified lease provisions concerning the assignment of utility charges on a pro-rata basis.
- For specified at fault evictions, it establishes noticing requirements and restrictions not found in state law. (Note: would be enforced by the court, as it would be necessary to prove compliance when filing to evict a tenant.)

- For no fault eviction when the owner wishes to occupy or have a family member occupy a unit, it exempts specified, vulnerable tenants from being subject to eviction and it provides a 36-month right to return period during which the evicted tenant may return should the unit be placed back on the market. When returning, the evicted tenant would pay the rent at the time of eviction.
- For no fault evictions under the Ellis Act, which protects a property owner's right to remove a property from the rental market, it defines penalties, consequences, and terms for right of return at periods of 2, 5, and 10 years.
- For no fault evictions for substantial renovations, it defines noticing requirements and establishes that the evicted tenant has a right to return to the unit at the rent paid at the time of eviction plus any allowable annual adjustment.
- It sets compensation for a no fault eviction at the greater of the equivalent of four months rent or $8,000. Specified vulnerable populations receive an additional $4,000.
- It establishes per diem compensation for temporary short-term relocation of tenants when work on a unit requires that tenants vacate.
- It codifies various protections and rights of tenants.
- There is no sunset provision.

The citizens' initiative defines the Rent Stabilization and Tenant Protections Program as "the City department that implements and enforces this Chapter." While staff does not interpret this definition to mean that the program requires creation of a stand-alone city department, it does imply an organizational unit should be established for this program. Additionally, the initiative codifies numerous administrative and enforcement requirements for "the Program," that will necessitate a dedicated organization unit. See the legal issues discussion below about the enforceability of the administrative components of the initiative.

Impact Should the Citizens' Initiative be Approved by Voters

California Elections Code Section 9212 states that the impact report for an initiative shall address eight factors:

(1) Its fiscal impact.
(2) Its effect on the internal consistency of the city's general and specific plans, including the housing element, the consistency between planning and zoning, and the limitations on city actions under Section 65008 of the Government Code and Chapters 4.2 (commencing with Section 65913) and 4.3 (commencing with Section 65915) of Division 1 of Title 7 of the Government Code.
(3) Its effect on the use of land, the impact on the availability and location of housing, and the ability of the city to meet its regional housing needs.
(4) Its impact on funding for infrastructure of all types, including, but not limited to, transportation, schools, parks, and open space. The report may also discuss whether the measure would be likely to result in increased infrastructure costs or savings, including the costs of infrastructure maintenance, to current residents and businesses.
(5) Its impact on the community's ability to attract and retain business and employment.
(6) Its impact on the uses of vacant parcels of land.
(7) Its impact on agricultural lands, open space, traffic congestion, existing business districts, and developed areas designated for revitalization.
(8) Any other matters the legislative body requests to be in the report.

Staff provides the following assessment of the impact of the initiative under each category, acknowledging that there is a level of speculation required for some of the analysis.

1. Fiscal Impact

The City is in the first year of implementation of the rent stabilization and eviction protection ordinances passed by the City Council in 2023. Implementation has involved three categories of resources: city staff,

outside support, and software. City staff time has been allocated in the form of a portion of time from the City Manager, Assistant City Manager, and Administrative Analyst within the Administration Department. In the model the City is developing, the Administrative Analyst is anticipated to be the primary internal staff person for the program, overseeing data collection and management, as well aspects of communication, outreach, and engagement. In the first few years of the program, it is envisioned that the Analyst will spend 50% of time on the program. As a cost in dollars, the total amount of staff time allocated to the program approximates $100,000 annually.

Outside support for the program involves the use of an organization called ECHO, which specializes in direct engagement with tenants and property owners about their rights and responsibilities under local and state laws. ECHO is authorized to answer questions about the Larkspur ordinances and how they are being implemented and enforced. ECHO works on a time and materials agreement not to exceed $50,000 in the first year.

To manage the rent stabilization and eviction protection program, the City has acquired license agreements and technical support from a company called 3Di, which has within its data management software a module specifically designed for supporting such a program. The first-year cost of the software is $ 81,500, with subsequent years costing $54,180 (Year 2) to $62,720 (Year 5). Time and materials support is also available.

Staff anticipates varying degrees of legal and support costs and has projected needing $10,000 to $50,000 annually for such purposes.

In total, staff believes the current program will cost the City $250,000 to $300,000 annually to operate.

The initiative implies the establishment of a separate organizational unit to support the program. The initiative purports to require staff to develop systems to monitor and track not just rents and rent increases, but evictions and the restoration of units to the market. The initiative requires coordination between the program administrator and other city units, such as the Building Division, to make certain notices comply with the ordinance and that proposed building improvements comply with required tenant safety plans. If the City must perform those functions, the responsibilities of the program administrator would best be addressed by someone with a background in housing matters. Additionally, the program administrator would need to be capable of acting on behalf of the City, including in enforcement matters that might carry liability if administered incorrectly. Finally, the rent cap in the initiative is lower in relation to the rent cap in the Municipal Code and it is believed a lower cap will invite more petitions by property owners to exceed the restriction.

Having reviewed the staffing models in other cities, staff anticipates the City would need a dedicated management level employee at a total cost of roughly $200,000 annually. This employee would be assisted by a staff person shared with another function(s), such as an Administrative Analyst, at a cost of $50,000 to $80,000 per year. Ultimately, it might be necessary to hire a dedicated administrative support person. The agreement with ECHO for general support and outreach would likely continue, as would the agreement with 3Di for software. Legal and support costs would most likely increase to $50,000 to $100,000 to address the more complex ordinance.

In total, staff believes the program in the initiative would cost the City $400,000 to $500,000 annually to operate. **This means the direct fiscal impact on the cost of City operations is projected to be $150,000 to $200,000 in the first year** (the increased cost over the current program). The cost increase may grow over time if demand for program services intensifies.

Both the City's current program and the program in the initiative allow the City Council to recover costs by establishing a registration fee for property owners wishing to rent units in Larkspur. The initiative goes so

far as to establish an initial registration fee, proposing a two-tiered system for units subject to both rent stabilization and eviction protections and those units subject only to eviction protections. The two-tiered approach is found in many cities with these types of ordinances. Depending on the final mix of units that fall into each category (plus consideration for exempt units), staff estimates that the annual costs of the program, and thus the annual fee, for property owners subject to both components of the program will likely be $140 to $160 per unit under the current program in the Municipal Code and $175 to $200 per unit under the initiative. Final numbers will depend on true costs, which will not be known for one to two years.

Another potential fiscal impact of the initiative is a negative effect on property tax revenue. During the City Council's exploration of rent stabilization and eviction protections, representatives for the owner of one apartment complex stated that if a rent stabilization ordinance established a rent cap that would make it difficult for the owner to realize the rate of return projected at the time the complex was purchased, the owner would apply for a downward reassessment of the property value. City staff met with staff from the County Assessor's Office and learned that a rent stabilization ordinance would be a valid reason to petition for a reassessment. The assessed value of an apartment complex is based, in part, on the assumptions made at the time of acquisition, and a rent stabilization ordinance could have a material effect on the owner's pro forma. Staff from the County Assessor's Office did not state that any particular application for a reduced assessed valuation would be approved or denied. They only confirmed that rent stabilization is a cognizable basis for an application.

2. Effect on the Internal Consistency of the City's General and Specific Plans

Staff does not believe this initiative has an effect on the internal consistency of the City's General and Specific Plans. The City is in the final stages of revising its Housing Element, which incorporates the existence of local rent stabilization and eviction protections into its text.

3. Effect on the Use of Land, including the Availability of Housing

Generally, staff does not believe this initiative will have an effect on the use of land, but does note that most of the complaints received to date from property owners about the City Council's ordinances have focused on eviction protections. In particular, several property owners have indicated they are or will be removing their single-family homes from the rental market in response to the ordinance. The initiative proposes a broader scope of eviction protections than found in Larkspur's Municipal Code and a similar ordinance adopted in Fairfax has received highly publicized criticism from owners of smaller rental properties for its potential to drive units off the market.

4. Impact on Funding for Infrastructure

If the City realizes a loss of property tax (discussed above) as a result of the initiative, there will be less money available for the General Fund, including for infrastructure projects. Otherwise, staff does not believe there is a direct impact on funding for infrastructure.

5. Impact on Community's Ability to Attract and Retain Business and Employment

Staff does not believe this initiative will have an impact on the community's ability to attract and retain business and employment.

6. Impact on Uses of Vacant Parcels of Land

Staff does not believe this initiative will have an impact on the uses of vacant parcels of land, but notes that some speakers have voiced concern that rent stabilization and evictions protections are a disincentive to use vacant parcels to construct apartments.

7. Impact on Agricultural Lands, Open Space, Traffic Congestion, Existing Business Districts, and Developed Areas Designated for Revitalization

Staff does not believe this initiative will have an impact on agricultural lands, open space, traffic congestion, existing business districts, and developed areas designated for revitalization.

8. Any Other Matter the Legislative Body Requests to Be in the Report

The City Council has expressed concern about and requested discussion about the economic impact of the initiative on the community as a whole. The overall economic impact of this initiative is open to considerable debate. Rent stabilization is an anti-displacement policy and the initiative's low rent cap reduces a considerable factor in what leads a tenant to move. In simple terms, rent stabilization is a benefit for the current resident. Rent stabilization is not an affordable housing policy, nor does it curb the rise in market rates for housing. It arguably has the opposite long-term effect as less displacement means fewer units are available on the market. Of the papers reviewed by staff about these issues and arguments, the attached article (Attachment 2) by a group led by Professor Karen Chapple, offers a good overview of the economic arguments concerning housing market interventions, including rent stabilization, and the various implications for the behavior of a market sector. Throughout the City Council's exploration of the topics of rent stabilization and eviction protections, supporters of intervention spoke of the negative effects of an unregulated rental market while opponents of intervention spoke of the unintended consequences of regulation. Voters are encouraged to visit https://www.cityoflarkspur.org/TPO and follow the link to "Past Rent Regulation Meetings and Staff Reports" to review these arguments.

The Council expressed interest in what the effect of the initiative would be on the rent cap – the threshold above which a property owner would have to petition to increase the rent amount. The table below uses the 12-month percent change in CPI for every year from 2000 to 2024 to illustrate the rent cap calculation that state law, the current Larkspur Municipal Code, and the initiative would have determined were they in effect for this period.

Effect of Different Rate Cap Calculations Had They Been in Effect in Larkspur from 2000 to 2024

		% Maximum Allowable Rent Increase (Cap)		
Year	12-Month % Change CPI	State law	Municipal Code	Initiative
2000 Apr	3.8	8.80	7.00	2.28
2001 Apr	5.8	10.00	7.00	3.00
2002 Apr	2.1	7.10	7.00	1.26
2003 Apr	2.2	7.20	7.00	1.32
2004 Apr	0.5	5.50	5.50	0.30
2005 Apr	2.1	7.10	7.00	1.26
2006 Apr	3.2	8.20	7.00	1.92
2007 Apr	3.3	8.30	7.00	1.98
2008 Apr	2.9	7.90	7.00	1.74
2009 Apr	0.8	5.80	5.80	0.48
2010 Apr	1.7	6.70	6.70	1.02
2011 Apr	2.8	7.80	7.00	1.68
2012 Apr	2.1	7.10	7.00	1.26
2013 Apr	2.4	7.40	7.00	1.44
2014 Apr	2.8	7.80	7.00	1.68
2015 Apr	2.4	7.40	7.00	1.44

		% Maximum Allowable Rent Increase (Cap)		
Year	12-Month % Change CPI	State law	Municipal Code	Initiative
2016 Apr	2.7	7.70	7.00	1.62
2017 Apr	3.8	8.80	7.00	2.28
2018 Apr	3.2	8.20	7.00	1.92
2019 Apr	4	9.00	7.00	2.40
2020 Apr	1.1	6.10	6.10	0.66
2021 Apr	3.8	8.80	7.00	2.28
2022 Apr	5	10.00	7.00	3.00
2023 Apr	4.2	9.20	7.00	2.52
2024 Apr	3.8	8.80	7.00	2.28

The April calculation of “12-month % Change in CPI” is used to be consistent with a provision in the initiative.

Finally, there are two general categories of legal issues associated with the initiative that Council might find informative. The first has to do with the enforceability of several provisions of the initiative related to the administration of the programs envisioned in the ordinance. The second has to do with defense of the initiative, if challenged in whole or in part.

With regard to the first issue, California courts have established that the voters’ power to enact law through initiative is not unlimited. The power of initiative is limited to legislative acts and cannot compel administrative or executive acts. An initiative is subject to invalidation by a court to the extent that it deals with and seeks to direct administrative acts. The distinction between legislative acts and administrative ones can be blurry—and courts may be cautious to invalidate a measure— in part because an initiative may properly include both a broad public purpose and also specific “provisions for ways and means of its accomplishment.” That said, courts have drawn a line to find that an initiative amounts to an administrative act when it infringes on “governmental powers properly assigned to the executive department” and that an initiative that “interferes with the City’s ability to carry out its day-to-day business is not a proper subject of voter power.”

A city is not prohibited, however, from implementing an initiative that directs administrative acts. Rather, an initiative that includes provisions that intrude into areas of city administration are subject to court challenge and potential invalidation, in whole or in part. The court-created tests for deciding this issue are mostly fact-specific and therefore this question cannot be answered except through litigation.

Nevertheless, the proposed initiative includes a number of provisions that could be characterized as administrative. Some examples include:

- The requirement that the City maintain records of units withdrawn from the market and re-rented and provide notice of re-rental to the tenant displaced.
- The requirement to maintain a register of rental units withdrawn from the market.
- The requirement that the City review and decide whether a Tenant Safety Plan, as defined in ordinance, is adequate.
- The requirement that the City collect data from Buyout Agreements, as defined in the ordinance, that are filed with the City.
- The requirement that the City “issue rules and regulations as will further the purposes” of the initiative.
- The requirement that the City produce a brochure that describes teh legal rights and obligations of landlord and tenants.

- The requirement that the City produce materials that describe a tenant's rights for posting in common areas of rental housing buildings.

There is a section of the initiative ordinance that lists "powers, duties, and responsibilities" of the City administrative staff. It does not specify which of the listed items is a power and which is a duty. If characterized as duties, several of the listed items could be viewed as an intrusion into the administration of the City, including for example:

- Issuing orders, rules, and regulations.
- Reporting annually to the City Council on teh status of rental housing regulated by the ordinance.
- Maintaining a database of unlawful detainer filings, and termination, rent increase, and change in terms of notices received.

Another of the items on that list potentially makes it a duty of the City administration to "[m]ake available on a contract basis legal services for low income residents of the City related to presentation in evictions, petitions, hearings and administrative appeals." California courts have not definitively ruled on this issue, but many have suggested that, with some exceptions not applicable here, entering into contracts is an administrative act. In other words, it may be beyond the voters' power, through an initiative, to compel the City to enter into a contract to provide legal services to low income residents of the City.

Other provisions of the initiative ordinance potentially exceed the voters' power for related reasons. The ordinance states that "Council shall finance the reasonable and necessary expenses of the Program by charging Landlords an annual Rental Housing Fee." California courts have established that the voters, in exercising legislative power by initiative, cannot compel further legislative acts by a legislative body. Thus, it is questionable whether the initiative can compel the City Council to adopt a fee on rental housing. As noted above, the ordinance establishes initial fee amounts, and it authorizes Council to increase the fee amounts based on administrative costs. However, if Council opts not to adopt fee amounts that reflect actual administrative costs, the initial fee amounts established by the ordinance might be inadequate to fully fund the program. Since the ordinance also provides the costs of administration shall not be paid from the City's General Fund, if Council left in place the fee amounts established by the ordinance, it might not be possible to implement all aspects of the ordinance.

Another provision states that the City Council "shall review and assess yearly that a sufficient number of staff are employed by the Program, such as a Program Administrator, hearing examiners, housing counselors and legal services, as may be necessary to perform the functions of the Program efficiently in order to fulfill the purpose of" the ordinance. It is unclear whether this provision of the ordinance attempts to compel the City Council to direct the hiring of staff based on its determinations about the administrative needs of the ordinance—assuming the ordinance can compel the City Council to undertake such annual review. In a general law city such as Larkspur, the City Council appoints only two positions: the City Manager and City Attorney. The City Manager has independent authority to make all other hiring decisions for the administration of the City. To the extent this provision of the ordinance purports to compel that the City create and fill positions for the administration of the ordinance, it might be beyond the power of the voters.

Regarding the second general category of legal issues, in the event of a legal challenge to all or any part of the proposed initiative ordinance, California courts have recognized that cities are not legally required to provide a defense. In this case, the City could answer a legal challenge by declining to defend the initiative ordinance, including agreeing that all or some of the challenged provisions are unlawful. The initiative proponents would have standing to intervene in the litigation to defend the ordinance. The City, however, cannot be compelled to defend the initiative or to fund a legal defense. The proponents or parties with legal standing could defend the initiative, but they would have to do so at their own expense.

CONCLUSION

The submitted citizens' initiative would create a regulatory scheme for rent stabilization and eviction protections that would result in increased staffing costs. Staff projects the initial increase in cost would be $150,000 to $200,000 over what the City is projects spending for its current program, and that amount might grow over time. In total, program costs under the initiative are expected to approach $500,000 annually. The initiative proposes that this fiscal impact be eliminated by charging a registration fee to the owners of rental property that is sufficient to cover the costs of the program. Additionally, staff believes there is a real possibility that the initiative will result in reduced property tax revenue for the City by inviting some number of petitions from property owners seeking a reduction in the assessed value of their rental property.

Rent stabilization and eviction protections ordinances are a form of government intervention into a market. There are many theoretical arguments about the impact of these ordinances that were discussed when the City Council conducted its extensive process that concluded with the adoption of the ordinances now found in the Municipal Code. Voters are encouraged to visit https://www.cityoflarkspur.org/TPO and follow the link to "Past Rent Regulation Meetings and Staff Reports" to review these arguments.

STAFF RECOMMENDATION

It is recommended for the City Council to receive this report and direct staff to publish it on the City's website.

Respectfully submitted,
Dan Schwarz, City Manager

Attachments
1. Initiative
2. Article, "Housing Market Interventions and Residential Mobility in the San Francisco Bay Area"

AN ORDINANCE OF THE PEOPLE OF THE CITY OF LARKSPUR REPEALING AND REPLACING LARKSPUR MUNICIPAL CODE CHAPTERS 6.20 and 6.30.

The People of Larkspur do hereby ordain as follows:

Section 1. Amendment of Larkspur Municipal Code to Repeal and Replace Chapter 6.20 and 6.30. The Larkspur Municipal Code is hereby amended by deleting Chapter 6.20 and 6.30 and adopting in the place of Chapter 6.30 an Ordinance which shall read as follows:

6.30.010 Title and Purpose.

This Chapter shall be known as the Larkspur Rent Stabilization and Tenant Protections Ordinance. The purpose of this Chapter is to promote neighborhood and community stability, healthy housing, and affordability for renters in the City of Larkspur by controlling excessive rent increases and arbitrary evictions to the greatest extent allowable under California law, while ensuring landlords a fair and reasonable return on their investment.

6.30.020 Findings.

A. There is a shortage of decent, safe, affordable, and sanitary housing in the City of Larkspur.

B. The prolonged affordable housing crisis in the City of Larkspur disproportionately impacts low income and working class households, senior citizens, people of color, immigrants, and people with disabilities, and increases homelessness and crime and harms neighborhood stability and cohesion.

C. Residential tenants, who constitute more than 3,300 renter-occupied housing units in Larkspur, constituting approximately 54% of total City housing units, suffer great and serious hardship when forced to move from their homes.

D. As of 2021, 84% of Black households and 67% of Latino households in Larkspur are renters, meaning that renters' rights are a racial equity issue and strengthening tenant protections furthers fair housing.

E. Additionally, approximately 53% of Larkspur householders over the age of 60 and 80% of Larkspur householders under the age of 35 are renters.

F. State laws that eliminate limits on rent increases when a rental unit becomes vacant provide added economic incentive for landlords to evict tenants.

G. An estimated 86% of all Larkspur housing units are in structures built before 1995, as identified by the U.S. Census Bureau, 2021: American Community Survey 5-Year Estimates.

H. Tenants should not consistently face the threat of losing their homes at no fault of their own. Common sense protections against unfair evictions are needed in Larkspur to protect long-time and low income residents from landlords who game the system to try to take advantage of high rents.

I. According to American Community Survey 5-Year Estimates from the U.S. Census Bureau, approximately 49% of renter households in Larkspur are rent-burdened, which means that they pay more than 30% of their income on rent. Without rent stabilization, a tenant who moved into a unit they could afford can very quickly find themselves rent burdened.

J. According to the same data source, approximately 26% of Larkspur renters were estimated to be severely rent-burdened, which is defined as spending more than 50% of household income on rent.

K. Given the increased housing cost burden and poverty faced by many Larkspur residents, excessive rent increases threaten the public health, safety, and welfare of Larkspur residents, including seniors, people with disabilities, those on fixed incomes, those with very low, low, and moderate income levels, and those with other special needs. Such persons are often forced to choose between paying rent and providing food, clothing, and medical care for themselves and their families.

L. The problem of rent increases in Larkspur has reached a crisis level, with rents consistently rising at rates higher than inflation and average wage growth, forcing people out of their homes and out of our community.

M. The State Of California's Tenant Protection Act of 2019 establishes an annual allowable rent increase of 5% plus inflation, far exceeding that of all municipal rent stabilization districts in the Bay Area.

N. Without sufficient and long-term eviction protections, many tenants "self-evict" and move out even without adequate replacement housing, rather than face future legal eviction that could impact their ability to find new housing.

O. Evictions can lead to homelessness. Unsheltered homelessness – the number of people living on the street, in tents or in vehicles – is increasing in Larkspur. Unsheltered homelessness increased 20% between February 2022 and March 2023. As of March 2023, 205 people were living on the streets, in tents, or in vehicles in Larkspur.

P. According to the San Mateo County One Day Homelessness Count and Survey, the number of people living on the street, tents or in vehicles increased throughout San Mateo County by 21% between 2019 and 2022.

Q. Tenants in Larkspur have experienced significant displacement caused by a lack of legal protections against no-fault evictions. Without additional legal protections, such problems are expected to recur.

R. Stabilizing rents and regulating evictions will protect existing affordable housing stock, enabling local residents to live where they work, thereby shortening commutes, improving traffic and air quality, and lowering local carbon emissions.

S. The right to adequate housing is an internationally recognized human right, sanctioned by the United Nations and enumerated to include protection against forced evictions, security of tenure, and non-discriminatory access, as identified by the Office of the United Nations High Commissioner for Human Rights, The Right to Adequate Housing, Fact Sheet No. 21/Rev.1.

T. In recent years, large, out-of-state corporate landlords have bought large apartment complexes in Larkspur and raised rents to the maximum allowed under state law—up to 10%—for the vast majority of tenants, for multiple consecutive years. Tenant organizers have faced retaliation through illegal eviction notices and landlords have refused to negotiate with tenant associations that represent a majority of tenants residing in their complexes.

U. Larkspur's largest apartment complex, home to over 600 Larkspur families, has begun raising rents to the maximum allowed under state law—up to 10%—for the vast majority of tenants.

V. Construction and repairs on rental units or adjacent to such units can create hardships for tenants, especially those who are senior citizens, persons on fixed incomes and members of low and moderate-income households. However, both preventative maintenance as well as code enforcement-related maintenance sometimes involve the replacement or substantial modification of major building systems or the abatement of hazardous materials and, by their very nature, generally makes rental units temporarily untenantable, as defined by California Civil Code section 1941.1. Additionally, the State of California has passed several laws which have streamlined the ability of landlords to build on lots next to residential units that are already occupied by residential housing. These provisions have recently been extended to include not only units built in owner-occupied lots but also investment properties owned by developers who do not live in the community where they own property.

W. In accordance with California Civil Code section 1946.2(g)(1)(B), the Council finds that this Chapter is more protective than the provisions of California Civil Code section 1946.2 for the following reasons:

    1. The just cause for termination of a residential tenancy under this Chapter is consistent with California Civil Code section 1946.2; and

    2. This Chapter further limits the reasons for termination of a residential tenancy, provides for higher relocation assistance amounts, and provides additional tenant protections that are not prohibited by any other provision of law.

X. On August 3rd, 2022, the question of whether to adopt a rent stabilization ordinance in Larkspur first came before the Larkspur City Council as an agenda item.

6.30.030 Applicability and Exemptions.

A. **Applicability of this Chapter.** This Chapter applies to all residential Rental Units except for those units that are exempted.

B. **Exemptions from this Chapter.** The following Rental Units are exempt from all provisions of this Chapter:

1. Rental Units in hotels, motels, and inns which are rented primarily to transient guests for a period of fewer than thirty (30) days. This exemption does not apply:

   i. to a Tenant who has lived at the Property for more than thirty continuous days;

   ii. to a Tenant who has entered into an agreement to lease a Rental Unit for 30 days or more; or

   iii. where a Landlord has violated California Civil Code 1940.1 with regard to the Tenant.

2. Rental Units in any hospital, convent, monastery, extended medical care facility, non-profit home for the aged, or dormitory as defined in California Building Code section 202 that is solely owned and operated by an accredited institution of higher education.

3. A Rental Unit that has been the Primary Residence of the Landlord since the beginning of the tenancy, and where the Landlord shares a bathroom or kitchen with the Tenant. A Landlord, as used in Subsection 6.30.030(B)(3), means a natural person who has at least a fifty-one (51) percent recorded ownership interest in the Property.

4. Any Rental Unit which is an Accessory Dwelling Unit or Junior Accessory Dwelling Unit lawfully permitted pursuant to Larkspur Municipal Code Chapter 18.23, so long as the Accessory Dwelling Unit or Junior Accessory Dwelling Unit is physically attached to an owner occupied single unit with separately alienable title.

6.30.040 Exempted Only from Rent Stabilization.

A. Rental Units exempt pursuant to the Costa-Hawkins Rental Housing Act (California Civil Code sections 1954.50—1954.535) are exempt only from Section 6.30.060 and Section 6.30.160 of this Chapter (Rent Stabilization). If the Costa-Hawkins Rental Housing Act is

repealed or amended, by operation of law, new Rental Units shall be exempt per this Section 6.30.040(A) only for the first 10 years after the completion of their construction.

B. Rental Units fully owned, operated, and managed by a Marin County government unit, agency or authority. This exemption applies only if applicable federal or state law or administrative regulation specifically exempt such units.

6.30.050 Definitions.

The following words or phrases as used in this Chapter shall have the following meanings:

A. **Annual Allowable Rent Increase.** The percent by which a landlord may increase the Rent for any Controlled Rental Unit each year without an order from a hearing officer.

B. **City.** The City of Larkspur.

C. **Controlled Rental Units.** All Rental Units in the City of Larkspur except those units exempt as defined in Subsection 6.30.030(B) and Section 6.30.040.

D. **Council.** The Larkspur City Council.

E. **Creditworthiness.** Any standard for determining whether a Tenant is suitable to receive credit or reliable to pay money owed, including any financial or income standard created by a Landlord as part of a rental application.

F. **Disabled or Disability.** As defined in California Government Code section 12955.3.

G. **Educator.** Any person who works at a school in the Larkspur-Corte Madera School District or Tamalpais Union High School District as an employee of the school or of the governing body that has jurisdiction over the school, including, without limitation, all teachers, classroom aides, administrators, administrative staff, counselors, social workers, psychologists, school nurses, speech pathologists, custodians, security guards, cafeteria workers, community relations specialists, child welfare and attendance liaisons, and learning support consultants.

H. **Fair Market Rent.** As determined by the U.S. Department of Housing and Urban Development for a unit of equivalent size in the San Francisco, CA HUD Metro FMR Area for the fiscal year in which the Rent is demanded.

I. **Housing Services.** Amenities provided by the Landlord in connection with a tenancy. Housing Services include, but are not limited to, repairs, maintenance, painting, light, hot and cold water, electricity service, heating service, sewer service, elevator service, window shades and screens, storage, kitchen, bath and laundry facilities and privileges, janitor services, access to exterior doors, entry systems, and gates, refuse removal, furnishings, telephone, parking, the right to have a specified number of occupants or Tenants, the right to have pets, Utility infrastructure, and any other benefit, privilege or

facility connected with the use or occupancy of any Rental Unit. Housing Services for a Rental Unit include a proportionate part of services provided to common facilities of the building where the Rental Unit is located. In addition, a Tenant's right to engage in Organizing Activities, to receive assistance from a Tenant Association, and to have Organizing Activities occur at the Property shall qualify as a housing service, and a landlord's failure to confer in good faith with a Tenant Association may support a petition for a substantial decrease in Housing Services.

J. **Landlord.** An owner, lessor, sublessor or any other person entitled to receive Rent for the use and occupancy of any Rental Unit, or an agent, representative or successor of any of the foregoing.

K. **Maximum Allowable Rent.** The maximum Rent which a Landlord may legally charge for any Controlled Rental Unit covered by this Chapter.

L. **Organizing Activities.** Concerted activities by Tenants or individuals acting on behalf of Tenants for their shared collective interests as Tenants, regardless of whether they share the same Landlord or management company. Collective interests may include concerns regarding Housing Services, repairs and maintenance, security, rent amounts or rent increases, evictions, discrimination, or harassment. Organizing Activities shall include, but are not limited to:

1. Engaging with other Tenants for the purpose of mutual aid and protection;
2. Convening Tenant or Tenant Association meetings in an appropriate space accessible to Tenants under the terms of their Rental Agreement;
3. Providing Property access to Tenant organizers, advocates, or representatives working with or on behalf of Tenants living at a Property;
4. Distributing and posting literature informing other Tenants of their rights and of opportunities to involve themselves in their project in common areas, including lobby areas and bulletin boards, or communicating with other Tenants about their rights;
5. Advocating for government action or legislation addressing issues of particular concern to Tenants;
6. Initiating contact with other Tenants, including by conducting door-to-door surveys, to ascertain interest in and/or seek support for forming a Tenant Association;
7. The operations of a Tenant Association, including joining or supporting a Tenant Association; or
8. Otherwise acting on behalf of one or more Tenants in the building regarding issues of common interest or concern.

M. **Primary Residence.** A housing unit that is an individual's usual place of return. Occupancy of a Primary Residence does not require an individual to be physically present in the unit at all times or continuously.

1. Factors that indicate Primary Residence include:

    a. The individual carries on basic living activities at the residence for extended periods;

    b. The residence is listed with other public agencies, including federal, state and local taxing authorities as the individual's Primary Residence;

    c. Utilities are billed to and paid by the individual at the residence;

    d. A homeowner's tax exemption for the individual has not been filed for a different property;

    e. The individual is not registered to vote at any other location;

    f. All or most of the individual's personal possessions have been moved into the residence;

    g. The residence is the place the individual normally returns to as their home, exclusive of military service, hospitalization, vacation, family emergency, travel necessitated by employment or education, incarceration, or other reasonable temporary periods of absence;

    h. Other relevant factors illustrating Primary Residence.

2. In order for a housing unit to qualify as a Primary Residence by a Landlord, ownership must be held by the natural person claiming Primary Residence and cannot be held by a limited liability corporation, limited partnership, or other corporate structure. A housing unit owned by a living trust may qualify as a Primary Residence if the trust beneficiary meets the above criteria, so long as the Landlord provides documentation to the Program of the name and address of all trust beneficiaries.

N. **Property.** All Rental Units on a parcel or lot, including any associated common areas.

O. **Rent.** All periodic payments and all nonmonetary consideration a Tenant pays in exchange for the use or occupancy of a Rental Unit and common areas, including all payment and consideration for Housing Services. Nonmonetary compensation includes the fair market value of goods, labor performed or services rendered to or for the benefit of the Landlord under a Rental Agreement.

P. **Rent Stabilization Program Administrator or "Program Administrator."** A person designated by the City to administer and oversee the Program.

Q. **Rent Stabilization and Tenant Protections Program or "Program."** The City department that implements and enforces this Chapter.

R. **Rental Agreement.** An agreement, oral, written or implied, between a Landlord and Tenant for use or occupancy of a Rental Unit and for Housing Services.

S. **Rental Housing Fee.** The fee described in Subsection 6.30.150(D).

T. **Rental Unit.** Any unit in any real property, rented or offered for rent for residential purposes, regardless of zoning or permitting status, together with all Housing Services connected with use or occupancy of the real property such as common areas and recreational facilities held out for use by a Tenant. A room or rooms rented separately from other rooms at the same real property shall constitute a single Rental Unit, even if Tenants share other common spaces or amenities.

U. **School Year.** Either the Larkspur-Corte Madera School District orTamalpais Union High School District school year, starting with the first day of instruction for the Fall semester through two weeks after the last day of instruction for the Spring semester, as posted on the District website each year. For an Educator, the applicable School Year shall be for the District in which the Educator is employed at the time a notice of termination is served. For a child, the applicable School Year shall be for the Larkspur-Corte Madera School District if the child is in Pre-K through 8th grade and Tamalpais Union High School District if in High School.

V. **Tenant.** A tenant, subtenant, lessee, sublessee or any other person entitled under the terms of a Rental Agreement to use or occupy a Rental Unit.

W. **Tenant Association.** A group that has a primary purpose of addressing Housing Services and conditions, community life, landlord-tenant relations, and/or similar issues of common interest or concern among Tenants on the same Property or sharing the same Landlord, as provided for in Subsection 6.30.130(B).

X. **Tenant Household.** All persons living together in one Rental Unit under one Rental Agreement.

Y. **Utility.** The provision of gas, heat, electricity, water, hot water, sewer, refuse removal, telephone, cable or internet.

6.30.060 Rent Stabilization for Controlled Rental Units.

A. No Landlord shall charge Rent or increase Rent for a Controlled Rental Unit to an amount greater than the Base Rent, as specified in Subsection 6.30.060(D) plus any lawful Rent increases allowed under this Chapter.

B. A Landlord may set the initial Rent for a new tenancy to the extent permitted by state law. After that, a Landlord may only increase the Rent as allowed by this Chapter.

C. **Annual Allowable Rent Increase.**

1. A Landlord may increase the Rent each year by an amount equal to the Annual Allowable Rent Increase.

2. The Annual Allowable Rent Increase shall be equal to sixty percent (60%) of the percentage increase in the Consumer Price Index (All Urban Consumers, San Francisco-Oakland-Hayward region as reported and published by the U.S. Department of Labor, Bureau of Labor Statistics, or any successor designation of that index that may later be adopted by the U.S. Bureau of Labor Statistics) for the 12-month period ending as of April of the current year.

3. The new Annual Allowable Rent Increase will take effect each year on September 1.

4. In no event will the Annual Allowable Rent Increase be less than zero percent (0%) or greater than three percent (3%).

5. The Program shall publicize the Annual Allowable Rent Increase amount each year by no later than August 1.

D. **Calculation of Base Rent**.

1. **Initial rollback.** Beginning the effective date of this Chapter, no Landlord shall charge more Rent for any Controlled Rental Unit than the Rent amount in effect on August 3, 2022 except for increases expressly allowed under this Chapter. For a tenancy that began before August 3, 2022, the Rent in effect on that date shall be the Base Rent.

2. For tenancies beginning after August 3, 2022, the Base Rent is the initial rental rate in effect on the date the tenancy begins. As used in this Subsection 6.30.060(D)(2), the term “initial rental rate” means only the amount of Rent actually paid by the Tenant for the initial term of the tenancy.

E. **Utilities.** A Landlord may not charge a Tenant for Utilities in addition to Rent. In order to be paid by a Tenant, the Utility service must be separately or individually metered and the Utility account must be registered to the Tenant and not the Landlord. This prohibition applies only to tenancies entered into after the effective date of this Chapter. It applies regardless of if the written lease allows for split utility charges or ratio utility billing services.

6.30.070 Just Cause for Eviction Protections.

A. **Just Cause Required.** No Landlord shall take action to terminate any tenancy unless the Landlord is able to prove the existence of one of the following at-fault or no-fault grounds in Sections 6.30.080 and 6.30.090. The grounds must be stated in the termination notice that the court action is based upon.

B. Actions to which this Section 6.30.070 applies include, but are not limited to, making a demand for possession of a Rental Unit, threatening to terminate a tenancy verbally or in writing, serving any notice to quit or other eviction notice, bringing any court action to recover possession or be granted recovery of possession of a Rental Unit, including by seeking the entry of an eviction judgment, or by causing or permitting a writ of possession to be entered or executed.

6.30.080 At-Fault Just Causes for Eviction.

The following are the only at-fault just causes for which a Landlord may terminate a tenancy under this Chapter:

A. **Failure to Pay Rent.** The Tenant failed to pay the Rent to which the Landlord is legally entitled under the Rental Agreement, this Chapter, federal, state, and any other local law.

In any action to recover possession of a Rental Unit filed under this Subsection 6.30.080(A), it shall be a defense that the Landlord impeded the Tenant's effort to pay Rent by refusing to accept Rent that a third party paid on behalf of the Tenant or refusing to provide a W-9 form or other necessary documentation for the Tenant to receive rental assistance from a government agency, non-profit organization, or other third party.

B. **Breach of Lease.** The Tenant has continued, after written notice to cease, to substantially violate any of the written material terms of the Rental Agreement, except the requirement to surrender possession on proper notice as required by law.

1. To constitute a breach of lease, the substantially violated term must be reasonable and legal and have been accepted in writing by the Tenant as part of the Rental Agreement. Where such terms were accepted by the Tenant or made part of the Rental Agreement after the initial creation of the tenancy, the Landlord must have first notified the Tenant in writing that they need not accept such terms or agree to their being made part of the Rental Agreement.

2. Before attempting to recover possession of a Rental Unit based on this Subsection 6.30.080(B), the Landlord shall serve the Tenant a written notice of the violation that provides the Tenant with a minimum of fourteen (14) days' opportunity to cure the violation. The warning notice shall inform the tenant that a failure to cure may result in the initiation of eviction proceedings and include sufficient details of the violation to allow the tenant to reasonably comply and any information necessary to determine the date, time, place, witnesses present, and the circumstances concerning the reason for the notice. Any such warning notice must be attached to a notice terminating tenancy.

3. Notwithstanding any lease provision to the contrary, a Landlord shall not take any action to terminate a tenancy based on a Tenant's sublease of the Rental Unit if the Landlord has unreasonably withheld the right to sublease following a written

request by the Tenant. The Tenant must continue to reside in the Rental Unit as their Primary Residence and the sublease must replace one or more departed Tenants under the Rental Agreement on a one-for-one basis.

a. A Landlord's refusal of a subtenant must state the reason for the refusal. If the Landlord fails to respond to the Tenant's request to sublease in writing within fourteen (14) days of receipt of the Tenant's request, the Tenant's request shall be deemed approved by the Landlord.

b. A Landlord's reasonable refusal of the Tenant's written request may not be based on the proposed occupant's lack of Creditworthiness, if the occupant will not be legally obligated to pay some or all of the Rent directly to the Landlord.

4. **Protections for Families.** Notwithstanding any contrary provision in this Section 6.30.080(B), a Landlord shall not attempt to recover possession of a Rental Unit as a result of the addition to the Rental Unit of a Tenant's child, parent, grandchild, grandparent, brother or sister, or the spouse or domestic partner (as defined in California Family Code section 297) of such relatives, or as a result of the addition of the spouse or domestic partner of a Tenant, so long as the number of occupants does not exceed the maximum lawful number of occupants as determined under section 503(b) of the Uniform Housing Code as incorporated by California Health & Safety Code section 17922.

C. **Cause Substantial Damage to Unit.** The Tenant has continued, after the Landlord has served the Tenant with a written notice to cease, to cause substantial damage to or expressly permit substantial damage to be caused to the Rental Unit and, after written notice, has refused to cease damaging the premises, or has refused to either make satisfactory correction or to pay the reasonable costs of repairing such damage over a reasonable period of time.

Before attempting to recover possession of a Rental Unit based on this Subsection 6.30.080(C), the Landlord shall serve the Tenant a written notice of the violation that provides the Tenant with a minimum of fourteen (14) days' opportunity to cure the violation. The warning notice shall inform the tenant that a failure to cure may result in the initiation of eviction proceedings and include sufficient details of the violation to allow the tenant to reasonably comply and any information necessary to determine the date, time, place, witnesses present, and the circumstances concerning the reason for the notice. Any such warning notice must be attached to a notice terminating tenancy.

D. **Nuisance.** The Tenant has created a threat to the health or safety of other occupants of the Property or of the immediate area.The fact that a Tenant has been arrested or convicted of a crime, been the victim of a crime, or contacted the police or other emergency services, in and of itself, is not evidence of nuisance for purposes of this Subsection 6.30.080(D).

E. **Failure to Give Access.** The Tenant has continued to refuse, after the Landlord has served the Tenant with a written notice, to grant the Landlord reasonable access to the Rental Unit for the purposes of showing the unit to a prospective purchaser or mortgagee or making necessary repairs or improvements required by the law. Unless necessary due to a documented emergency affecting a Tenant's health and/or safety, all repair or improvement work will be scheduled in compliance with the Tenant Safety Plan and Section 6.30.010 and any applicable Program regulations.

   1. To terminate a tenancy under this Subsection 6.30.080(E), a Landlord:

      a. Must show that they provided written notice to the Tenant in compliance with California Civil Code section 1954 and all necessary repair or improvement work was scheduled in compliance with this Ordinance and all applicable Program regulations.

      b. Shall serve the Tenant a written notice of the violation that provides the Tenant with a minimum of fourteen (14) days' opportunity to cure the violation. The warning notice shall inform the tenant that a failure to cure may result in the initiation of eviction proceedings and include sufficient details of the violation to allow the tenant to reasonably comply and any information necessary to determine the date, time, place, witnesses present, and the circumstances concerning the reason for the notice. Any such warning notice must be attached to a notice terminating tenancy.

   2. Tenants may request that workers, agents or any other people requesting access to their Rental Unit wear face masks and may deny access if such a request is refused.

F. **Return to Primary Residence.** The Landlord seeks in good faith to recover possession of a separately alienable Rental Unit for their occupancy as a Primary Residence, after the Tenant failed to vacate upon proper notice. This shall apply only where the Landlord has previously occupied the Rental Unit as their Primary Residence and has the right to recover possession of the unit for their occupancy as a Primary Residence under an existing written Rental Agreement with the current Tenants for a term of no more than 12 consecutive months.

   1. The Tenant must be provided, at the inception of the tenancy, with a written statement that includes the length of the tenancy and that the tenancy may be terminated at the end of the temporary tenancy period with no further good cause.

   2. No relocation payment is required under this Subsection 6.30.080(F). However, if the Landlord fails to move in within 90 days of the Tenant vacating or re-rents the Rental Unit, any new Tenant moving into the Rental Unit will have as the original Base Rent the Rent in effect at the time the previous Tenant vacated.

6.30.090 No-Fault Just Causes for Eviction.

A. The following are the only no-fault just causes for which a Landlord may terminate a tenancy under this Chapter:

1. **Owner Move-In.** The Landlord seeks to recover possession in good faith for use as a Primary Residence by the Landlord or the Landlord's Designated Relative or by a professional caretaker who meets the requirements of Subsection 6.30.090(A)(1)(d).

a. For purposes of this Subsection 6.30.090(A)(1), "Designated Relative" shall mean a Landlord's spouse, domestic partner, child, parent or grandparent.

b. A Landlord, as used in Subsection 6.30.090(A)(1), means a natural person who has at least a fifty-one (51) percent recorded ownership interest in the Property.

c. The Landlord or Designated Relative or professional caretaker must intend in good faith to move into the Rental Unit within ninety (90) days after the Tenant vacates and to occupy the Rental Unit as a Primary Residence for at least thirty-six (36) consecutive months.

d. Where a Landlord or their Designated Relative as listed in Subsection 6.30.090(A)(1) already lives at the Property and is over the age of 62 or Disabled, a professional caretaker of that Landlord or Designated Relative may additionally qualify as a valid person for whose use of the Rental Unit the Landlord may recover possession under Subsection 6.30.090(A)(1). All other requirements under this Subsection 6.30.090(A)(1) shall continue to apply. If a professional caretaker who has moved into a Rental Unit under this Subsection 6.30.090(A)(1)(d) is subsequently charged Rent for the Rental Unit, it cannot be more than the previous Rent in effect at the time the previous Tenant vacated.

e. Except as provided in Subsection 6.30.090(A)(1)(d), above, no eviction may take place under Subsection 6.30.090(A)(1) if the same Landlord or the same Designated Relative already occupies a Rental Unit on the Property, or if a vacancy already exists at the Property. Only one specific unit per building may undergo an "Owner Move-in" eviction. Once a Landlord has successfully recovered possession of a Rental Unit pursuant to Subsection 6.30.090(A)(1), no other Landlords may recover possession of any other Rental Unit at the Property under Subsection 6.30.090(A)(1). Any future evictions taking place at the same Property under Subsection 6.30.090(A)(1) must be of that same Rental Unit. At all times, a Landlord may request a reasonable accommodation to the

Program if the Landlord or enumerated relative is Disabled and a different unit is necessary to accommodate the person's Disability.

f. A Landlord who has terminated a tenancy for a Rental Unit under Subsection 6.30.090(A)(1) may not terminate a tenancy for a Tenant who subsequently reoccupies a Rental Unit after termination of tenancy under Subsection 6.30.090(A)(1) or relocates to a comparable Rental Unit on the same Property for a period of four years beginning from the date of the latest notice terminating tenancy.

g. A notice terminating tenancy under Subsection 6.30.090(A)(1) shall contain the name, address of Primary Residence, and relationship to the Landlord of the person intended to occupy the Rental Unit, a list of all real property owned by each intended future occupant, and the address of the real property, if any, on which each intended future occupant claims a homeowner's property tax exemption.

h. If the Landlord, Designated Relative, or professional caretaker specified on the notice terminating tenancy fails to occupy the Rental Unit within 90 days after the Tenant vacates, the Landlord shall:

    i. Offer the Rental Unit to the Tenant who vacated it at the same Rent in effect at the time the Tenant vacated; and

    ii. Pay to said Tenant all reasonable expenses incurred in moving to and from the Rental Unit, including lease termination fees. This Subsection 6.30.090(A)(1)(h)(ii) does not limit any other remedies a Tenant may have under this Chapter or applicable law.

    iii. If the Landlord, Designated Relative, or professional caretaker specified on the notice fails to occupy the Rental Unit within 90 days after the Tenant vacates or does not occupy the Rental Unit as a Primary Residence for at least 36 months, the Landlord shall have the burden of producing evidence that the failure to occupy occurred in good faith.

i. If the Landlord, Designated Relative, or professional caretaker specified on the notice terminating tenancy fails to occupy the Rental Unit within ninety days or fails to occupy for at least 36 months, and the previous Tenant declines to move back into the Rental Unit, any new Tenant moving into the Rental Unit will have as the original Base Rent the Rent in effect at the time the previous Tenant vacated.

j. **Eviction Protection for Elderly, Disabled, or Terminally Ill Tenants.** A Landlord may not evict a Tenant under Subsection 6.30.090(A)(1) if:

i. The Tenant has resided in the Rental Unit for at least three (3) years and is either at least 62 years of age or Disabled; or

ii. The Tenant is certified as being terminally ill by the Tenant's treating physician.

For the purposes of this Subsection 6.30.090(A)(1)(j), notwithstanding the above, a Landlord may evict a Tenant who qualifies for the exemption because they are Disabled if the Landlord or designated relative who will occupy the Rental Unit is also Disabled and no other units are available at the Property. Likewise, a Landlord may evict a Tenant who qualifies for the exemption because they are terminally ill if the Landlord or designated relative who will occupy the Rental Unit is also terminally ill and no other units are available at the Property.

k. **School Year Protections for Educators and Students.** It shall be a complete defense to an action to recover possession under this Subsection 6.30.090(A)(1) if:

i. A child under the age of 18 or any Educator resides in the unit, the child or Educator is a Tenant in the unit or the child has a custodial or family relationship with a Tenant in the unit;

ii. The Tenant has resided in the unit for 12 months or more; and

iii. The expiration date of the notice of termination of tenancy falls during the School Year.

l. A Landlord may not evict a Tenant under Subsection 6.30.090(A)(1) if there is a comparable Rental Unit at the Property occupied by a Tenant who moved onto the Property more recently than the Tenant from whom the Landlord seeks to recover possession.

2. **Withdrawal from Rental Market.** The Landlord seeks in good faith to recover possession of all Rental Units on a parcel of land to permanently withdraw the units from the rental market or for demolition so long as the withdrawal is permitted by the Ellis Act (California Government Code section 7060 et seq.). The Landlord must have fulfilled all requirements of this Chapter and all regulations passed by the Program initiating the procedure for withdrawing Rental Units from rent or lease, with the intention of completing the withdrawal process and going out of the rental business or demolishing the Rental Units. Tenants shall be entitled to a minimum of 120-day notice of termination of tenancy. If a Tenant is at least 62 years of age or Disabled, the notice period shall be one year. Notice times may be increased by regulation if state law allows for additional time.

The following shall apply to a unit where the Landlord recovers possession pursuant to Subsection 6.30.090(A)(2):

a. **Re-rental Within Two Years.** If the Rental Unit is offered again for rent or lease for residential purposes within two years of the date the Rental Unit was withdrawn from rent or lease, the following shall apply:

   i. The Landlord of the Rental Unit shall be liable to any Tenant who was displaced from the Property by that action for actual and punitive damages. Any action by a Tenant pursuant to this paragraph shall be brought within three years of the withdrawal of the Rental Unit from rent or lease. However, nothing in this paragraph precludes a Tenant from pursuing any alternative remedy available under the law.

   ii. The Program may institute a civil proceeding against the Landlord for punitive damages for displacement of Tenants. Any action pursuant to this paragraph shall be brought within three years of the withdrawal of the Rental Unit from rent or lease.

   iii. **Right to Reoccupy.** The Landlord shall first offer the unit for rent or lease to the Tenant displaced from that unit by the withdrawal pursuant to this Chapter, if the Tenant has advised the Landlord in writing within 30 days of the displacement of the Tenant's desire to consider an offer to renew the tenancy and has furnished the Landlord with an address to which that offer is to be directed. That Tenant or former Tenant may advise the Landlord at any time during the eligibility of a change of address to which an offer is to be directed.

   iv. If the Tenant has advised the Landlord of a desire to consider an offer to renew the tenancy, then the Landlord shall offer to reinstate a Rental Agreement or lease on terms permitted by law to that displaced Tenant. This offer shall be deposited in the United States mail, by registered or certified mail with postage prepaid, addressed to the displaced Tenant at the address furnished to the Landlord as provided in this Subsection 6.30.090(A)(2)(a), and shall describe the terms of the offer. The displaced Tenant shall have 30 days from the deposit of the offer in the mail to accept the offer by personal delivery of that acceptance or by deposit of the acceptance in the United States mail by registered or certified mail with postage prepaid. The Tenant shall have the option to offer an email instead of an address to receive such offers. However, the email must be offered for this specific purpose to be considered offered.

b. **Re-rental of Rental Units Within Five Years.** If the Rental Unit is offered again for rent or lease for residential purposes within five years of the date the Rental Unit was withdrawn from rent or lease, the Rental Unit shall be offered and rented or leased at the lawful Rent in effect at the time any notice of intent to withdraw the Rental Unit is filed with the Program, plus any lawful Annual Allowable Rent Increases. The provisions of this paragraph shall apply to all tenancies commenced during either of the following time periods:

   i. The five-year period after any notice of intent to withdraw the Rental Unit is filed with the Program, whether or not the notice of intent is rescinded or the withdrawal of the Rental Unit is completed pursuant to the notice of intent.

   ii. The five-year period after the Rental Unit is withdrawn.

   This Subsection 6.30.090(A)(2)(b) shall prevail over any conflicting provision of law authorizing the Landlord to establish the rental rate upon the initial hiring of the Rental Unit.

c. **Re-rental Within Ten Years.** A Landlord who offers a Rental Unit again for rent or lease within 10 years from the date on which it is withdrawn shall first offer the unit to the Tenant displaced from that unit by the withdrawal, if that Tenant requests the offer in writing within 30 days after the Landlord has notified the Program of an intention to offer the Rental Unit again for residential rent or lease. The Landlord of the Rental Unit shall be liable to any Tenant who was displaced by that action for failure to comply with this paragraph, for punitive damages in an amount which does not exceed the contract Rent for six months, and the payment of which shall not be construed to extinguish the Landlord's obligation to comply with this Subsection 6.30.090(A)(2).

d. **Demolition Restrictions.** If the Rental Unit(s) are demolished, and new Rental Unit(s) are constructed on the same Property, and offered for rent or lease within five years of the date the Rental Unit(s) were withdrawn from rent or lease, the newly constructed Rental Unit(s) shall be subject to the system of control established in Section 6.30.060 at which time they would be offered at the Rent that was paid at the time the prior tenancy was terminated under this Subsection 6.30.090(A)(2), notwithstanding any exemption from the system of controls for newly constructed Rental Units.

e. **Applicability to Successors in Interest.** When a Landlord withdraws Rental Units from rent or lease pursuant to Subsection 6.30.090(A)(2), the requirements of Subsection 6.30.090(A)(2) shall apply to all successors in interest. The Program shall record a notice with the county

recorder which shall specifically describe the real property where the Rental Unit is located, the dates applicable to the constraints and the name of the Landlord of record of the real property. The notice shall be indexed in the grantor-grantee index. The Program shall charge a fee for the processing of evictions filed pursuant to Subsection 6.30.090(A)(2).

f. **Notice of Withdrawal.** A Landlord who seeks to demolish or withdraw a Rental Unit from the rental market under Subsection 6.30.090(A)(2) must provide the Program with a notice, that states under the penalty of perjury:

   i. the number of Rental Units withdrawn;

   ii. the address or location of those Rental Units;

   iii. the name or names of the Tenants of the Rental Units;

   iv. the lawful Rent applicable to each Rental Unit.

   The name or names of the Tenants, the Rent applicable to any residential Rental Unit, and the total number of Rental Units, is confidential information and for purposes of this Chapter shall be treated as confidential information for purposes of the Information Practices Act of 1977 Chapter 1 (commencing with section 1798) of Title 1.8 of Part 4 of Division 3 of the California Civil Code).

g. The Landlord must record with the county recorder a memorandum summarizing the provisions, other than the confidential provisions, of the notice in a form which shall be prescribed by the regulation from the Program, and will require a certification with that notice that actions have been initiated as required by law to terminate any existing tenancies.

h. The Landlord must notify the Program in writing of their intention to re-offer the Rental Unit for rent or lease.

i. The date on which the Rental Unit is withdrawn from rent or lease for purposes of this Chapter is 120 days from the delivery in person or by first-class mail of the notice of withdrawal to the Program. However, if the Tenant is at least 62 years of age or Disabled, and has lived in their Rental Unit for at least one year prior to the date of delivery to the Program of the notice of intent to withdraw, then the date of withdrawal of the Rental Unit of that Tenant shall be extended to one year after the date of delivery of that notice to the Program, provided that the Tenant gives written notice of their entitlement to an extension to the Landlord within 60 days of the date of delivery to the Program of the notice of intent to withdraw.

j. **Protections During Extension of Tenancy for Elderly or Disabled Tenants.** If a Tenant notifies a Landlord of their right to an extension pursuant to the previous Subsection 6.30.090(A)(2)(i) in writing within 60 days of the Program receiving the notice of intent to withdraw the Rental Unit, the following provisions shall apply:

   i. The tenancy shall be continued on the same terms and conditions as existed on the date of delivery to the Program of the notice of intent to withdraw, subject to any adjustments otherwise available under this Chapter.

   ii. No party shall be relieved of the duty to perform any obligation under the lease or Rental Agreement.

   iii. The Landlord may elect to extend the tenancy on any other Rental Unit within the rental property up to one year after date of delivery to the Program of the notice of intent to withdraw, subject to paragraphs (i) and (ii).

   iv. Within 30 days of the notification by the Tenant to the Landlord of their entitlement to an extension, the Landlord shall give written notice to the Program of the claim that the Tenant is entitled to stay in their Rental Unit for one year after date of delivery to the Program of the notice of intent to withdraw.

   v. Within 90 days of the date of delivery to the Program of the notice of Intent to withdraw, the Landlord shall give written notice of the Landlord's election to extend a tenancy under paragraph (iii) and the revised date of withdrawal to the Program and any Tenant whose tenancy is extended.

   vi. The date of withdrawal for the Rental Unit as a whole, for purposes of calculating any time-periods in this Chapter, shall be the latest termination date among all Tenants within the Rental Unit, as stated in the notices required by paragraphs (iv) and (v). A Landlord's further voluntary extension of a tenancy beyond the date stated in the notices required by paragraphs (iv) and (v) shall not extend the date of withdrawal.

k. The Landlord must notify any Tenant displaced pursuant to Subsection 6.30.090(A)(2) of the following:

   i. That the Program has been notified pursuant to Subsection 6.30.090(A)(2)(f).

   ii. That the notice to the Program specified the name and the amount of Rent paid by the Tenant as an occupant of the Rental Unit.

iii. The amount of Rent the Landlord specified in the notice to the Program.

iv. Notice to the Tenant of their rights under Section 6.30.090(A)(2)(a)(iii).

v. That if the Tenant is at least 62 years of age or Disabled, and has lived in their Rental Unit for at least one year prior to the date of delivery to the Program of the notice of intent to withdraw, then tenancy shall be extended to one year after date of delivery to the Program of the notice of intent to withdraw, provided that the Tenant gives written notice of their entitlement to the Landlord within 60 days of date of delivery to the Program of the notice of intent to withdraw.

vi. That the extended tenancy shall be continued on the same terms and conditions as existed on date of delivery to the Program of the notice of intent to withdraw, subject to any adjustments otherwise available under Section 6.30.060.

vii. That no party shall be relieved of the duty to perform any obligation under the lease or Rental Agreement during the extended tenancy.

l. Not later than the last day of the third and sixth calendar months following the month in which notice is given to the Program, and thereafter not later than December 31 of each calendar year for a period of five years, beginning with the year in which the six-month notice is given, the Landlord of any Property which contains or formerly contained one or more Rental Units which a Tenant or Tenants vacated pursuant to Subsection 6.30.090(A)(2) shall notify the Program, in writing, under penalty of perjury, for each such Rental Unit:

i. Whether the unit has been demolished;

ii. If the unit has not been demolished, whether it is in use;

iii. If it is in use, whether it is in residential use;

iv. If it is in residential use, the date the tenancy began, the name of the Tenant(s), and the amount of Rent charged.

If the Rental Unit has been demolished, and one or more new units constructed on the lot, the Landlord shall furnish the information required by items (ii), (iii) and (iv) for each new unit. The Program shall maintain a record of the notices received under this Subsection 6.30.090(A)(2)(l) for

each Rental Unit withdrawn from the rental market pursuant to Subsection 6.30.090(A)(2).

m. The Program shall notify each person who is reported as having become a Tenant in a vacated or new Rental Unit subject to the reporting requirements of Subsection 6.30.090(A)(2)(l) that it maintains the records described in Subsection 6.30.090(A)(2)(l), and that the Rent of the Rental Unit may be restricted pursuant to Subsection 6.30.090(A)(2).

n. The Program shall maintain a register of all Rental Units withdrawn from rent or lease under Subsection 6.30.090(A)(2) and the Rent applicable to each unit at the time of withdrawal. The Program shall inform Tenants displaced from units withdrawn from rent or lease at the address provided by the Tenant, when the Landlord notifies the Program that the Rental Unit or replacement unit will again be offered for rent or lease within ten years of the date of withdrawal.

o. The Program may investigate whether a Rental Unit that was withdrawn from rent or lease has been again offered for rent or lease, and whether the Landlord has complied with the provisions of Subsection 6.30.090(A)(2).

3. **Temporarily Vacate for Substantial Renovation.** The Landlord, after having obtained all necessary permits from the City and an approved Tenant Safety Plan on or before the date the notice of termination is given, seeks in good faith to perform Substantial Renovation to the Property.

    a. For purposes of this Subsection 6.30.090(A)(3), “Substantial Renovation” means repair or renovation work performed on a Rental Unit or on the building containing the Rental Unit that (1) brings the Rental Unit into compliance with applicable laws regarding building health and safety requirements by making substantial repairs, (2) cannot be performed while the Tenant lives there, and (3) that improves the property by prolonging its useful life or adding value. Substantial Renovation must additionally involve one of the following:

        i. Replacement or substantial modification of any structural, electrical, plumbing or mechanical system that requires a permit under the Larkspur Municipal Code.

        ii. Abatement of hazardous materials, such as lead-based paint and asbestos, in accordance with applicable federal, state and local laws.

        iii. Repairs required by a Building Official in a Notice of Violation.

b. Where the Landlord owns any other Rental Units in the City of Larkspur of the same number of bedrooms or fewer, and any such unit is vacant and available at the time of service of the written notice terminating the tenancy, or at any time thereafter until the earlier of the Tenant vacating the Rental Unit or a court of competent jurisdiction entering judgment awarding possession of the premises to the Landlord, the Landlord may notify the Tenant in writing of the existence and address of each such vacant Rental Unit and offer it to the Tenant as an alternative to providing the relocations payments required under Section 6.30.090(C), if the Tenant so chooses. In such case, the Landlord additionally shall offer the Tenant the right, at the Tenant's option, to enter into a Rental Agreement (to be designated as a "Temporary Rental Agreement") for the available Rental Unit which the Tenant may choose. The Rent for such a unit shall not exceed the lesser of the lawful Rent which may be charged for the available Rental Unit or the lawful Rent in effect at the original Rental Unit at the time of the notice of termination of tenancy. The Rental Agreement for the replacement Rental Unit shall be for a term of the lesser of ninety days or until the Substantial Renovation is completed on the Rental Unit vacated by the Tenant.

c. A notice terminating tenancy under Subsection 6.30.090(A)(3) must include the following information:

    i. A statement informing Tenants of their right to relocation payments under this Chapter.

    ii. The statement, "When the needed repairs are completed on your unit, the Landlord must offer you the opportunity to return to your unit with a Rental Agreement that has the same terms as your original one and with the same rent.”

    iii. A description of the Substantial Renovation to be completed and the approximate expected duration of the Substantial Renovation.

d. Where the Landlord recovers possession under Subsection 6.30.090(A)(3) either prior to or after an unlawful detainer judgment, the Tenant must be given the right of first refusal to re-occupy the unit. The Landlord shall notify the Tenant Household at least sixty (60) days in advance of the date the Rental Unit becomes available. Within thirty (30) days of receipt of the notice of availability, a Tenant Household must notify the Landlord if it wishes to reoccupy the Rental Unit. The Landlord must hold the Rental Unit vacant at no cost to the Tenant for sixty (60) days from the date the Tenant Household’s written notice of its intent to reoccupy the Rental Unit is received.

e. **School Year Protections for Educators and Students.** If the expiration date of the notice of termination of tenancy falls during the School Year, the Landlord must make a showing that the Substantial Renovation cannot wait to be completed after the School Year. Otherwise, it shall be a defense to an action to recover possession under this Subsection 6.30.090(A)(3) that:

i. A child under the age of 18 or any Educator lives in the unit, the child or Educator is a Tenant in the Rental Unit or the child has a custodial or family relationship with a Tenant in the Rental Unit;

ii. The Tenant has lived in the Rental Unit for 12 months or more; and

iii. The expiration date of the notice of termination of tenancy falls during the School Year.

B. **Right of Return and First Right of Refusal at the Same Rent.** All Tenants that are displaced based on reasons under this Section 6.30.090(A) shall have the first right of refusal to return to a Rental Unit if it is ever returned to the rental market by the Landlord or a successor Landlord.

1. The new Rental Agreement shall include the same terms as the original and the original Base Rent shall be the Rent lawfully paid by the Tenant at the time the Landlord gave notice for which the basis was listed in this Section 6.30.090.

2. Should the Tenant decline to reoccupy the Rental Unit after it is returned to the rental market, the lawful Base Rent for the new tenancy shall be the Rent lawfully paid by the former Tenant at the time the Landlord served the termination notice, plus any lawful Annual Allowable Rent Increases.

C. **Relocation for No Fault Evictions.**

1. A Landlord seeking to recover possession under Subsections 42.9(A) must make a relocation payment to the Tenant Household. The amount of the relocation payment shall be equal to four times the monthly Fair Market Rent for the Rental Unit being vacated, per Tenant Household, or $8,000, whichever is more. The landlord shall pay this amount at the time of service of the notice of termination of tenancy. If the notice of termination is withdrawn, the Tenant shall return the relocation payment.

2. If any Tenant of the Tenant Household is 62 years of age or older, Disabled, or terminally ill at the time a notice of intent to withdraw Rental Units under Subsection 6.30.090(A) is filed with the Program, the Tenant Household shall be entitled to receive a payment of $4,000 in addition to the payment required by Subsection 6.30.090(C)(1). A Tenant must notify the Landlord of their entitlement to this payment.

3. When a Landlord disputes a Tenant Household's eligibility to receive standard or additional relocation assistance, either party may file a petition with the Program requesting a hearing to determine eligibility. Such petitions and hearings shall follow all applicable procedures specified in Section 6.30.160 and Program regulations. This is not an exclusive remedy.

4. Every year following the date of passage, both the minimum relocation payment provided for in Subsection 6.30.090(C)(1) and the additional relocation payment for provided for in Subsection 6.30.090(C)(2) shall adjust annually at the rate of increase in the Consumer Price Index for All Urban Consumers: Rent of Primary Residence in San Francisco-Oakland-Hayward for the preceding calendar year, as that data is made available by the United States Department of Labor and published by the Program.

6.30.100 Tenant Safety Plans for Repairs, Construction, and Substantial Renovation of Occupied Rental Properties.

A. **Purpose.** The purpose of this Section 6.30.100 is to facilitate investment by Landlords in renovations and the construction of new housing without subjecting tenants to either untenantable housing conditions during such renovation work or forced permanent displacement. A Tenant Safety Plan requires landlords to mitigate such temporary untenantable conditions, either through actions to ensure that Tenants can safely remain in place during construction, or through the temporary relocation of Tenants to alternative housing accommodations. These two options should not be regarded as mutually exclusive but rather as complementary approaches that may be appropriate for different stages of the renovation process.

B. No Landlord shall perform repair, construction, or Substantial Renovation on an occupied Rental Unit, a building containing occupied Rental Units, or on the same lot as the occupied Rental Unit, which requires a permit or is performed in response to an order to abate from the City building official, without first obtaining an approval of a Tenant Safety Plan for such construction, renovations or repairs.

   1. **Emergency Repair Exempted.** In the event that a necessary repair must be completed in less than 48 hours to ensure the health and safety of a Tenant Household and no permit is required before work may commence, the work may commence without a Tenant Safety Plan.

   2. **Substantial Renovation.** For purposes of this Section 6.30.100, "Substantial Renovation" means work performed either on a Rental Unit or on the building containing the Rental Unit that brings the Rental Unit into compliance with the Housing Code by making substantial repairs and that cannot be made while the Tenant lives there, improves the property by prolonging its useful life or adding value, and involves either or both of the following:

a. Replacement or substantial modification of any structural, electrical, plumbing or mechanical system that requires a permit under the Larkspur Municipal Code.

b. Abatement of hazardous materials, such as lead-based paint and asbestos, in accordance with applicable federal, state and local laws.

C. The City (or Program, at the discretion of the City Manager) shall not approve a Landlord's application for a permit for repairs, construction, or Substantial Renovation unless both of the following conditions have been met:

1. The Landlord has submitted a Tenant Safety Plan to the Program which, in accordance with this Section 6.30.100, the Program finds adequately mitigates the impact of the construction, renovation, or repairs upon affected Tenants; and

2. The Landlord has submitted to the Program a declaration documenting that the Landlord served to affected Tenants both a Notice of Substantial Renovation and a copy of the non-confidential portions of the Tenant Safety Plan.

D. **Tenant Safety Plan Requirements.** At a minimum, a Tenant Safety Plan shall provide the following information as well as any other information the Program deems necessary to ensure that the impact of the renovation upon affected Tenants is adequately mitigated:

1. Identification of the Landlord, the general contractor responsible for the renovation, and any specialized contractor responsible for hazardous material abatement, including but not limited to lead-based paint and asbestos.

2. Identification of all affected Tenants, including the current Rent each Tenant pays and the date of each Tenant's last Rent increase. In accordance with California Civil Code section 1798 et seq., information regarding Tenants shall be considered confidential.

3. Description of the scope of work covered in the construction, repair or renovation. This description shall address the overall work to be performed on all affected Rental Units and common areas, the specific work to be undertaken on each affected Rental Unit, an estimate of the total project cost and time, and an estimate of the cost and time of renovation for each affected Rental Unit.

4. Identification of the impact of the renovation on the habitability of affected Rental Units, including a discussion of impact severity and duration of noise, Utility interruption, exposure to hazardous materials, interruption of fire safety systems, inaccessibility of all or portions of each affected Rental Unit, other potential health hazards such as exposure to infectious diseases, and disruption of other Housing Services.

5. Identification of the mitigation measures that will be adopted to ensure that Tenants are not required to occupy an untenantable dwelling, as defined in California Civil Code section 1941.1, outside of the hours of 8:00 am through 5:00 pm, Monday through Friday, and are not exposed at any time to toxic or hazardous materials including, but not limited to, lead-based paint and asbestos. Such measures may include the adoption of work procedures that allow a Tenant to remain on-site and/or the temporary relocation of Tenants.

6. Identification of the impact of the renovation on the personal property of affected Tenants, including work areas which must be cleared of furnishings and other Tenant property, and the exposure of Tenant property to theft or damage from hazards related to work or storage.

7. Identification of the mitigation measures that will be adopted to secure and protect Tenant property from reasonably foreseeable damage or loss.

8. Identification of a phone number and email address of a responsible party who will be responsive to tenant complaints about the execution of the Substantial Renovation.

E. **Tenant Safety Plan Acceptance.** The Program shall make a determination of whether the Landlord's proposed Tenant Safety Plan is adequate within five working days of the date the Program receives the plan for review. The Program shall accept those plans which meet the requirements of this Section 6.30.100 and which it determines, with reference to the standards set forth in California Civil Code section 1941.1, applicable local codes, and in accordance with any regulations or guidelines adopted by the Program, will adequately mitigate the impacts of renovation upon Tenants.

1. The Tenant Safety Plan may allow for the temporary disruption of major systems during the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, without requiring the relocation of Tenants in order to adequately mitigate the impacts upon the affected Tenants.

2. The Program shall provide landlords with written indications of deficiencies which must be addressed whenever a Tenant Safety Plan is determined to be inadequate. A landlord may submit an amended plan in order to correct identified deficiencies.

3. Once the Program has approved a Landlord’s proposed Tenant Safety Plan, the Landlord must provide impacted Tenants a copy of the approved Tenant Safety Plan along with a notice, as provided by the Program, of the Tenant’s right to appeal the Tenant Safety Plan pursuant to Subsection 6.30.100(E)(4).

4. Landlords and Tenants may appeal the Program’s determination regarding a Tenant Safety Plan. The appeal shall be made in writing, upon appropriate forms provided by the Program, and shall specify the grounds for appeal, such as the

plan being overly disruptive or that a temporary relocation should or should not be provided. The appeal shall be filed within 15 calendar days of the service of the Program's determination. The requested hearing shall be held within 30 calendar days of the filing of the appeal following the procedures adopted under this Chapter. The Program shall issue a written decision within ten calendar days of the hearing on the appeal, with a copy of the decision served on the landlord and the tenants by first class mail, postage prepaid, or in person. Such appeals and hearings shall follow all applicable procedures specified in Section 6.30.160 and Program regulations.

5. Tenants may raise on appeal that job or childcare schedules or other unavoidable hardship require relocation or other mitigation measures beyond those proposed by the Landlord, in addition to the other requirements of this Section 6.30.100.

6. Notwithstanding Subsection 6.30.100(E)(1), a Tenant Safety Plan shall not be approved if it would allow Tenants to be exposed at any time to toxic or hazardous materials, including, but not limited to, lead-based paint and asbestos.

F. **Substantial Renovation Notice.** In the event that the work proposed is a Substantial Renovation, service of the approved Tenant Safety Plan items shall be provided in the manner prescribed by section 1162 of the California Code of Civil Procedure and at least 60 days prior to the date the Substantial Renovation is scheduled to begin. Notice of Substantial Renovation shall be written in the language in which the original lease was negotiated and shall provide the following information.

1. The estimated start and completion dates of any Substantial Renovation associated with the accepted Tenant Safety Plan.

2. A description of the Substantial Renovation to be performed and how it will impact that particular tenant or household.

3. Whether temporary relocation will be required, and if so, a notice concerning Tenants’ rights under this Chapter.

4. Instructions that Tenants with questions should consult the Landlord or the Program.

5. Notice of the Tenant's right to reoccupy the units under the existing terms of tenancy upon completion of the Substantial Renovation.

6. Notice that the Tenant may appeal the Program’s acceptance of a Tenant Safety Plan provided such request is submitted within 15 days of the tenant's receipt of the Notice of Substantial Renovation.

7. Notice that a tenant can make complaints to the responsible party identified in the Tenant Safety Plan.

8. A disclaimer in at least 24 point bold font on the first page of the notice stating "THIS IS NOT AN EVICTION NOTICE. IF YOU HAVE QUESTIONS CONCERNING YOUR RIGHTS AS A TENANT CALL [Phone Number of Program].

G. **Short-Term Tenant Relocation Plan.**

1. When a Tenant will be displaced from their Rental Unit for renovation, repairs, or construction work for a period of fewer than thirty days, the Tenant shall be immediately entitled to receive short-term relocation payments from the Landlord as set out in Subsection 6.30.10(G)(3). The Tenant may choose not to receive short-term relocation payments. If the Tenant receives short-term relocation payments, the Tenant remains obligated to pay to the Landlord the lawful Rent in effect when the Tenant vacates. If the Tenant has chosen not to receive short-term relocation payments, the Tenant shall not be obligated to pay any Rent until the Tenant reoccupies the Rental Unit.

2. Should a Tenant be displaced for a greater time than originally notified, the Landlord shall pay additional short-term relocation expenses for each additional day of displacement, to be paid on a weekly basis prior to each additional week.

3. The following amounts shall be paid by the Landlord to the Tenant for each day of displacement:

    a. Hotel or motel accommodations: $150.00 per Household;

    b. Meal expenses: $30.00 per occupant;

    The dollar amounts specified in this Subsection 6.30.100(G)(3) shall adjust annually at the rate of increase in the Consumer Price Index for All Urban Consumers: Rent of Primary Residence in San Francisco-Oakland-Hayward for the preceding calendar year, as that data is made available by the United States Department of Labor and published by the Program. The Program shall publish the new short-term relocation payment amounts each year following the increase.

4. A Landlord's failure to properly comply with the provisions of this Section 6.30.100 is not a defense to failing to provide relocation payments under this Subsection 6.30.100(G) or any available remedy.

H. Nothing in this Section 6.30.100 shall prevent a Tenant from seeking a reasonable accommodation for Disability from a Landlord or impact a Tenant's existing legal right to Disability accommodations during renovations.

6.30.110 Provisions Applicable to All Eviction Actions.

A. In any action to recover possession of a Rental Unit, a Landlord must allege and prove that the Landlord seeks to recover possession of the unit with good faith, honest intent, and with no ulterior motive, for the reason stated in the termination notice.

B. If a Landlord claims the Rental Unit is exempt from this Chapter, the Landlord must allege in the notice of termination of tenancy and prove that the unit is covered by one of the exceptions enumerated in Subsection 6.30.030(B), including the specific grounds for the exemption. Failure to make such allegations in the notice shall be a complete defense to any unlawful detainer action.

C. **Additional Notice Requirements.** In any notice purporting to terminate tenancy under this Chapter, the Landlord shall state the cause for the termination and any information required under this Chapter. All termination notices served under this Chapter must additionally include the following:

1. A statement that information regarding the laws upon which the notice terminating tenancy is based is available from the Larkspur Rent Stabilization and Tenant Protections Program.

2. A statement that Tenants seeking legal advice should consult with an attorney.

3. The statement, “The Larkspur Fair and Affordable Housing Ordinance applies to your rental unit. Your landlord must have one of the reasons specified in the Ordinance in order to end your tenancy. Reasons that are not listed in the Ordinance, such as the sale of the property, are not valid causes for eviction under the Ordinance.”

4. The calendar date on which the Tenant is required to vacate, including the month and day.

5. All notices that the Landlord is otherwise required by this Chapter to serve on a Tenant during an effort to terminate a tenancy, which must be attached to the termination notice.

6. Any other information that the Program may, by regulation, require.

D. **Filing of Termination Notices**. The Landlord shall file with the Program a copy of any notice terminating tenancy within three (3) days after serving the notice on the Tenant.

E. **Failure to Strictly Comply in Eviction Actions.** In any legal action brought to recover possession of a Rental Unit, the Landlord must allege and prove compliance with this Chapter. A Landlord’s failure to strictly comply with any requirement of this Chapter or any implementing regulation may be asserted by a Tenant as an affirmative defense in an action brought by the Landlord to recover possession of the Rental Unit.

F. The requirements of this Section 6.30.110 shall apply to all notices terminating tenancy that have been served as of the effective date of this Chapter, but where the corresponding Rental Unit has not been vacated or an unlawful detainer judgment has not been issued as of the effective date of this Chapter.

G. **Good Faith in Eviction Actions.** The Program may adopt regulations governing the determination of good faith.

6.30.120 Buyout Offers and Agreements.

A. **Definitions.** As used in this Section 6.30.120, the following terms shall have the following meanings:

1. **Buyout Agreement.** An agreement in which a Landlord pays a Tenant money or other consideration to vacate a Rental Unit. An agreement to settle an unlawful detainer action pending in court does not constitute a "Buyout Agreement."

2. **Buyout Offer.** An offer, written or oral, by a Landlord to pay a Tenant money or other consideration to vacate a Rental Unit. An offer to settle an unlawful detainer action pending in court does not constitute a "Buyout Offer."

B. **Disclosure Required.** No less than ten days prior to making a Buyout Offer for a Rental Unit, the Landlord shall provide each Tenant in that Rental Unit a written disclosure, on a form developed and authorized by the Program, that includes the following:

1. A statement that the Tenant has a right not to enter into a Buyout Agreement;

2. A statement that the Tenant may choose to consult with an attorney before entering into a Buyout Agreement;

3. A statement that the Tenant may rescind the Buyout Agreement for up to thirty days after it is fully executed;

4. A statement that the Tenant may consult the Program with respect to the Buyout Agreement;

5. Any other information required by the Program consistent with the purposes and provisions of this Section 6.30.120; and

6. A space for each Tenant to sign and write the date the Landlord provided the Tenant with the disclosure.

C. Every Buyout Agreement shall be in writing and include the following statements in bold letters in at least fourteen-point type in close proximity to the space reserved for the signature of the Tenant(s):

“You may cancel this agreement in writing at any time before the thirtieth day after all parties have signed this agreement. You have a right not to enter into a buyout

agreement. You may choose to consult with an attorney or the Larkspur Rent Stabilization and Tenant Protections Program before signing this agreement. The Larkspur Rent Stabilization and Tenant Protections Program may have information about other buyout agreements in your neighborhood."

D. A Buyout Agreement that does not satisfy all the requirements of this Section 6.30.120 shall not be effective and shall be void at the option of the affected Tenant(s). However any remedy based on an ineffective or void Buyout Agreement shall not include displacement of a subsequent Tenant or Tenants of the affected Rental Unit.

E. **Right to Rescind.** A Tenant shall have the right to rescind a Buyout Agreement for up to thirty days after its execution by all parties, so long as the Tenant has not already permanently vacated the Rental Unit. In order to rescind a Buyout Agreement, the Tenant must hand-deliver, e-mail, or place in the U.S. mail a statement to the Landlord indicating that the Tenant has rescinded the Buyout Agreement no later than the 30th day after it is executed by all parties.

F. The Landlord shall retain a copy of each signed disclosure form for five years, along with a record of the date the Landlord provided the disclosure to each Tenant, and shall give each Tenant a copy of the Buyout Agreement at the time the Tenant executes it.

G. The Landlord shall provide a copy of the Buyout Agreement to the Program no sooner than the thirty-first day after the Buyout Agreement is executed by all parties, and no later than sixty days after the agreement is executed by all parties.

H. Buyout Agreements must be maintained by the Program in a file that is separate from any other file.

I. All information included in the Buyout Agreements by which an individual might reasonably be identified ("personally-identifying information"), including without limitation an individual's name, phone number, unit number, or specific street address, must be maintained as confidential.

J. The Program shall collect data from the filed Buyout Agreements--including, without limitation, the compensation paid as consideration for the Buyout Agreement and the neighborhood of the affected Rental Unit--and shall make that data public; but only to the extent that no personally identifying information is revealed.

6.30.130 Right to Organize.

A. **Non-Interference In Organizing Activities.** A Landlord may neither prohibit nor interfere with a Tenant, or a guest of the Tenant, from using common areas in that building to engage in Organizing Activities.

B. **Establishing a Tenant Association.** Tenants on a Property may establish a Tenant Association by providing their Landlord a petition signed by Tenants representing at least 50% of the occupied Rental Units on the Property certifying that they desire to form

a Tenant Association, and identifying the Tenant Association. For purposes of this Subsection 6.30.130(B) a "petition" may include individual written statements signed by said Tenants, or some combination of individual and collective written statements. For a Property with only one Rental Unit, the Tenants shall instead provide their Landlord a petition signed by 50% of the Tenants residing in the Unit.

C. **Requirement to Confer.** Landlords and Tenant Associations shall confer with each other in good faith regarding Housing Services and rental conditions, landlord-tenant relations, Rent increases, and other issues of common interest or concern. In order to qualify as “good faith” for purposes of this Section 6.30.130, the parties shall have the mutual obligation, personally or through their authorized representatives, to meet and confer and continue for a reasonable period of time, in order to exchange freely information, opinions, and proposals, and to endeavor to reach agreement. Examples of conferring in good faith may include, but are not limited to:

    1. Maintaining a designated point of contact
    2. Engaging in regular communications
    3. Responding to reasonable requests for information
    4. Allowing participation by non-resident advocates
    5. Providing adequate time for limited-English speakers to obtain translation services
    6. Providing and adhering to timelines for addressing habitability concerns
    7. Negotiating and putting agreements into writing.

    The Program may by regulation prescribe additional guidelines and requirements for determining whether the parties are conferring in good faith.

D. **Right to Representation.** A Landlord may not prohibit a Tenant from allowing a Tenant Association representative to attend any meeting or conversation involving the Landlord and one or more Tenants.

E. A Landlord must on written request of a Tenant Association attend, either themselves or through their representative, at least one Tenant Association meeting per calendar quarter, though more frequent attendance at the request of the Tenant Association is permitted. A Landlord or Landlord's representative must·remain in attendance at the meeting until all agenda items are complete, unless the meeting extends for more than two hours, in which case the Landlord or Landlord's representative may withdraw from the meeting and request that the remaining items be continued to a subsequent meeting. The meetings shall occur at a mutually convenient time and place. To request that a Landlord or their representative attend a meeting, the Tenant Association shall send the Landlord a written request at least 14 days in advance; alternatively, if the Tenant Association meets at a regularly scheduled time and place, then the Tenant Association

may send the Landlord a single standing request to attend meetings for the duration of the calendar year. A Tenant Association may send the Landlord a single standing request to attend meetings for the duration of the calendar year.

6.30.140 Harassment Prohibited.

A. No Landlord or such Landlord's agent, contractor, subcontractor, or employee shall do any of the following, in bad faith. For purposes of this Section 6.30.140, “bad faith” means willful, reckless, or grossly negligent conduct in disregard for legal requirements or in a manner indifferent to the rights of or impact on Tenants. The scope and effect of the conduct will be taken into account in determining whether the conduct is in bad faith. The Program may enact regulations to further guide the determination that conduct is in bad faith.

1. Reduce, interrupt, terminate, or fail to provide Housing Services required by a Rental Agreement or by state, county or local housing health or safety laws, or threaten to do so. This includes the following:

    a. Curtailing any Utility services by any means whatsoever, including, but not limited to, the cutting or removal of wires, removal of fuses, switching of breakers, and non-payment of bills for Utilities that are part of the Housing Services.

    b. Impeding reasonable access to the Rental Unit.

    c. Removing doors or windows of the Rental Unit.

2. Fail to perform repairs or maintenance required by a Rental Agreement or by state, county or local housing, health or safety laws, or threaten to do so.

3. Fail to exercise due diligence in completing repairs or maintenance once undertaken or fail to follow appropriate industry repair containment or remediation protocols designed to minimize exposure to noise, dust, lead paint, mold, asbestos, or other building materials with potentially harmful health impacts, or fail to use all containment or remediation protocols designed to protect the health and safety of the occupants of Property when completing repairs and maintenance.

4. Abuse the Landlord’s right of access into a Rental Unit as established and limited by California Civil Code section 1954 or successor statute, including the following:

    a. Failing to provide the approximate time of entry to a Tenant or providing a time window that is excessive relative to the amount of time for which the Landlord requires access.

b. Entering or photographing portions of a Rental Unit that are beyond the scope of a lawful entry or inspection, including exceeding the scope of a notice provided per California Civil Code section 1954.

c. Entering an excessive number of times.

d. Entering in a way that improperly targets certain Tenants or is used to collect evidence against occupants or is beyond the scope of an otherwise lawful entry.

e. Entering or demanding entry at times outside of normal business hours, unless for health and safety reasons or if the Tenant agrees otherwise.

f. Entering contrary to a Tenant's reasonable request to change the date or time of entry.

g. Misrepresenting the reasons for accessing a Rental Unit.

h. Failing to notify a Tenant that a noticed entry has been canceled.

5. Remove or threaten to remove from the Rental Unit personal property, furnishings, or other items that belong to the Tenant or that are part of the Housing Services without the prior written consent of the Tenant, except when done pursuant to the procedures set forth in California Civil Code section 1980 et seq., or successor statute.

6. Influence or attempt to influence a Tenant to vacate a Rental Unit through fraud, intimidation, or coercion. This includes threatening to report a Tenant or other person known to the Landlord to be associated with the Tenant to any local, state, or federal agency based on their perceived or actual immigration status.

7. Offer payments to a Tenant to vacate more than once in six months, after the Tenant has notified the Landlord in writing the Tenant does not desire to receive further offers of payments to vacate.

8. Attempt to coerce a Tenant to vacate with offer(s) of payments to vacate that are accompanied with threats or intimidation.

9. Threaten the Tenant, or their guests, by word or gesture, with physical harm.

10. Interfere with a Tenant's right to quiet use and enjoyment of a Rental Unit as that right is defined by California law.

11. Refuse to accept or acknowledge receipt of a Tenant's lawful Rent payment or rental assistance payment. This shall include a refusal to accept Rent paid on behalf of the tenant from a third party, or to timely provide a W-9 form or other necessary documentation for the Tenant to receive rental assistance from a government agency, non-profit organization, or other third party.

12. Refuse to cash a Rent check or money order for more than 30 days.

13. Interfere with a Tenant's right to privacy. This includes, but is not limited to the following:

    c. Recording video or audio that captures the interior of a Rental Unit.

    d. Unreasonable inquiry into a Tenant's relationship status or criminal history.

    e. Unreasonable restrictions on or inquiry into guests. Unreasonable restrictions on guests include, but are not limited to, prohibiting a Tenant from hosting overnight guests and charging a Tenant a fee for hosting overnight guests.

14. Request information that violates a Tenant's right to privacy. This includes, but is not limited to, requesting information regarding the residency status, citizenship status, or social security number of any Tenant or member of the Tenant's family or household member, occupant, or guest of any Tenant, except as required by law or, in the case of a social security number, for the purpose of obtaining information for the qualifications for a tenancy prior to the inception of a tenancy, or releasing such information except as required or authorized by law. This includes a refusal to accept equivalent alternatives to information or documentation that does not concern immigration or citizenship status, e.g. an Individual Taxpayer Identification Number (ITIN). This Subsection 6.30.14(A)(14) applies to a prospective Tenant as well as to a current Tenant.

15. Misrepresent to a Tenant that they are required to vacate a Rental Unit or otherwise entice a Tenant to vacate a Rental Unit through misrepresentations or concealment of material facts.

16. Force a Tenant to vacate their Rental Unit and reregister to avoid classification as a Tenant under California Civil Code section 1940.1. Forced vacation can be implied from the totality of the circumstances.

17. Unilaterally impose or require an existing Tenant to agree to material new terms of tenancy or to a new Rental Agreement, unless:

    a. The change in the terms of tenancy is authorized by California Civil Code sections 1946.2(f), 1947.5, or 1947.12, or successor statutes, or is required by federal, state, or local law or regulatory agreement with a government agency, or

    b. The change in the terms of the tenancy was accepted in writing by the Tenant after receipt of written notice from the Landlord that the Tenant need not accept such new terms as part of the Rental Agreement.

Notwithstanding Subsections 42.14(A)(17)(a) and (b), for Controlled Rental Units, all changes in terms of tenancy must additionally comply with the provisions of this Chapter and any accompanying regulations.

18. Remove a Housing Service for the purpose of causing the Tenant to vacate the Rental Unit.

19. Commit elder financial abuse, as defined by California Welfare and Institutions Code 15610.30 et seq., of a Tenant.

20. Fail to provide or fail to adequately provide Housing Services to a Tenant that are customarily provided to other Tenants in the building who pay a different Rent amount or use a different source of income to pay Rent.

21. Fail to provide or fail to adequately provide Housing Services to a Tenant that are customarily provided to other Tenants in the building when the Tenant owes COVID-19 rental debt. For purposes of this Subsection 6.30.140(A)(21), “COVID-19 rental debt” shall mean unpaid rent or any other unpaid financial obligation under the Rental Agreement that came due between March 1, 2020 and February 28, 2023.

22. Release information protected by the Tenant's right to privacy except as required or authorized by law.

23. Conduct elective renovation of or construction work on a Rental Unit for the purpose of harassing a Tenant.

24. Provide false written or verbal information regarding any federal, state, county, or local Tenant protections, including mischaracterizing the nature or effect of a notice to quit or other eviction notice. False information includes, without limitation, requesting or demanding a Tenant:

    a. Sign a new Rental Agreement not in the Tenant's primary language if:

        i. Rental Agreement negotiations were conducted in the Tenant's primary language;

        ii. The existing Rental Agreement is in the Tenant's primary language; or

        iii. The Landlord is otherwise aware that the new Rental Agreement is not in Tenant's primary language.

    b. Enter into a Rent repayment plan if the Landlord states, misrepresents, suggests, or implies, that the Tenant should or must do so to take advantage of Tenant protection laws that do not in fact require such plans.

25. Communicate with the Tenant in a language other than the Tenant's primary language for the purpose of intimidating, confusing, deceiving or annoying the Tenant.

26. Interfere with the right of Tenants to engage in Organizing Activities.

27. Engage any Tenant in any form of human trafficking as defined by California Penal Code section 236.1, as a condition of that Tenant's continued occupancy of a Rental Unit.

28. Other repeated acts or omissions of such significance as to substantially interfere with or disturb the comfort, peace or quiet of any person lawfully entitled to occupancy of such Rental Unit and that cause, are likely to cause, or are intended to cause any person lawfully entitled to occupancy of a Rental Unit to vacate such Rental Unit or to surrender or waive any rights in relation to such occupancy.

The Program may, by regulation, augment but not eliminate, reduce or weaken this list.

B. **Severances Prohibited.** The following amenities, supplied in connection with use or occupancy of a Rental Unit, may not be severed from a tenancy without good cause: garage facilities, parking facilities, driveways, storage spaces, laundry rooms, decks, patios, backyards, gardens on the same lot, kitchen facilities, toilet facilities, or lobbies in residential hotels. For purposes of this Section 6.30.140, good cause shall include:

1. The requirement of federal, state, or local law;

2. For Rental Units which are not Controlled Rental Units, acceptance of the severance in writing by the Tenant after receipt of written notice from the Landlord that the Tenant need not accept the severance;

3. For Controlled Rental Units, Program approval of the removal of amenities in a manner consistent with the Program's regulations; or

4. The removal of a balcony for which repair or removal was necessary for safety and where the Landlord has obtained all necessary permits for the removal.

A severance does not include noticed temporary unavailability of the above Housing Services to perform necessary work with all required permits.

6.30.150 Rent Stabilization and Tenant Protections Program and Funding.

A. **Powers and Duties.** The Program shall have the following powers, duties, and responsibilities:

1. Establish a Base Rent under Subsection 6.30.060(A).

2. Make Rent increases and decreases in accordance with Section 6.30.160.

3. Issue orders, rules and regulations, conduct hearings and charge and collect fees as set forth below.

4. Make such studies, surveys and investigations, conduct such hearings, and obtain such information as is necessary to carry out its powers and duties.

5. Report annually to the Council on the status of rental housing covered by this Chapter.

6. Maintain a database of unlawful detainer filings, and termination, rent increase, and change in terms of notices received by the Program.

7. Administer oaths and affirmations and subpoena witnesses.

8. Establish rules and regulations for deducting penalties and settling civil claims regarding the Rental Housing Fee.

9. Seek injunctive and other civil relief under this Chapter.

10. Charge and collect the Rental Housing Fee, including penalties for late payments.

11. Make available on a contract basis legal services for low income residents of the City related to presentation in evictions, petitions, hearings and administrative appeals.

12. Collect and/or receive copies of notices of termination of tenancy, unlawful detainer complaints, Rent increase, and changes in terms of tenancy.

13. Any other duties necessary to administer and enforce this Chapter.

B. **Rules and Regulations**. The Program shall issue such rules and regulations as will further the purposes of the Chapter. The Program shall publicize its rules and regulations prior to promulgation on its website and any other appropriate medium. All rules and regulations, internal staff memoranda, and written correspondence explaining the decisions, orders, and policies of the Program shall be kept in the Program's office and made available online to the public for inspection, download and copying or any other future appropriate technology.

C. **Community Education**.

1. The Program shall publicize this Chapter so that all residents of Larkspur will have the opportunity to become informed about their legal rights and duties under this Chapter. The Program shall prepare a brochure which fully describes the legal rights and duties of Landlords and Tenants under this Chapter. The brochure will be available to the public and each Tenant of a Rental Unit shall receive a copy of the brochure from their Landlord. Landlords shall provide the brochure at the commencement of the tenancy and with each notice of Rent

increase, and to all sitting Tenants when the brochure is first made available by the Program. This brochure will be made available for download from the City website and/or other appropriate technology. Information about the Chapter shall be made available in all other languages that are requested by the community.

2. The Program shall produce materials describing a Tenant's rights under the Ordinance for posting in common areas. If Rental Units subject to this Chapter are located on a Property with an interior common area that all Tenants have access to, the Landlord must post the materials as provided and specified by the Program in at least one such common area on the Property.

D. **Rental Housing Fee.**

1. The Council shall finance the reasonable and necessary expenses of the Program by charging Landlords an annual Rental Housing Fee. The Council shall ensure that the Rental Housing Fee is set at a level sufficient to fund the duties and responsibilities of the Program, including but not limited to the provision of legal services as set out under Subsection 6.30.150(A)(12).

2. The Rental Housing Fee amount will be determined by the Council after the Program provides a recommendation to the Council. The Program and staff to enforce this Chapter shall be funded only by the Rental Housing Fee and not from the General Fund. However, the City shall front any necessary funds until the City has collected such fees.

3. From the time that this Chapter goes into effect until the Rental Housing Fee is determined, the amount shall be $120 per Controlled Rental Unit per year ($10 per month) and $84 per unit ($7 per month) for Units that are partially exempt under Section 6.30.040 only and are not Controlled Rental Units.

4. The Rental Housing Fee shall become due at the start of a new tenancy if no Rental Housing Fee was paid the prior year. Ongoing tenancies shall have Rental Housing Fees collected in January of each year or at the same time as the City business license fee each year. The fee shall not be deemed late and no penalty shall be imposed unless received by the Program 30 days or more after the due date.

5. The Rental Housing Fee shall be deposited into a Rent Stabilization and Tenant Protections Program Fund, the sole and exclusive purpose for which shall be the funding of the Program and the administration, enforcement, and enactment of this Chapter.

E. **Personnel.** The Council shall review and assess yearly that a sufficient number of staff are employed by the Program, such as a Program Administrator, hearing examiners, housing counselors and legal services, as may be necessary to perform the functions of the Program efficiently in order to fulfill the purpose of this Chapter.

F. **Reporting and Fee Payment Requirements.**

1. Within sixty (60) days after the adoption of this Chapter, all Landlords shall be required to provide a copy of all Rent increase notices, change of terms of tenancy and tenancy termination notices with the Program within 3 days after serving said notice on a Tenant. A proof of service with time and date of service of notice on Tenant shall be included with any notice filed with the City.

2. If the Program, after the Landlord has proper notice and after a hearing, determines that a Landlord has willfully and knowingly failed to properly report, as described above, any Rent increase notices, change of terms of tenancy or tenancy termination, or to pay the Rental Housing Fee, the Program may authorize the Tenant of such a Rental Unit to withhold all or a portion of the Rent for the Rental Unit until such time as the Rental Housing Fee is paid or notice filed. After a notice is properly filed or fee paid, the Program shall determine what portion, if any, of the withheld Rent is owed to the Landlord for the period in which the notice is not properly filed or fee paid. Whether or not the Program allows such withholding, no Landlord who has failed to properly report or pay the fee shall at any time increase Rents for a Controlled Rental Unit until such fee or notice is reported. This shall take effect thirty (30) days after determination of the Program.

3. Failing to pay the fee or comply with Subsection 6.30.150(F)(1), before the filing of an unlawful detainer lawsuit, is a complete defense to an unlawful detainer. No Program action is required for this defense to be alleged or litigated in an unlawful detainer action.

6.30.160 Rent Stabilization Petition and Hearing Process.

A. **Petitions to Raise or Decrease Rents.** A Landlord or a Tenant may file a petition with the Program to increase or decrease the Maximum Allowable Rent of a Rental Unit for a reason outlined in this Chapter.

1. **Petition Procedures.** The petition shall be filed on the form provided by the Program. A petition filed by a Landlord shall include a declaration by the Landlord that the Rental Unit meets all requirements of this Chapter. The Program may refuse to hold a hearing and/or grant a Rent adjustment if an individual hearing has been held and decision made regarding Maximum Allowable Rent for the Rental Unit within the previous twelve (12) months.

2. **Procedures for Rent Adjustment.** After a petition is filed, a hearing examiner may adjust the Maximum Allowable Rent of an individual Controlled Rental Unit upward or downward per the requirements of this Chapter. In making adjustments, the hearing examiner shall consider the purposes of this Chapter and the requirements of law, including state law.

B. **Downward Adjustments.** In making an individual downward adjustment, the Program may consider prior or current unlawful increases, decreases in Housing Services; substantial deterioration of the Controlled Rental Unit other than as a result of ordinary wear and tear; or failure on the part of the Landlord to provide adequate Housing Services or to comply substantially with applicable housing, health and safety codes.

C. **Upward Adjustments - Right of Reasonable Return for Landlords.**

1. Landlords have the right to a reasonable return on their investment**.** A hearing examiner shall make an upward adjustment of the Maximum Allowable Rent if a Landlord demonstrates that the such adjustments are necessary to provide a reasonable return. The Program may create regulations to govern petitions filed under this Subsection 6.30.160(C) in accordance with this Chapter and the law.

2. **Factors to be considered.** In making such upward adjustments of the Maximum Allowable Rent, the hearing examiner shall consider the purposes of this Chapter and shall specifically consider all relevant factors, including (but not limited to):

    a. Increases or decreases in property taxes;

    b. Unavoidable increases or any decreases in maintenance and operating expenses;

    c. The cost of planned or completed capital improvements to the Rental Unit (as distinguished from ordinary repair, replacement and maintenance) where such capital improvements are necessary to bring the Property into compliance or maintain compliance with applicable local code requirements affecting health and safety, and where such capital improvement costs are properly amortized over the life of the improvement;

    d. Increases or decreases in the number of Tenants occupying the Rental Unit, living space, furniture, furnishings, equipment, or other Housing Services provided, or occupancy rules;

    e. Substantial deterioration of the Rental Unit other than as a result of normal wear and tear;

    f. Failure on the part of the Landlord to provide adequate Housing Services, or to comply substantially with applicable state rental housing laws, local housing, health and safety codes, or the Rental Agreement;

    g. Whether parties conferred in good faith relating to Housing Services and conditions, landlord-tenant relations, rent increases, and other issues of common interest or concern;

    h. The pattern of recent Rent increases or decreases;

i. The Landlord's rate of return on investment. In determining such return, all relevant factors, including but not limited to the following shall be considered: the Landlord's actual cash down payment, method of financing the property, and any federal or state tax benefits accruing to the Landlord as a result of ownership of the property; and

j. Whether or not the property was acquired or is held as a long-term or short-term investment.

2. Additional limits on the total increase per month and length of monthly increases shall be added by the Program through regulations.

3. The Program shall not authorize an upward adjustment of an individual Maximum Allowable Rent if the Landlord:

a. has continued to fail to comply, after order of the Program, with any provisions of this Chapter and/or orders or regulations issued thereunder by the Program, or

b. has failed to bring the Rental Unit into compliance with the implied warranty of habitability.

D. **Effective Date of Adjustment.** If the Program approves an increase in the Maximum Allowable Rent, the increase shall become effective only after the Landlord gives the Tenant at least a thirty (30) day written notice of the Rent increase and the notice period expires. If the Program approves a downward adjustment of the Maximum Allowable Rent, the Rent decrease shall take effect no sooner than thirty (30) days after the date both parties are sent notice of the downward adjustment and its effective date by the Program.

E. **Hearing Procedure**. The Program shall enact rules and regulations for hearings and appeals which shall include the following:

1. **Hearing Examiner**. A hearing examiner designated by the Program shall conduct a hearing to act upon the petition for individual adjustment of Maximum Allowable Rent and shall have the power to administer oaths and affirmations.

2. **Notice.** Once it receives a petition, the Program shall notify the other party and provide a copy thereof.

3. **Time of Hearing.** The hearing officer shall notify all parties of the time, date and place of the hearing.

4. **Records.** The hearing examiner may require either party to a hearing to provide it any records and papers deemed pertinent in addition to the information in registration statements for the Rental Unit. If the hearing examiner finds good cause to believe the Program's information does not reflect the current condition of the Controlled Rental Unit, the hearing examiner shall conduct a current

building inspection and/or request that the City conduct a current building inspection. The Tenant may request that the hearing examiner order such an inspection on or prior to the date of the hearing. All documents required under this Subsection 6.30.160(E)(4) shall be made available to the parties at the Program office prior to the hearing. In cases where information filed in a petition or in additional submissions filed at the request of the hearing examiner is inadequate or false, no action shall be taken on the petition until the deficiency is remedied.

5. **Open Hearings.** All Maximum Allowable Rent adjustment hearings shall be open to the public.

6. **Right of Assistance.** All parties to a hearing may have assistance in presenting evidence and developing their position from attorneys, legal workers, Tenant Association representatives or any other persons designated by the parties.

7. **Hearing Record.** The Program shall make an official record of the hearing, including the recording, available for inspection and copying by any person. This shall constitute the exclusive record for decision on the issues of the hearing. The record of the hearing shall include all exhibits, papers and documents required to be filed or offered or accepted into evidence during the proceedings; a list of participants present; a summary of all testimony accepted in the proceedings; a statement of all materials officially noticed; all recommended decisions, orders and/or rulings; all final decisions, orders and/or rulings, and the reasons for each final decision, order and/or ruling. All hearings shall be recorded. Any party may receive a copy of the audio recording. Reasonable costs may be charged for a recording copy. The Program shall not be responsible for transcribing the audio recording.

8. **Standard of Proof and Notice of Decision.** A hearing office shall not grant an individual adjustment unless the adjustment is supported by the preponderance of the evidence submitted at the hearing. All parties to a hearing shall be sent a notice of the decision and a copy of the findings of fact and law upon which the decision is based. The parties to the proceeding shall also be notified in the decision of their right to any appeal allowed by the Program and/or to judicial review of the decision pursuant to this Section 6.30.160.

9. **Consolidation.** All Landlord petitions pertaining to Tenants of the same Property shall be consolidated for hearing. All petitions filed by Tenants occupying the same Property shall be consolidated for hearing unless there is a showing of good cause not to consolidate the petitions.

10. **Appeal.** Any person aggrieved by the decision of the hearing examiner may appeal to the Council. On appeal, the Council shall affirm, reverse or modify the decision of the hearing examiner.

11. **Finality of Decision.** The decision of the hearing examiner shall be the final decision of the Council in the event that neither party appeals to the Council. The decision of the hearing examiner shall be stayed pending appeal.

12. **Time for Decision.** The rules and regulations adopted by the Program shall require final action on any individual Rent adjustment petition within a reasonable time.

F. Decisions decreasing Rents due to reductions in services or failure to maintain the Property shall remain in effect until the hearing officer finds that the Landlord has corrected the defect warranting the decrease. The Program shall, by regulation, establish procedures for making prompt compliance determinations. Upon a determination of compliance, the Landlord shall be entitled to reinstate the prior Rent level, retroactive to the date that the Landlord notified the Program that it had corrected the defect that warranted the decrease. This shall occur in compliance with California Civil Procedure section 1942.4. If the Landlord is found to be in violation of California Civil Procedure section 1942.4, then no Rent shall be charged for the period during which the Landlord was in violation.

6.30.170 Non-Waiverability.

Any provision, whether oral or written, whereby any provision of this Chapter is waived, shall be deemed to be against public policy and shall be void.

6.30.180 Judicial Review.

A Landlord or Tenant aggrieved by any action or decision of the Program may seek judicial review by appealing to the appropriate court within the jurisdiction. No action or decision by the Program shall go into effect until thirty (30) days have expired to allow for such appeal.

6.30.190 Remedies.

A. **Civil.** Any aggrieved Tenant, or the City, may enforce the provisions of this Chapter by means of a civil action.

B. **Injunctive and Equitable Relief.** Any person who commits an act or engages in any pattern and practice that violates this Chapter or its implementing regulations may be enjoined therefrom by a court of competent jurisdiction. A court may issue other equitable relief as may be necessary to prevent the use or employment by any person of any practice which violates this ordinance or as may be necessary to restore to any person in interest any money or property, real or personal, which may have been acquired through practices that violate this ordinance. An action for injunction under this Subsection 6.30.19(B) may be brought by an aggrieved Tenant, by the City Attorney, or by any person or entity who will fairly or adequately represent the interests of the protected class.

C. **Damages**

1. **Damages for Relocation Payments.** If a Landlord fails to provide required relocation payments in accordance with this Chapter, in addition to any other remedy under this Chapter, or at law, the Landlord shall be liable to the Tenant in a civil action for damages of not less than three times actual damages.

2. **Wrongful Eviction Damages.** Any attempt to recover possession of a Rental Unit or obtain possession of a Rental Unit in violation of this Chapter shall render a Landlord liable to the Tenant in a civil action for wrongful eviction for damages of not less than three times actual damages, including damages for emotional distress. Damages for mental anguish and emotional distress shall only be trebled if the Landlord acted in knowing violation or reckless disregard of this Chapter.

3. **Damages for Excess Rent.** Any Landlord who demands, accepts, receives, or retains any payment of Rent in excess of the Maximum Allowable Rent, in violation of the provisions of this Chapter or any rule, regulation or order hereunder promulgated, including the provisions ensuring compliance with habitability standards and registration fee requirements, shall be liable in a civil action to the Tenant from whom such payments are demanded, accepted, received or retained, for damages of not less than three times actual damage,. in the amount by which the payment or payments demanded, accepted, received or retained exceeds the maximum lawful Rent. If the Landlord's violation under this Subsection 6.30.190(C)(3) was willful, the Landlord shall be liable for three times actual damages.

4. **Harassment Damages.** Any person who violates, or aids or incites another person to violate, the provisions of Section 6.30.140 shall be liable in a civil action for each and every such offense for money damages of not less than three times actual damages suffered by an aggrieved Tenant (including damages for mental or emotional distress), or for the minimum damages in the sum of $1,000.00, whichever is greater, and whatever other relief the Court deems appropriate. In the case of an award for damages for mental or emotional distress, the award shall be trebled only if the trier of fact finds that the Landlord acted in knowing violation of or reckless disregard of this Chapter. Moreover, any person who violates, or aids or incites another person to violate, this Chapter shall be liable for an additional civil penalty of up to $5,000.00 for each offense committed against a person who is Disabled or aged 62 or over. The court may also award punitive damages to any plaintiff, including the City, in a proper case as defined by California Civil Code section 3294 or successor statute.

D. **Attorney's Fees and Costs.**

1. **Action by City Attorney.** In any civil proceeding brought by the City Attorney pursuant to this Section 6.30.190, the City may, at the initiation of the

proceeding, seek an award of attorney's fees. If the City seeks an award of attorney's fees, the award shall be made to the prevailing party. Court costs may be awarded to a prevailing party pursuant to state law.

2. **Action by Tenant**. In any civil action brought pursuant to this Section 6.30.190, the prevailing Tenant is entitled to recover the Tenant's reasonable attorney's fees. A defendant Landlord may recover reasonable attorney's fees if the complaint brought by the Tenant was devoid of merit and brought in bad faith. Court costs may be awarded to a prevailing party pursuant to state law.

3. **Costs of Investigation.** In the event the City Attorney brings a civil action, or proceeding pursuant to this Chapter, the City Attorney may recover its costs of investigation.

E. **No Exhaustion Requirement**. No administrative remedy need be exhausted prior to filing suit pursuant to this Section 6.30.190.

F. **Nonexclusive Remedies and Penalties.** The remedies provided in this Section 6.30.190 are not exclusive and are not intended to be exclusive of each other or to any other existing legal remedies.The remedies of this Chapter may be used cumulatively with any other remedy available at law or equity.

G. **Statute of Limitations**. The statute of limitations for an action shall be three (3) years. All remedies under this Chapter are available for the entire three-year statutory period.

Section 2. Severability - Liberal Construction. If any section, subsection, sentence, clause, or phrase of this Ordinance is, for any reason, held to be unconstitutional or invalid, such decision shall not affect other provisions or applications of this Chapter which can be given effect without the invalid provision or application, and to this end the provisions of this Chapter are declared to be severable. The People of Larkspur declare that they would have adopted this Ordinance and each section, subsection, sentence, clause or phrase of the Ordinance in spite of the fact that any one or more of the same be declared unconstitutional or invalid. This Chapter shall be liberally construed to achieve the purposes of this Chapter and to preserve its validity.

Section 3. Competing Ordinances. In the event that there is another ordinance on the ballot during the same election which seeks to regulate residential housing which also passes, the ordinance which obtains the higher number of votes shall be the controlling ordinance.

Section 4. Amendment of the Larkspur Municipal Code After Filing but Prior to Adoption. The intent of the proposed Ordinance is to replace the currently existing provisions of the Larkspur Municipal Code concerning the regulation of residential rental housing, including rent regulation, eviction regulation, relocation payments, and tenant protections, with new, more protective statutes. These provisions are currently contained in Chapter 6.20 and 6.30. If these Chapters are moved, repealed or amended by act of the Council or voters, this Ordinance shall still serve to replace those provisions.

Section 5. Effective Date. This Ordinance shall be effective only if approved by a majority of the voters voting thereon and shall go into effect ten (10) days after the vote is declared by the City Council. The Mayor and City Clerk are hereby authorized to execute this Chapter to give evidence of its adoption by the voters.

Community Development Working Paper

FEDERAL RESERVE BANK OF SAN FRANCISCO

Housing Market Interventions and Residential Mobility in the San Francisco Bay Area

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March 2022
Working Paper 2022-01
http://www.frbsf.org/community-development

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Suggested Citation

Chapple, Karen, Jackelyn Hwang, Jae Sik Jeon, Iris Zhang, Julia Greenberg, and Bina P. Shrimali. 2022. "Housing Market Interventions and Residential Mobility in the San Francisco Bay Area." Federal Reserve Bank of San Francisco Community Development Working Paper 2022-1. doi: 10.24148/cdwp2022-01

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[1] The views expressed in this paper are those of the authors and do not necessarily reflect the views of the Federal Reserve Bank of San Francisco or the Federal Reserve System. We thank Casey Pablo Butcher, Alex Kim, Brooke Ada Tran, Patricia Wei, Alisha Zhao, and Isaac Schmidt for their excellent research assistance with this report, and Lizzy Mattiuzzi, Rocio Sanchez-Moyano, James Pappas, Pedro Peterson, Brian Asquith, and Kate Pennington for their thoughtful comments. Funding for this report was provided to UC Berkeley and Stanford University by the Chan Zuckerberg Initiative DAF and the Silicon Valley Community Foundation. For the new housing production and tenant protections databases, we used data provided by Zillow through the Zillow Transaction and Assessment Dataset (ZTRAX). More information on accessing the data can be found at http://www.zillow.com/ztrax. The results and opinions are those of the author(s) and do not reflect the position of Zillow Group

Executive Summary

Governments at all levels enact a wide array of policies and programs to ensure that residents of all incomes will have access to housing. To boost production, jurisdictions enable some development by upzoning, land assembly, and permit streamlining, among other strategies. For those unable to procure housing via the market, policymakers support subsidized housing production, affordable housing preservation, and tenant protection programs. Despite these efforts, an affordable housing crisis still afflicts many US housing markets, including most of California. Yet, in part because of the unavailability of appropriate data, there is little evaluation research on which housing solutions will be most effective in stabilizing communities so that those who wish to stay are able to, even as newcomers arrive.

This study seeks to fill this gap by building unique, fine-grained data sets that capture both patterns of individual and household mobility and the impacts of specific housing interventions on the nine-county San Francisco Bay Area. We use individual and household mobility and the type of neighborhood moved to (similar or downward) as proxies for displacement, or forced moves, and assess exclusionary displacement by examining who moves into neighborhoods with specific interventions. To measure displacement, we track the movements of individual households by income and financial stability levels in and out of neighborhoods, measured as census block groups (geographic areas with typically 600 to 3,000 people), using two different proprietary datasets on individual and household characteristics. This provides unique robustness to our study, since we can validate results across datasets. We examine mobility patterns for a four-year period for new developments and a one-year period for tenant protections. To identify the role of housing policies and investments, we build a unique block-level dataset on new market-rate and subsidized housing constructed, with estimates of the number of existing housing units currently protected by either just cause or rent stabilization ordinances.

Using this new dataset, we are able to answer four key questions about displacement, looking at movement both out of and into local neighborhoods:

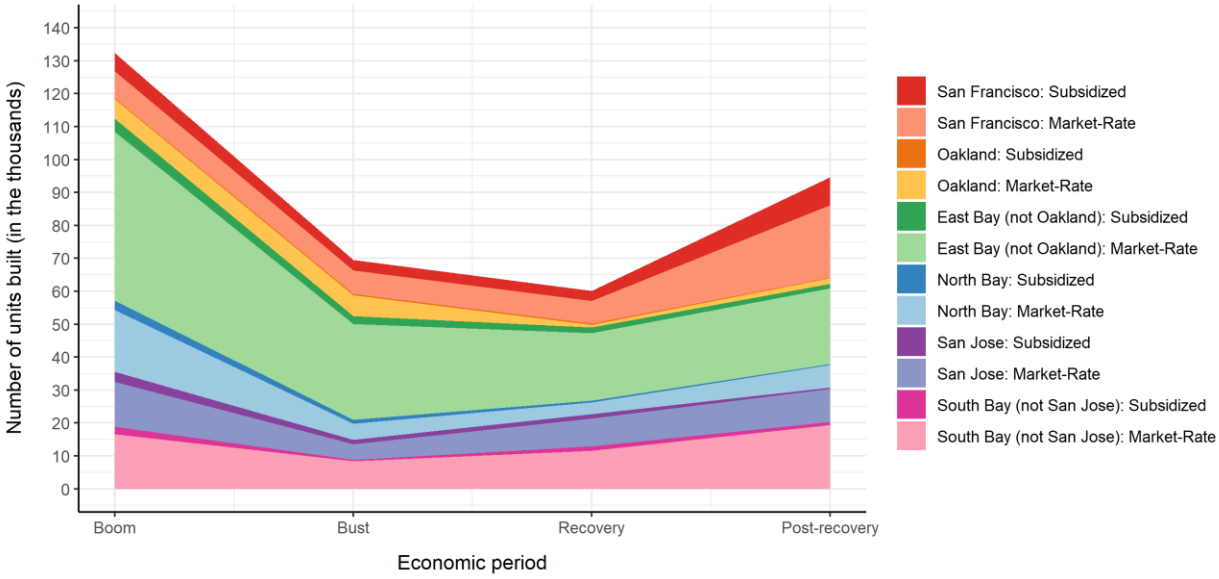
- How does market-rate development impact displacement?
- How does subsidized development impact displacement?
- How do tenant protections, including both rent stabilization and just cause for evictions protections impact displacement?
- And where do people go when they are displaced?

We first examine trends in housing production and tenant protections over time. From 2000-2019, 385,094 new units were produced in the Bay Area, of which 6.2% were subsidized. This total falls far short of demand, creating unusual pressure on the regional housing market (Metropolitan Transportation Commission 2020). Figure ES1 displays the distribution of new housing production across different regions in the Bay Area and over time, distinguishing between market-rate and subsidized housing units. Most new production, including subsidized housing, over the last two decades occurred during the housing boom period (2002-2006), and there has been an increase in the post-recovery period (2015-2019). Most newly produced

housing has been in the East Bay outside of Oakland, but more new units were produced in San Francisco than the entire East Bay in the post-recovery period. There was also a substantial amount of market-rate development in the South Bay throughout the last two decades.

Figures ES2 and 3 display the number of units covered by just cause for evictions and rent stabilization ordinances, respectively, for each jurisdiction in the Bay Area where these tenant protections existed between 2002 to 2019. Between 2014 and 2017, there was an increase in the number of units covered by both types of protections. Of all the jurisdictions, San Francisco consistently has the highest number of units subject to both types of tenant protections. San Jose and Oakland have the next highest coverage for rent stabilization; San Jose did not adopt any just cause for evictions protections until 2017.

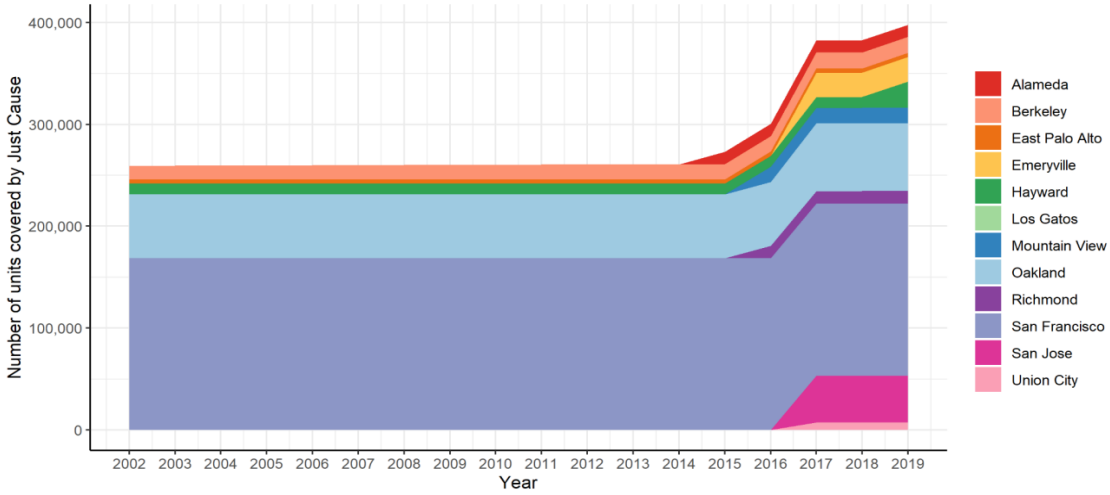
Figure ES1. Construction of New Housing Over Time by Subregion[2]



Source: Urban Displacement Project (UDP) New Housing Production Database

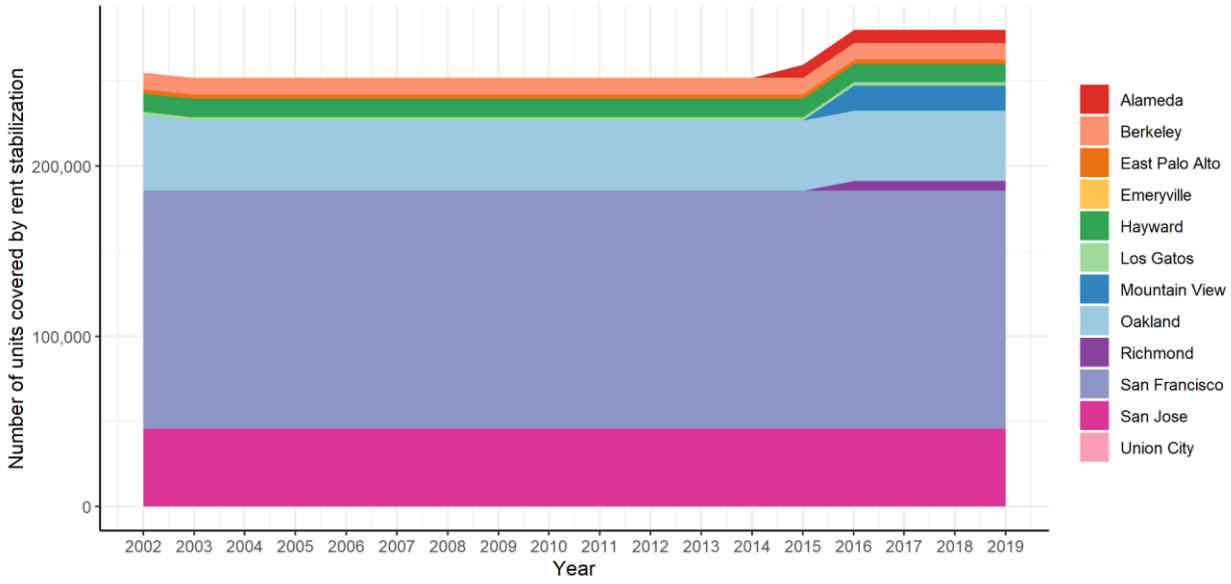
[2] 'Boom' = 2002-2006; 'Bust' = 2007-2009; 'Recovery' = 2010-2014; 'Post-recovery' = 2015-2019.
'North Bay' includes Marin, Napa, Solano, and Sonoma Counties. 'East Bay' includes Contra Costa and Alameda Counties, excluding Oakland. 'South Bay' includes Santa Clara and San Mateo Counties, excluding San Jose.

Figure ES2. Number of Units Subject to Just Cause for Evictions Ordinances by Jurisdiction



Source: UDP Tenant Protection Database

Figure ES3. Number of Units Subject to Rent Stabilization Ordinances by Jurisdiction



Source: UDP Tenant Protection Database

The UC Berkeley and Stanford teams utilize two distinct large-scale datasets–Infogroup and the Federal Reserve Bank of New York/Consumer Credit Panel (CCP), respectively–and generally find similar impacts of market-rate construction and of tenant protections for some groups, but sometimes disagree on other findings.

In sum, we find that market-rate housing production is associated with increased moving—both out of and into neighborhoods—across all income/financial stability status (hereafter SES) levels, except for the highest-SES households, who move out less with more housing production and are relatively more likely to move in than the lowest-SES groups. When market-rate housing production occurs, the lowest-SES movers tend to make constrained moves—similar or downward moves as measured by the income or poverty level of the receiving neighborhood.

We are not able to discern impacts from subsidized housing production because of low sample sizes and lack of subsidized production, but we do find that middle-SES groups are more likely to both move in and out. Both just cause and rent stabilization ordinances are associated with decreased moving out of neighborhoods for the lowest SES and increased moving out of neighborhoods for those in higher-SES groups. Rent stabilization is associated with fewer lower-SES residents moving into neighborhoods, and both just cause and rent stabilization ordinances are associated with fewer high-SES residents moving into neighborhoods. Subsidized housing production, just cause, and rent stabilization are all associated with the lower likelihood of low-SES groups making a constrained move.

Summary and Policy Implications

Despite some areas of disagreement and uncertainty, this study suggests that new market-rate housing production is generally resulting in slight increases in both outmigration and inmigration. New subsidized construction tends to increase inmigration but has mixed effects on outmigration. Thus, new construction fosters churn: some households leave while others move in, and the net impact is minimal, at least over the four-year period studied. That newcomers at all SES levels can move in suggests that market-rate construction is easing housing market pressures. At the same time, some households may be moving involuntarily, with lower-SES groups exhibiting constrained moves. Even if they are replaced by others at similar SES levels, displacement would still need to be mitigated in order to avoid the disruption of lives and communities.

Extremely low- to low-SES groups experience increases in outmigration of 1-2% in each subsequent year for 4 years when new market-rate construction occurs in their block group, whether there are 100 or 1,000 new units. For example, while in a normal year 10% of households might move out, new construction will mean that 12% move out per year for the next 4 years. In a block group that houses 500 households with 50 moving out in a typical year, new construction will result in 60 households moving out each year after construction, totaling 40 additional displaced households in 4 years.

This suggests a level of impact that is readily mitigable. Which approach is most appropriate? Since producing new subsidized units may have the unintended consequence of spurring displacement, communities might best look to housing preservation strategies. The most effective may be acquiring multi-unit rental properties that are at risk of becoming unaffordable, via a program like San Francisco's Small Sites Acquisition and Rehab Program. Other potential approaches include tenant opportunity to purchase, property tax incentives for building owners, condominium conversion restrictions, and community land trusts.

Tenant protections have mixed effects across income groups, but they are generally reducing this churn. Where tenant protections fall short is by discouraging inmigration, reflecting reduced housing options. Although the exact mechanism by which this works is unclear, our models and results suggest that new housing production should help mitigate this.

This study examines the effects of new housing production and tenant protections together, finding that they can complement and reinforce each other. In general, even when new market-rate housing production is associated with heightened outmigration, tenant protections (measured together) reduce it. In contexts where tenant protections are reducing outmigration, new subsidized construction can help reduce it further. When tenant protections reduce inmigration, policies to promote housing production can help mitigate it.

The San Francisco Bay Area is an extreme case study, with job growth outpacing new housing production and resulting in supply shortages and price spikes that date back at least thirty years. In this context, the traditional mechanism for providing housing affordability for all but the lowest income households–filtering–is broken. In the face of this structural problem, the policies studied here–market-rate and subsidized housing production, just cause ordinances, and rent stabilization–are only providing minimal relief, and their impacts may be distorted. For example, new construction may result in direct displacement, while rent stabilization may result in exclusionary displacement, subsequently leaving local residents with limited opportunities to move by choice. At the same time, the depth of the housing shortage means that tenant protections may enable cities to retain accessibility for residents at all income levels in the short and medium timeframe. In regions where there is no shortage of affordable housing to start with, these policies may have very different impacts–and may not be needed to mitigate displacement.

I. Introduction

Governments at all levels enact a wide array of policies and programs to ensure that residents of all incomes will have access to housing, yet consistently fail to meet the housing needs of the lowest income. To boost production, jurisdictions enable some development via upzoning, land assembly, and permit streamlining, among other strategies. For those unable to procure housing via the market, policymakers support subsidized housing production, housing choice vouchers, affordable housing preservation, and tenant protection programs.

Despite these efforts, an affordable housing crisis still afflicts many US housing markets, including most of California. As regional economies continue to grow, an influx of high-income workers has put new pressure on affordable rental housing stock. The lack of affordability has forced some households to move out and made it challenging even for middle-income households to move in. With scarce resources available to mitigate the crisis, lawmakers need to target spending to the most effective programs. Yet, in part because of the unavailability of appropriate data, there is little evaluation research on which housing solutions will be most effective in stabilizing communities so that those who wish to stay are able to, even as newcomers arrive.

This study seeks to fill this gap by building unique, fine-grained data sets that capture both patterns of household mobility and the impacts of specific housing interventions on the nine-county San Francisco Bay Area. We use individual and household mobility and the type of neighborhood moved to (similar or downward) as proxies for displacement, or forced moves, and assess exclusionary displacement by examining who moves into neighborhoods with specific interventions. To measure displacement, we track the movements of individual households by income and financial stability levels in and out of neighborhoods, measured as census block group, using two different proprietary datasets on individual and household characteristics.[3] This provides unique robustness to our study, since we can validate results across datasets.

We examine mobility patterns for a four-year period for new developments and a one-year period for tenant protections. Higher-than-normal mobility rates indicate that involuntary displacement may be occurring. This measure lacks the precision of data produced from surveys that ask directly about the decision to move but is highly correlated with data that measures motivation (Carlson, 2020).[4] This measure thus falls short of a full measure of forced moves, but still captures disproportionate mobility that may occur for complex reasons not easily captured in a closed-ended survey.[5] Thus, we also duplicate our analysis focused on whether people move to similar or lower-income/higher-poverty neighborhoods to better reflect constrained moves (DeLuca et al. 2013; Desmond and Shollenberger 2015).

[3] Block groups are subdivisions of census tracts usually containing between 600 and 3,000 people.
[4] Carlson (2020) finds a significant 0.64 correlation between "motivational" mobility (economic or physical displacement, evictions, or harassment identified from survey data) and individual household mobility overall, with the former distributed far more unevenly across New York City neighborhoods.
[5] For example, households may move in anticipation of a life or rent change in future years, or because a better housing opportunity arises; these might be recorded in a survey as voluntary but may still be in a sense forced.

To identify the role of housing policies and investments, we build a unique block-level dataset on new market-rate and subsidized housing constructed, with estimates of the number of existing housing units currently protected by either just cause or rent stabilization ordinances.

Using this new dataset, we are able to answer four key questions about displacement, looking at movement both out of and into local neighborhoods:

- How does market-rate development impact displacement?
- How does subsidized development impact displacement?
- How do tenant protections, including both rent stabilization and just cause for evictions protections, impact displacement?
- And where do people go when they are displaced?

This report is organized as follows. We begin by describing research to date on the housing market impacts of infill housing development and tenant protections. The next section discusses our database construction effort and methods to analyze impacts. The results section provides both plots and regression tables looking at the patterns of moves out of homes (displacement) and moves into block groups (exclusion) and movers' destinations over time. We conclude with recommendations for how to prevent displacement most effectively using these interventions.

II. Reviewing the debate on housing interventions and displacement to date

The following reviews existing studies on the impacts of new housing production and tenant protections on displacement.

New housing production and displacement

In theory, by increasing the supply of housing, new housing production helps moderate housing costs, make housing more affordable to more households, and relieve displacement pressures (Been, Ellen, and O'Regan, 2018). But empirical studies reveal that though this is true at the regional level, supply impacts vary locally by sub-market and context. New market-rate production may actually result in rent increases in lower-priced residential buildings nearby (Damiano and Frenier, 2020), and may not preserve income diversity over the long-term (i.e., one or more decades) as low-income newcomers cannot move into a hot market context like San Francisco (Ding, Hwang, & Divringi 2016; Pennington, 2020; Zuk and Chapple, 2016). Yet, in markets that have struggled to add housing supply in recent decades, fostering new market-rate production is critical to local housing affordability in multiple ways: it reduces demand for existing stock, it enables funding for subsidized housing (e.g., via inclusionary housing programs), and it fills a gap where government subsidies will always fall short. In the following sections, we examine the literature on how new construction in the form of infill housing development impacts housing prices, rents, and household mobility.

Housing prices and rents

In the absence of rigorous data on household mobility, researchers have focused on how infill development affects prices and rents. Most of these studies examine just one case, usually in urban strong markets, but rarely contextualize their findings in terms of local growth trends. A

slight preponderance of studies finds that prices increase around new projects, with effects decaying with distance and tending to be greater for larger, for-profit developments relative to smaller, affordable housing projects (Brunes et al. 2016, Ding & Knaap 2002, Ellen & Voicu 2006, Galster et al. 2004, Simons et al. 1998 but see Ahvenniemi et al. 2018, Ding et al. 2000, Pollakowski et al. 2005, and Wiley 2009, which found mixed or no impact or decrease). In the case of San Francisco, new residential development leads to decreasing property prices in the immediate vicinity, presumably by adding more housing supply, but impacts are heterogeneous across price tiers (Olsen 2019). Property value increases are more likely to occur and will likely be larger in distressed or low-income neighborhoods (Brunes et al. 2016, Galster et al. 2004, and Ding et al. 2000).

Due to the lack of fine-grained, up-to-date data on rents, few studies have addressed how new development affects nearby rents. A recent study of new market-rate buildings in 11 cities across the US found that new buildings lower nearby rents by 5-7% (Asquith, Mast, and Reed 2019), while a study of high-rise building construction in New York City found that for every 10% increase in housing supply there is a 1% decrease in rents within 500 feet (Li, 2019). However, looking at new market-rate construction in Minneapolis, Damiano and Frenier (2020) find that the rent effects of the new construction depended on the submarket of the nearby buildings in terms of proximity, price, and size. For buildings catering to low-income renters, new construction significantly raised rents, with even higher spikes for those buildings closest to the new construction. These types of impacts are suggested by Davidson and Lees (2010), who argue that market-rate housing development raises rents and leads to displacement in multiple forms, for instance by "price shadowing" and loss of sense of place.

Household mobility and displacement

Infill development affects displacement more directly through two mechanisms that increased housing supply triggers: filtering and migration. The more housing available, the lower prices will get (Asquith, Mast, and Reed, 2019; Been, Ellen, O'Regan, 2018; Rosenthal, 2014). The cost of older market-rate housing will fall over time as units decline in quality, thus filtering to people at lower-income levels. Meanwhile higher-income people move from lower-rent housing to new market-rate housing, thus theoretically freeing up their previous units for lower-income households. This process may also work horizontally, as new housing stock accommodates local demand and eases pressures on existing housing stock.

Filtering has long functioned as the source of most affordable housing in the United States (JCHS, 2015). However, it works slowly (approximately 2% of rental units filter down to lower-income households each year), meaning that new units may take many decades to trickle down to the lowest income brackets (Rosenthal 2014). Filtering thus works particularly well to provide affordable options to moderate- and middle-income households, and usually falls short for the very low-income.

Regions with rapid housing price appreciation, affordable housing shortages, and high levels of rental demand relative to supply will experience slower rates of filtering, and desirable older units may filter up instead of down (JCHS 2019, Liu et al. 2020, Rosenthal 2014). While downward filtering can be rapid in certain regions, there are others, such as Los Angeles and Washington, DC, which primarily see upward filtering (Liu et al. 2020). Higher cost metros like these have seen decreased housing production–and presumably filtering–since the 1990s, due to

a variety of factors from regulation and zoning to the 1986 changes in the tax code that reduced incentives for multifamily construction. These regions are also facing serious affordable housing shortages; policies that encourage the creation of more housing will assist in easing demand pressures and allow downward or horizontal filtering to occur for those of relative moderate incomes (Liu et al., 2020).

Filtering works only as long as market-rate housing production keeps pace with demand, and households migrate into new market-rate housing, vacating their older units. Recent research suggests that the process of moving into market-rate housing initiates multiple rounds of migration that ultimate free up housing supply in low-income areas in just a few years (Mast 2019). A study of market-rate construction in 11 cities found that the share of people from very low-income neighborhoods moving into neighborhoods with these new units is higher, suggesting that the presence of these new units reduces costs in lower segments of the housing market (Asquith, Mast, and Reed 2019). Notably, these studies did not have data specifically on the income level of inmovers, and did not examine patterns of neighborhood change in the low-income areas from which households moved. This leaves open the possibility that high-income (rather than low-income) households are moving from low-income gentrifying areas to higher-income neighborhoods.

While the lion's share of the research on housing production and displacement is focused on market-rate housing, a San Francisco study also examines the effect of affordable housing production on displacement, finding that both market-rate and subsidized housing production prevent displacement (Zuk and Chapple, 2016). On the other hand, a subsequent study that examines the impact of both market-rate and subsidized construction on individual mobility finds no significant short-term impact of affordable housing on either rents or displacement nearby (Pennington, 2020). However, these studies suggest that subsidized housing construction can help reduce displacement over the long term, by targeting income groups at risk, preserving their housing, and preserving income diversity.

Adding housing affordable to the lowest income households may free up more units for other low- and moderate-income households—similar to the process described above for market-rate housing production (Emmanuel, 2016). On the other hand, new construction of subsidized units may crowd out nearby new rental construction in gentrifying areas, complicating these dynamics (Baum-Snow and Marion, 2009). Another San Francisco study found that new market-rate development reduces eviction risk for those living in close proximity, even with an influx of affluent residents (Pennington 2018). However, eviction notices are a narrow proxy for displacement that do not capture the many forms of indirect displacement related to market-rate development.

Tenant protections and displacement

Rent stabilization

Rent regulations (including rent control) emerged after World War II, when, in the face of housing shortages for returning soldiers, cities across the country implemented different forms of rent regulation to limit housing cost increases (Pastor et al., 2018). While specific rent regulation policies vary across time and geographic context, rent control today refers to a set of policies

restricting the amount landlords can raise rent in a given year, along with provisions that exempt new construction and bring rents to market rate once tenants move out.

The literature generally finds that rent control or, more accurately, rent stabilization policies are effective in preventing displacement and stabilizing neighborhoods (Pastor et al. 2018). Notably, the majority of these studies do not measure displacement directly, instead using proxy measures such as housing costs or rent prices to estimate the effect on existing tenants. Examining the migration patterns of tenants in small multi-family apartment buildings built before 1980 (protected by rent control) as compared with those built in 1980 or after (not protected by rent control), Diamond et al. (2019) suggest that rent control limited the displacement of tenants and allowed them longer tenure in their units, having an especially strong effect among minority and elderly communities.

Overall, tenants in rent-controlled units are 10-20% more likely to remain at their original address and are more likely to remain in San Francisco (ibid.). When Massachusetts unexpectedly removed rent control in 1995, property values in Cambridge increased by 16%, on average, for units that were no longer subject to rent regulations, which ostensibly led to the displacement of some tenants who had been protected by rent control (Autor et al., 2016). Another Boston study found that removing rent control shortened renter stays in a property by about 1.84 years (Sims, 2007).

Several recent studies examine rent stabilization in the California context, which is a unique policy environment due to the Costa-Hawkins Rental Housing Act. This state law, passed in 1995, ensures that stabilization does not apply to newly constructed units, but it enacts vacancy decontrol, which may encourage people to stay longer in units they would otherwise prefer to move away from, Research in Silicon Valley showed that the nuances of rent control (what cap exists, how many buildings are included, etc.) can make a significant difference. In San Jose, for example, where there has been some version of rent control in place since 1979, the cap on annual rent increases was set at 8%. While other cities with rent regulations in the area saw lower tenant outmigration than nearby cities without regulations, San Jose witnessed no difference, potentially demonstrating that the 8 percent cap was too high to have an effect (Hwang and Shrimali, 2019).

Yet, rent stabilization distorts housing markets in several ways that may end up exacerbating displacement. Various studies have shown that owners of rent stabilized units keep them off the rental market, convert them to condos, renovate them so they are no longer covered by rent control, or let their properties deteriorate (Asquith 2019; Diamond et al., 2019; Sims 2007). In sum, rent stabilization protects current tenants while potentially harming lower-income residents who are not benefitting from the policy (Diamond et al., 2019). It may also exacerbate exclusionary displacement, by inducing residents to remain in a location they would want to move away from and slowing normal neighborhood churn.

Just cause eviction protections

Just cause eviction protections forbid property owners from evicting tenants except under certain specified circumstances, such as nonpayment of rent, violation of lease terms, or permanent removal of a dwelling from the rental market. In the absence of such restrictions, landlords may serve tenants with notices to vacate without cause (“no fault” evictions), legally compelling the

surrender of the unit to the property owner within a certain period of time. Just cause protections therefore generally shield tenants from arbitrary evictions that may occur for reasons including economic incentives in a warming rental market, retaliation against tenants, or other instances in which tenants are not at fault (Cuéllar 2020). The coverage of just cause ordinances varies by jurisdiction: they may apply their protections universally or only to a subset of the housing stock (e.g., structures built prior to 1980).

There is little systematic evidence about whether just cause ordinances reduce evictions (and thus displacement). However, one recent study selected four cities with recently passed just cause protections, compared evictions and eviction filings before and after their implementation, and compared these results to those of cities with similar characteristics but not similar protections (Cuéllar 2020). Cities with just cause protections saw the incidence of evictions and eviction filings decline after passage, compared to their counterparts without such protections in place (ibid.).

III. Data and methods

This section first describes the data for the housing market interventions (new market-rate and subsidized production, just cause ordinances, and rent stabilization ordinances) under study. Then, we describe the data and measures for mobility outcomes for the UC Berkeley and Stanford teams separately. A final section outlines the models used, which were the same across the two teams.

Housing market interventions data

Urban Displacement Project (UDP) New Housing Production Database

We constructed two separate databases of new housing production; one for total units and one for subsidized units. The total units database, which was created using the ZTRAX sales and assessor data from Zillow, spans the years 2002-2019 and aggregates new production by year and census block group. Since the Zillow dataset was either lacking or entirely missing data for most counties in 2018 and 2019, we used the California Department of Housing and Community Development's (HCD) Annual Progress Report (APR) data from 2018 and 2019 to override the 2018 and 2019 data for all counties. We also made use of the San Francisco Planning Department's Housing Inventory dataset, which contains information on new construction, demolition, and alteration and repair activity in the city back to 2005. Considering this dataset is more robust and accurate than ZTRAX data, we used SF Planning's dataset to replace ZTRAX's new construction counts for all years it was available (2005-2019). In doing so, we were able to segregate and exclude new units that were constructed as part of alterations to existing buildings (e.g. ADUs or garage conversions), but only for San Francisco County.

The subsidized housing database, which uses data from the California Housing Partnership, includes properties that either used to or currently receive state (LIHTC, HCD, CalHFA) or federal funding (HUD, USDA). Because this data does not include a year-built variable, we matched these properties to the Zillow data as well as data from Dataquick and the National

Housing Preservation Database[6] to obtain this information. While some of these units may have been originally constructed as market-rate and then later converted to subsidized housing (as occurs, for example, in San Francisco's Small Sites Acquisition Program), we were not able to distinguish these and therefore assume that all currently subsidized units were built as subsidized. This may result in a slight overcount of subsidized units in early years.

We also calculated the number of new market-rate units by subtracting the number of subsidized units from the number of total units for each block group-year combination. For approximately 1% of all block group-year combinations, the number of subsidized units was larger than the number of total units, likely due to an undercount in the total units data. In these cases, we assigned the total units variable as the number of subsidized units and the number of market-rate units as 0.

UDP Tenant protections database

In addition to the new construction data, we also used the ZTRAX sales and assessor data from Zillow to construct a dataset that documents the number and percent of housing units in each block group and year that are covered by rent stabilization and just cause protections. These numbers were determined separately for the two distinct types of protections, but if a unit is subject to both, we counted it in both categories.

To determine coverage by tenant protections we first subset the ZTRAX data to only renter-occupied residential properties by keeping only properties with residential land use codes and then removing all owner-occupied properties with only one unit.[7] For owner-occupied properties with multiple units, we assumed that one of these units is occupied by the owner and the rest are renter-occupied, so we calculated the number of rental units as the number of units listed minus one. We also deleted properties whose land use codes indicated that they were transient or seasonal lodging, dormitories, fraternity houses, cooperatives, timeshares, garages, landominiums, "miscellaneous improvements," or common areas.

Since only a limited number of jurisdictions in the Bay Area–the City of Alameda, Berkeley, East Palo Alto, Emeryville, Hayward, Los Gatos, Mountain View, Oakland, Richmond, San Francisco, San Jose, and Union City–have implemented rent stabilization and just cause protections, we next subset the data to only these jurisdictions. Next, we removed properties based on jurisdiction-specific laws that exempt certain types of units from either just cause protections, rent stabilization protections, or both (see Appendix A for a complete list). We only counted units in years during or after the years the laws were passed in their respective jurisdictions, and accounted for amendments to the laws that affected which units were covered. Lastly, we removed single-family homes, condominiums, and all units built in 1995 or later from the rent stabilization counts (but not from the just cause counts) to account for the Costa Hawkins Rental Housing Act, which exempts these units from rent stabilization laws.

[6] https://preservationdatabase.org/

[7] We did not account for the fact that single-family homes can be rented out and are therefore subject to partial coverage in some cities, so we likely underestimated the number of units subject to tenant protections.

To standardize the unit counts across block groups, we calculated the percentage of units covered by each type of protection by dividing the number of units covered by the total number of housing units in each block group and year.

Mobility data

Infogroup[8] residential historical data (UC Berkeley)

This longitudinal dataset from Infogroup provides annual information on individual households from 2006-2019, including geographic coordinates of where the households live, household income, and demographic characteristics (many imputed). The origin of the fields is proprietary and while we have done some degree of manual validation, some individual household data may be unreliable. While the dataset theoretically includes the entire population of the Bay Area, it is not entirely complete and likely underrepresents lower-income households. These data allow us to analyze households' income categories and mobility patterns over time for an average of approximately 3 million Bay Area households per year. In our analysis, we exclude households where the household head is less than 25 years old, so that we are not analyzing households with transient living situations, such as students. The process of validation revealed that the Infogroup data requires careful data cleaning and wrangling. First, households occasionally appear and disappear in the dataset, and also experience extreme income fluctuations. Thus, we subset the data to the households that Infogroup consistently includes, without wide fluctuation in income. Second, validation against the American Community Survey (ACS) proved that there is overrepresentation of low-income households and underrepresentation of high-income households in certain years, so we devised a weighting scheme to correct the data to be consistent with the ACS.

To account for an unrealistic amount of fluctuation in households' incomes over time, we "smoothed" the data using the following method:

- If a household occupies only one income category for all of the years in which it appears in the dataset, it is assigned that income category
- If a household occupies two "adjacent" income categories (i.e., the difference between the two ranks equals one), it is assigned the most common income category in which it appears. If the household appears an equal number of times in two adjacent income categories, it is assigned to the income category with the higher rank
- If a household occupies more than two income categories or occupies two "non-adjacent" income categories, the household is removed from the dataset entirely

When validating the Infogroup data against American Community Survey (ACS) data, we found that Infogroup undercounts the number of low-income households (based on income category definitions described below) in 2006 and 2009-2013, and overcounts the number of low-income households in 2007-2008 and 2014-2019. Infogroup also undercounts the number of high-income households in 2006-2008 and 2014-2019 and overcounts the number of high-income households in 2009-2013. To adjust for this, we created household weights by dividing the

[8] Now called Data Axle

number of households in the given income category, year and county in the ACS data by the number of households in the given income category, year and county in the (smoothed) Infogroup data. We include these weights in all of our models. We construct weights for each household such that the weighted number of households in the panel for each income category in a given county and year approximates the estimated count of households for that income category, county, and year in the 1-Year ACS PUMS.[9]

Federal Reserve Bank of New York Consumer Credit Panel/Equifax Data (CCP) (Stanford)

The Federal Reserve Bank of New York Consumer Credit Panel/Equifax Data (CCP) is a restricted longitudinal dataset that provides quarterly information on a 5% sample of adult consumers from 2002-2018, with census block[10] information on where respondents live, as well as respondents' age, loans, mortgages, financial issues (e.g., delinquencies, bankruptcy, foreclosure), and Equifax Risk Scores (credit scores that indicate financial stability). These data allow us to analyze individuals' financial health and mobility patterns over time for an average of 240,000 Bay Area residents per year. Adult consumers comprise those with at least one credit account or collection/public record (such as bankruptcy or foreclosure), as well as those with closed or authorized user accounts. We analyze Bay Area residents from 2002 to 2018[11] aged 25 to 84 years old. We restrict our analysis to residents between 25 to 84 years old to deal with the under- and over-representation of individuals using credit reporting in lower and higher age categories.[12] More details about the dataset and Equifax Risk Scores are in Appendix B.

Measures

Outcome measures

For the household-level models, we examine the following outcome measures:

- *Moving out:* Using the Infogroup data, for each year, we examine if households move out of their census block group. However, since the Infogroup data was collected on different dates throughout each year for different households, the exact start and end dates for the "year" changes depending on the household. For example, if data for a household was collected in July 2008 and then next in February 2009, and the household moved from block group X to block group Y in November 2008, the household would be considered to have moved out of block group X in 2008 and moved into block group Y in 2009. If the household was recorded in block group X in July 2008, disappeared from the dataset

[9] Weights are constructed by dividing the number of households in the ACS PUMS estimates for a given income category, county, and year, by the number of households in the remaining panel dataset for that income category, county, and year.

[10] These data are based on 2000 Census boundaries and utilize a crosswalk from the National Historical Geographic Information System to 2010 Census block group and tract boundaries for the analysis.

[11] We do not include 2004 Bay Area residents in our analysis because the geographic data are inconsistent across that particular year due to changes in the geocoding procedures by the data vendor in that year.

[12] Residents younger than 25 are underrepresented in the data and can have inaccurate address reporting due to mobility related to higher education during this period; residents older than 84 years old are overrepresented in the data, most likely due to a lag in registered deaths in the data.

for a few years and then reappeared in block group Y in February 2011, the household would be considered to have moved out of block group X in 2008 and moved into block group Y in 2011. While residents may move within a given block group, we do not account for these short-distance moves in our analysis. Using the CCP data, for each year (beginning on June 1 of one year and ending on June 1 of the following year), we examine if individuals move out of their census block group (which contain an average of 39 blocks and about 600 to 3,000 people) over the period.[13] Residents may certainly move within these block groups, and our data do not capture these short-distance moves.

- *Moving in:* Based on the same yearly time period for each household, we also examine what kinds of residents, using the SES categories described next, move into block groups, based on whether an individual lived in a census block group on June 1 of one year and did not live there in the prior year on June 1 (for the CCP data).

For the block group-level models in the Appendix, we examine the following outcome measures:

- *Outmigration rate:* Using the Infogroup data, for each year, we examine the percent of all households who move out of each block group. When calculating these percentages, we exclude households who disappear from the dataset in all subsequent years from the denominator. For example, if a household is in the dataset for years 2007-2009, then disappears from the dataset from 2010 onwards, we do not count the household as part of the total block group population when determining the percent of households that move out in 2009. However, if the household disappears from the dataset in 2010 but reappears a few years later, it is counted in the denominator. Using the CCP data, for each year, we examine the percent of all households who move out of each block group.
- *Low-SES outmigration rate:* For each year, we examine the percent of all very low- and low-income households in the Infogroup data and the percent of all extremely low- and very low-to-low-income residents using the CCP data who move out of each block group.
- *Low-SES inmigration:* For each year, we examine the percent of households who move into each block group who are very low- or low-income using the Infogroup data and who are extremely low- and very low-to-low-income using the CCP data.

For the destination models, we use the 2005-2017 cohorts in the Infogroup and CCP data and 5-year ACS tract-level data from 2005-2009 to 2015-2019 (hereafter "2005-2017"), harmonized to the 2000 Census geographic boundaries to match the CCP data and estimate whether residents make constrained moves. We construct three separate measures of constrained moves using three different indicators—tract median household income, tract percent in poverty, and tract median rent.

- *Constrained move*: the destination tract had an equal or lower within-county decile of median household income than the origin tract; the destination tract had an equal or higher within-county decile of percent in poverty than the origin tract; the destination tract had an equal or lower within-county decile of median rent than the origin tract. Moves to higher within-county deciles are considered upward moves.

[13] We rely on annual changes because, although locations are reported quarterly, there is variation in reporting, particularly due to lags when an individual moves.

We merge each cohort of the Infogroup and CCP data with the ACS 5-year estimates by tract and year as follows:

- Cohorts in 2005, 2006, 2007, 2008, 2009 are merged with 2005-2009 ACS tracts
- Cohorts in 2010 are merged with 2008-2012 ACS tracts
- Cohorts in 2011 are merged with 2009-2013 ACS tracts
- Cohorts in 2012 are merged with 2010-2014 ACS tracts
- Cohorts in 2013 are merged with 2011-2015 ACS tracts
- Cohorts in 2014 are merged with 2012-2016 ACS tracts
- Cohorts in 2015 are merged with 2013-2017 ACS tracts
- Cohorts in 2016 are merged with 2014-2018 ACS tracts
- Cohorts in 2017 are merged with 2015-2019 ACS tracts

New production measures

The NHP data are aggregated up to the block-group level by year and merged with the Infogroup and CCP data. Since most block groups have zero new units, they were not normally distributed, requiring a log transformation. We test the following measures of new production in census block groups:

- Logged number of new subsidized housing units + 1
- Logged number of new market-rate housing units + 1

We examine effects up to a four-year lag on the outcomes. For example, the new market-rate and subsidized units production variables are assessed as the number of new respective units in that block group that year, 1 year before, 2 years before, and so on. Since the CCP data begins in 2002, four-year lags are only available from 2005 onwards. For the 2002 cohort in the CCP data, we only examine a 2-year lag.

Just cause and rent stabilization measures

We merged the Tenant Protections Database with the Infogroup and CCP data and tested both the percent of units subject to just cause ordinances and the percent of units subject to Rent Stabilization ordinances in census block groups. Since these units are not newly produced, we only examine their effects for up to a 1-year lag to account for newly converted units.

SES measures

Infogroup income categories

Accounting for variability in the income estimates provided within the household-level data, we construct a subset of the data for which income identification is more reliable. Based on Infogroup's income variable, which is listed for each household-year combination, we categorized households into four different income groups: very low, low, moderate, and high. The first step in this process was to compare households' Infogroup-provided incomes with the area median income (AMI) in the given county and year, which was calculated using the 1-Year estimates from the American Community Survey (ACS) Public Use Microdata Sample

(PUMS).[14] Households whose incomes were less than or equal to 50% of the county- and year-specific AMI were initially designated as Very Low; households with incomes between 50% and 100% of the AMI as Low; households with incomes between 100% and 150% of the AMI as Moderate; and households with incomes above 150% of the AMI as High.

CCP financial stability categories

SES categories are defined using Equifax Risk Scores, a proprietary credit score that estimates the likelihood that an individual will pay their debts without defaulting. They are a proxy of financial stability and reflect a distinct dimension of SES from typical measures, such as income or wealth, that are particularly relevant to the housing market, where landlords often use credit scores to screen tenants and lenders use credit scores to distribute mortgage products and make lending decisions. We split our sample into four SES categories in the following way by their Equifax Risk Scores, which range from 250 to 850, and name them based on the income distribution categories defined by the State of California:

- Extremely low-income ("ELI"): < 580 or no Score (too few accounts or new credit)
- Very low-income to low-income ("VLI-LI"): 580-649
- Moderate-middle SES: 650-749
- Middle-high SES: 750 or higher

The distribution of residents in the Bay Area by these SES categories is similar to the distribution of adult residents in the following income categories, respectively: < 50% of the US median household income; between 50%-100% US median household income; between 100-200% of the US median household income; and 200% of the median household income. Data from the Comprehensive Housing Affordability Strategy (CHAS) suggest that, within the Bay Area, our SES categories are similar to the following HUD Area Median Income (AMI) categories, respectively: <30% AMI ("extremely low", as labeled by the State of California), between 30 and 50% AMI ("very low"), between 50% and 100% AMI ("low" and "moderate"), and above 100% AMI ("high"). To be clear, these categories are not a direct proxy of income and do not consider household size. Appendix Table C1 presents descriptive information about the SES composition, based on Equifax Risk Scores, of the CCP sample in the Bay Area used in our study. Most Bay Area residents are categorized as middle-high SES, and the share of residents that are middle-high SES increases over time, as expected.

Tenure status

Tenure status (owner or renter) was derived from estimates provided by Infogroup, which rated each household on a scale from 0 to 9, with 0 representing a confirmed renter household, 9 representing a confirmed owner household, and values in between for households where status was imputed by Infogroup. The optimal threshold for classifying households as renters or owners was determined by comparing the share of renter households in each tract within the study regions for 2015-2019 with the share of renters in each tract according to 2015-2019 ACS estimates. Using a threshold tenure score of 6 and below for renter households was found to

[14] Steven Ruggles, Sarah Flood, Sophia Foster, Ronald Goeken, Jose Pacas, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 11.0 [dataset]. Minneapolis, MN: IPUMS, 2021. https://doi.org/10.18128/D010.V11.0

produce tract-level rentership shares that were closest to ACS estimates. Because it is difficult to determine whether mobility of homeowners is voluntary or involuntary, we exclude owners from all of our models. In the CCP data, we determine tenure status based on whether someone in the household has a mortgage. This proxy can categorize residents in households who have paid off their mortgages as renters.

Analytic methods

In our analysis, we estimate four sets of models. First, we estimate the probability that a household moves out of a block group on new production and SES using a linear probability model.[15] Second, we use linear probability models to assess the probability of making a constrained move. Third, we estimate the probability a household moves into a block group on new production and SES using a linear probability model. We test how the effects of new production differ across SES categories by including interaction terms between the new production variable and SES categories in these two sets of models. Last, we estimate a multinomial logistic regression model predicting the SES categories of residents moving into a block group on new production to compare the effect of new production on the probability of residents of different SES categories moving in. We also conduct all these analyses on the effect of just cause and rent stabilization measures on these outcomes. For block group-level models, we test the effects of new production and tenant protections on outmigration rates, the percent of lower SES households who move out, and the predicted percent of inmovers who are lower SES using linear regression models. We present these results for the overall Bay Area, as well as four specific cities (see Appendix F): San Francisco, San Jose, Oakland, and Santa Rosa. We selected these cities to represent contrasting central cities of the Bay Area: high-density San Francisco, populous San Jose, rapidly changing Oakland, and low-density Santa Rosa.[16]

In the results presented below, we present regression results from models with (1) no control variables and without interaction terms; (2) with controls for individual, household, and location characteristics and interaction terms; and (3) with controls for additional neighborhood characteristics for models examining new production in the same year, 2 years prior, and 4 years prior. We show predicted probabilities of the outcomes based on results from models for each time lag with the full set of controls.

In the destination models, we deploy linear probability regression and restrict the sample to everyone who moved and use linear probability models to estimate the probabilities that a mover makes a constrained move as a result of new production and tenant protections for each SES.

Control variables

[15] As a sensitivity analysis, we also ran the same set of models with moves at the tract level (i.e., a household's moves in and out of its census tract instead of its block group, which should include more local moves), and the results were very similar.

[16] We do not run the tenant protection models for Santa Rosa because the city does not have tenant protections in place.

Using the Infogroup data, to account for household-level characteristics that are related to differences in whether individuals move, we control for age and race of household head, length of residence, number of children, number of adults, and marital status. Using the CCP data, we control for age, whether the household has a mortgage as a proxy for homeownership, whether the household has delinquency on credit accounts as a proxy for financial instability, and the adult household size. For both datasets, we control for locational characteristics by including indicators in our models of the subregion: the City of Oakland, the City of San Francisco, the City of San Jose, the North Bay (Marin, Napa, Sonoma, and Solano Counties), South Bay (San Mateo and Santa Clara Counties) excluding San Jose, and East Bay (Alameda and Contra Costa Counties) excluding Oakland, and models using the CCP data also include indicators for the panel year.

We also account for several census tract-level characteristics that could be associated with mobility patterns. These include percent Hispanic, percent college-educated, percent foreign-born, poverty rate, percent homeownership, median home value, median gross rent, vacancy rate, percent of housing built in the last 20 years based on 2000 US Census data. In addition, we include the number of subsidized housing units as of 2016 from the National Housing Preservation Database.[17]

In models testing newly produced subsidized and market-rate units, we also include a control for the natural log-transformed number of new market-rate units and number of new subsidized units, respectively, as well as the percent of housing units covered by rent control or just cause that year. For example, in models testing the log-transformed number of new market-rate units built 2 years earlier, we control for the log-transformed number of new subsidized units built 2 years earlier and the percent of units covered by either just cause for evictions or rent stabilization protections 2 years earlier. For models testing percent of housing units covered by rent control and by just cause, we include a control for the rolling prior 3-years' average of the log-transformed number of new market-rate and new subsidized units. For example, in models testing the percent of units covered by rent stabilization protections 1 year earlier, we control for the log-transformed number of new market-rate and subsidized units 1 year earlier.[18] Across all models, to account for the possibility that outmigration and inmigration rates are simply a product of neighborhood churning, we also include a rolling prior 3-years' average of the block group out- and inmigration rates by SES.[19] In the linear models testing probabilities to make a constrained move, we remove the control variables for the rolling 3-years' average of outmigration and inmigration rates.

[17] However, due to collinearity issues, we removed the "percent college-educated" control from the San Francisco, Oakland, and Santa Rosa models, and we removed the "percent Hispanic" and "poverty rate" controls from the Santa Rosa models.

[18] We do not control for the other type of tenant protection in these models because the just cause and rent stabilization variables are highly correlated.

[19] For the Stanford team, because the CCP data starts at 2002 and does not include values for 2004, panel year 2002 (222,881 observation) is dropped, panel year 2003 is based on the prior year rates, panel years 2005 and 2006 are based on the two-year averages from 2002 and 2003, and 2003 and 2005 respectively. 3-year averages are only used for panel years 2007 and above.

In the block group-level models, we exclude individual- and household-level characteristics, and instead control for the percent of respondents in that block group who are in each SES category, percent of respondents in that block-group who are delinquent on a loan and who have a mortgage (for the CCP analysis only), in addition to all neighborhood-level controls. To check the robustness of our results and heterogeneity across different geographies, we examined results based on moves in and out of census tracts, rather than census block groups, ran our analysis on only major cities in the Bay Area, and, for the Stanford team, combined extremely low- and very low-SES residents into a single category. These results are discussed in Appendix E and G. We also run models for gentrifying tracts in San Francisco, San Jose, and Oakland only to examine trends in hot-market areas, which are discussed in Appendix F.

Comparing SES categories across Infogroup and CCP/Equifax

Using these two very different data sources (Infogroup and CCP), it is challenging to devise equivalent socio-economic categories for comparison. Infogroup offers income data but requires significant smoothing and weighting to be comparable to the American Community Survey. CCP provides credit scores that measure financial stability, a proxy for SES. Both teams mapped their datasets to four categories, but these differ from each other and from the definition used by the Federal Reserve Bank (Table 1). The Infogroup Very Low category encompasses the CCP Extremely Low and Very Low categories, while the CCP High category includes the Infogroup Middle and High. The CCP results thus offer a unique look into extremely low-SES, while the Infogroup provides a special lens into high-SES households. Although we visualize the four groups with similar colors, they are thus not directly comparable. To be consistent with the Federal Reserve designations, we use the categories Extremely Low-Low, Moderate-Middle, Middle-High, and High for the Infogroup results, and Extremely Low, Very Low-Low, Moderate-Middle, and Middle-High for the CCP results.

Table 1. Comparing Income/SES Categories across Infogroup and CCP

Income relative to SFBay Area median	0-30%	30-50%	50-80%	80-100%	100-120%	120-150%	150%+
Berkeley: Infogroup	Extremely Low - Low		Moderate-Middle		Middle		High
Stanford: CCP/Equifax	Extremely Low	Very Low	Moderate - Middle			Middle - High	
Federal Reserve Bank standard*	Extremely Low	Very Low or Low	Moderate	Middle		High	

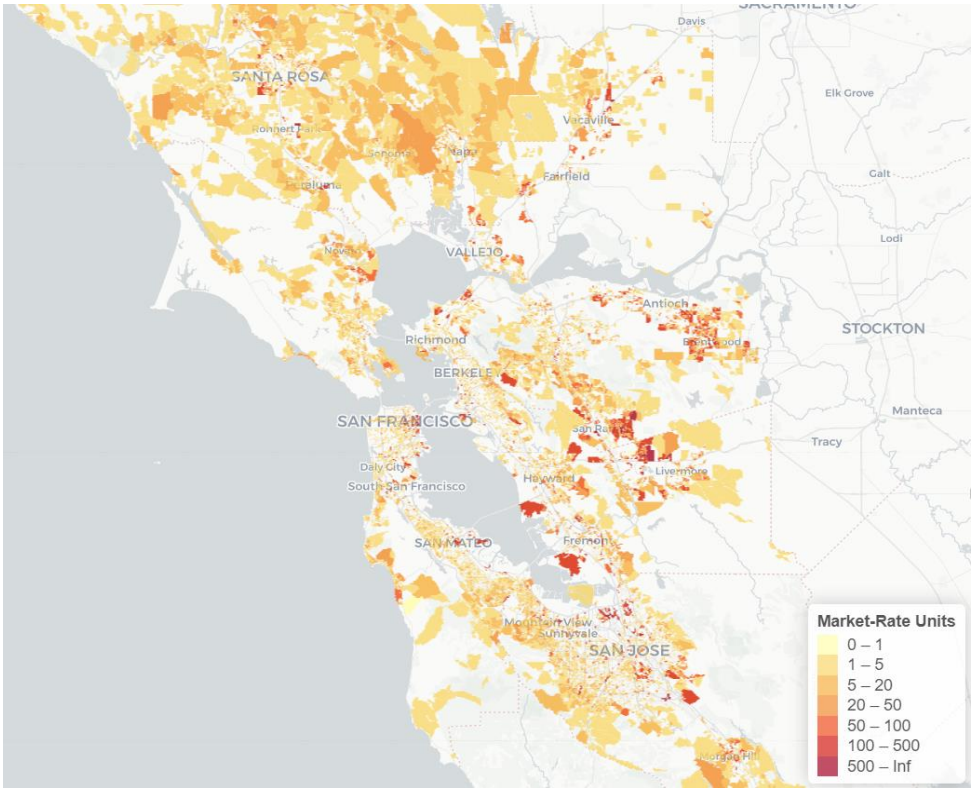
*Board of Governors of the Federal Reserve System, Community Reinvestment Act Resources, 2018. Accessed at https://www.federalreserve.gov/consumerscommunities/cra_resources.htm

IV. Results: the impacts of new production on mobility

New production in the Bay Area

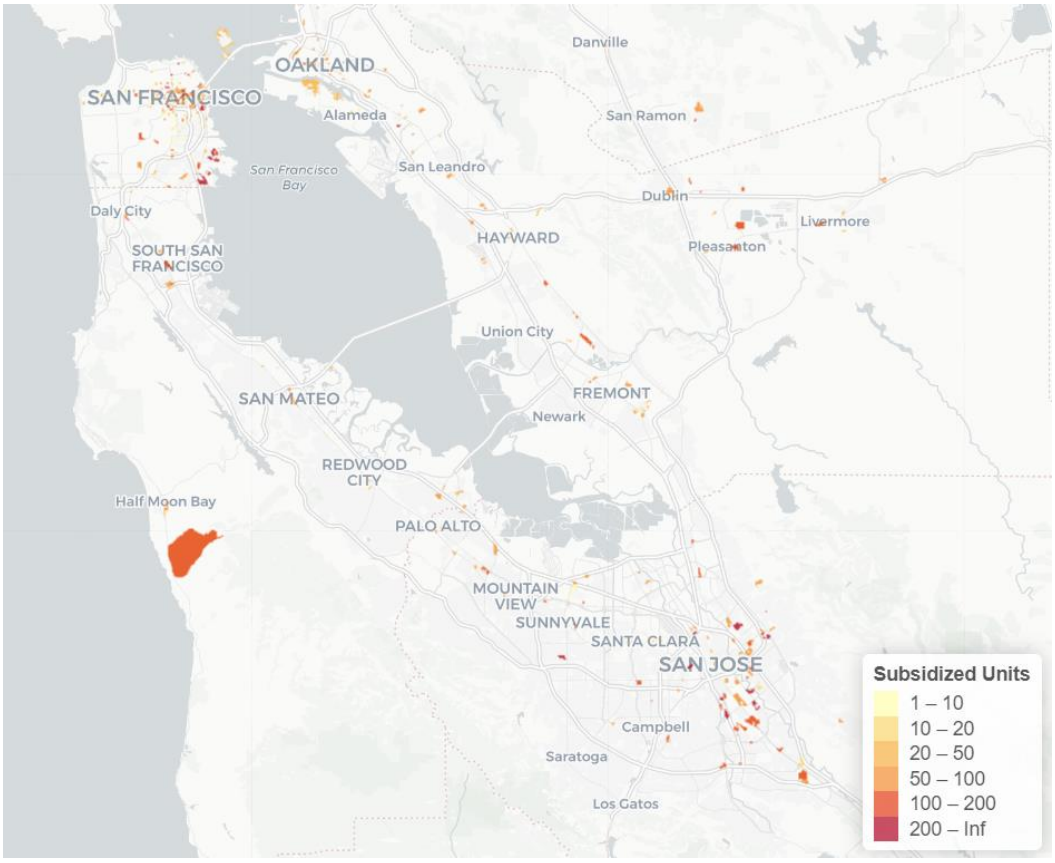
We begin by describing the distribution of housing units either newly constructed or subject to tenant protection across the San Francisco Bay Area. Figures 1 and 2 illustrate the distributions of new market-rate and subsidized construction. Between 2000 and 2019, there was significantly more market-rate than subsidized construction throughout the Bay Area (363,781 market-rate versus 34,647 subsidized units). Of note, this level of market-rate housing production is much lower than in previous decades, despite continued job growth, leading to increased market pressures and housing costs (Metropolitan Transportation Commission 2020). A high concentration of subsidized construction occurred in south San Jose, and many new market-rate units are clustered in the South Bay as well as parts of the East Bay such as San Ramon, Brentwood, and Livermore.

Figure 1: New Market-Rate Unit Construction in the Bay Area by Census Block, 2000-2019



Source: UDP New Housing Production database

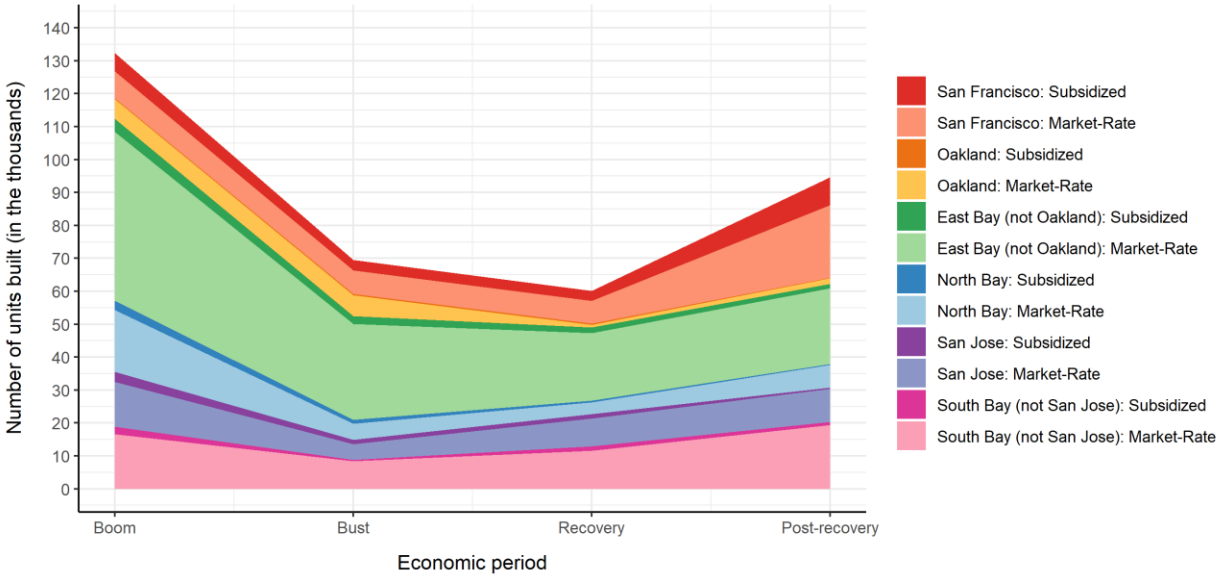
Figure 2: New Subsidized Unit Construction in the Bay Area by Census Block, 2000-2019



Source: UDP New Housing Production database

In the following figures, we examine trends in housing production over time. From 2000-2019, 356,610 new units were produced in the Bay Area, of which 13.1% were subsidized. Figure 3 displays the distribution of new housing production across different regions in the Bay Area and over time, distinguishing between market-rate and subsidized housing units. We group descriptive results into four economic housing periods based on market trends from the Standard & Poor Case-Schiller Home Price Indices for the San Francisco Bay Area (years represent the initial year of each annual sample): Boom (2000-2006), Bust (2007-2009), Recovery (2010-2012), and Post-Recovery (2015-2019). Across all periods, only a small share of newly produced housing is subsidized. Most new production, including subsidized housing, over the last two decades occurred during the housing boom period, and there has been an increase in the post-recovery period. Most newly produced housing has been in the East Bay outside of Oakland, but more new units were produced in San Francisco than the entire East Bay in the post-recovery period.

Figure 3. Construction of New Housing Over Time by Subregion[20]



Source: Calculations by the authors with UDP New Housing Production database

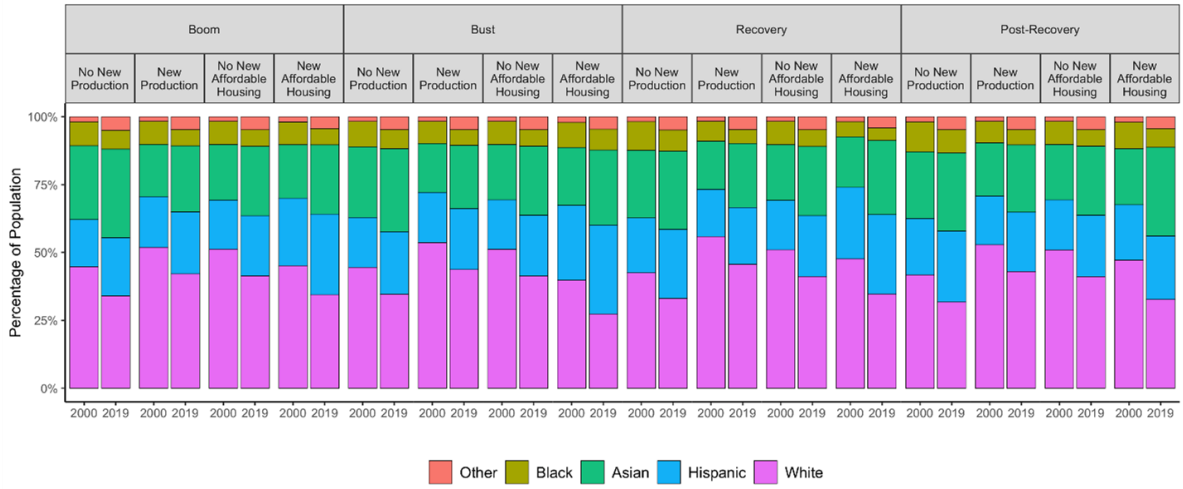
Figures 4 and 5 compare changes in census tract populations by race and ethnicity and changes in several other neighborhood characteristics, respectively, for census tracts with and without newly produced housing during the housing periods described above. The figures also compare tracts with and without newly produced subsidized housing. Most neighborhoods with new housing production had larger white populations, were more socioeconomically advantaged (lower poverty rates, higher educational attainment, higher incomes, higher homeownership rates), and had higher home values in the year 2000 compared to those where new housing was not built. By contrast, neighborhoods with new affordable housing began the period with smaller white populations, though these differences were less stark among neighborhoods when comparing places where new affordable housing was built during the recovery and post-recovery

[20] 'North Bay' includes Marin, Napa, Solano and Sonoma Counties. 'East Bay' includes Contra Costa and Alameda Counties, excluding Oakland. 'South Bay' includes Santa Clara and San Mateo Counties, excluding San Jose.

period. Neighborhoods with new affordable housing also began the period with more disadvantage (higher poverty, lower educational attainment, lower incomes, lower home values and rents, lower homeownership rates, more vacancies) compared to those without new affordable housing, but also more new construction over the last 20 years.

Over time, neighborhoods with new market-rate or subsidized production experienced similar increases in socioeconomic status and housing prices compared to neighborhoods that did not have newly produced housing. At the same time, they experienced similar declines in their shares of white residents as neighborhoods that did not have newly produced housing built in them.

Figure 4. Population Change by Race and Ethnicity for Census Tracts With and Without New Housing Production



Source: Calculations of the authors with UDP New Housing Production database, 2000 US Census, and 2015-2019 American Community Survey 5-year Estimates

Figure 5. Neighborhood Change for Census Tracts With and Without New Housing Production

Housing Period Ranges: Boom = 2002-2006, Bust = 2007-2009, Recovery = 2010-2014, Post-Recovery = 2015-2017

Source: Calculations by the authors with UDP New Housing Production database, 2000 US Census, and 2015-2019 American Community Survey 5-year Estimates

Figure 6 compares changes in the Federal Housing Finance Agency (FHFA)'s Tract-Level Housing Price Index (HPI) between census tracts that had new housing production and those that do not in each housing period. For each year in each tract in the Bay Area, we calculate the percent change between the HPI 2 years before and 2 years after, and the changes presented in the figure display the average changes over the housing period for tracts with new housing production compared to those without it. Counter to narratives that new production drives up housing prices, housing prices generally increased more in neighborhoods without new production, regardless of time period or geography. There were slightly larger increases in the HPI among tracts without new production, especially in the post-recovery period in Oakland and the rest of the East Bay. During the housing bust, neighborhoods with new production had smaller declines in the HPI compared to those without new production in most of the Bay Area, except in San Francisco.

Figure 6. Housing Price Index Change for Census Tracts With and Without New Housing by City/Subregion

Source: Calculations by the authors with UDP New Housing Production Database and the Federal Housing Finance Agency Developmental Tract-level Housing Price Index (https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx)

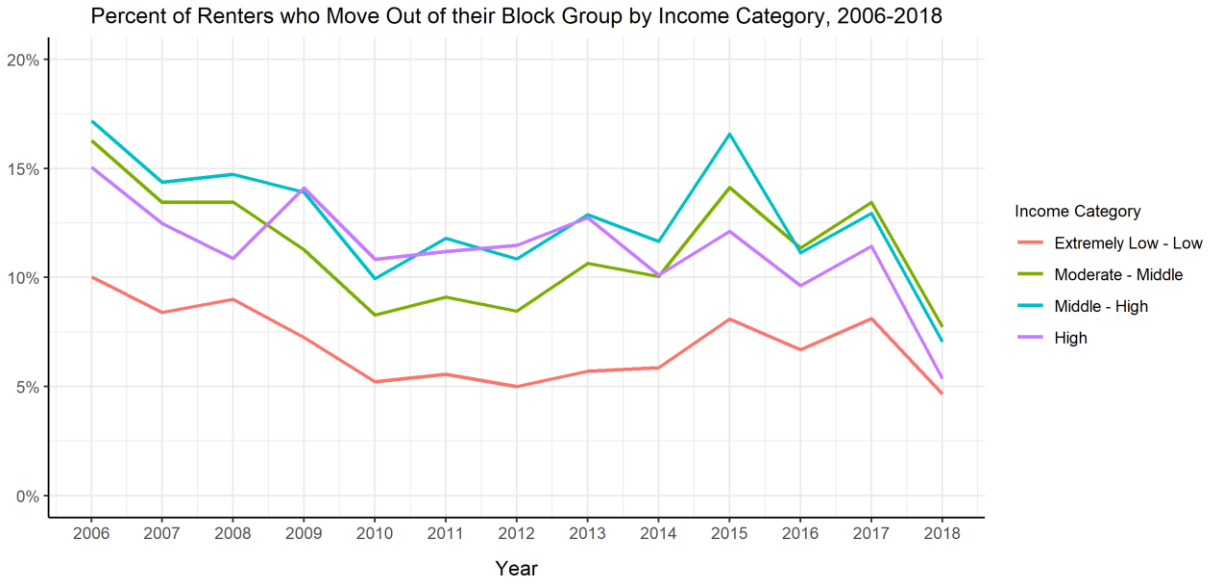
In the following sections, we present results from the Infogroup data conducted by the UC Berkeley team analysis using Infogroup data, followed by the model results using the CCP data based on analysis conducted by the Stanford team. The Infogroup results are for renters' household mobility, while the CCP results are for all individuals aged 25 to 84 due to the imprecise proxy for tenure status. We use both plots and regression models to determine impacts. While the predicted plots show the effect of new development on moving for specific groups, the regression models include interaction terms that identify significant differences in the effect of new units on outmigration between groups. In this report, we focus more on whether new development affects moving out for each SES group than on whether the differences between groups is significant.

New production and mobility: Infogroup results

Descriptive statistics for all moves

Figure 7 shows the percent of renter households in each SES who moved from their census block group from 2006 to 2018, based on the Infogroup data. In general, this pattern is consistent with Current Population Survey data, which shows declining migration rates and an overall (owner and renter) outmigration rate of about 10% in 2018.[21] Throughout the period, low-SES households consistently moved the least. Overall, the rates at which households move somewhat steadily declined until 2012, then fluctuated before dropping sharply in 2018. However, it is possible that the sharp decline in 2018 could be caused by a data quality issue.

Figure 7. Percent of Residents Who Move by SES

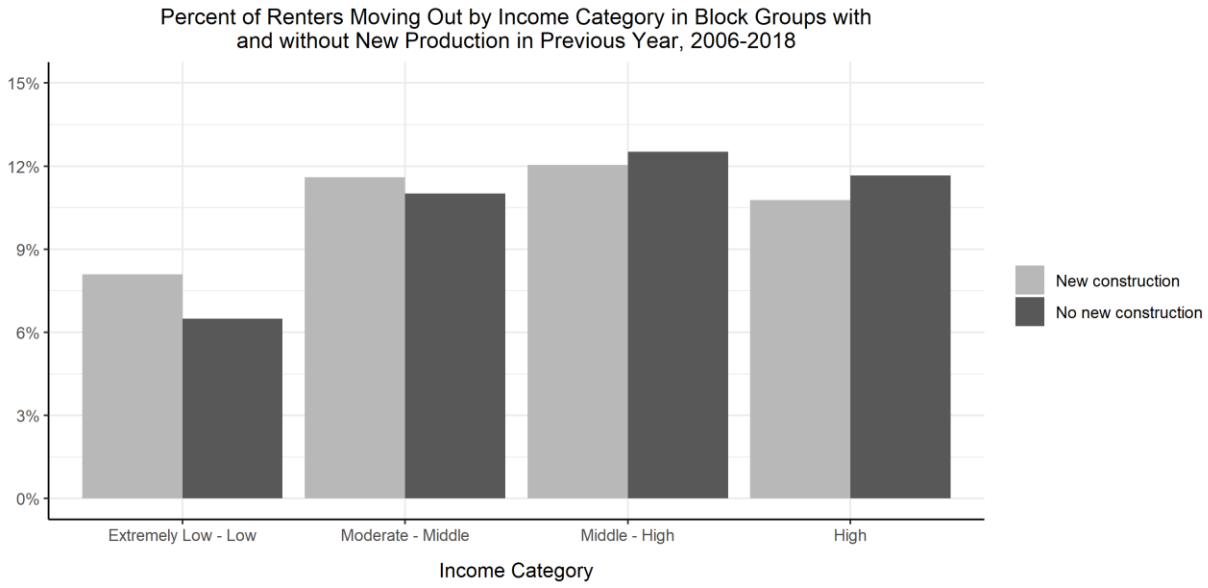


Source: Infogroup

[21] https://www.census.gov/library/visualizations/time-series/demo/historic.html

Approximately 18.7% of renters were living in a block group that had new housing produced in a given year. Figure 8 displays the percent of households who move from their block groups by SES in block groups with and without new housing production in the prior year. This figure shows that low-, moderate-, and middle-SES households moved out more in block groups with new housing built in the prior year, and this difference is largest among low-SES households. These descriptive results suggest that new production is associated with residential displacement among lower-SES residents.

Figure 8. Percent Moving by SES in Block Groups With and Without New Production

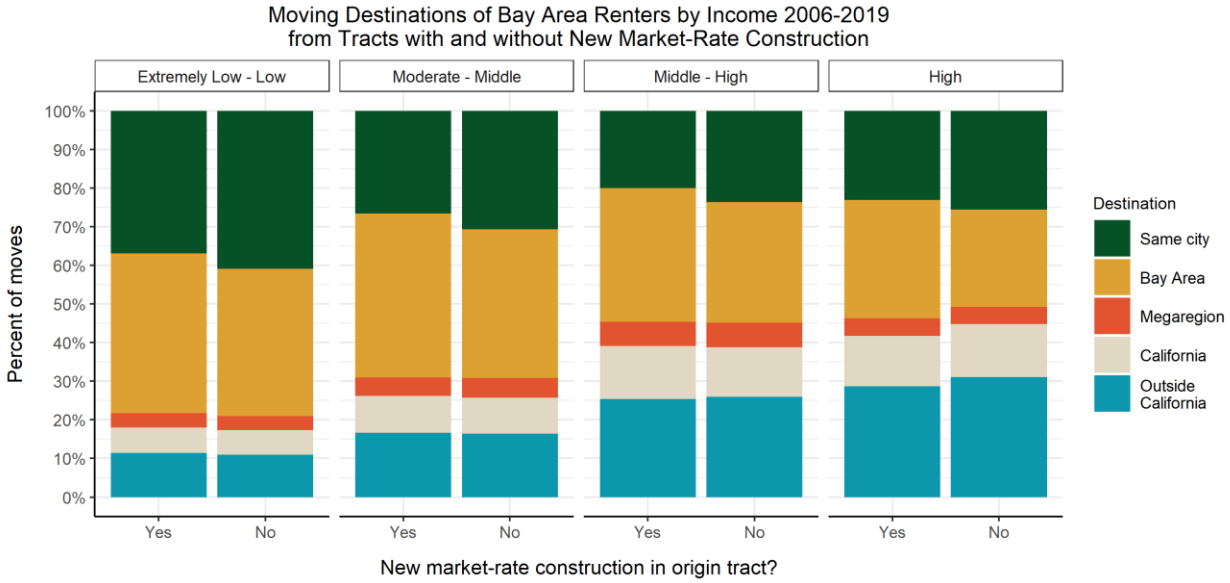


Source: Infogroup and UDP New Housing Production Database

Next, we examine where movers take up residence after departing from their neighborhood block group, looking specifically at areas that experience new housing production and/or tenant protections. Here we are interested in not just whether residents are displaced from the neighborhood, city, and region, but also if they move to higher- or lower-status neighborhoods– an outcome that can affect life chances.

The descriptive analysis separates moves into 5 categories: within the same city, out of the city but within the Bay Area, out of the Bay Area but within the megaregion, out of the megaregion but within California, and moving out of California entirely. The Bay Area megaregion is defined as the additional area outside of the Bay Area which encompasses Sacramento, San Joaquin, Santa Cruz, and Yolo counties. Figure 9 shows that although differences are minor, those moving from block groups with new market-rate housing production are slightly less likely to stay in their own city when they move, compared to those moving from blocks without new construction, although they do stay within the Bay Area. These patterns are similar from low-SES households through high-SES households.

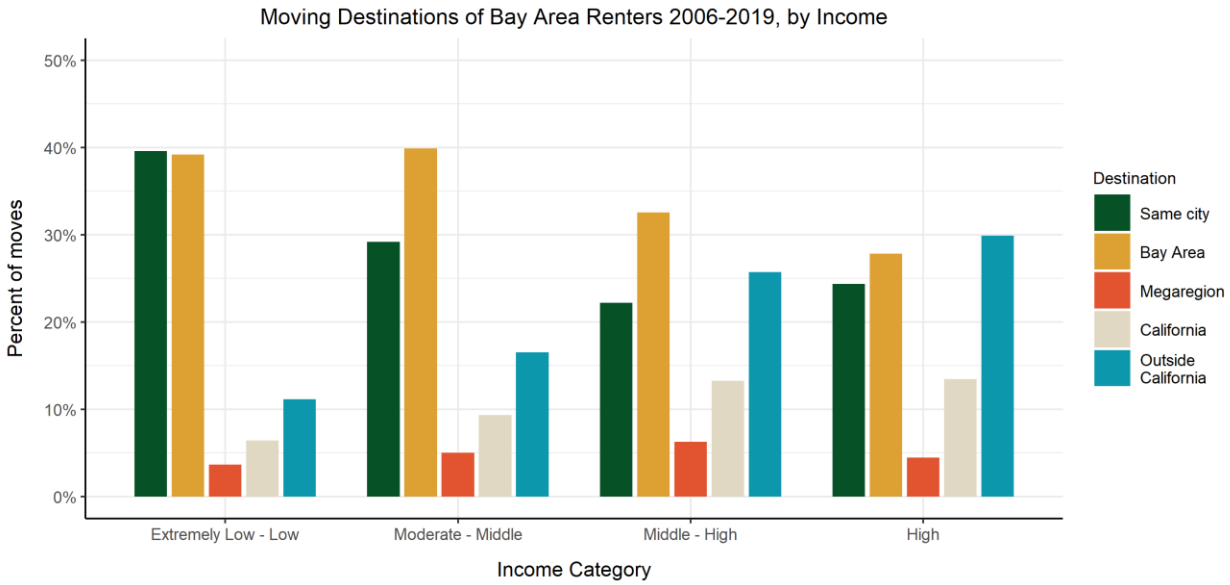
Figure 9. Destinations of Bay Area Renters by SES from Block Groups With and Without New Market-Rate Construction, 2006-2018



Source: Infogroup and UDP New Housing Production Database

Figure 10 shows the destinations of Bay Area movers who moved out of their origin city to another Bay Area location. For very low-income households, the largest share of movers ended up in Alameda, Santa Clara, Contra Costa, or San Mateo counties. Higher-SES groups were more likely to move to Santa Clara or San Francisco counties.

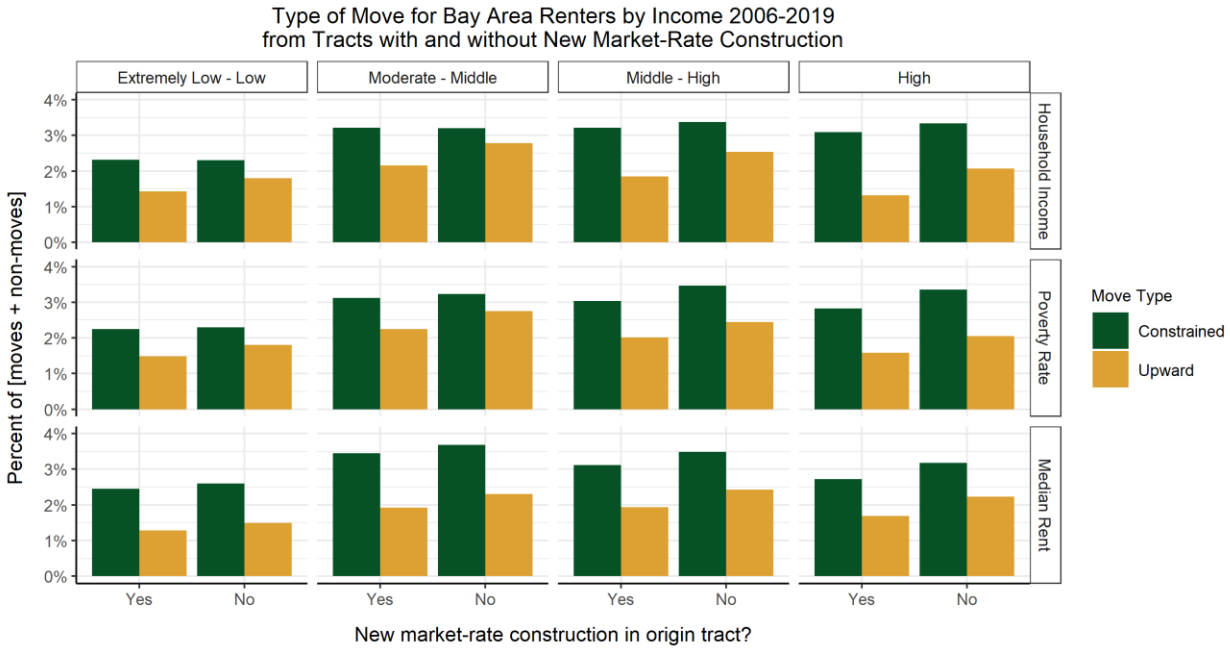
Figure 10. Destinations of Movers Moving Within the Bay Area, Not Within the Same City, 2006-2018



Source: Infogroup

For the regression analyses, we examine how new production affects residential mobility, in terms of the characteristics of mover destinations. We examine the destinations of movers by using a series of linear probability models, restricting the sample to movers only. Among those who move, we characterize their destinations in three ways—the within-county decile of the tract's median household income that year; the within-county decile of the tract's poverty rate that year; and the within-county decile of the tract's median rent that year. We select these indicators because they capture different components of neighborhood quality (and thus resident life chances). A downward or "constrained" move occurs if the destination decile is equal to or lower than the origin's for household income and rent, or if the destination decile is greater to or equal in terms of poverty. Across SES and neighborhood quality types, movers from block groups with new market-rate housing production are more likely to make constrained moves than those leaving neighborhoods without new construction (Figure 11).

Figure 11. Type of Move for Bay Area Renters by SES 2006-2019.



Source: Infogroup

Outmigration

Household-level probability models for all areas

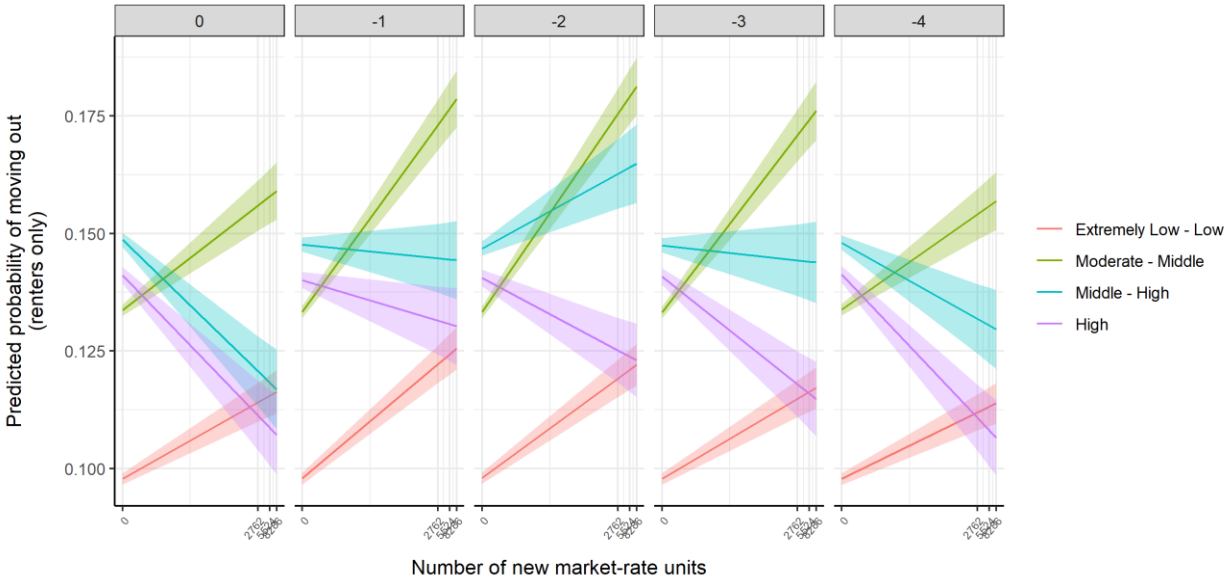
Next, we use statistical models to assess how new housing production is associated with whether residents have a higher probability of moving out of their neighborhoods, after accounting for various characteristics that affect mobility patterns.

Figure 12 presents the predicted probabilities of moving for renter households in the dataset having average characteristics for continuous variables and the mode for categorical variables.[22] These probabilities are based on the models with the full set of household, and neighborhood control variables presented in the tables. Renter households of low- and moderate-SES groups are more likely to move out of their block groups after production of new market-rate units, with effects decreasing after 2 years. Outmigration rates decrease sharply for high-SES households and are mixed for middle-SES households. The effects are more mixed for subsidized production–while moderate- and middle-SES groups generally experience increases in outmigration rates, both low- and high-SES households see decreases in outmigration as a result of new subsidized production.

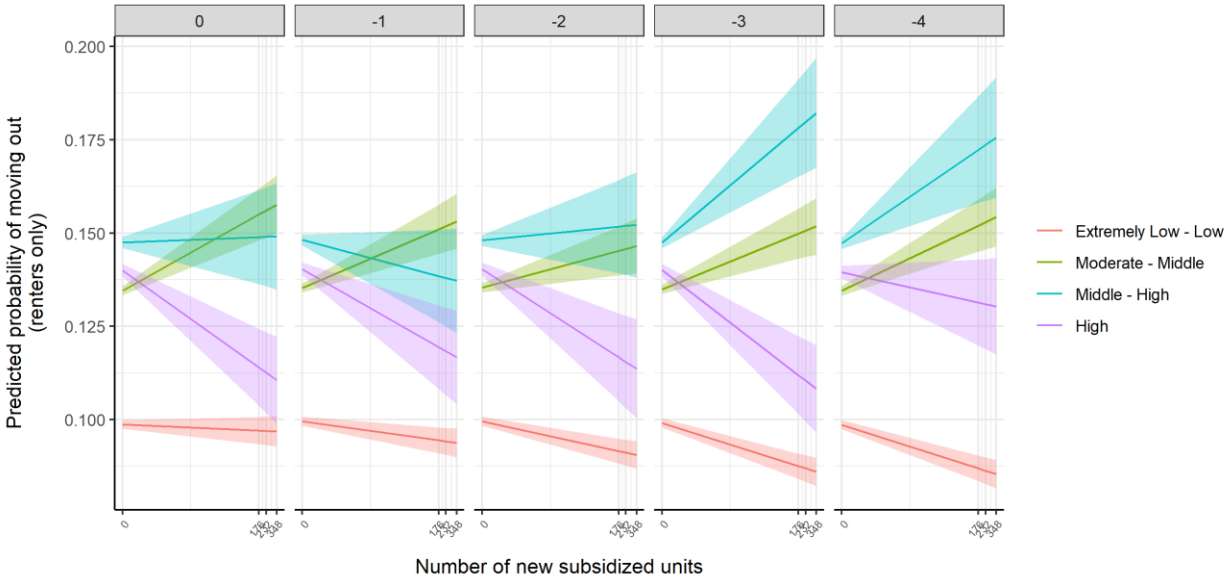
[22] Specifically, these are white households in San Francisco who have lived in their unit for 4.7 years, have 0.064 children (this number is so low likely because of the lack of large families in the city), and whose household head is 30-34 years old and unmarried. These households live in a census tract with a vacancy rate of 4.1%, 18.9% of units built in the past 20 years, and 41.7% ownership rate in 2000, and 145.9 subsidized units in 2016.

Figure 12. Predicted Probabilities by SES of Renters Moving Out of Block Groups by Number of New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Appendix Table D1 presents the regression coefficients and standard errors from a series of linear probability models predicting the probability that a resident will move out of their census block group by the number of newly produced housing in the same year, 2 years prior, and 4 years prior. The models confirm that although new market-rate housing decreases outmigration rates in general, there is a positive and significant impact on displacement (outmigration rate) for low- and moderate-SES households that increases by Year 4. The controls reveal expected effects, with a few exceptions. In general, regional controls are positive, suggesting greater impacts in core cities, but outmigration is not significant in San Francisco. Interestingly, the coefficient for Latine is negative (reduced outmigration rates), while Black and White are positive. Tenant protections (including both just cause and rent stabilization ordinances) consistently reduce outmigration. The impacts occur despite previous churn patterns: outmigration is significant even controlling for outmigration rates in previous years.

Introducing new subsidized housing units generally reduces outmigration for low and high-SES households, though its impact is not consistently statistically significant. All controls had expected effects, in similar directions as the market-rate models.

Household-level probability models for gentrifying areas

Low-income areas with strong housing markets may experience growth dynamics that are different from weaker markets or high-income areas. Specifically, gentrifying neighborhoods in core cities may experience high demand across market segments, such that new market-rate construction is not able to alleviate housing market pressures. In such cases, are communities better off building new market-rate housing or not, in order to prevent displacement?

To answer this question, we conduct a sensitivity analysis specific to gentrifying neighborhoods, subsetting our sample to gentrifying tracts in Oakland, San Francisco, and San Jose. We construct gentrification from the 2000 Census and 2006-2010 ("2010") ACS, defining tracts as gentrifiable if the median household income in 2000 was less than the subregion's median household income in 2000. Among gentrifiable tracts, tracts are split into gentrifying and nongentrifying tracts–tracts where 1) the percentage increase in either the median rent or median home value was less than the subregion's 25th percentile of the percent increase on either of those indicators, and 2) the percent increase in either the population of college-educated residents or the median household income was less than the subregion's 25th percentile of the percent increases on either of those indicators.

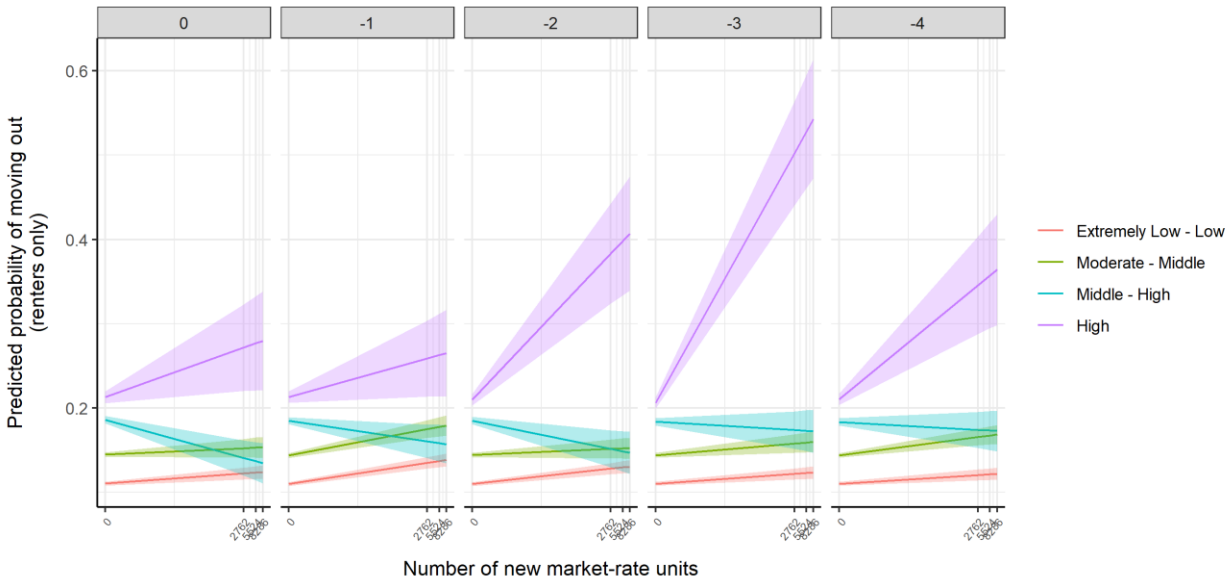
For the analysis, we remove tract-level controls that are collinear with the gentrification measures—median home value, median income, median rent, and percent college-educated. We include a control variable for the city and remove the regional control variable. Figure 13 shows the results from this model for San Francisco, the modal city in the dataset, with control variables plotted at San Francisco-specific mean and modal values.

Figure 13 presents predicted probabilities of outmigration by SES and the number of new market-rate units. Overall, these gentrifying neighborhoods reveal a tighter housing market than the region as a whole. Specifically, all groups except middle-SES have similar or higher probabilities of moving out when market-rate housing is built. New subsidized units do not

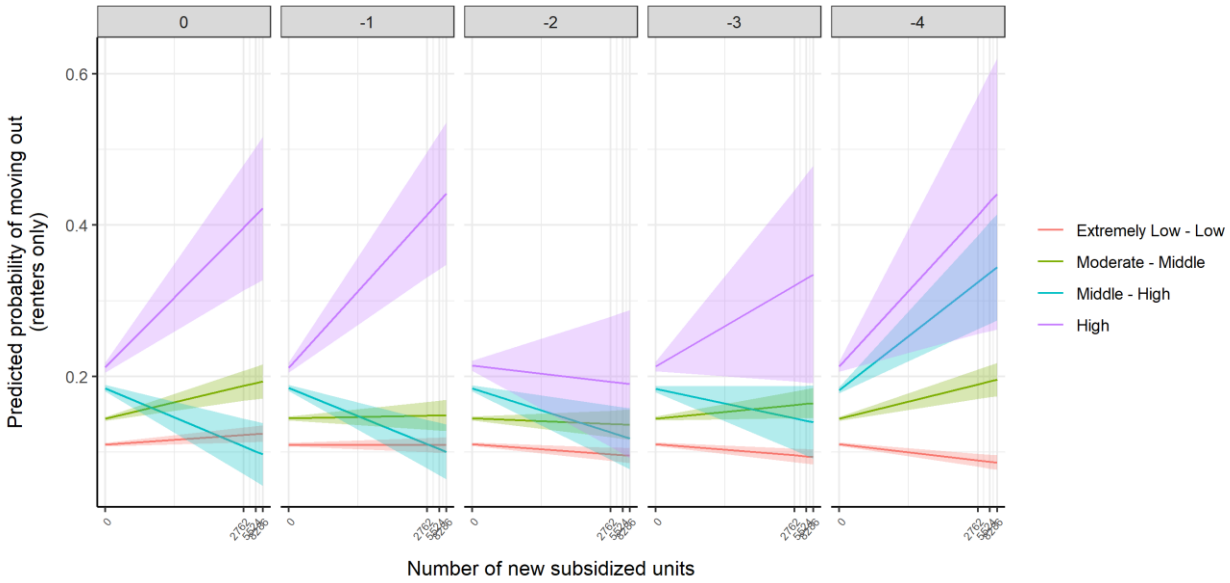
change the picture much, only reducing outmigration rates for middle-SES households. Whatever the type of production, move-out rates are particular steep for high-SES households.

Figure 13. Predicted Probabilities by SES of Moving Out of Block Groups by Number of New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Constrained moves

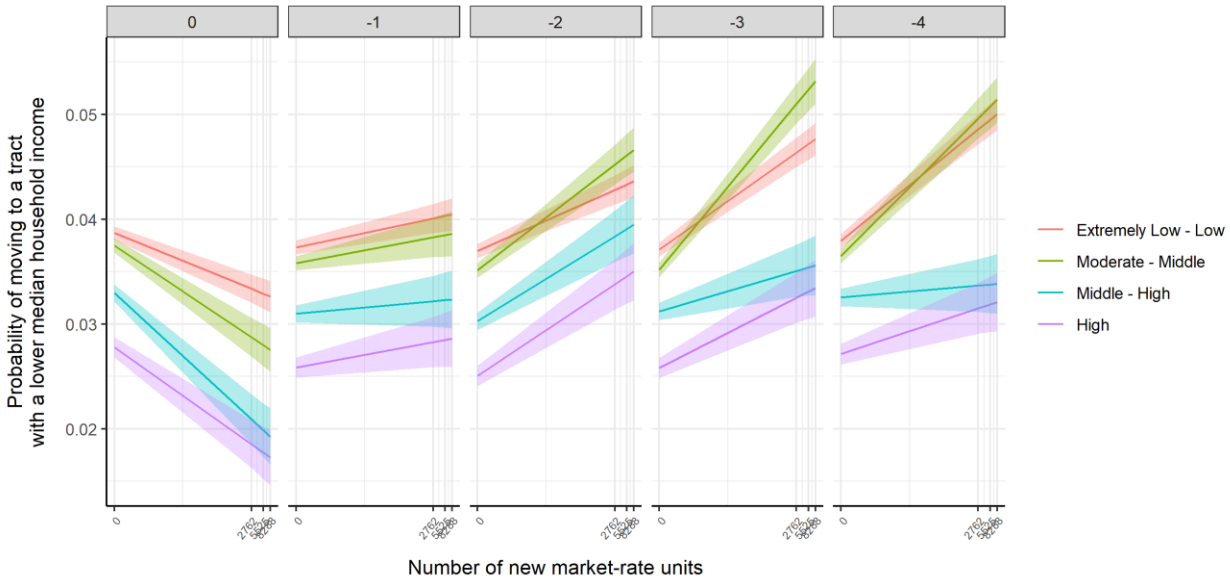
Figures 14 to 16 illustrate differences in the probabilities to make a constrained move by the number of newly produced market-rate and subsidized units and compare results for whether new housing is built up to 4 years prior and for the three ways constrained moves are measured. The figures present the predicted probabilities of making a constrained move for individuals in the dataset having average characteristics for continuous variables and the mode for categorical variables, which are the same values as in the outmigration models above. The following plots are for movers who did not move within their same tract.

Overall, new market-rate production increases the probability that households will make a constrained move for at least 4 years after the units are built (albeit not in the initial year), for all groups when looking at median household income deciles, and for low- and moderate-SES households when using poverty deciles; probabilities are generally highest for low-SES households and lowest for high-SES (Figures 19 and 20). The probability of a constrained move is also higher (after Year 0) based on the median rent decile, but only for low and moderate-SES households (Figure 21). (The figures, which are for movers who did not move within their tract, present the predicted probabilities of making a constrained move for individuals in the dataset having average characteristics for continuous variables and the mode for categorical variables, which are the same values as in the outmigration models above.)

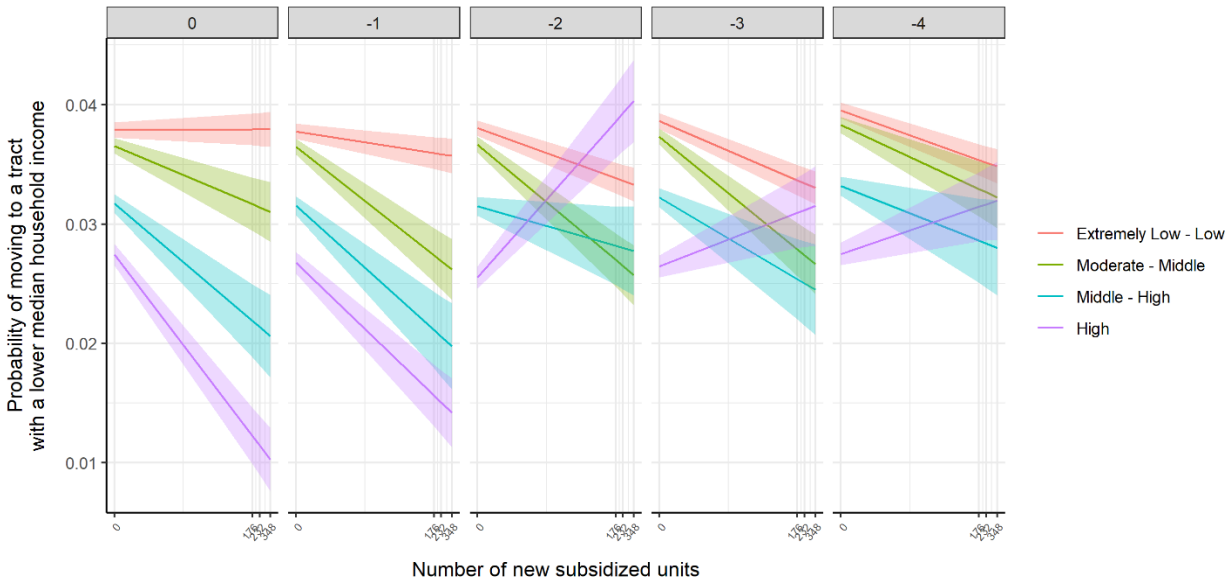
When measuring constrained moves according to the income and poverty indicators, new subsidized production decreases the probability of a downward move for all but the highest SES group, which experiences mixed results. New subsidized housing increases the probability of a constrained move for moderate-SES groups based on the rent indicator and generally decreases it for low-, middle-, and high-SES households.

Figure 14. Predicted Probability of Making a Constrained Move by SES from Block Groups with New Units (a) Market-Rate (b) Subsidized Using Median Household Income Deciles

(a) Market-Rate



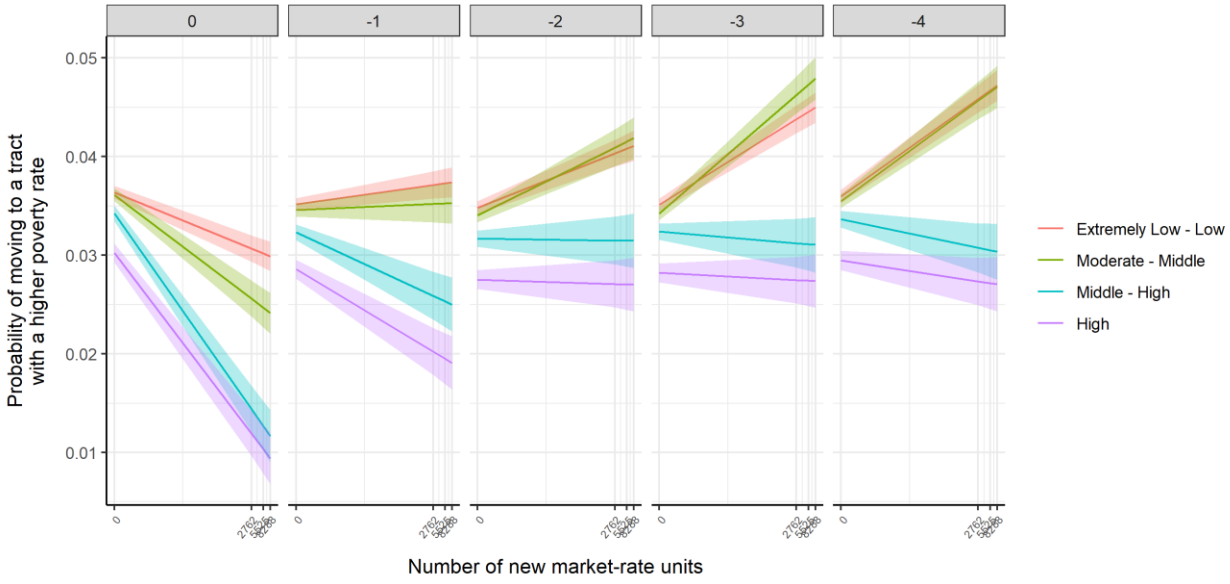
(b) Subsidized



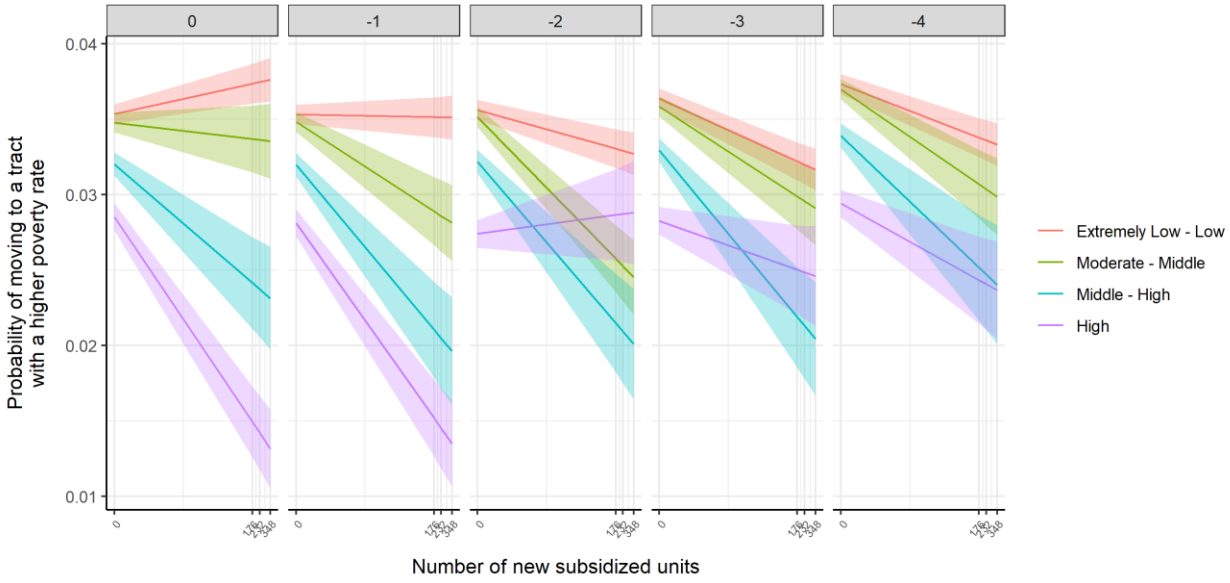
Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Figure 15. Predicted Probability of Making a Constrained Move by SES from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Poverty Rate Deciles

(a) Market-Rate



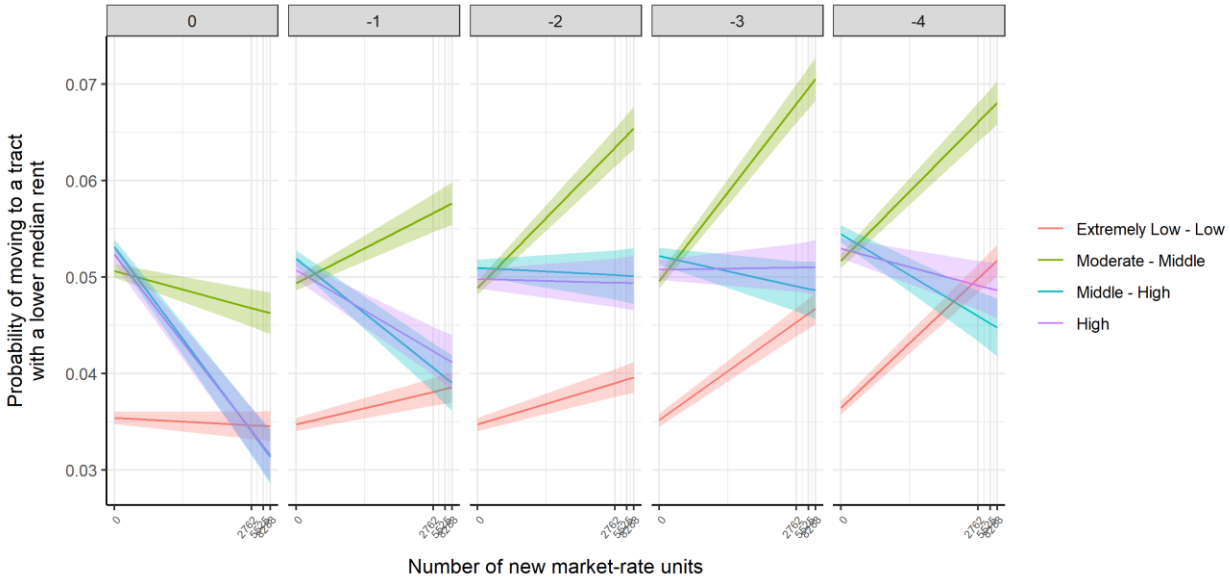
(b) Subsidized



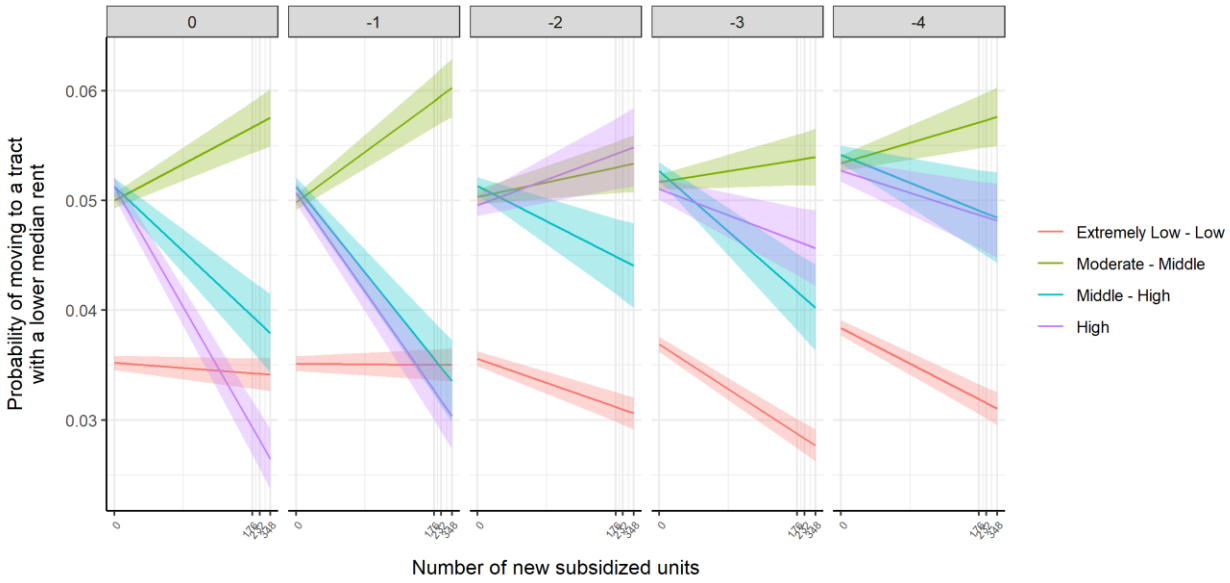
Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Figure 16. Predicted Probability of Making a Constrained Move by SES from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Median Rent Deciles

(a) Market-Rate



(b) Subsidized



Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

Household-level probability models of effects of new production

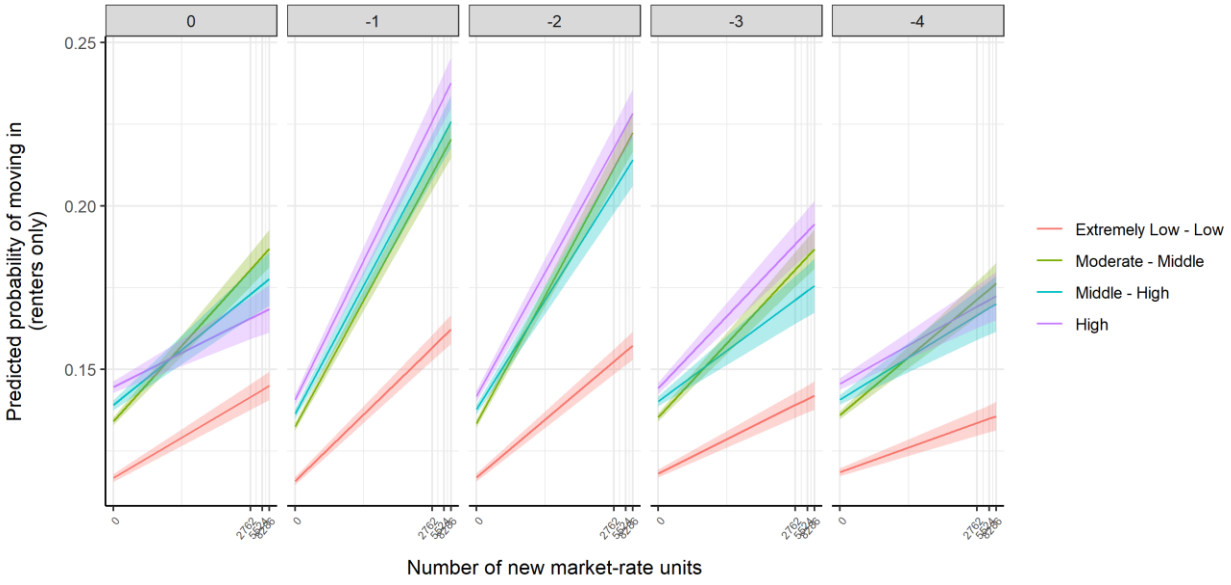
This next set of analyses examine how new housing production is shaping who moves into neighborhoods. First, we test if new production increases the probability that residents in different income groups will move into a block group. Second, we compare the likelihood that those moving into neighborhoods with and without new production are in each SES group. The first analysis sheds light on whether the probability that a household will move into a block group changes in neighborhoods with new production. We would expect that it would, given that there would presumably be more available units. The latter analysis only considers movers and sheds light on how new production changes the composition of households moving into neighborhoods.

Figure 17 illustrates the overall positive effect of new market-rate production on the probability that households from all SES groups will move into a neighborhood. High-SES households generally have the highest probability of moving into block groups with new market-rate production, and low-SES households have the lowest probability. The effects are strongest 1 to 2 years after production, but persist for up to 4 years afterwards.

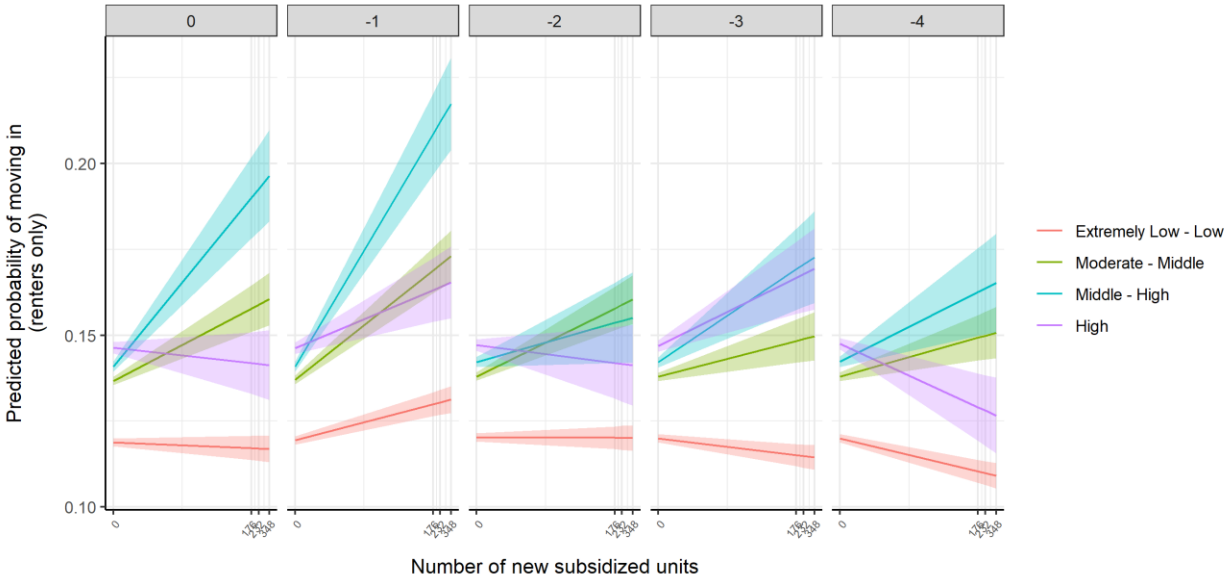
The effects of subsidized production are more mixed. All SES groups except high-SES households are more likely to move in up to 2 years after production, but impacts decay thereafter for low- and high-SES groups.

Figure 17. Predicted Probabilities by SES of Renters Moving into Block Groups by Number of New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

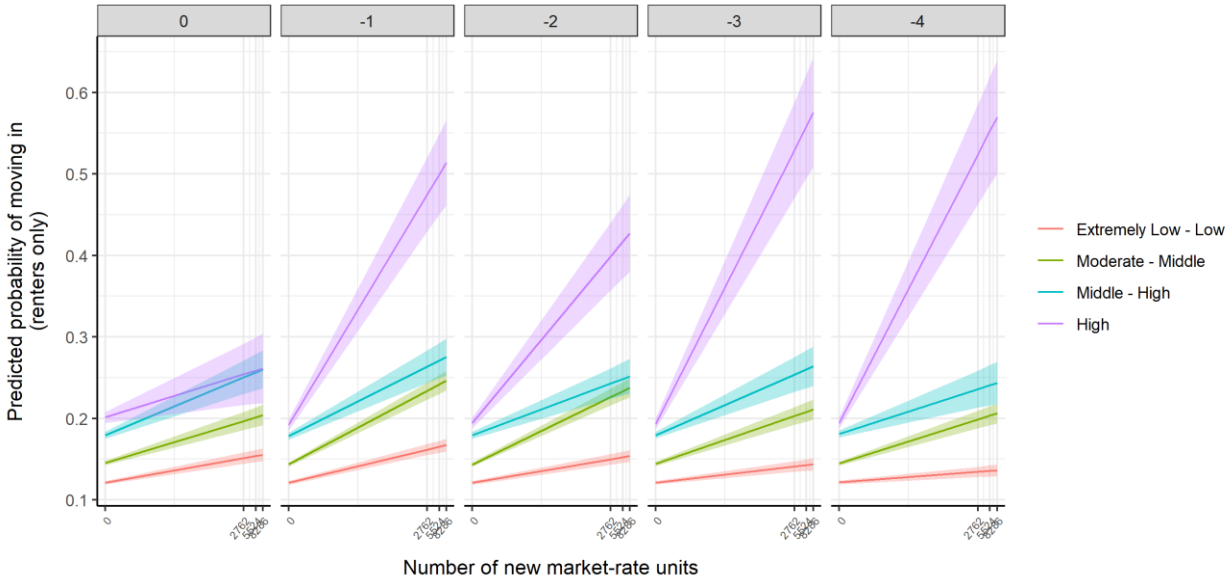
Appendix Table D2 presents the regression coefficients and standard errors from a series of linear probability models predicting the probability that a resident will move into a census block group by the number of newly produced housing units in the same year, 2 years prior, and 4 years prior. Overall, confirming the plots, inmigration is positive and significant in block groups with market-rate construction for all SES groups, with effects decreasing over time. In general, model controls follow expected patterns. However, the presence of both subsidized housing units and tenant protections decrease move-ins. Of note, Latine status is negative, i.e., less likely to move in, while Black and White households, as well as all of the core cities, are associated with more move-ins.

Household-level probability models of effects of new production on gentrifying areas

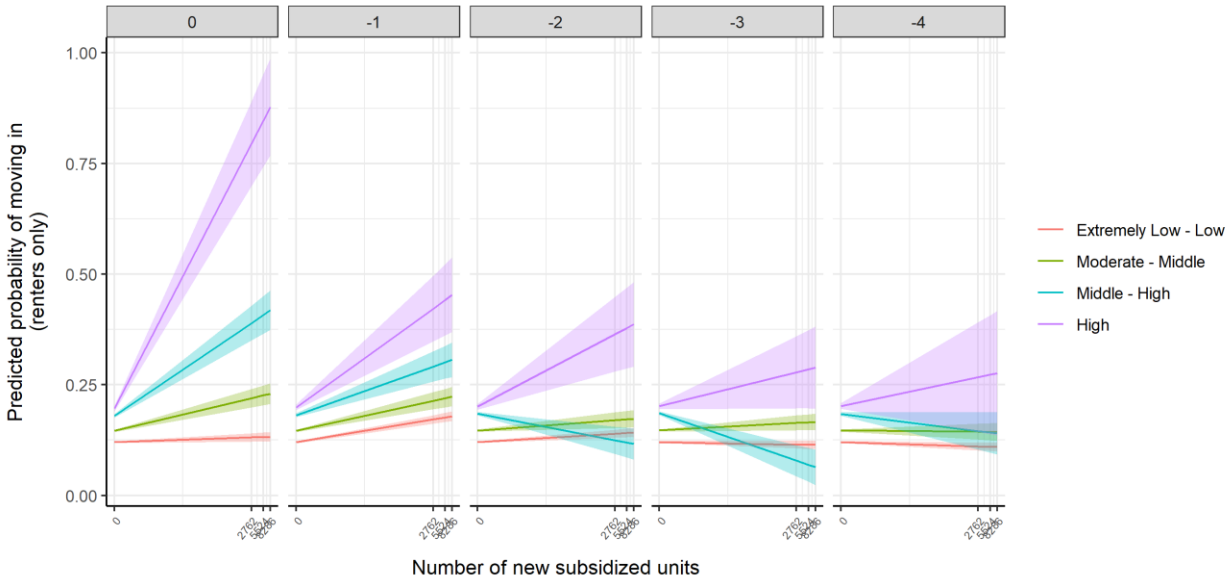
Figure 18 shows the results of inmigration models when subsetting the sample only to hot-market areas with high levels of gentrification, as discussed in Section V-A.3. The figure shows that move-in rates increase, suggesting again, with results for outmigration, that neighborhoods with new production tend to experience increased churn. Inmigration increases sharply for high-SES groups when market-rate production occurs, and also for moderate- and middle-SES groups. Low-SES households also experience inmigration at a higher rate than in the overall models (Figure 17), but at a lower rate than other SES groups. Subsidized housing is also associated with higher inmigration from all groups except middle-SES (beginning 2 years after construction).

Figure 18. Predicted Probabilities by SES of Moving Into Block Groups by Number of New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

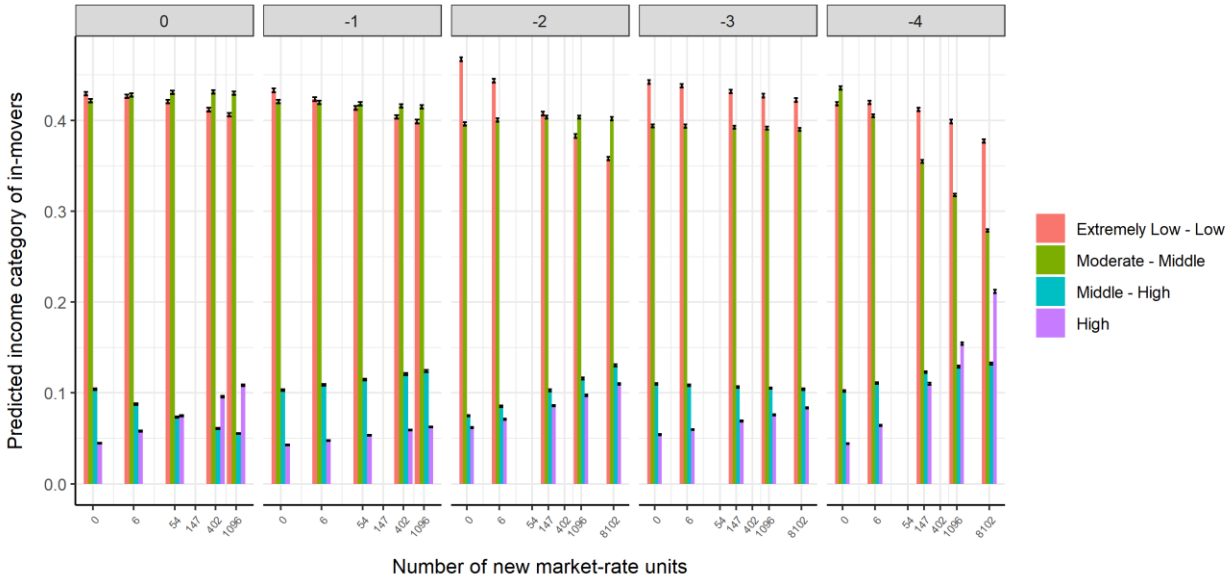
Predicted SES composition of inmovers in areas with new production

How does inmigration for different groups change with new housing production? We use multinomial logit models looking only at movers, to predict the likelihood that new residents (at the block group level) will belong to each economic group. As shown in Figure 19, results differ widely depending on household SES level, and tend to differ from the linear probability models. For low-SES households, new market-rate construction generally reduces inmigration. After an initial increase in the year of construction, moderate-SES households also are less likely to move in, with effects continuing through the fourth year. In contrast, middle-SES households are more likely to move in. High-SES households are also more likely to move in, with sharp increases in move-in rates by the third year after construction.

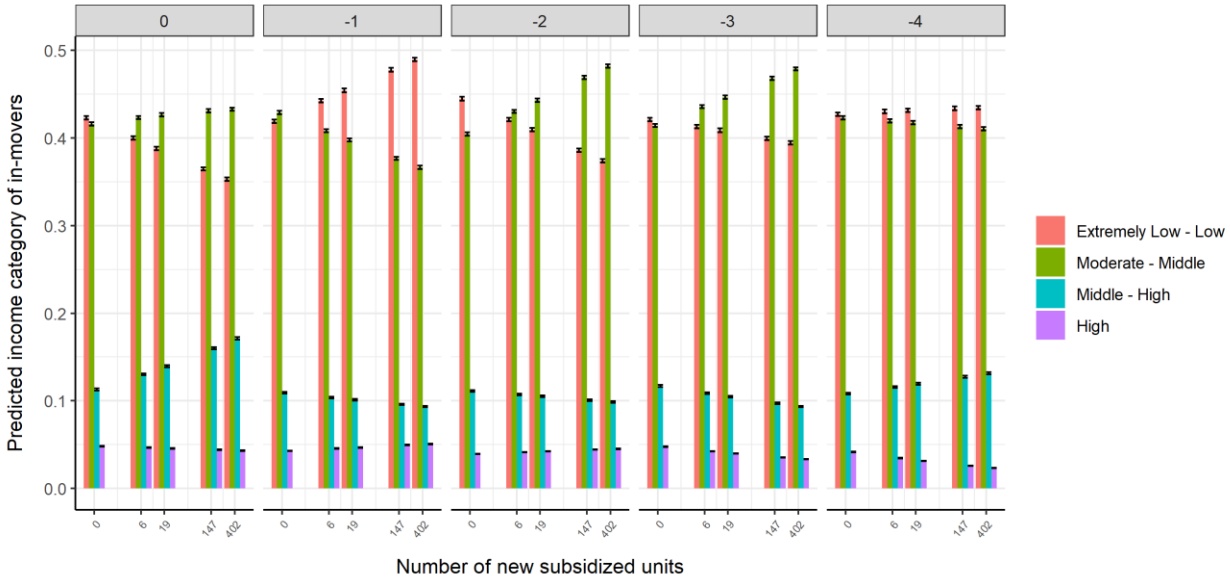
With new production of subsidized housing (Figure 19b), there are mixed results for low-SES households, while moderate-SES households are more likely to move in. In contrast, middle- and high-income households experience mixed results but more declining inmigration rates.

Figure 19. Predicted Composition of Movers into Block Groups With or Without New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

New production and mobility: CCP results

Descriptive statistics for all moves

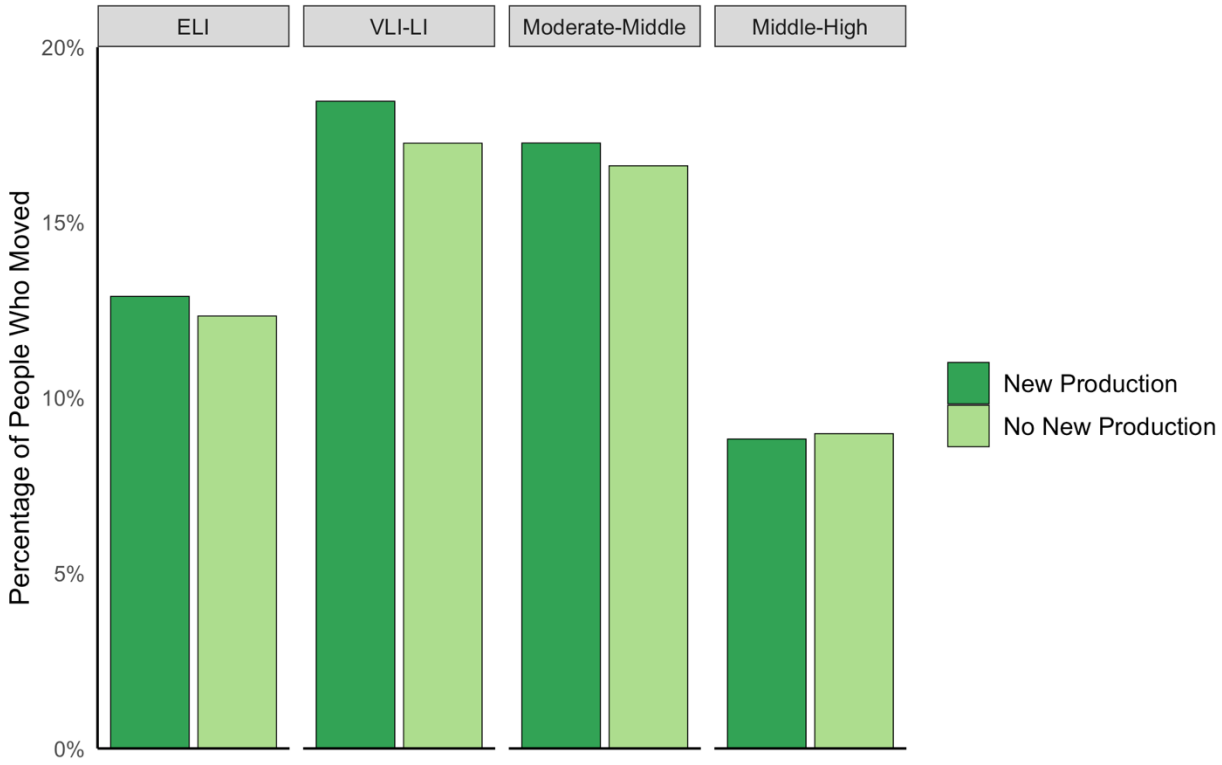
Figure 20 shows the percent of residents in each SES category who move from their census block group from 2002-2017. Throughout the period, very low-to-low-income ("VLI-LI") and moderate-middle SES residents move out of their census block group more than both extremely low-income- ("ELI") and high-SES residents, and high-SES residents move the least. After a peak in 2006, there is a steady decreasing trend, but their rates are generally increasing starting 2012, particularly among VLI-LI and moderate-middle SES residents.

Figure 20. Percent of Residents Who Move by SES

Source: FRBNY Consumer Credit Panel/Equifax Data

In our sample, about 23% of residents are living in a block group that had new housing produced in a given year. Figure 21 displays the percent of residents who move from their block groups by SES categories in neighborhoods with and without new housing production in the prior year. The figure shows that ELI, VLI-LI, and moderate-middle SES residents move out more in neighborhoods with new housing built in the prior year, and this difference is larger among VLI-LI residents. These descriptive results suggest that new production is associated with residential displacement among lower-SES residents, especially moderately poor individuals.

Figure 21. Percent Moving by SES in Block Groups With and Without New Production



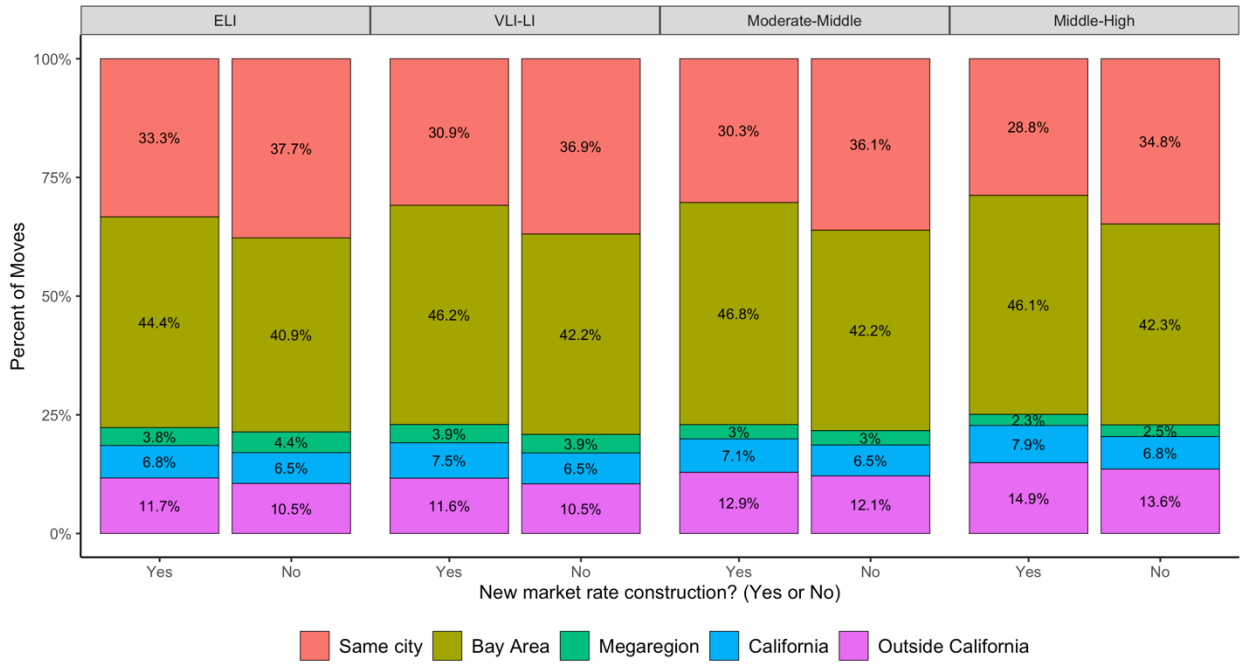
Source: FRBNY Consumer Credit Panel/Equifax Data and UDP New Housing Production Database

The following set of figures provide descriptions of where movers end up. Destinations are separated into 5 categories: within the same city, out of the city but within the Bay Area, out of the Bay Area but within the megaregion, out of the megaregion but within California, and moving out of California entirely. The Bay Area megaregion is defined as the additional area outside of the Bay Area which encompasses the Sacramento, San Joaquin, Santa Cruz, and Yolo counties.

Figure 22 shows that across all SES groups, those moving from block groups with new market-rate construction are slightly less likely to move out of their city and slightly more likely to move within the Bay Area than those moving from block groups without new market-rate construction. These differences are quite similar in magnitude across SES groups, but higher-SES movers are slightly more likely to leave their origin city but still stay within the Bay Area than are lower-SES movers, whereas lower-SES residents are more likely to stay within their origin city. The percent of movers moving out of the Bay Area and into the megaregion, and out of the megaregion and into elsewhere in California are similar across block groups with or without new market-rate construction, but ELI residents in block groups without new market-rate housing are more likely to move out of the Bay Area into the megaregion than similar residents in block groups with new market-rate housing. ELI and VLI-LI movers are slightly more likely to stay

within the megaregion compared to moderate-middle and middle-high SES movers, who are slightly more likely to move to elsewhere within California or out of California entirely.

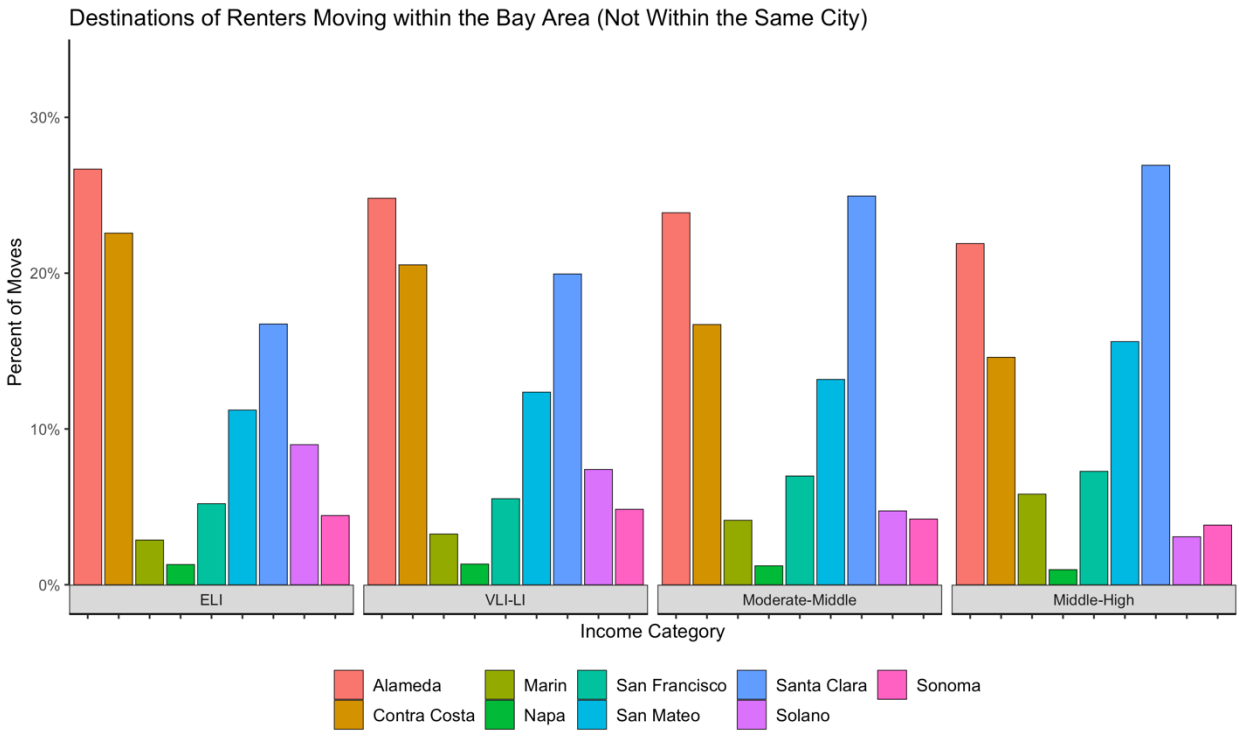
Figure 22. Destinations of Bay Area Renters by Income from Block Groups With and Without New Market-Rate Construction, 2006-2018



Source: FRBNY Consumer Credit Panel/Equifax Data and UDP New Housing Production Database

Figure 23 shows the destinations of Bay Area movers who move out of their origin city but nevertheless move to somewhere within the Bay Area. Among all SES groups, Sonoma county has a similar percent of movers in that SES group who move there. The percentage of movers who move to San Francisco, Marin, and Napa counties grows slightly as the SES group moves from extremely low-income ("ELI") to middle-high. The percentage of movers who move to Santa Clara and San Mateo counties also increases as the SES group moves from ELI to middle-high, whereas the percentage that moves to Alameda, Contra Costa, and Solano counties decreases.

Figure 23. Destinations of Movers Moving Within the Bay Area, Not Within the Same City, 2006-2018



Source: FRBNY Consumer Credit Panel/Equifax Data

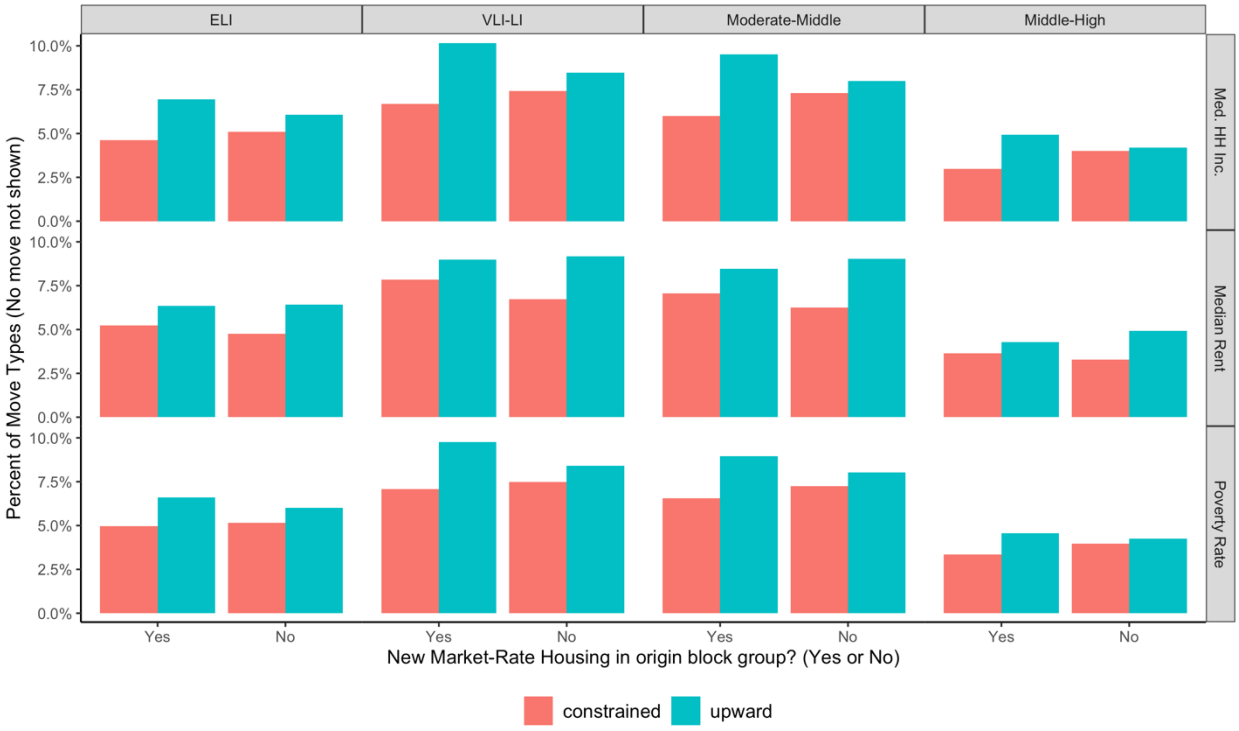
This next set of analyses focuses on studying how new production affects residential mobility beyond whether people move by also considering movers' destinations. We examine the destinations of movers by using a series of linear probability models. Among those who move, we characterize their destinations in three ways—the within-county decile of the tract's median household income that year; the within-county decile of the tract's poverty rate that year; the within-county decile of the tract's median rent that year. A move is considered constrained if the destination decile is equal to or lower than the origin's for household income and rent, or if the destination decile is greater to or equal to the origin for poverty. Upward moves are the opposite of constrained moves—where the destination decile is greater than the origin's for household income and rent, or lower than the origin's for poverty.

Figure 24 shows the percentages of all residents making a constrained or upward move for each SES group and measure (household income, rent, poverty), by the presence of newly constructed market-rate units that year. The percent of people not making a move is not shown on the graph. Overall, middle-high SES residents have the lowest probabilities to make a constrained move across all measures, but they also have the lowest probabilities to make an upward move across all measures. This is likely because middle-high SES residents are most likely to not move at all. VLI-LI residents are most likely to make constrained and upward moves, followed by moderate-middle SES residents and ELI residents, in that order.

Presence of new market-rate construction is not uniformly associated with higher probabilities of making a constrained move. For example, when moves are assessed with household income and

poverty rate, residents living in block groups without new market-rate housing are more likely to make a constrained move than similar residents living in block groups with new market-rate housing, but the opposite is true for rent.

Figure 24. Percent of Residents Making a Constrained or Upward Move by SES and Presence of New Market-Rate Construction, 2005-2017.



Source: FRBNY Consumer Credit Panel/Equifax Data and UDP New Housing Production Database

Outmigration

Individual-level probability models

With the CCP data, we use statistical models to assess how new housing production is associated with whether residents have a higher probability of moving out of their neighborhoods, after accounting for various characteristics that affect mobility patterns. Appendix Table C2 presents the regression coefficients and standard errors for the primary variables of interest from a series of linear probability models predicting the probability that a resident will move out of their census block group by the logged number of newly produced housing in the same year, 2 years prior, and 4 years prior. Statistically significant coefficients for the interaction terms indicate significantly different effects of the logged number of new units on the probability of moving out between SES groups. The figures presented below illustrate these differences but also illustrate the effects of new units on the probability of moving out for each SES group. We compare these

results against logistic regression models for robustness and only note where results differ in the footnotes.

The baseline models show that very low-to-low-income ("VLI-LI") and moderate-middle SES residents move more than extremely low-income ("ELI") residents, and middle-high SES residents move less than ELI residents. The number of new units of any kind is associated with higher rates of moving when it is built, 2 years later, and 4 years later. The subsequent models examine whether the effects of new production on moving differ across SES groups by including interaction terms.

We find different effects across SES groups: VLI-LI and moderate-middle SES residents are more likely to be displaced by new market-rate production, while it allows middle-high SES residents to stay in place. We find positive effects for the lowest-SES residents 2 years after new subsidized housing is built and in the year that new market-rate housing is built. Figure 25 illustrates these differences for the number of newly produced market-rate units and subsidized, and compares results for whether units are built up to 4 years prior. The figures present the predicted probabilities of moving for individuals in the dataset having average characteristics for continuous variables and the mode for categorical variables.[23] These probabilities are based on the models with the full set of individual, household, and neighborhood control variables presented in the tables (Model 3). The results for subsidized units exhibit larger standard errors because there are fewer neighborhoods in which there are subsidized units.

Figure 25 shows that VLI-LI and moderate-middle SES residents are more likely to move out of their neighborhood as more market-rate housing is built, and these effects last up to 1 year after the units are built for moderate-middle SES residents and 3 years after for VLI-LI residents. However, middle-high SES residents are less likely to move out of neighborhoods as more market-rate housing is produced in it all years. ELI residents are more likely to move out in the year new market-rate units are built.[24] ELI residents are more likely to move out 2 years after production of new subsidized units. Moderate-middle SES residents are more likely to move out in the same year, 2, and 4 years after, and middle-high SES residents are more likely to move out in the same year and up to 2 years after.[25]

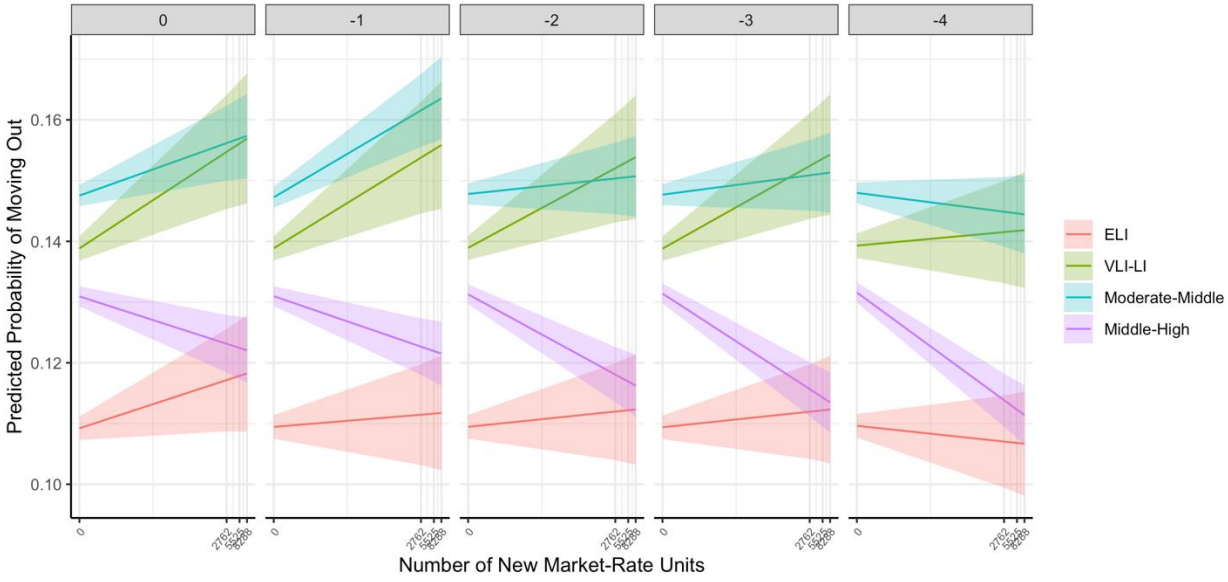
[23] Specifically, these are individuals of age just under 49, in year 2017, in a household size of 2, that is not delinquent and has a mortgage, living in an East Bay (not Oakland) neighborhood, with a vacancy rate of 3% in 2000, 25.6% units built in the past 20 years, ownership rate of 60.5%, 75 subsidized units, 52% non-Hispanic white, 38% college-educated, 27% foreign-born, median household income of $68,887, 8% poverty, median home value of $372,819, median rent of $1,039, 61% owner-occupied, with an average outmigration rate of 12.2% and inmigration rate of 16% in the past 3 years.

[24] In logistic regression models, results for ELI residents are the same and there are no longer any effects for VLI residents. Moderate-middle SES residents are only more likely to move out 1 year after but are actually less likely to move out by 4 years later. There are no negative effects for middle-high SES residents until 2 years after.

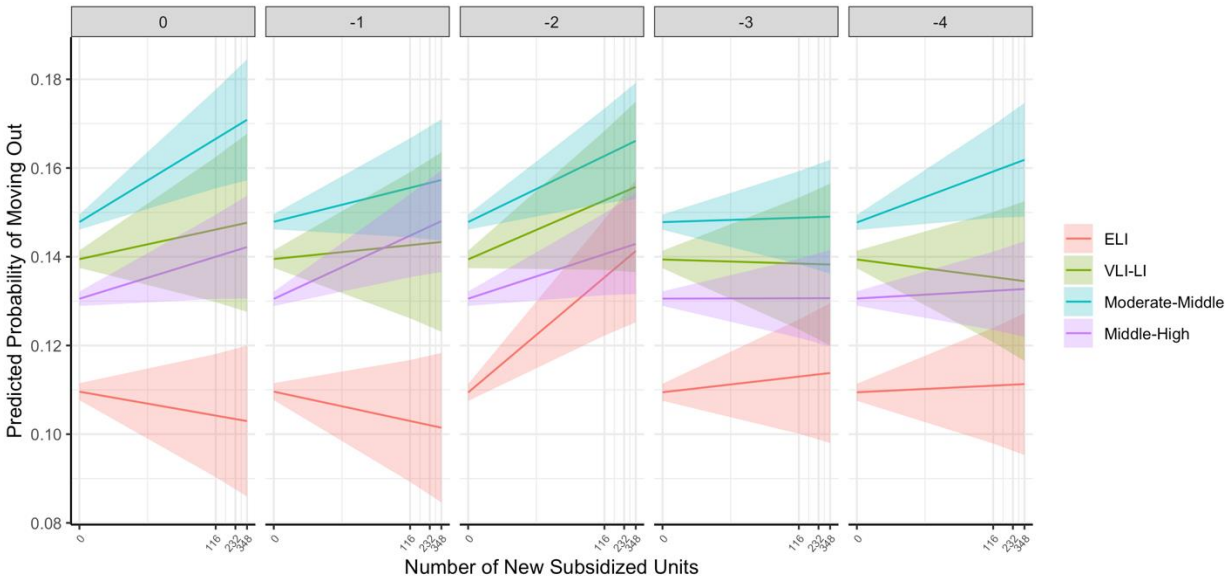
[25] In logistic regression models, the results are the same for ELI and middle-high SES residents, but there are no longer any effects for moderate-middle SES residents.

Figure 25. Predicted Probabilities of Moving Out from Block Groups by SES and Number of New Units (a) Market-Rate, and (b) Subsidized

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Individual-level probability models in gentrifying areas

Next, we compare mobility patterns only among gentrifying tracts in Oakland, San Francisco, and San Jose to better understand migration pressures in strong market areas. Gentrification measures are constructed from the 2000 and 2006-2010 ("2010") ACS. Tracts are considered gentrifiable if the median household income in 2000 was less than the subregion's median household income in 2000. Among gentrifiable tracts, tracts are split into gentrifying and non-gentrifying tracts. Tracts are considered be nongentrifying only if 1) the percentage increase in either the median rent or median home value was less than the subregion's 25th percentile of the percent increase on either of those indicators, and 2) the percent increase in either the population of college-educated residents or the median household income was less than the subregion's 25th percentile of the percent increases on either of those indicators. Tracts are considered to be gentrifying otherwise.

In this analysis, we subset our data to only gentrifying tracts in San Francisco, San Jose, and Oakland. We remove tract-level controls that are collinear with the gentrification measures—median home value, median income, median rent, and percent college-educated. We include a control variable for the city and remove the regional control variable. Figure 26 shows the results from this model for San Francisco, the modal city in the dataset, with control variables plotted at San Francisco-specific mean and modal values.

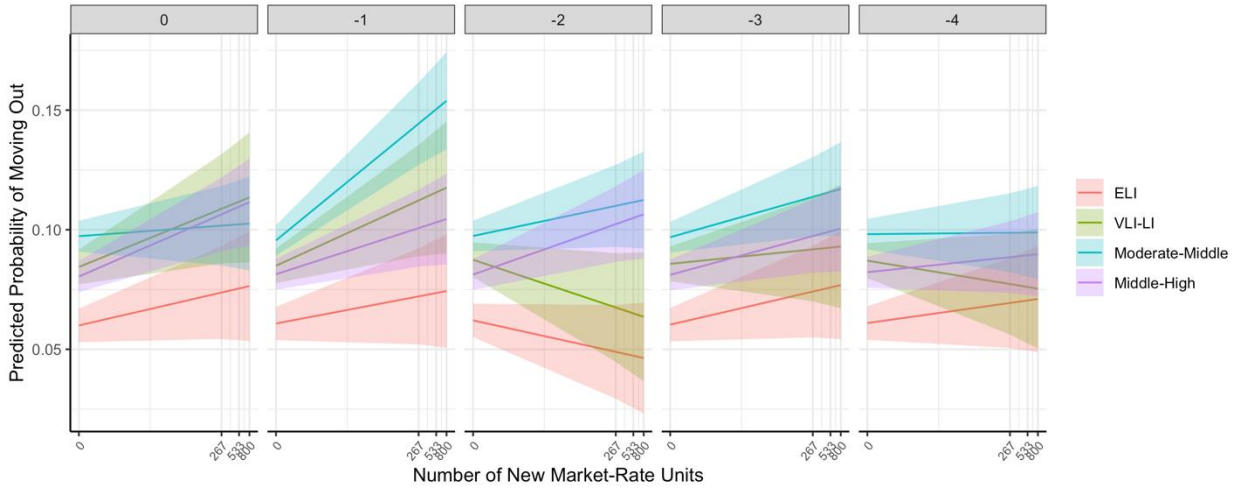
Figure 26 presents predicted probabilities of outmigration by SES and the number of new market-rate and subsidized units**.**

Overall, new market-rate production encourages middle-high SES residents to move out, while new subsidized production in gentrifying tracts allows lower-SES residents in stay in place in the immediate years after units are built.

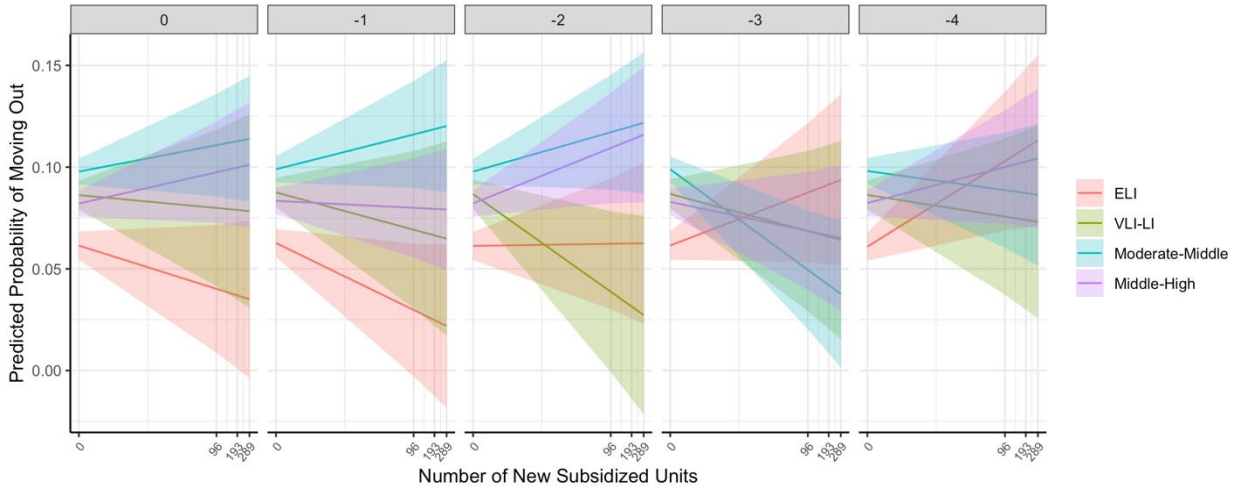
Figure 26 shows that the new construction of market-rate units has no effects on ELI residents. VLI-LI residents are more likely to move out in the same year and the year after units are built, but are less likely to do so 2 years after. Moderate-middle SES residents are more likely to move out 1 year and 3 years after units are built, and high-SES residents are more likely to move out in all years except 4 years after where there are no effects. New construction of subsidized units discourages ELI residents to move out in the year after units are built but encourages them to do so 4 years after. VLI-LI residents are less likely to move out 2 years after units are built, and moderate-middle SES residents are less likely to move out 3 years after. Middle-high SES residents are more likely to move out 2 years after.

Figure 26. Predicted Probabilities by SES of Moving Out of Block Groups by Number of New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Constrained Moves

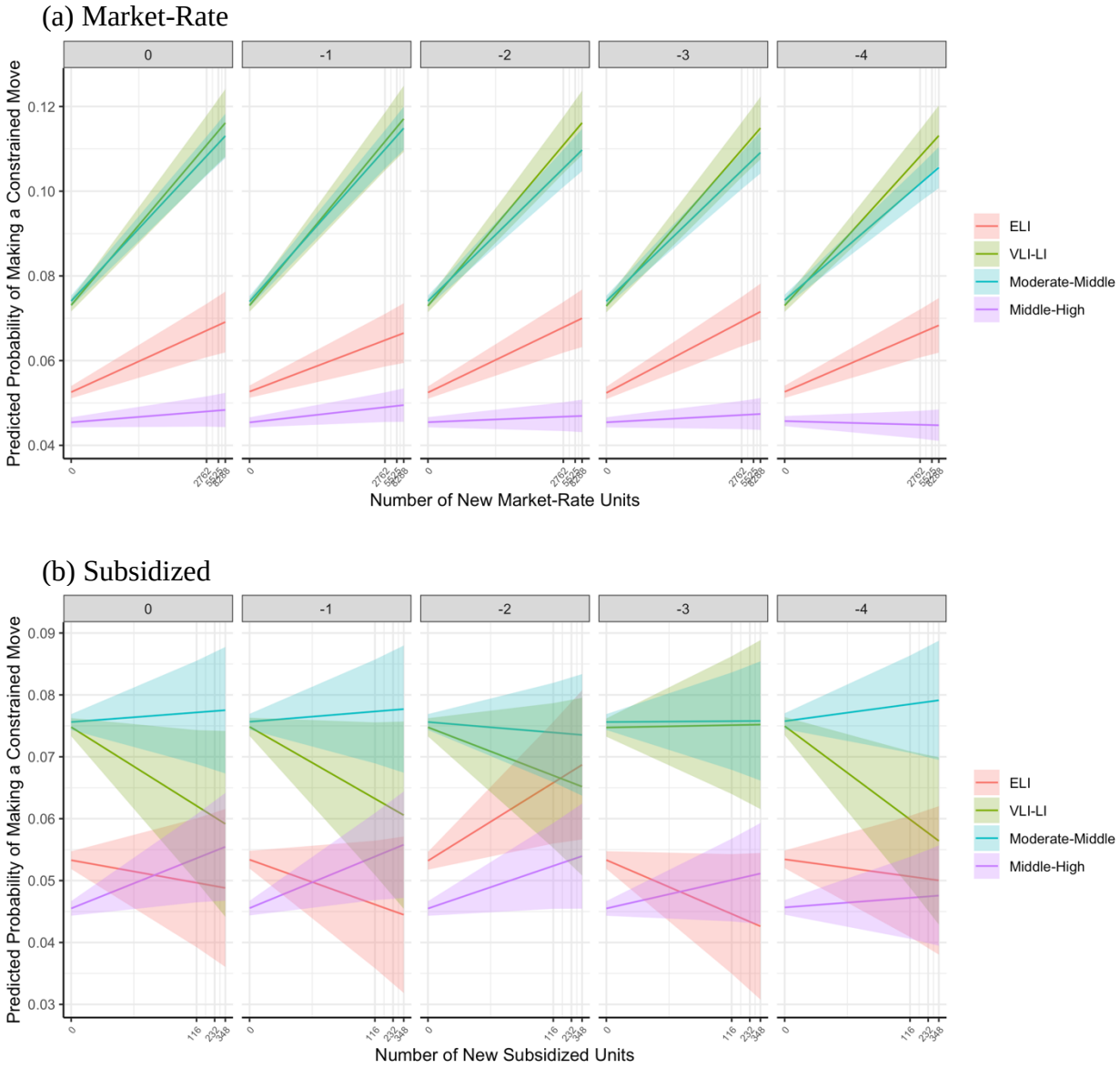
In the following section, we present results from linear probability models predicting the probabilities to make a constrained move by SES. This analysis sheds light on whether new production affects the probability that a resident has to make an undesirable move. We expect that effects should vary by SES groups, with lower-SES groups having to make constrained moves more often.

Overall, new market-rate production increases the probability that all movers will make a constrained move. This is consistent across the measures based on household income and poverty rate, and are more muted based on neighborhood rents. New subsidized production decreases the probability, especially for lower-SES residents, of making a constrained move based on household income and poverty rate deciles but increases it for higher-SES residents based on rents.

Figures 27 to 29 illustrate these differences by the number of newly produced subsidized and market-rate units and compare results for whether new housing is built up to 4 years prior and for the three ways constrained moves are measured. The figures present the predicted probabilities of making a constrained move for individuals in the dataset having average characteristics for continuous variables and the mode for categorical variables, which are the same values as in the outmigration models above. The following plots are for movers who did not move within their same tract.

For constrained moves defined with median household income deciles, Figure 27 illustrates how increases in the number of market-rate units increase the probability of making a constrained move for everyone, with effects lasting only 1 year after for middle-high SES residents and at least 4 years for everyone else. However, middle-high SES residents have significantly lower probabilities than other residents to make constrained moves, with the gap between middle-high SES movers and everyone else widening over time. Middle-high SES residents are also the only group to experience a decreasing probability 4 years after. Increases in subsidized housing production reduce the probability of making a constrained move for ELI residents starting the year units are built, with effects lasting 1 year and 4 years after. VLI-LI residents are more likely to make a constrained move 2 years after units are built but there were no effects otherwise. There were positive effects for middle-high SES residents in the same year and the year after, and there were no significant effects for moderate-middle SES residents.

Figure 27. Predicted Probability of Making a Constrained Move by SES from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Median Household Income Deciles

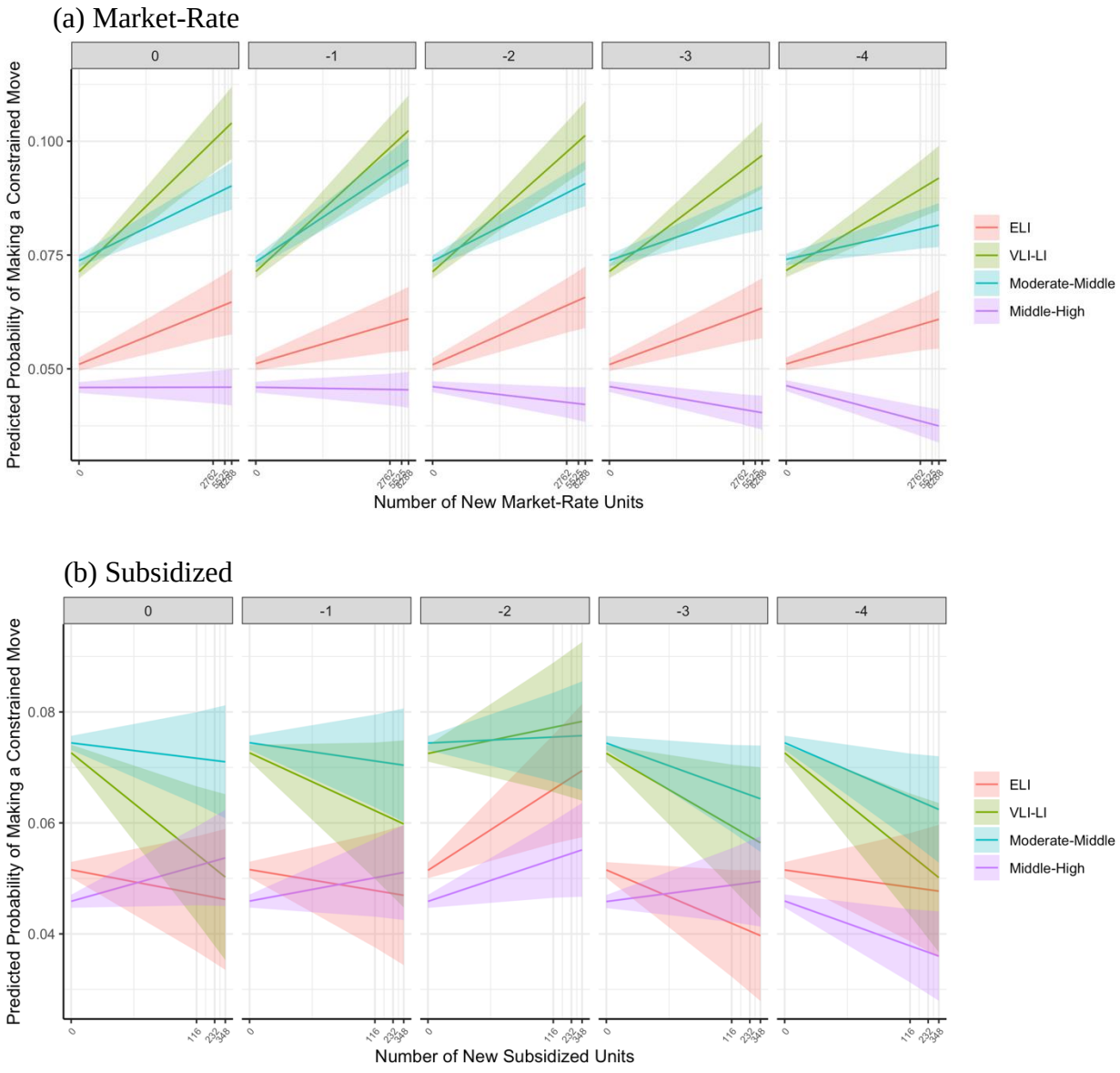


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Figure 28 illustrates that new market-rate housing production increases the probability of making a constrained move for ELI, VLI-LI, and moderate-middle SES residents in all years. While there are no effects for middle-high SES residents in the same year and the year after units are built, there are negative effects starting 2 years after units are built, with effects lasting at least 4 years.

New subsidized housing reduces the probability of making a constrained move, defined as a higher or equal poverty rate decile at the destination than at the origin, for ELI residents in all years except 2 years after units are built. It increases the probability of making a constrained move for VLI-LI movers 2 years after units are built but decreases it 3 years after units are built. Moderate-middle SES movers are less likely to make a constrained move 3 and 4 years after new subsidized housing is built, whereas high-SES movers are more likely to make a constrained move after units are built but less likely to do so 4 years after.

Figure 28. Predicted Probability of Making a Constrained Move by SES from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Poverty Rate Deciles

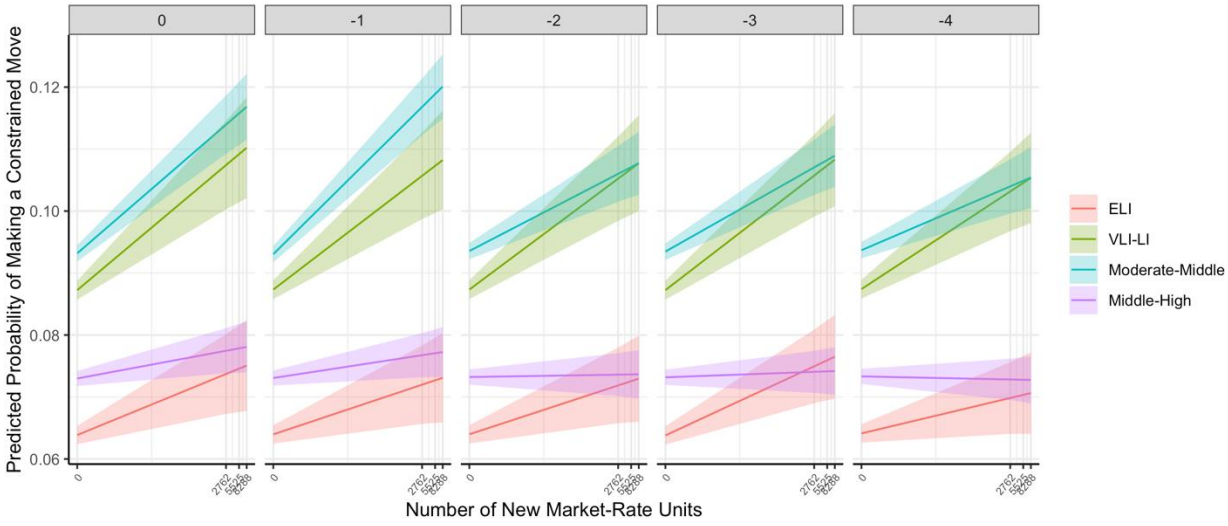


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

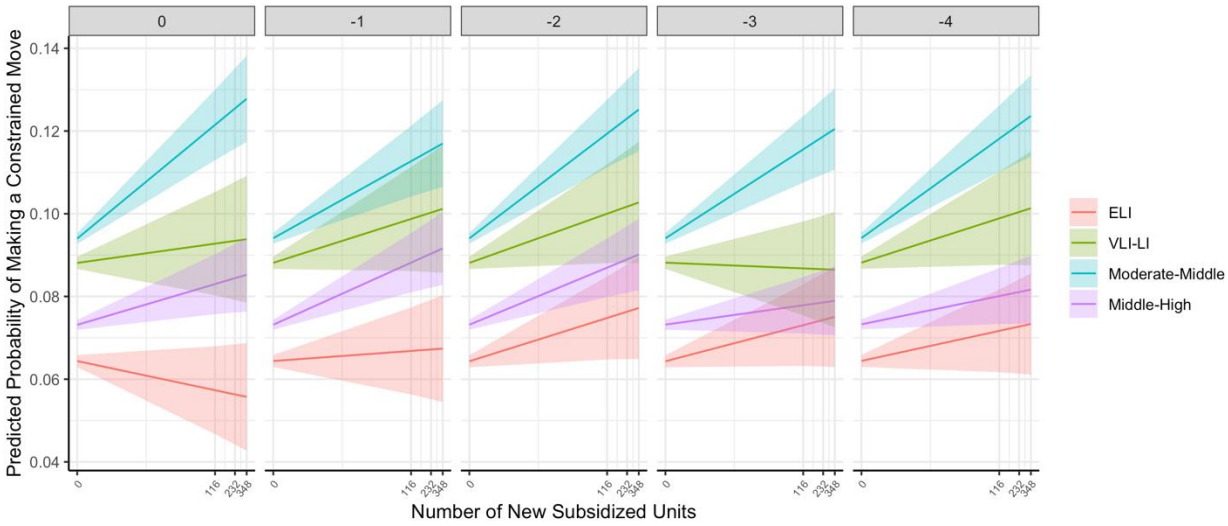
Figure 29 shows predicted probabilities to make a constrained move when defined as moving to a neighborhood with an equal or lower median rent decile for their metropolitan area. Market-rate housing increases the probability of making a constrained move for ELI, VLI-LI, and moderate-middle SES residents in all years, and for middle-high SES residents in the same year and the year after units are built. New subsidized units have no effects for ELI residents except a very weak positive effect 4 years after units are built. Increases in new subsidized units have a weak positive effect for VLI-LI residents 2 years after but had no effects otherwise. There are positive effects in all years for moderate-middle SES residents, and a positive effect for middle-high SES residents in all years except 3 years after. Since figure 29 shows trends for people who did not move within the same tract, the results are not necessarily driven by a reduction in rent in the tract due to new subsidized housing.

Figure 29. Predicted Probability of Making a Constrained Move by SES from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Median Rent Deciles

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

Individual-level probability models

Appendix Table C3 presents the regression coefficients and standard errors for the main variables of interest from a series of linear probability models predicting the probability that a resident will move into a census block group by the logged number of newly produced housing units in the same year, 2 years prior, and 4 years prior. The baseline models reflect the general trends of movers, with VLI-LI and moderate-middle SES residents moving into block groups more than ELI residents, and middle-high SES residents moving into them less. Further, the number of new units of any kind is associated with higher rates of inmigration when it is built, 2 years later, and 4 years later. The subsequent models examine whether the effects of new production on moving into neighborhoods differ across SES groups by including interaction terms. Similar to above, we only note where results differ when compared against logistic regression models in footnotes.

Overall, new market-rate production increases the probability that people will move into a neighborhood across all SES groups for at least 4 years after the units are built, and the probabilities are highest for middle-SES residents. New subsidized production increases the probability that people will move into a neighborhood for a few years, except for ELI residents. Figure 30 illustrates these differences by the number of newly produced market-rate and subsidized units, and compares results for whether new housing is built up to 4 years prior. The figures present the predicted probabilities of moving into a block group for individuals in the dataset having average characteristics for continuous variables and the mode for categorical variables, which are the same values as in the outmigration models above.

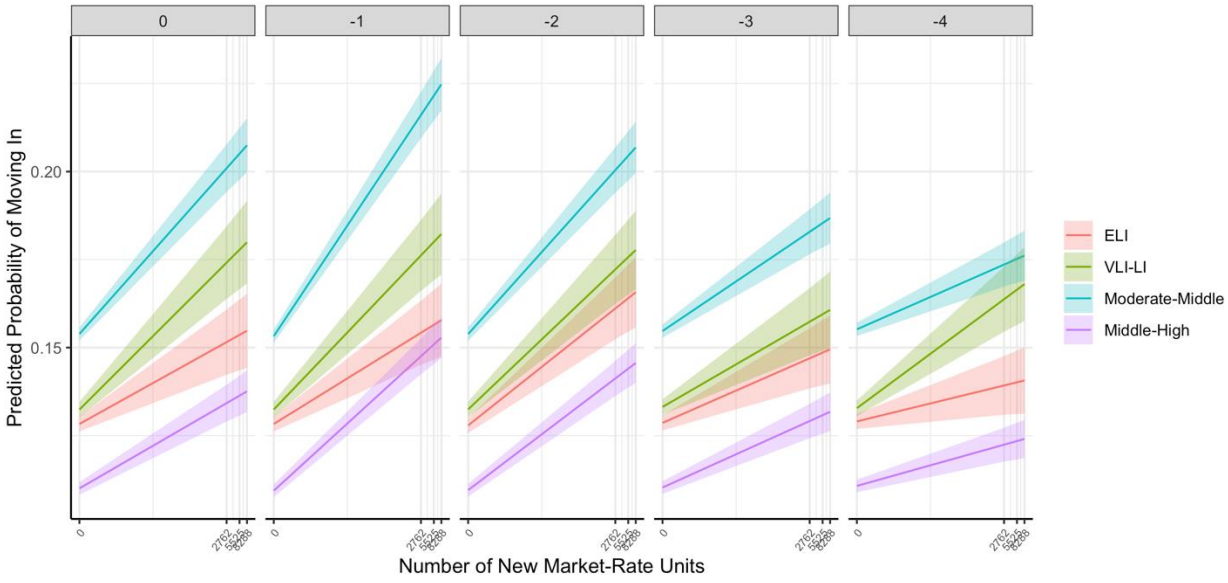
Figure 30 illustrates the overall positive effect of new market-rate housing, which attracts everyone for at least 4 years after the units are built. Once again, we find that moderate-middle SES residents have the highest probability of moving into neighborhoods with new market-rate units, followed by VLI-LI, ELI, and middle-high SES residents, although the differences between SES groups narrow slightly over time.[26] Subsidized production increases the probability that people will move into a neighborhood, though this is inconsistent for different SES groups across years. While moderate-middle SES residents have the highest probability of moving into neighborhoods with new subsidized production, middle-high SES residents generally have the lowest. Subsidized production is associated with the increased probability that VLI-LI and moderate-middle SES residents will move into neighborhoods in the same year, 1, and 2 years after, as well as 3 and 4 years after for moderate-middle SES residents. It is also associated with the increased probability that high-SES residents will move into neighborhoods, with effects lasting up to 3 years after new units are built. There are no effects for ELI residents, however.[27]

[26] In logistic models, the effects for middle-high SES residents are much stronger, with middle-high SES residents having the second highest probability to move in at the higher distribution of new units the year after new units are built.

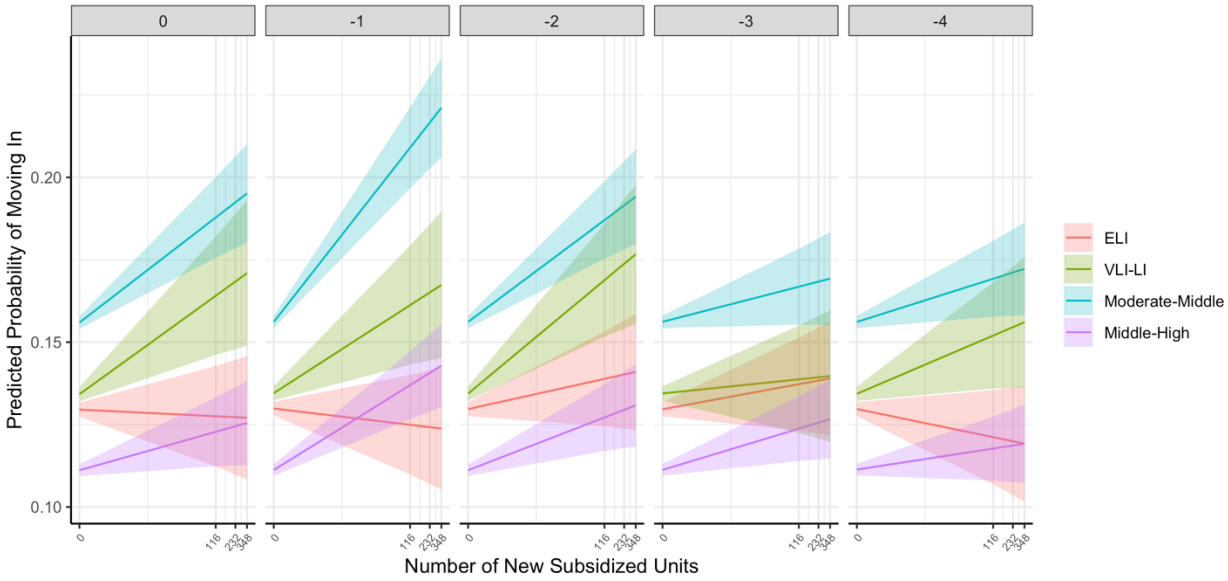
[27] In logistic regression models, results for ELI and moderate-middle SES residents are the same. VLI-LI residents are only more likely to move in 2 years after, and middle-high SES residents are more likely to move in with effects lasting at least 4 years.

Figure 30. Predicted Probabilities by SES of Moving into Block Groups by Number of New (a) Market-Rate Units, and (b) Subsidized

(a) Market-Rate Units



(b) Subsidized Units



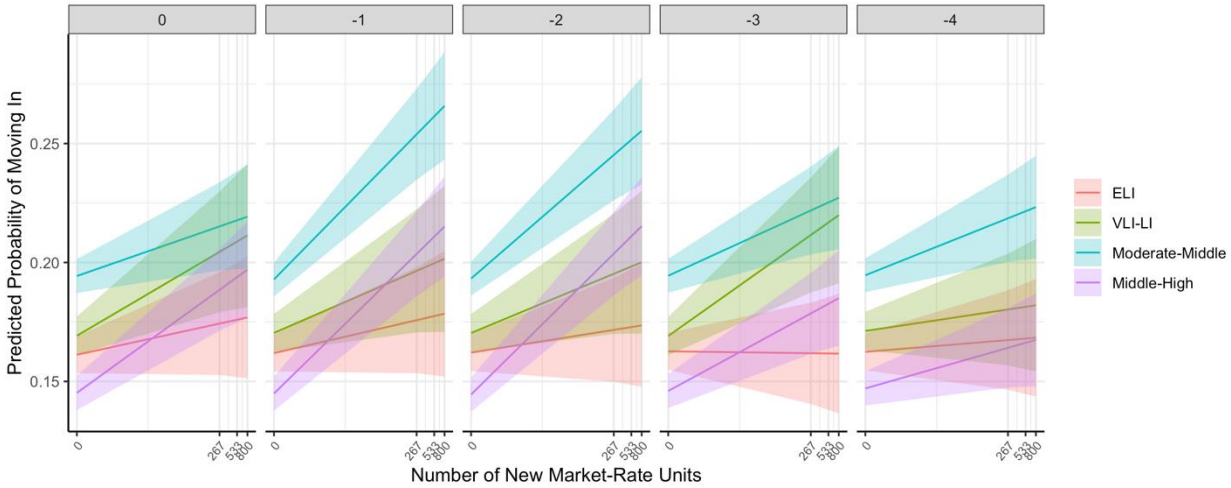
Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Individual-level probability models in gentrifying areas

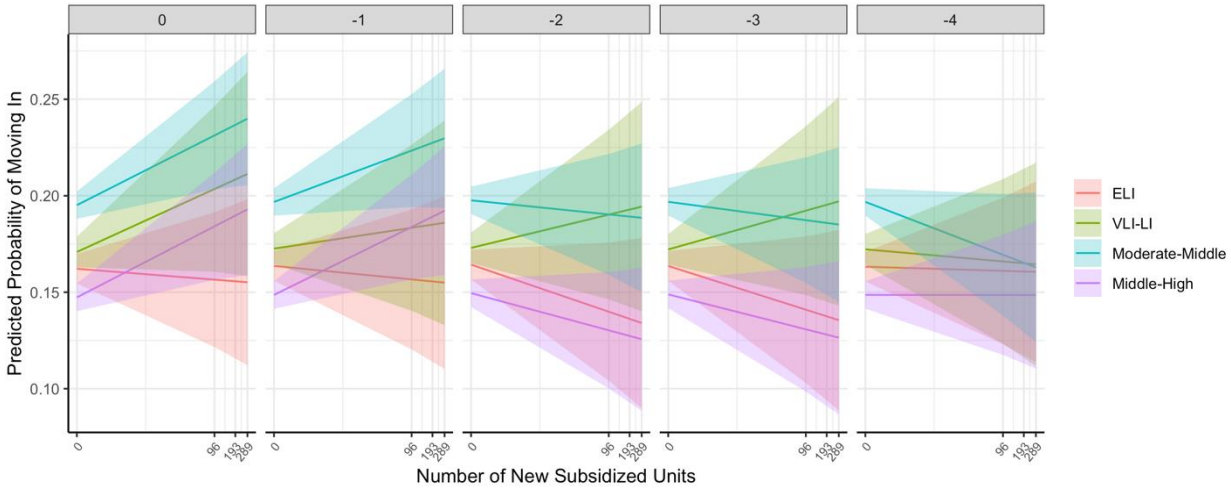
Figure 31 shows the results of inmigration models when subsetting the sample only to hot-market areas with high levels of gentrification, as discussed in Section V-C.3. We examine the effects of new construction on the likelihood of moving in for each SES group. Figure 31 shows that ELI residents in particular do not take advantage of newly constructed market-rate units, and that lower SES groups are not able to take advantage of newly constructed subsidized units. First, for market-rate units, there are no effects for ELI residents. Everyone else is more likely to move in in all years, except for VLI-LI residents for whom effects only last up to 3 years after. Next, for subsidized units, there are no effects for ELI and VLI-LI residents. Moderate-middle SES residents are more likely to move in in the same year and the year after units are built, but are less likely to do so 4 years after. Middle-high SES residents are more likely to move in in the same year and the year after.

Figure 31. Predicted Probabilities by SES of Moving Into Block Groups by Number of New (a) Market-Rate (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Predicted SES composition of inmovers

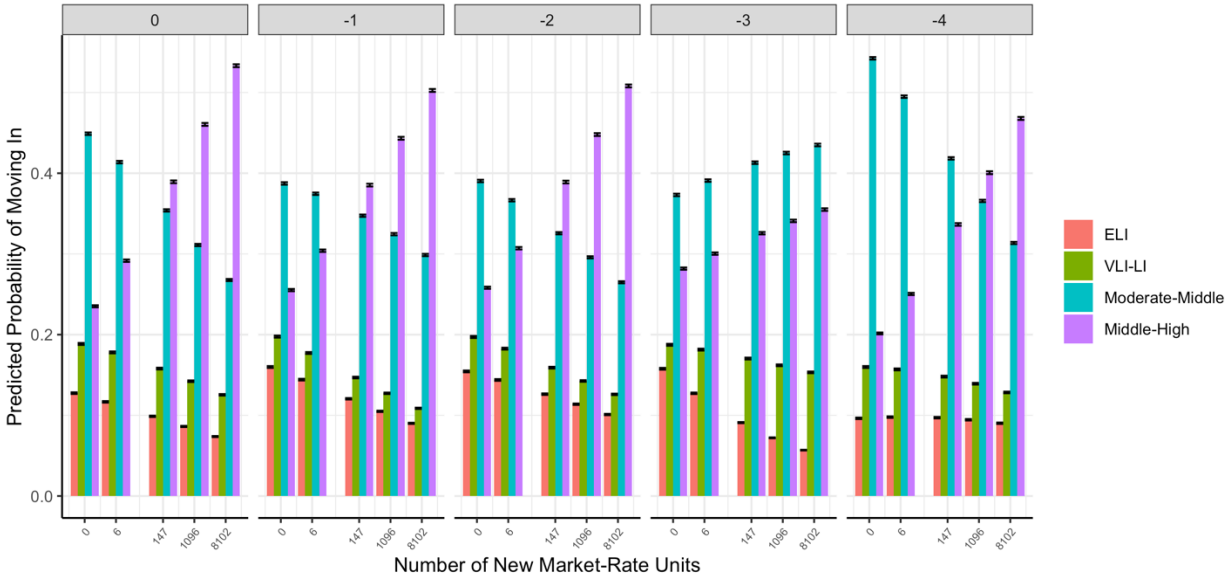
Next, we compare how the likelihood that movers into a block group are in each SES group changes with new housing production using multinomial logit models. These results are based on movers only. Figure 32 presents predicted likelihoods that new residents in neighborhoods are each SES. These results are based on multinomial logistic regression models predicting whether ELI, VLI-LI, or moderate-middle SES residents relative to middle-high SES residents move into neighborhoods.

Overall, new market-rate housing production provides more opportunities for middle-high SES residents, while new subsidized housing production makes neighborhoods accessible for moderate-o-middle-SES residents in the short-term but more accessible for middle-high SES residents in subsequent years.

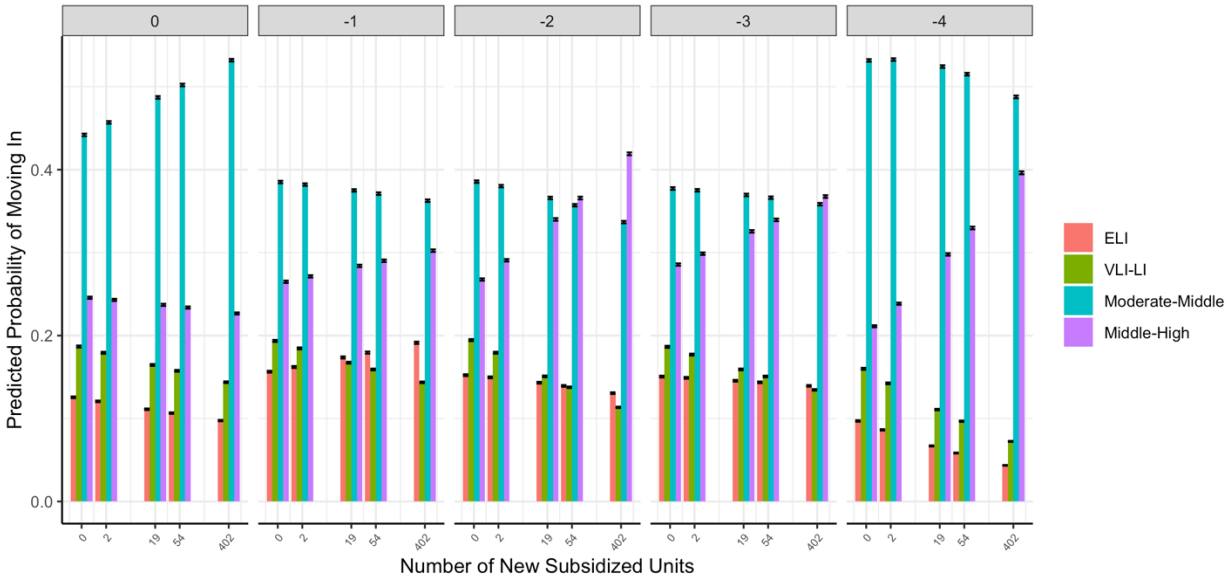
When considering the number of new market-rate units, figure 20 shows that the results exhibit negative trends for ELI, VLI-LI, residents, as well as for moderate-middle SES residents except for 3 years after units are built. The likelihood that inmovers are middle-high SES residents increases in neighborhoods with higher numbers of new market-rate units in all years, and middle-high SES residents are the most likely group to be inmovers. Moderate-middle SES residents are less likely to move into the neighborhood as the number of new subsidized units increases, in all years except in the same year units are built. Middle-high SES residents are actually less likely to move in as the number of new subsidized units increases in the year units were built, but more likely to starting the year after. Finally, VLI-LI and ELI residents comprise similarly low shares of the residents moving into any neighborhood, and ELI residents are only more likely to be move as the number of subsidized units increases the year after.

Figure 32. Predicted Composition of Movers into Block Groups by Number of New (a) Market-Rate Units, and (b) Subsidized

(a) Market-Rate



(b) Subsidized



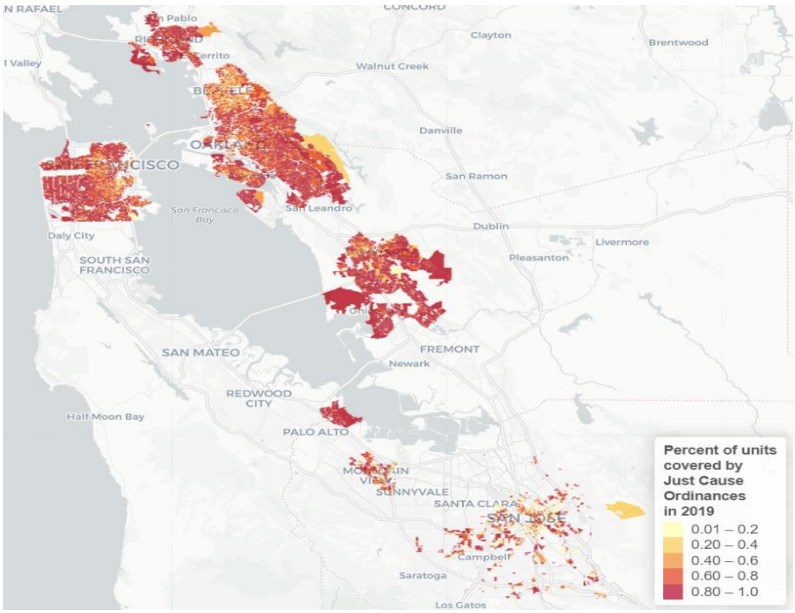
Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Results: the impacts of tenant protections on mobility

Tenant protections in the Bay Area

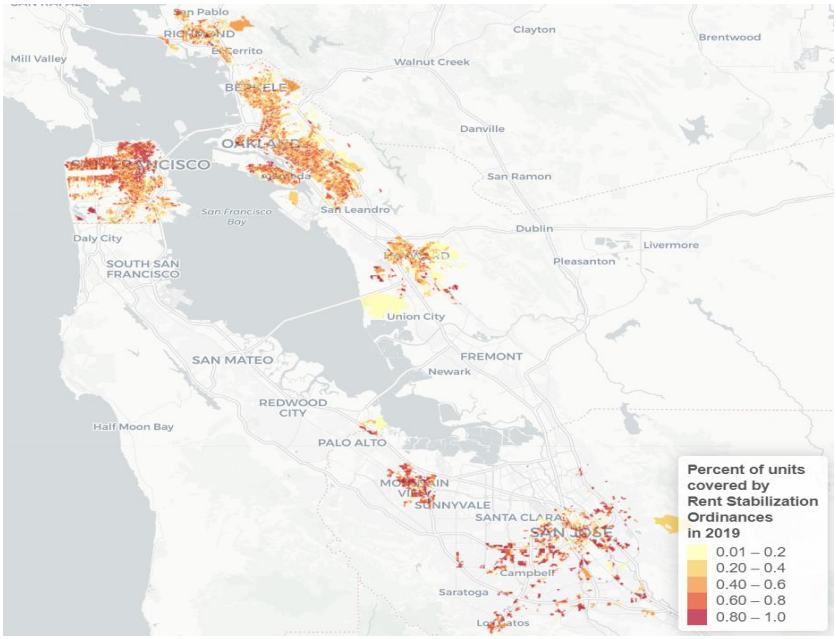
In general, coverage by just cause ordinances tends to be much more comprehensive than rent stabilization (Figures 33 and 34). San Francisco houses the greatest share of units with tenant protections, while protections are more sporadic in the South Bay.

Figure 33: Percent of Units Subject to Just Cause for Evictions Ordinances in 2019 by Census Block



Source: UDP Tenant Protection Database

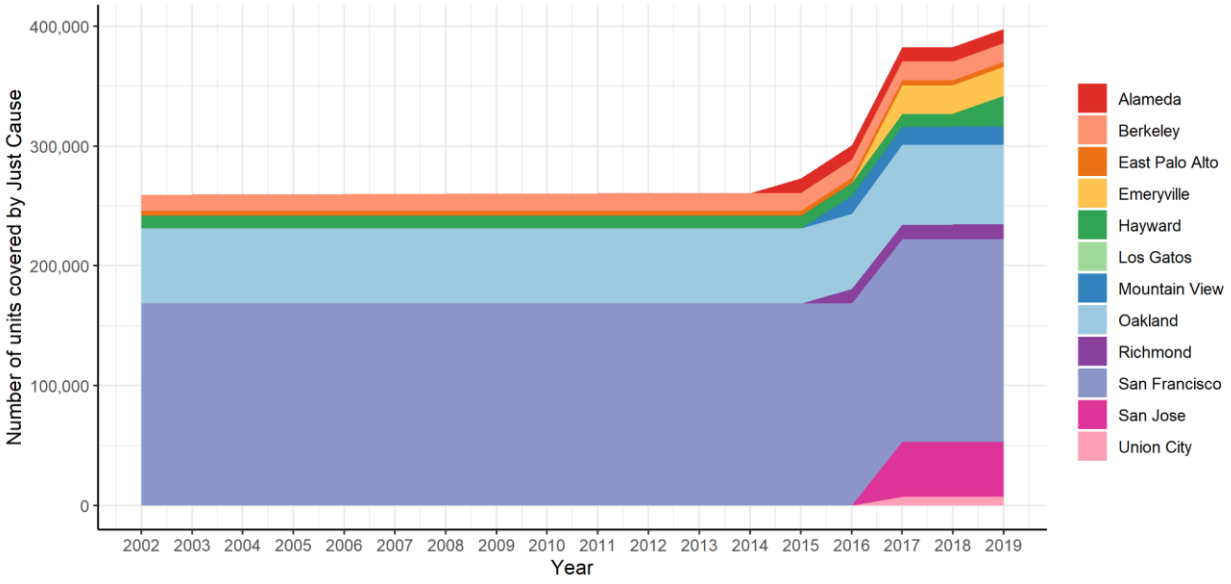
Figure 34: Percent of Units Subject to Rent Stabilization Ordinances in 2019 by Census Block



Source: UDP Tenant Protection Database

In the following figures, we examine trends in tenant protections over time.

Figure 35. Number of Units Subject to Just Cause for Evictions Ordinances by Jurisdiction

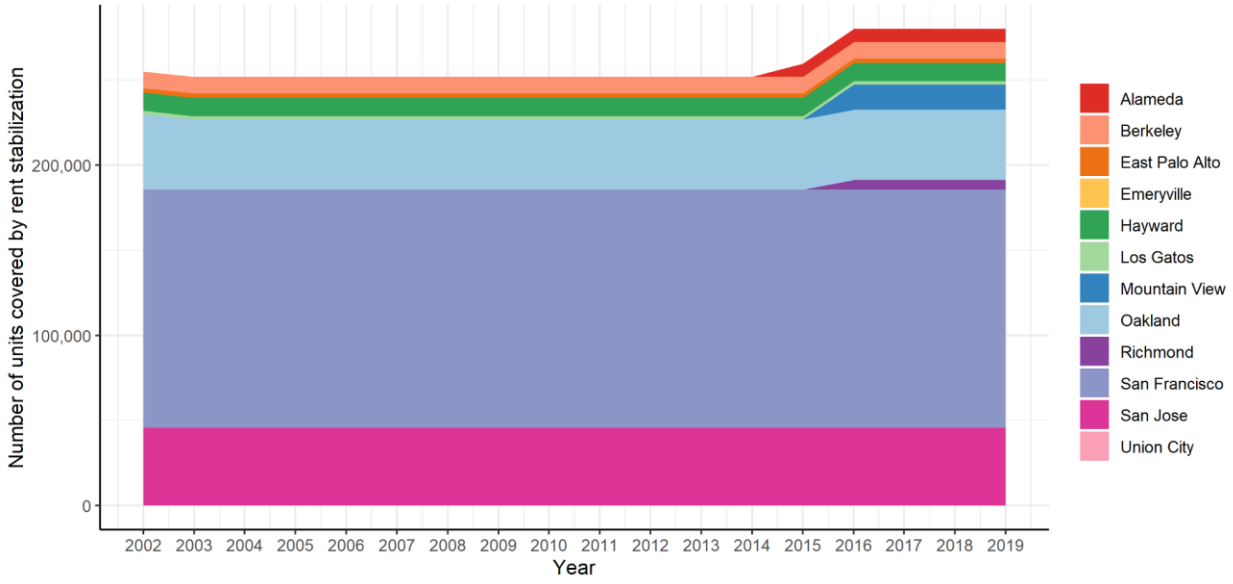


Source: UDP Tenant Protection Database

Figures 35 and 36 display the number of units covered by just cause for evictions and rent stabilization ordinances, respectively, for each jurisdiction in the Bay Area where these tenant protections existed between 2002 to 2019. Since tenant protection ordinances in most jurisdictions include both just cause for evictions and rent stabilization protections, there is significant overlap between the two. In general, however, more units in each jurisdiction are subject to just cause than rent stabilization.

Between 2014 and 2017, there was an increase in the number of units covered by both types of protections. During this time, multiple jurisdictions either amended or adopted ordinances that expanded coverage to more types of units. Of all the jurisdictions, San Francisco consistently has the highest number of units subject to both types of tenant protections. San Jose and Oakland have the next highest coverage for rent stabilization, although San Jose did not adopt just cause for evictions protections until 2017.

Figure 36. Number of Units Subject to Rent Stabilization Ordinances by Jurisdiction



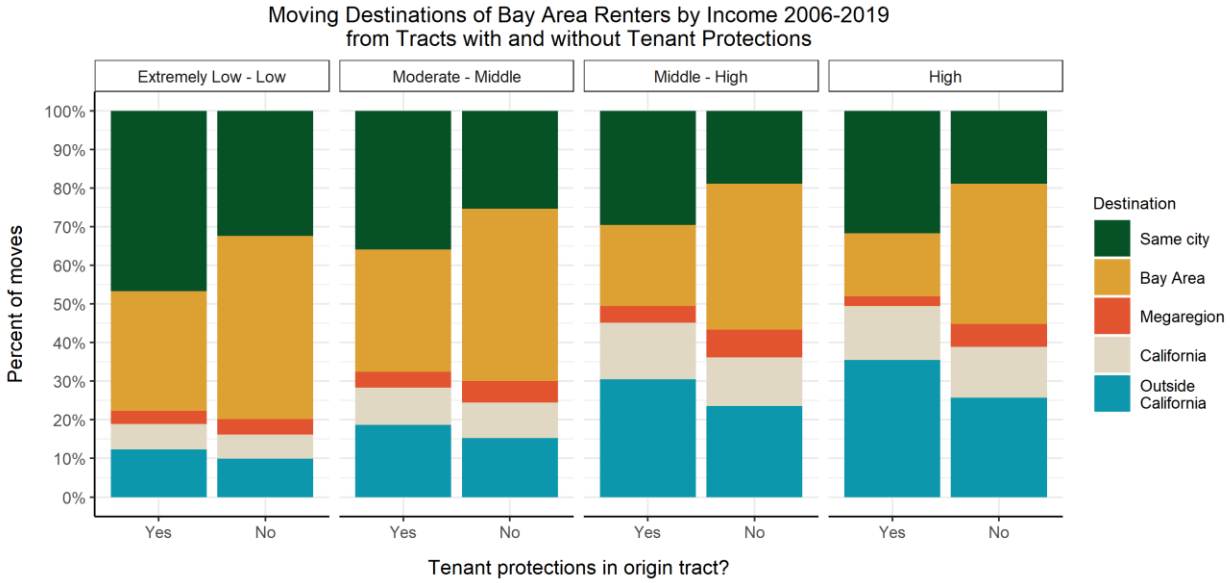
Source: UDP Tenant Protection Database

Tenant protections and mobility: Infogroup results

Descriptive Statistics

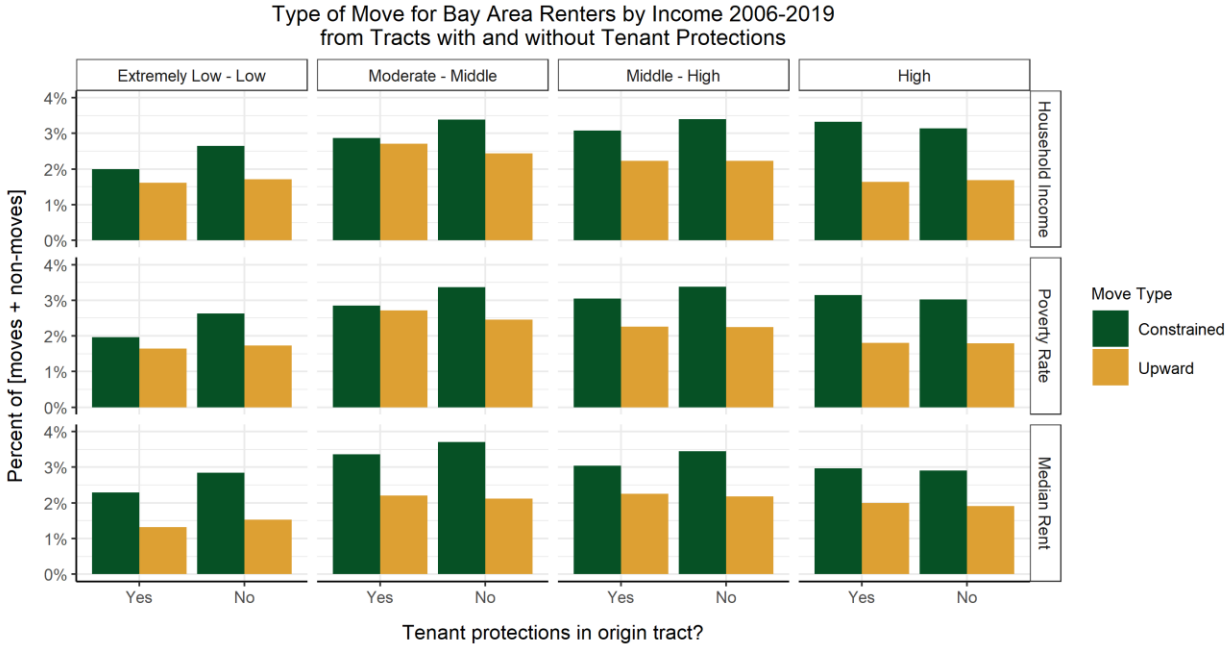
Across SES groups, households moving from block groups with tenant protections were disproportionately likely to land somewhere in their original city (Figure 37). The higher the SES, the more likely generally that movers ended up outside of the Bay Area, in California or outside the state altogether. Across SES groups and neighborhood types, movers out of block groups with tenant protections were more likely to experience constrained moves (Figure 38). This may occur because tenant protections were keeping them in neighborhoods as they became unaffordable, and they are unable to find comparable neighborhoods to move into.

Figure 37. Moving Destinations of Bay Area Movers by SES, 2006-2018, from Block Groups with and without Tenant Protections



Source: Infogroup and UDP Tenant Protection Database

Figure 38. ***Type of Move for Bay Area Renters by Income 2006-2019.***



Source: Infogroup and UDP Tenant Protection Database

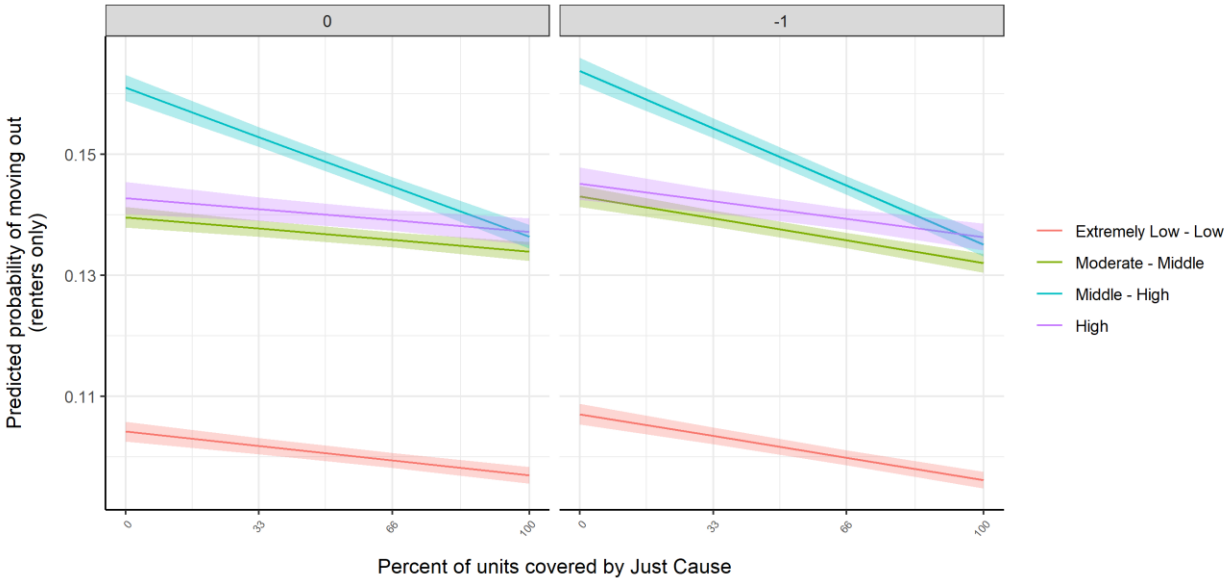
Outmigration

Household-level probability models

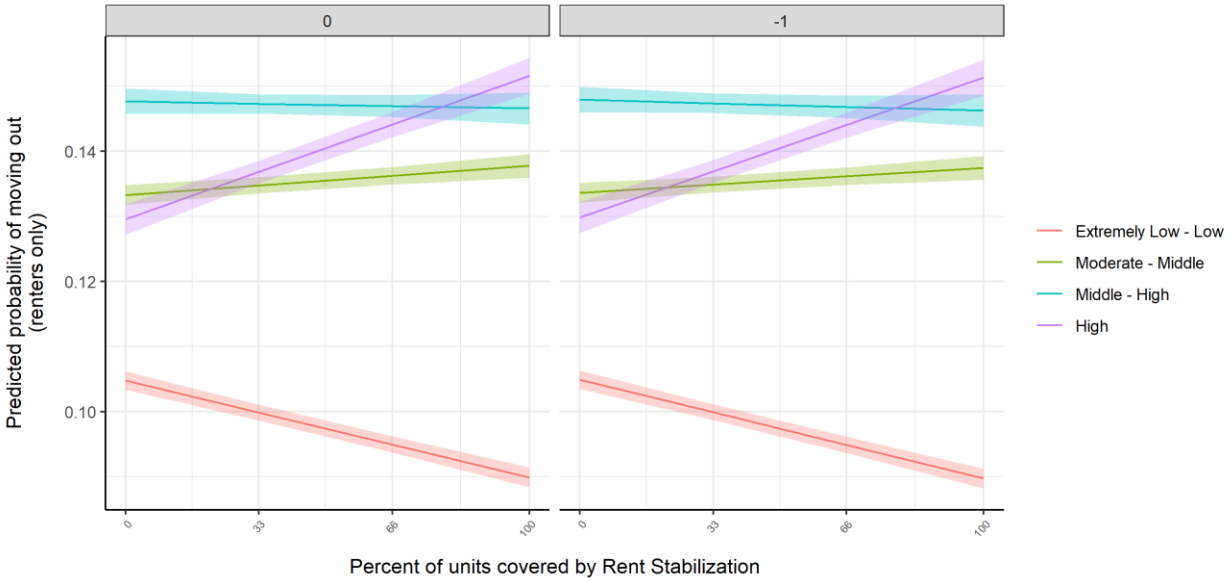
The following figures illustrate the relationship between tenant protections and the probability of renter households moving out of their block group. A higher percentage of units in a block group covered by just cause for evictions is associated with fewer move-outs at all SES levels, both the same year and 1 year after, with the biggest impacts for middle-SES groups. Rent stabilization decreases outmigration for low-SES households, increases outmigration for moderate- and high-SES households, and has no effect on move-outs for middle-SES households.

Figure 39. Predicted Probability of Moving Out by SES and Percent of Units Covered by (a) Just Cause and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

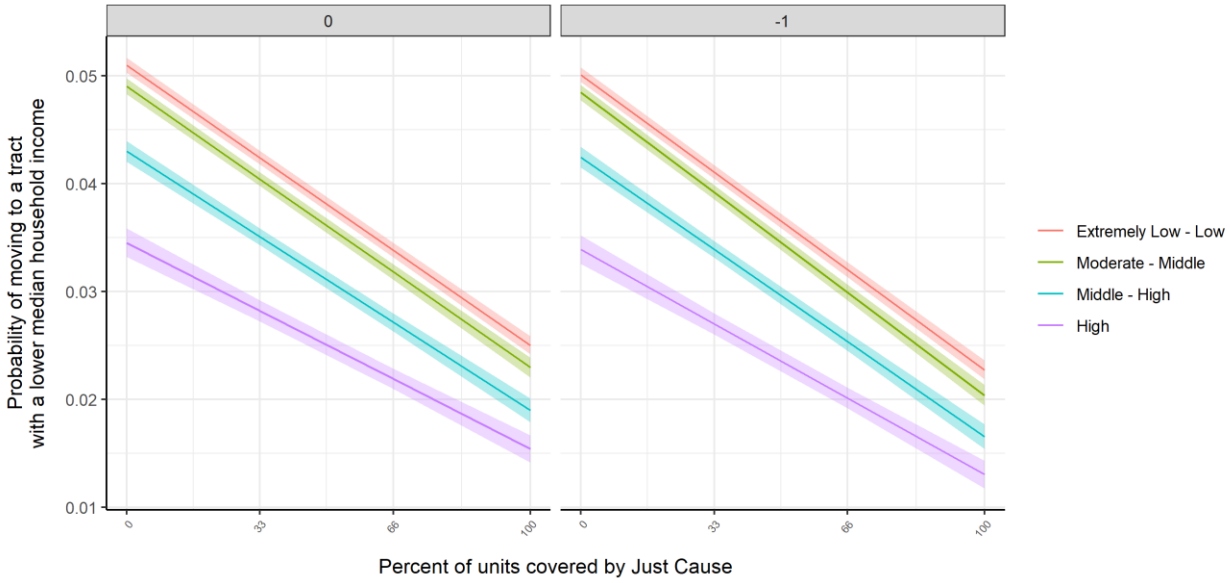
Regression results support the plot findings (Appendix Table D3). Just cause for eviction ordinances decrease outmigration across income groups and a variety of household characteristics, including Black and Latine race/ethnicity, and in core cities. Rent stabilization ordinances lower outmigration rates for low income groups only, and also for San Francisco households only. These ordinances are associated with increased outmigration among other income groups and in other core cities, as well as for both Black and White race/ethnicities.

Constrained Moves

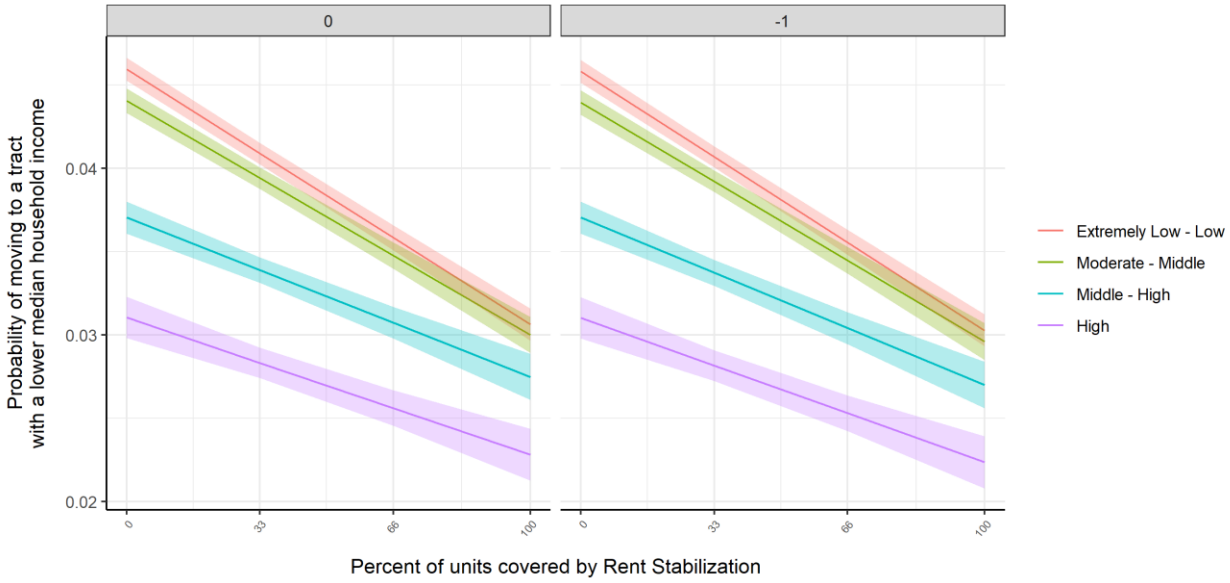
Increases in units covered by just cause for eviction ordinances decrease the probability of making a constrained move, as assessed with median household income or poverty deciles, for households across all SES groups in both the year units are covered and the year after; results are similar for rent stabilization except that using the poverty measure, high-SES households experience increased probabilities of a constrained move (Figures 40 and 41). Looking at destination neighborhoods by rent decile (Figure 42) reveals similar patterns, except that probabilities are lowest (rather than highest) for low-SES households and minimal for high-SES groups.

Figure 40. Predicted Probability of Making a Constrained Move by SES by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization, Using Median Household Income Deciles

(a) Just Cause for Evictions



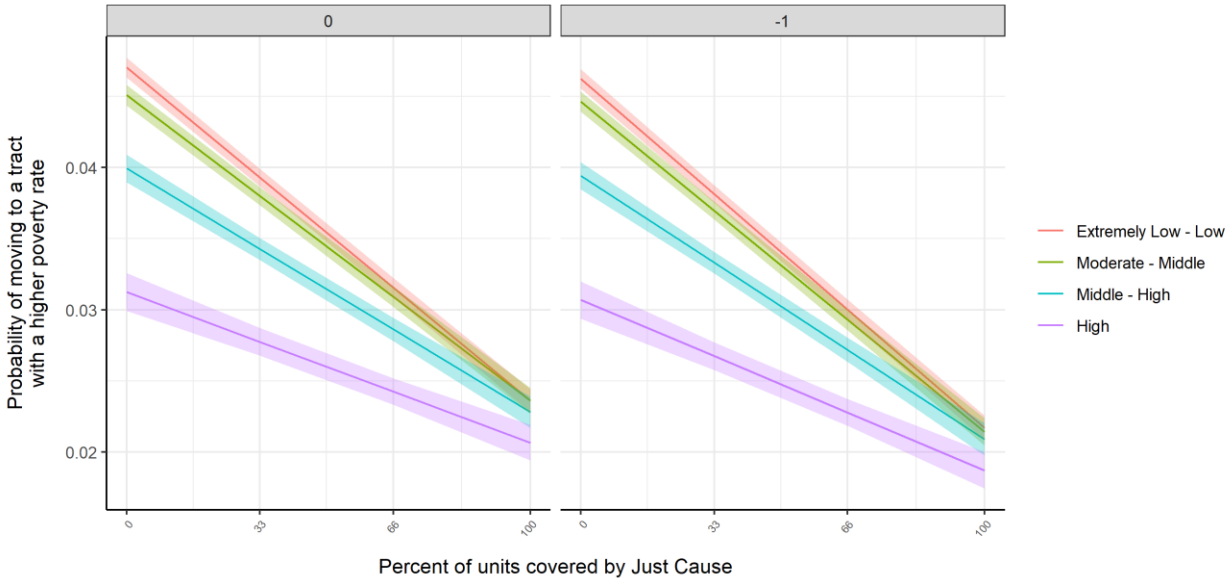
(b) Rent Stabilization



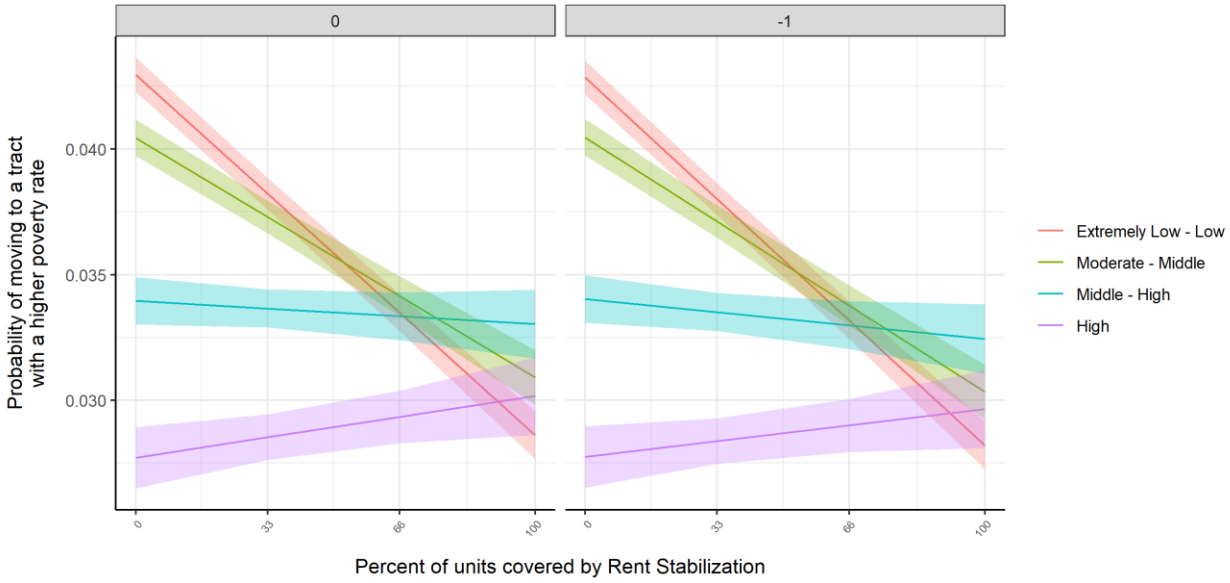
Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Figure 41. Predicted Probability of Making a Constrained Move by SES by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization, Using Median Poverty Rate Deciles

(a) Just Cause for Evictions



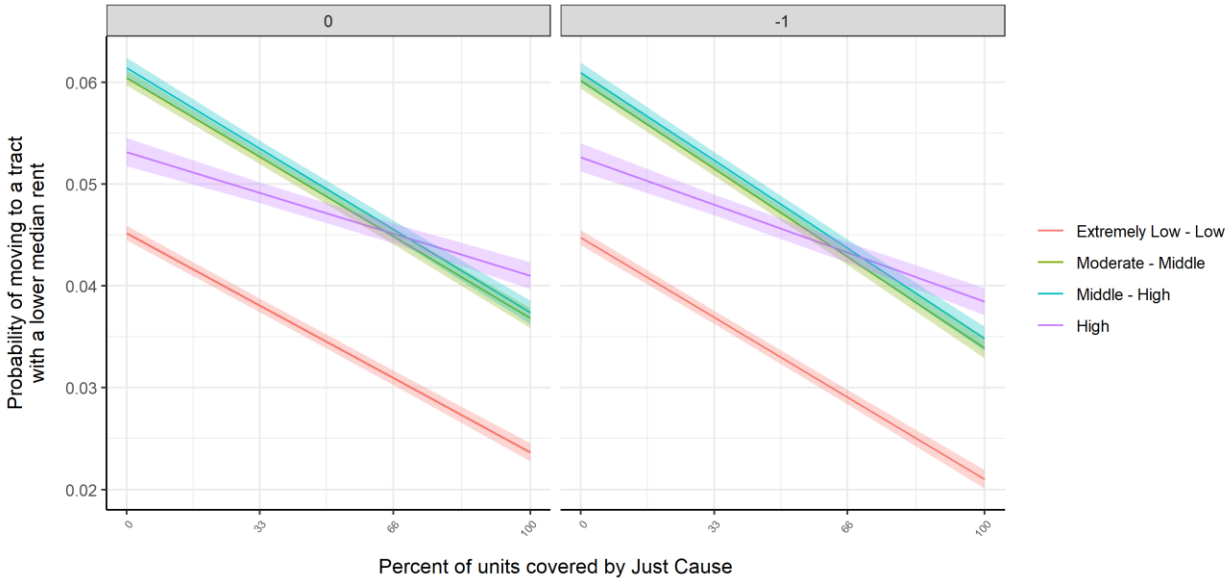
(b) Rent Stabilization



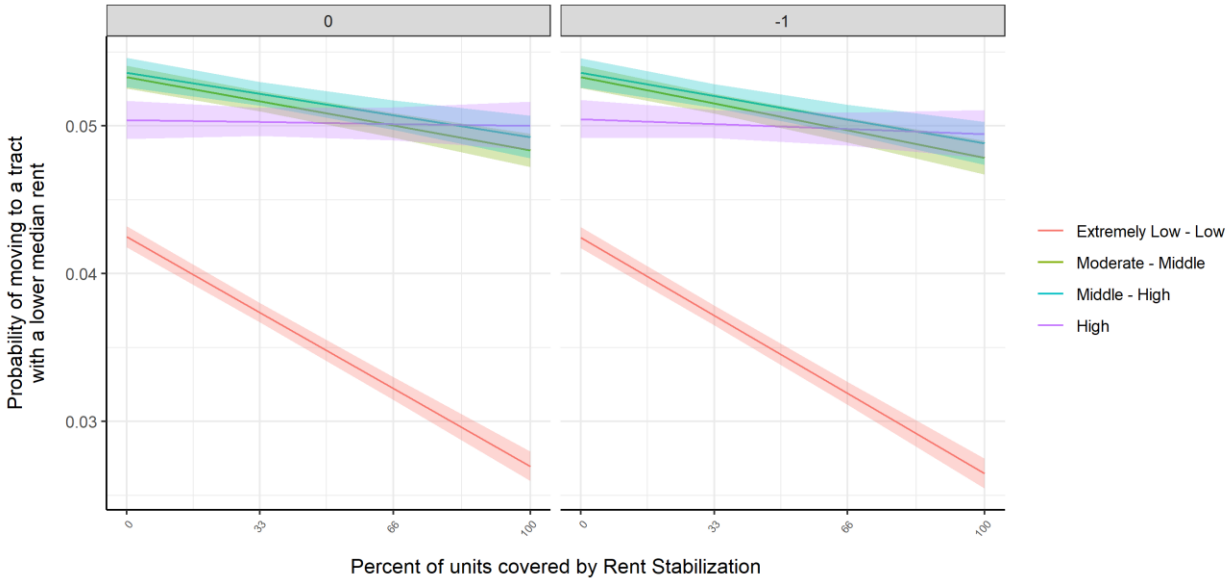
Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Figure 42. Predicted Probability of Making a Constrained Move by SES by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization, Using Median Rent Deciles

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

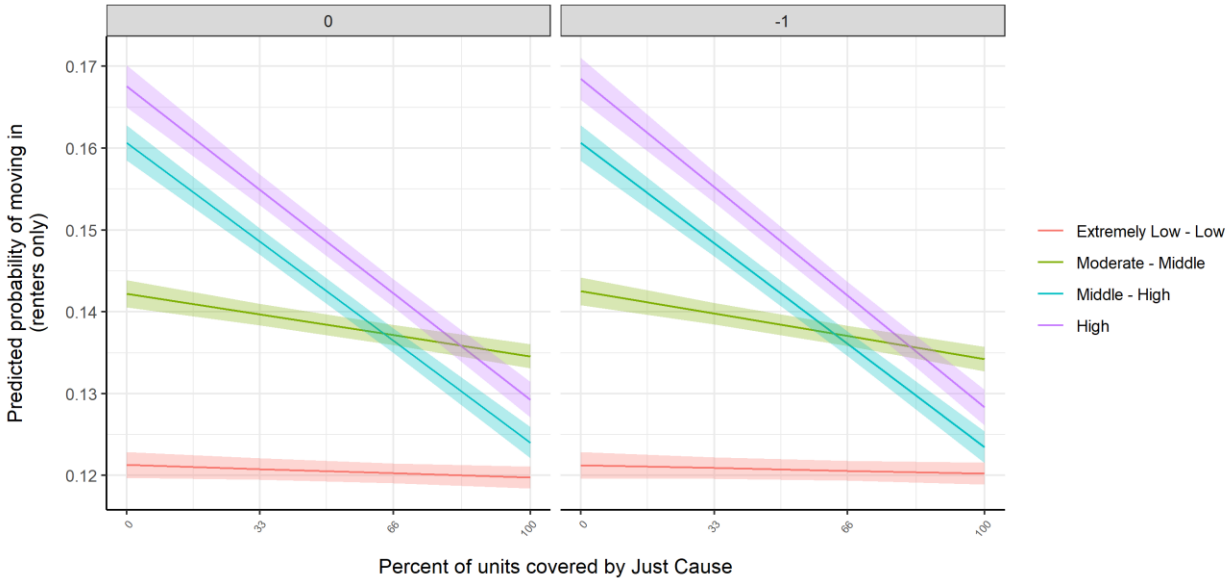
Inmigration

Household-level probability models

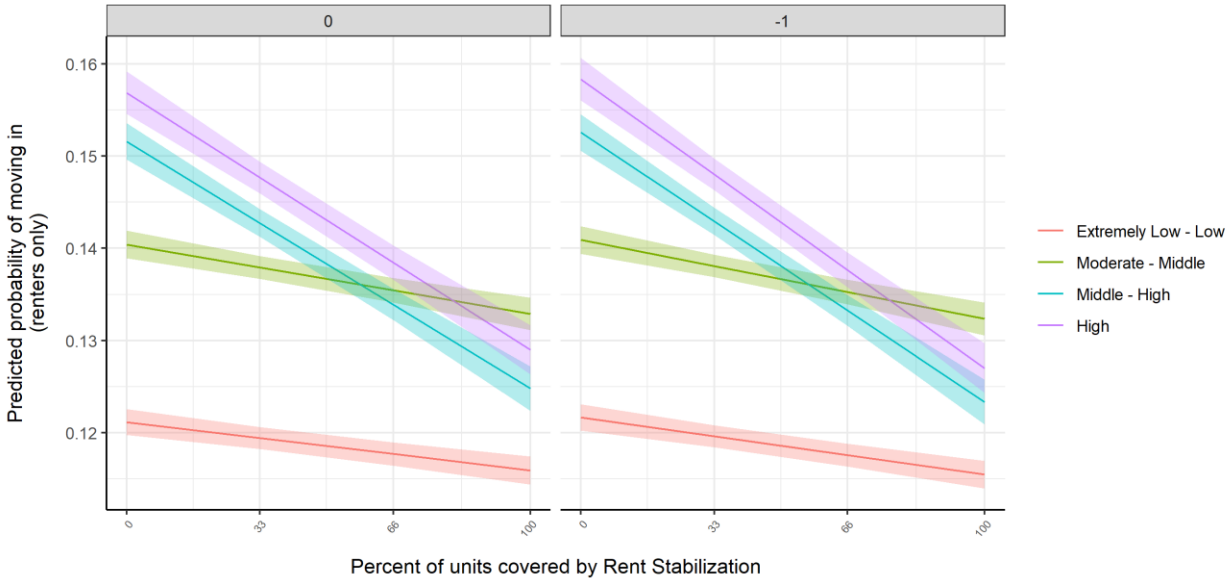
The effects of tenant protections on inmigration vary by SES, but generally reduce inmigration (Figure 43). Just cause ordinances are associated with slight declines in inmigration by moderate-SES households but have minimal impact on inmigration by low-SES groups. Rent stabilization reduces inmigration for both low- and moderate-SES households. The higher the share of units protected by either just cause or rent stabilization, the steeper the reduction in inmigration by middle- and high-SES households.

Figure 43. Predicted Probability of Moving In by Income and Percent of Units Covered by (a) Just Cause and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

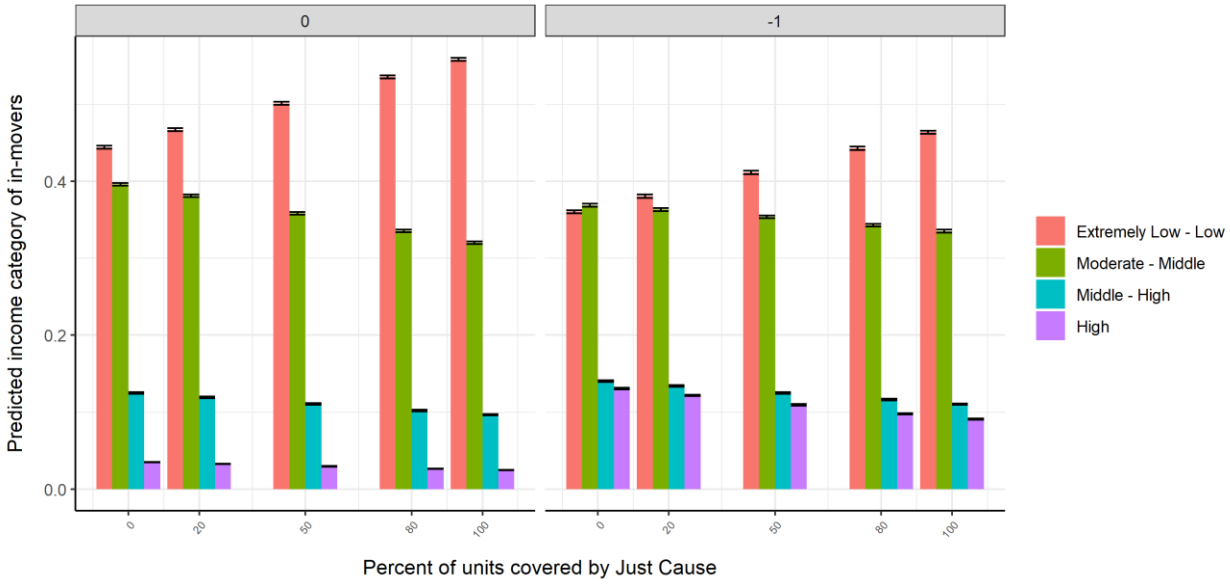
Regression results confirm these impacts (Appendix Table D4). In general, both just cause and rent stabilization decrease move-in rates for low- and moderate-SES households and to San Francisco generally; however, in other core cities, both types of ordinances increase inmigration. For both forms of tenant protections, inmigration increases for Black and White households and decreases for Latine households. The coefficient for recent market-rate and subsidized housing construction is positive for both forms of tenant protections, suggesting that new production works in conjunction with tenant protections to make neighborhoods less exclusive.

Predicted SES composition of inmovers

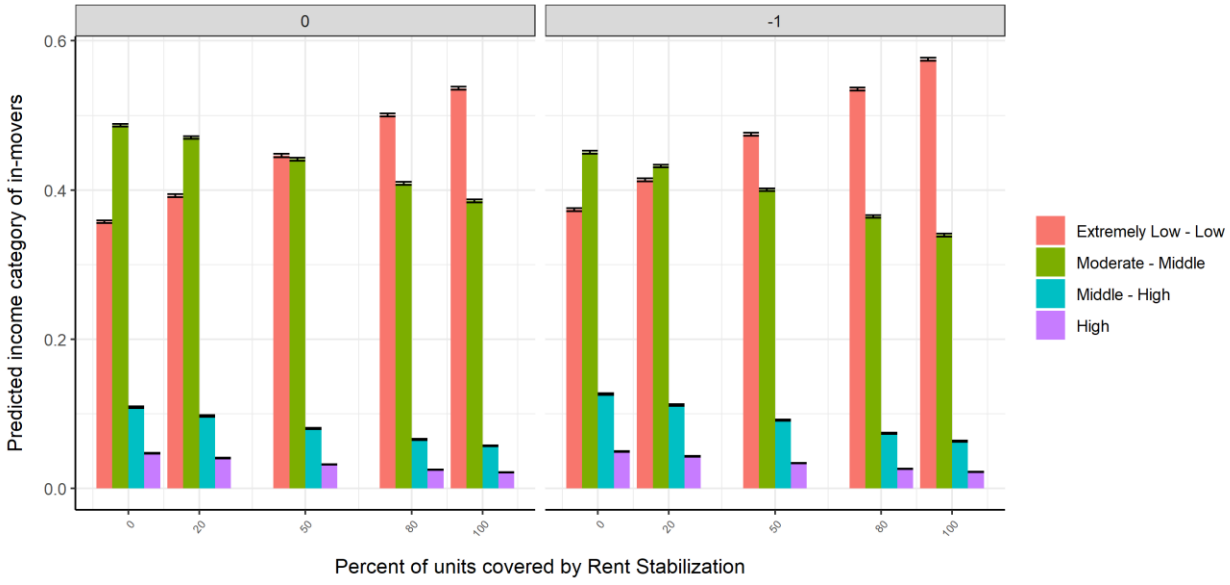
Looking again at likelihood of moving in by income group (Figure 44), this time for units covered by just cause and rent stabilization, results again vary depending on household SES. For low-SES households, just cause generally increases inmigration, but for moderate-SES households, just cause decreases inmigration slightly. Middle- and high-SES households are slightly less likely to move in when more units are covered by just cause, all things being equal. Similarly, with more units covered by rent stabilization, inmigration increases for low-SES households but decreases for all other SS groups.

Figure 44. Predicted Composition of Movers into Block Groups by Percent of Units Covered by (a) Just Cause and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



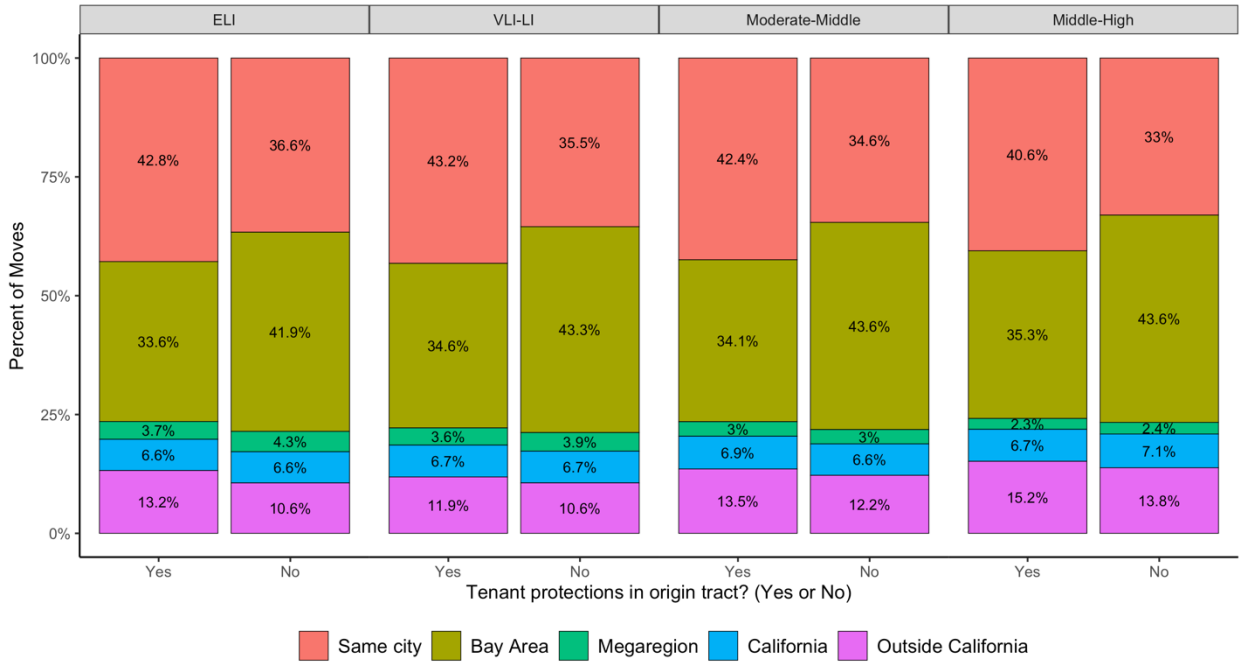
Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Tenant protections and mobility: CCP results

Descriptive statistics for all moves

We compare destinations for movers by SES and by whether their block group had any units covered by rent control or just cause ordinances. Figure 47 shows that movers moving from block groups with tenant protections coverage are slightly more likely to stay within the same city than movers moving from block groups without such protections. The differences in magnitude of frequency of destinations between movers moving from block groups with or without tenant protections are relatively equal across SES groups, but higher-SES movers are slightly less likely to move within their origin city and more likely to move out of California entirely. Across SES groups, those moving from block groups without tenant protection are more likely to move out of their origin city and into the Bay Area. The relative frequencies of movers staying within the megaregion or out of the megaregion but still within California are equal across block groups with or without tenant protections.

Figure 47. Moving Destinations of Bay Area Movers by SES, 2006-2018, from Block Groups With and Without Tenant Protections

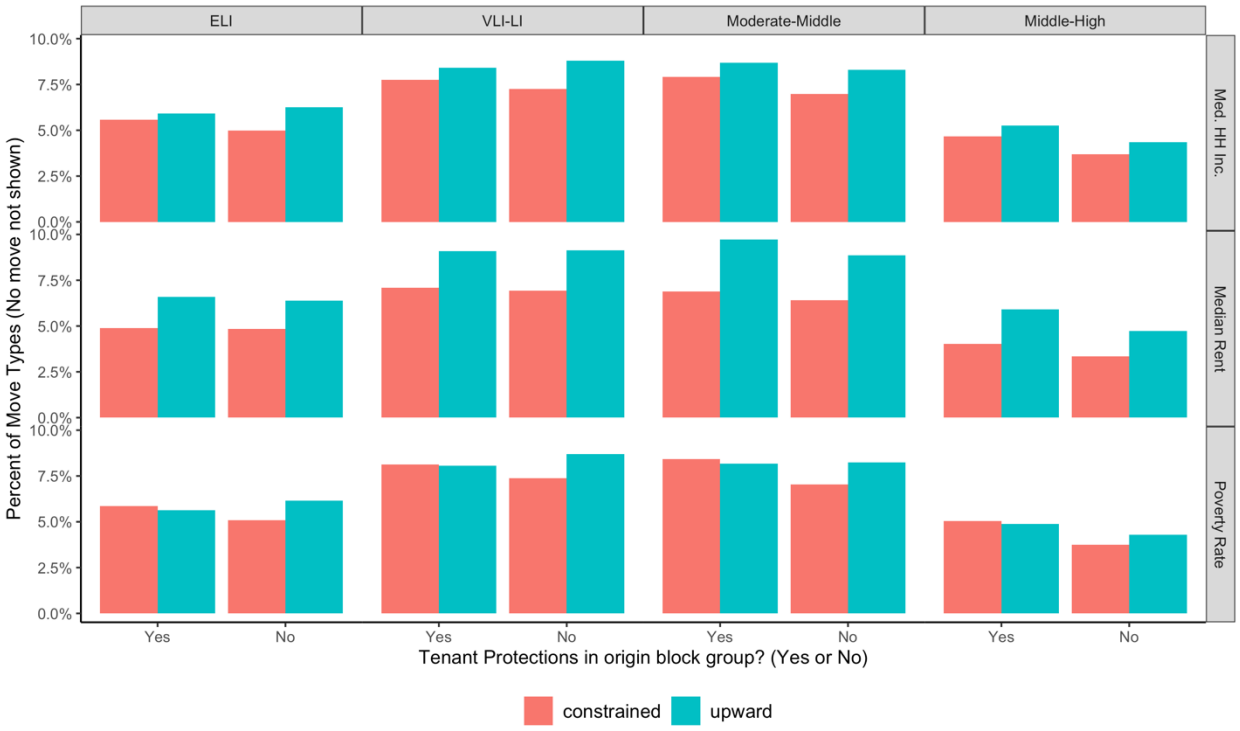


Source: FRBNY Consumer Credit Panel/Equifax Data and UDP New Housing Production Database

Figure 48 shows that middle-high SES residents are least likely to make both constrained and upward moves, since they are most likely to not move at all. It is consistently the case that residents from block groups with tenant protections are more likely to make a constrained move than similar residents from block groups without them, across all SES groups and all measures (household income, rent, poverty). However, the trends for making an upward move vary. For moves assessed with household income deciles, moderate-middle and middle-high SES residents are more likely to make an upward move from block groups with tenant protections but the

reverse is true for ELI and VLI-LI resident. For moves assessed with rent deciles, everyone except VLI-LI resident is more likely to make an upward move from block groups with tenant protections. Finally, for moves assessed with poverty rate deciles, everyone except middle-high SES residents is more likely to make an upward move from block groups without tenant protections.

Figure 48. Percent of Bay Area Residents Making a Constrained or Upward Move by SES, 2005-2017, from Block Groups With and Without Tenant Protections



Source: FRBNY Consumer Credit Panel/Equifax Data and UDP New Housing Production Database

Outmigration

Individual-level linear probability models

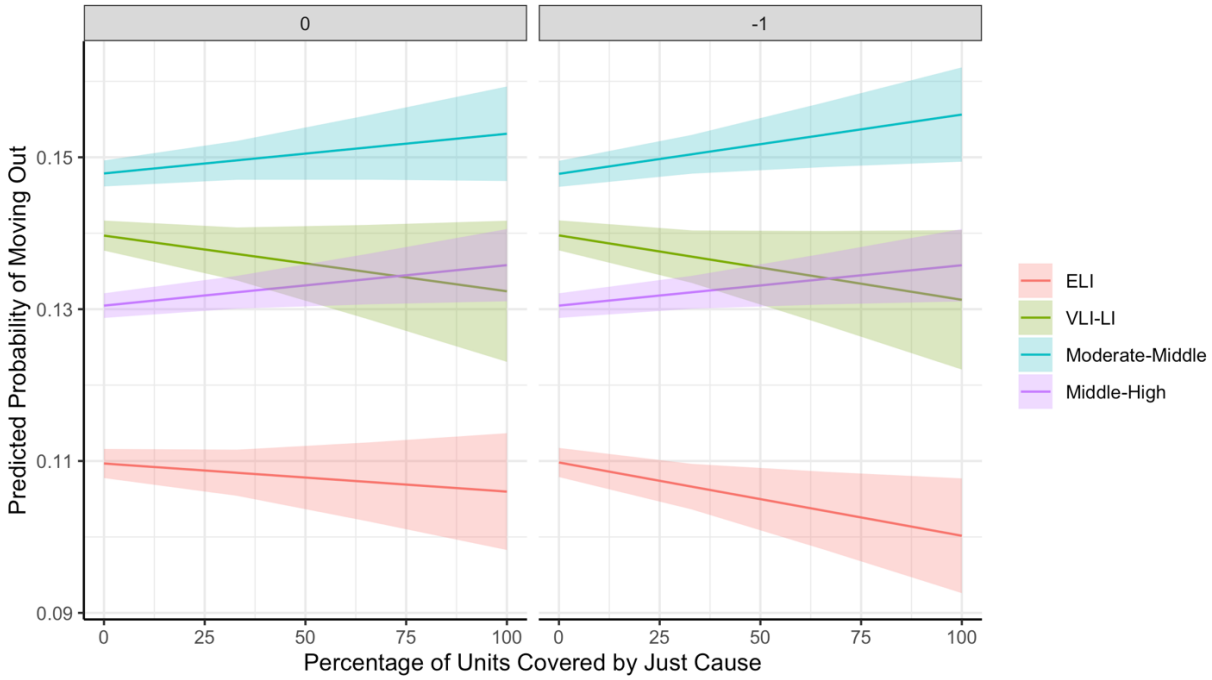
Overall, we found that just cause and rent stabilization seemed to prevent displacement of lower-SES residents and encourage outmigration among higher-SES residents.

Figure 49 illustrates the relationship between tenant protections and the probability of households moving out of their block group. We only show results in the year in which tenant protections are measured and 1 year later in case there is a lag for policy changes to take effect. Increases in rent stabilized units reduce the probability that ELI residents will move out in both years but only in the year after for increases in just cause-protected units. Rent stabilization and just cause protections increase the probability of moving out for moderate-middle and middle-high SES residents in both years. Rent stabilization decreases the probability of moving out for VLI-LI residents the year after the share of covered units is measured and just cause reduces it very slightly in both years.[28]

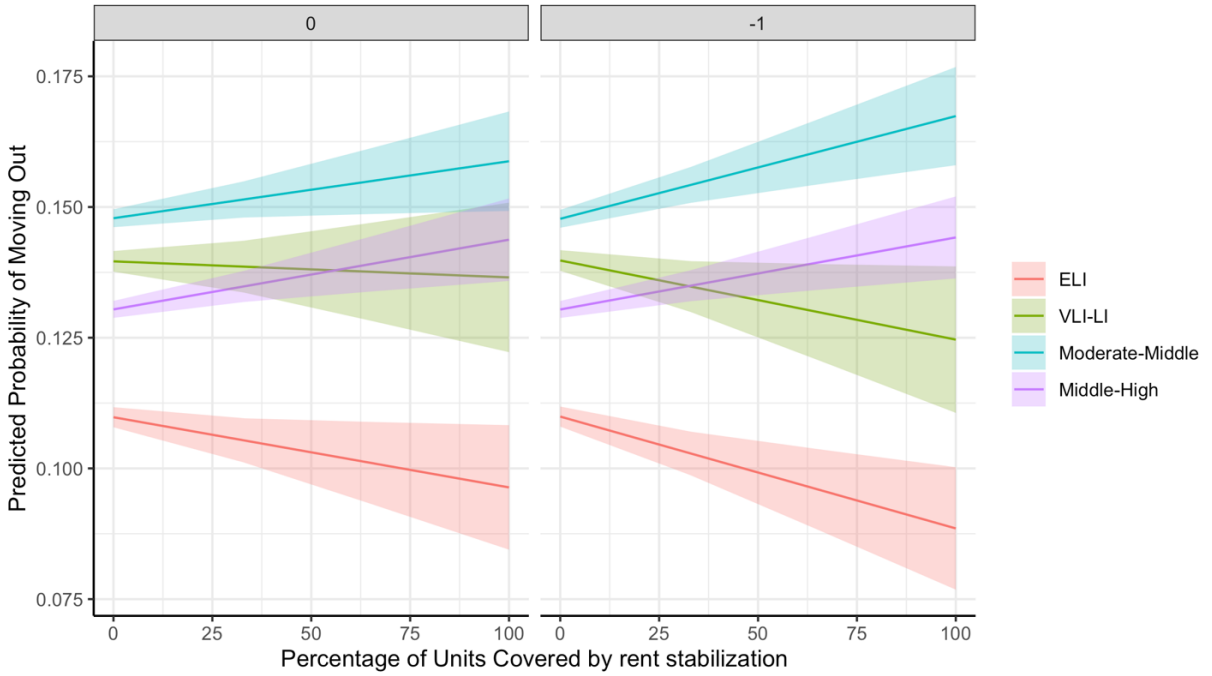
[28] In logistic regression models, results are the same for ELI and VLI-LI residents. There are no longer any effects for moderate-middle SES residents. Middle-high SES residents are more likely to move out in both years for both measures, and the effect is stronger.

Figure 49. Predicted Probability of Moving Out by SES and Percent of Units Covered by (a) Just Cause; and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Constrained moves

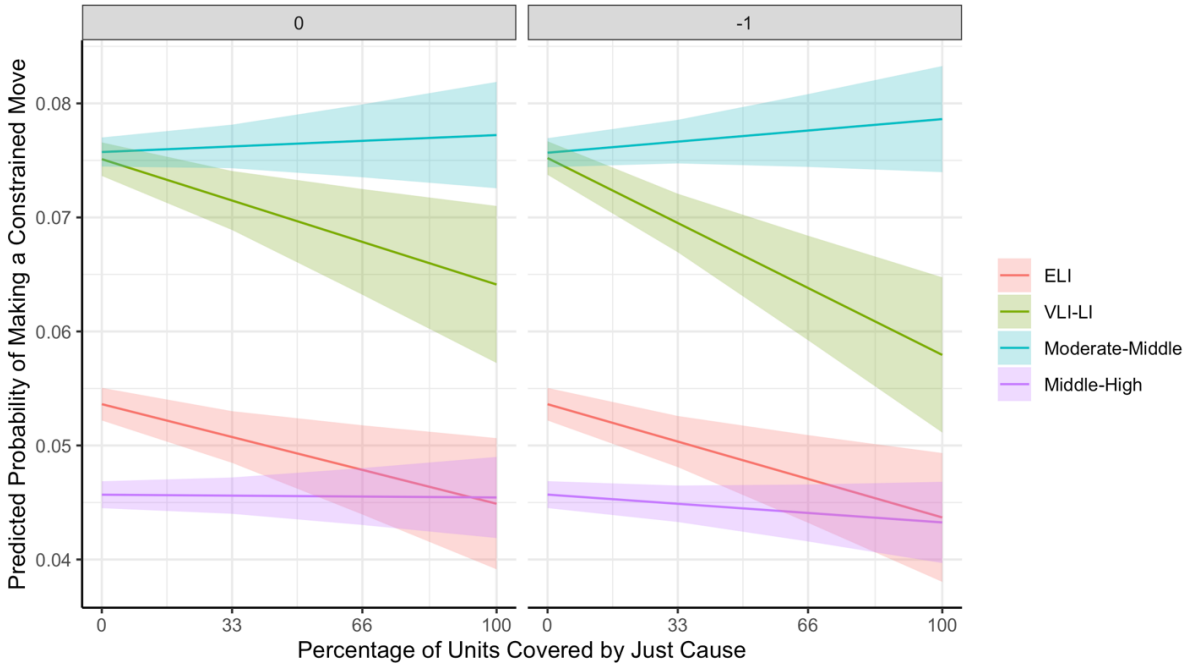
Figures 50-52 show the predicted probabilities to make a constrained move among movers using linear probability models for just cause for evictions and rent stabilization.

Overall, tenant protections appear to be effective at preventing lower-income movers from making constrained moves across all three measures; increases in percent of units covered by rent stabilization in particular increase the probability of making a constrained move for high-SES residents.

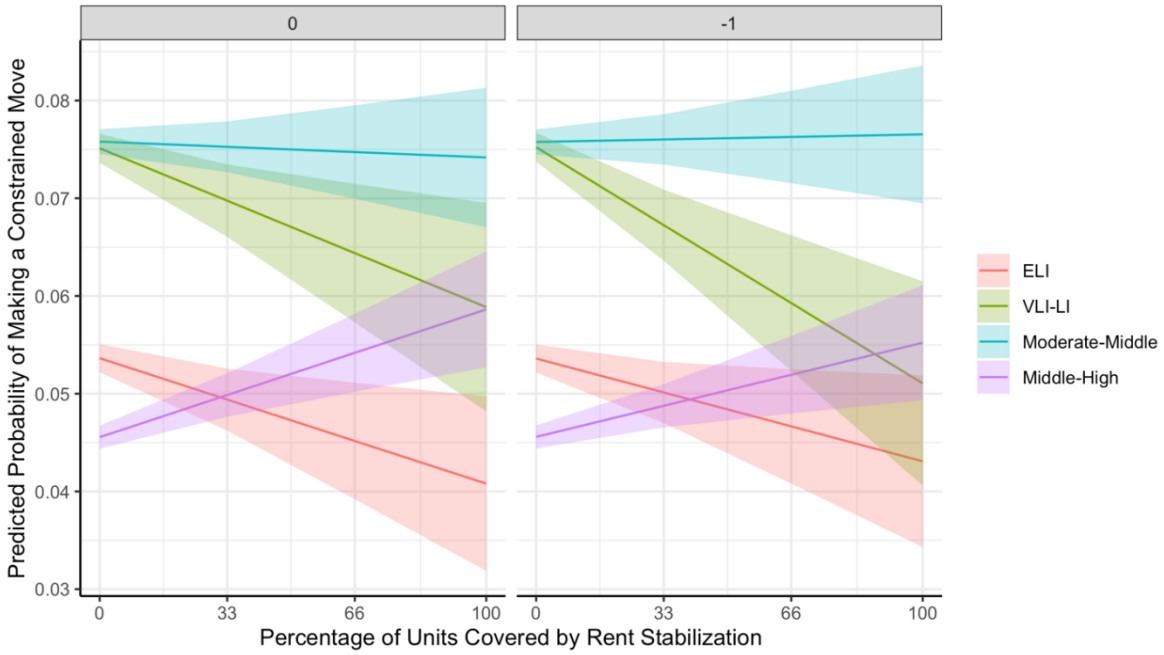
Figure 50 shows that increases in units covered by just cause for eviction protections decrease the probability of making a constrained move for ELI and VLI-LI residents in the same year and the year after units are covered. The probability for middle-high SES residents decreases very slightly the year after units are covered, and there are no effects for moderate-middle SES residents. Rent stabilization has different effects by SES on the probabilities to make constrained moves, as assessed with median household income deciles. Increases in units covered by rent stabilization decrease the probability of making a constrained move in the same year and in the year after units are covered for ELI and VLI-LI residents and increases it in both years for middle-high SES residents. There are no significant effects for moderate-middle SES residents.

Figure 50. Predicted Probability of Making a Constrained Move by SES by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization, Using Median Household Income Deciles

(a) Just Cause for Evictions



(b) Rent Stabilization

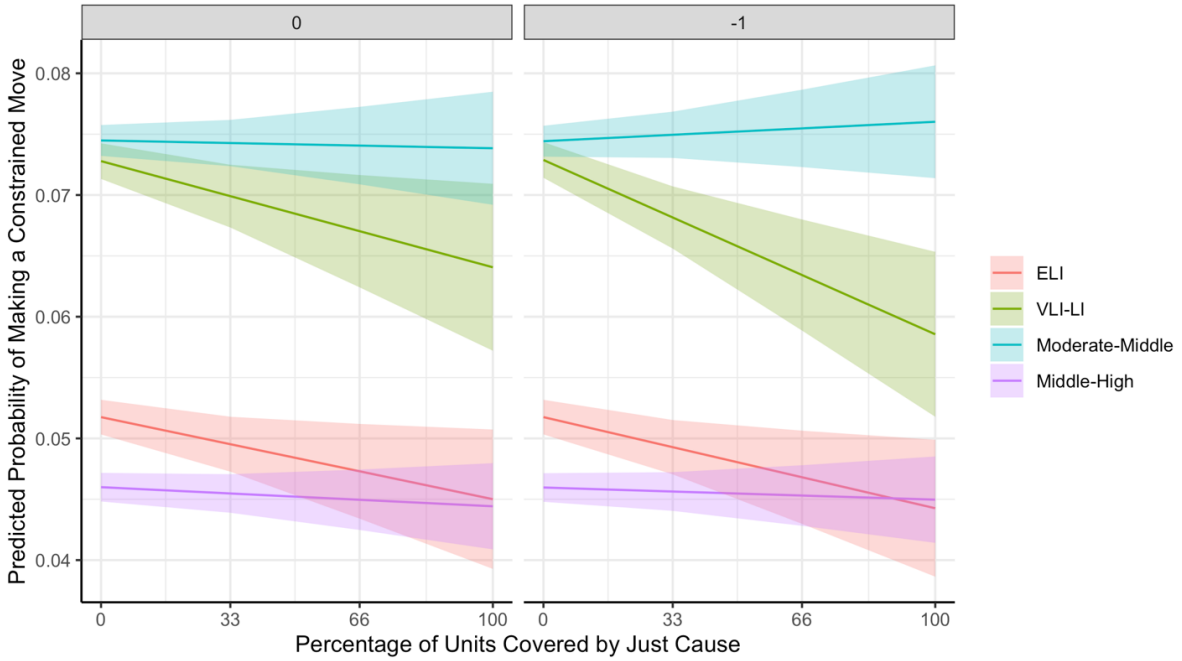


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

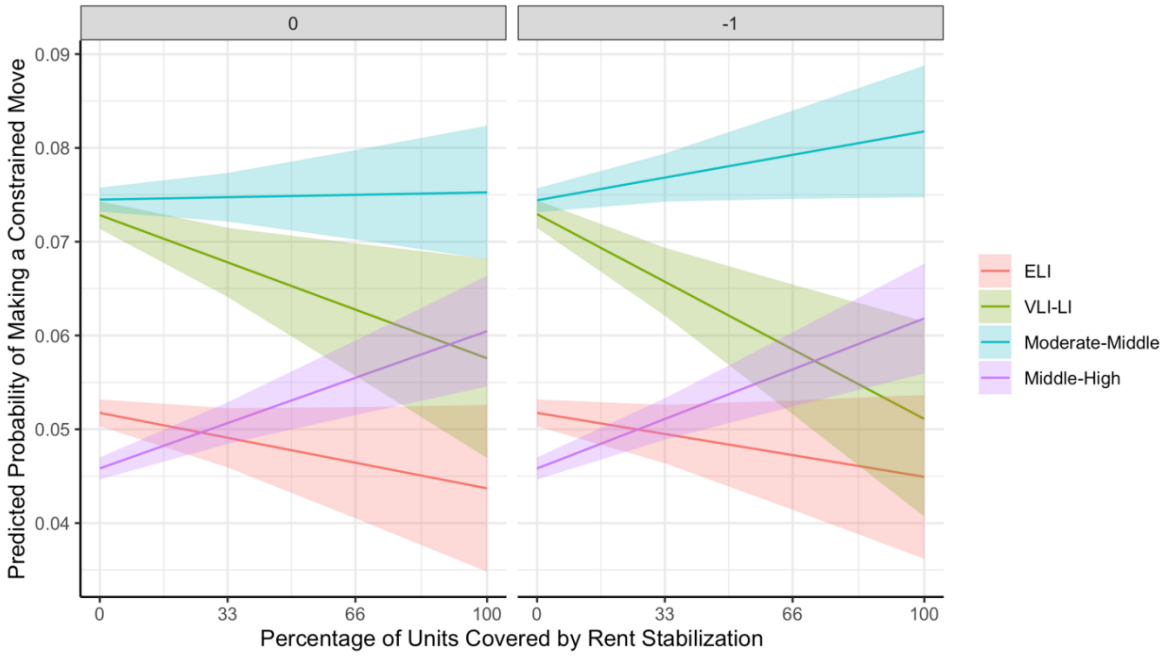
Figure 51 shows a similar picture when constrained moves are assessed using destination poverty deciles. The larger the share of units covered by just cause, the less the probability of making a constrained move for ELI and VLI-LI residents in both years. There are no significant effects for moderate-middle and middle-high SES residents. Increases in units covered by rent stabilization decrease the probability of making a constrained move for ELI and VLI-LI residents in both years. The probability increases for moderate-middle SES residents the year after units are covered, and for middle-high SES residents in both years.

Figure 51. Predicted Probability of Making a Constrained Move by SES by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization, Using Poverty Rate Deciles

(a) Just Cause for Evictions



(b) Rent Stabilization

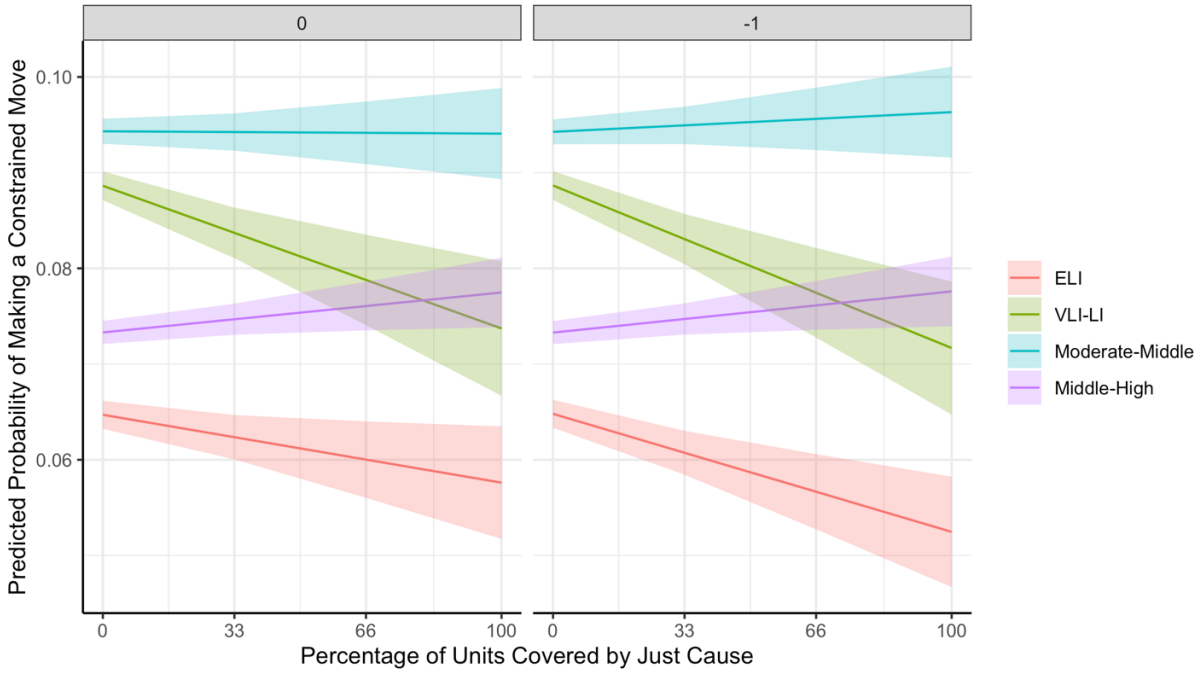


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

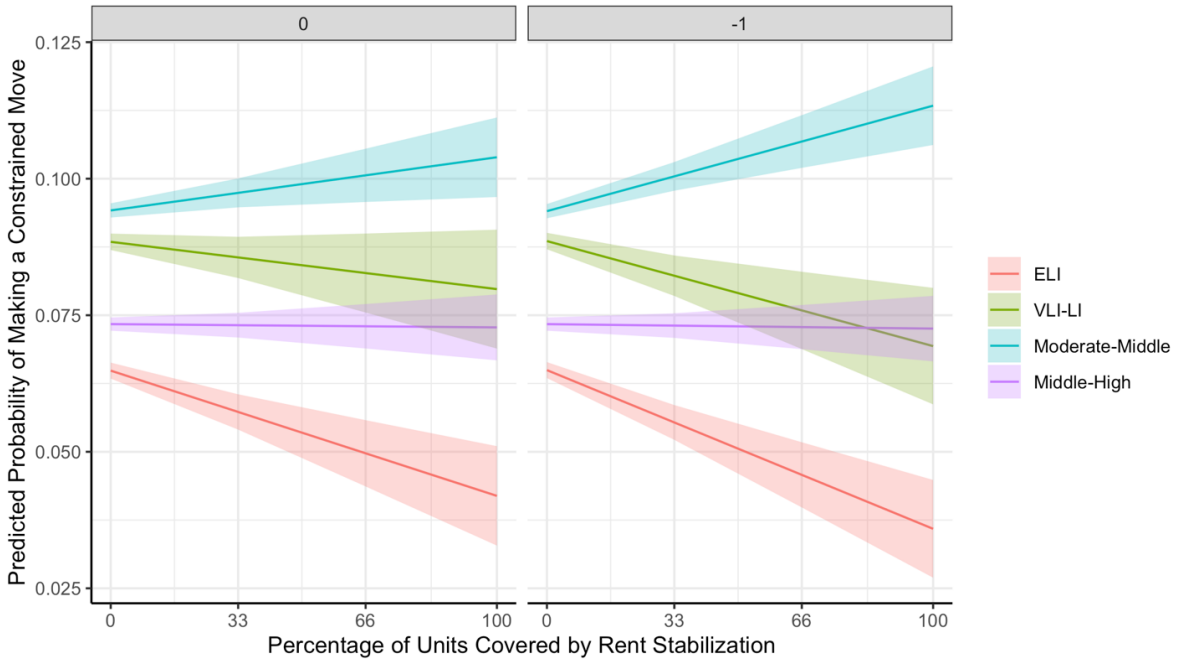
Finally, Figure 52 shows how increases in the percent of units covered by just cause protections reduce the probability to make a constrained move for ELI and VLI-LI residents in both years. The probability increases in both years for middle-high SES residents, and there are no effects for moderate-middle SES residents. Rent stabilization reduces the probability of making a constrained move when assessed with destination median rent, for ELI residents in the year after units are counted and for VLI-LI residents in both years. The probability increases for moderate-to-midddle-SES residents in both years, and there are no effects for middle-high SES residents.

Figure 52. Predicted Probability of Making a Constrained Move by SES by Percent of Units Covered by (a) Just Cause (b) Rent Control, Using Median Rent Deciles

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Inmigration

Individual-level probability models

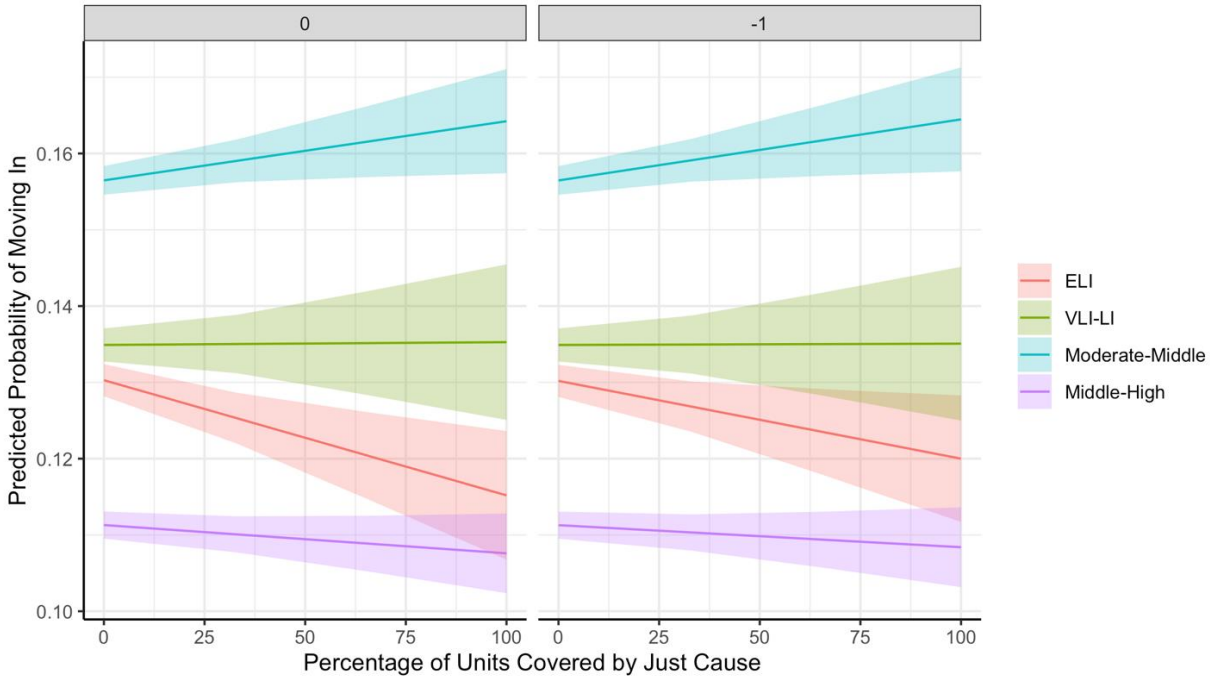
Overall, we found that just cause protections and rent stabilization increase the inmigration of moderate-middle SES residents but discouraged inmigration for ELI residents.

We examined how tenant protection policies affect the likelihood of moving into neighborhoods by SES using linear probability models. Increases in both types of units decrease the probability of moving in for ELI residents but increase them for moderate-middle SES residents both the year of and the year after. There are no effects for VLI-LI residents and a very weak negative effect for middle-high SES residents in the same year.[29]

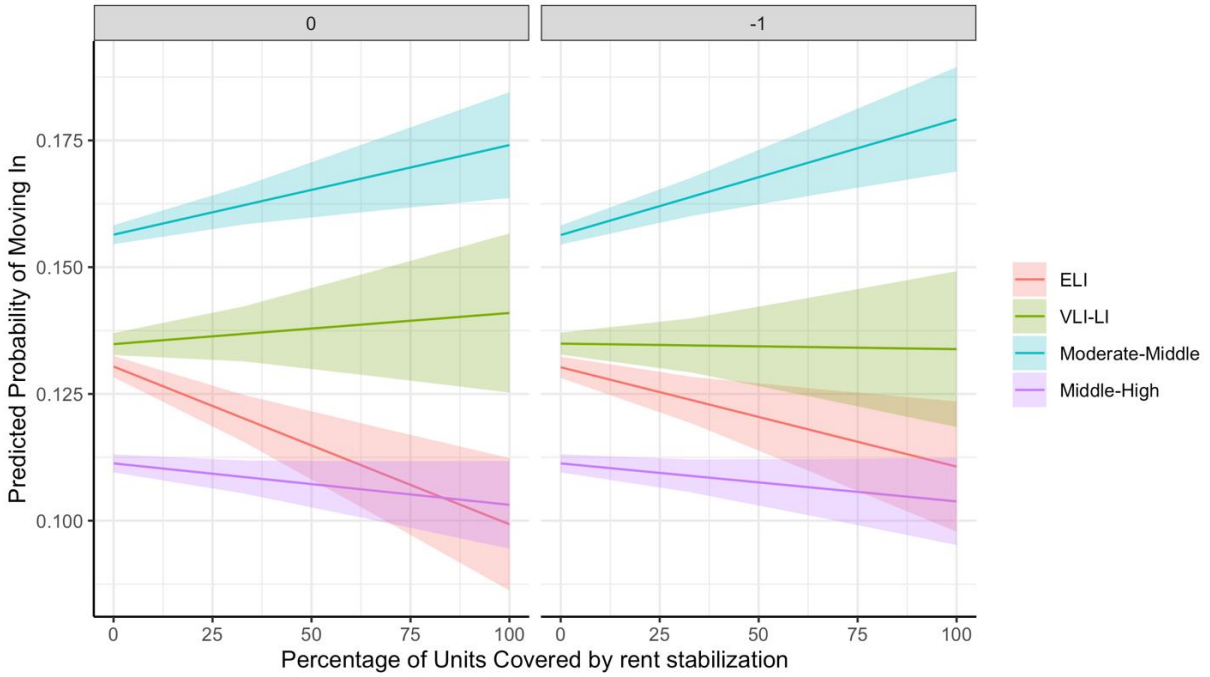
[29] In logistic regression models, there were only effects for ELI residents in the same year but not the year after. There were only effects for moderate-middle SES residents the year after but not in the same year. There were no effects for VLI-LI and middle-high SES residents. There were no effects for any residents in logistic regression models.

Figure 53. Predicted Probability of Moving In by SES and Percent of Units Covered by (a) Just Cause; and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Predicted SES composition of inmovers

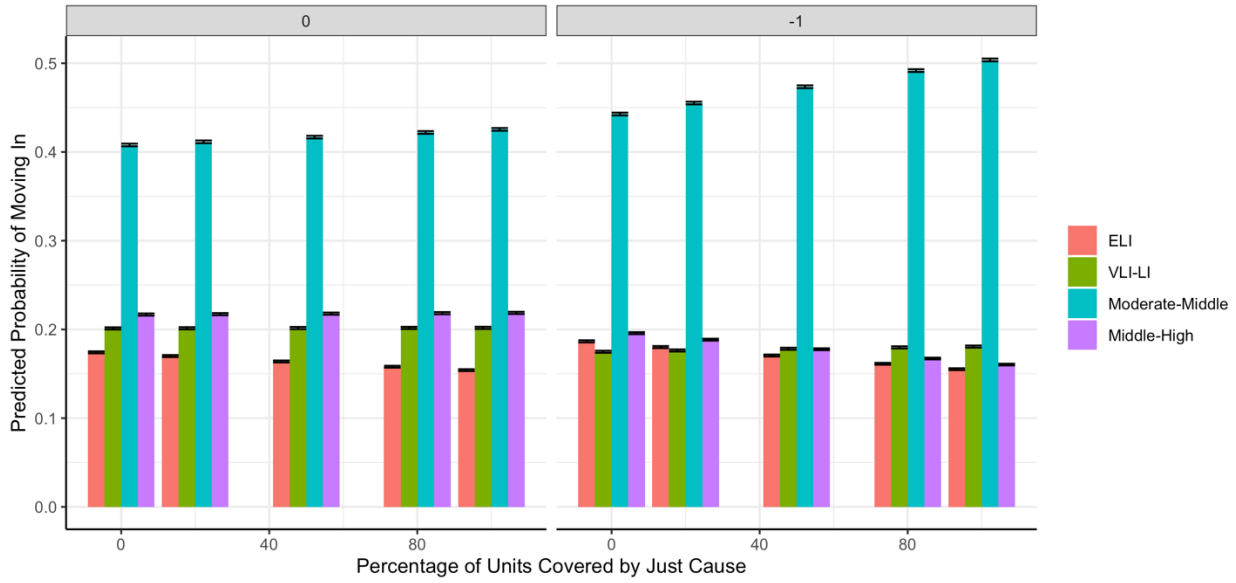
Next, we examined the extent to which the share of units covered by tenant protections shape the composition of residents moving into neighborhoods using multinomial logistic models, shown in figure 54.

While moderate-middle SES residents comprise the majority of movers, just cause for evictions is associated with increased shares of moderate-middle SES people moving into neighborhoods, and rent stabilization is associated with increased shares of VLI-LI people.

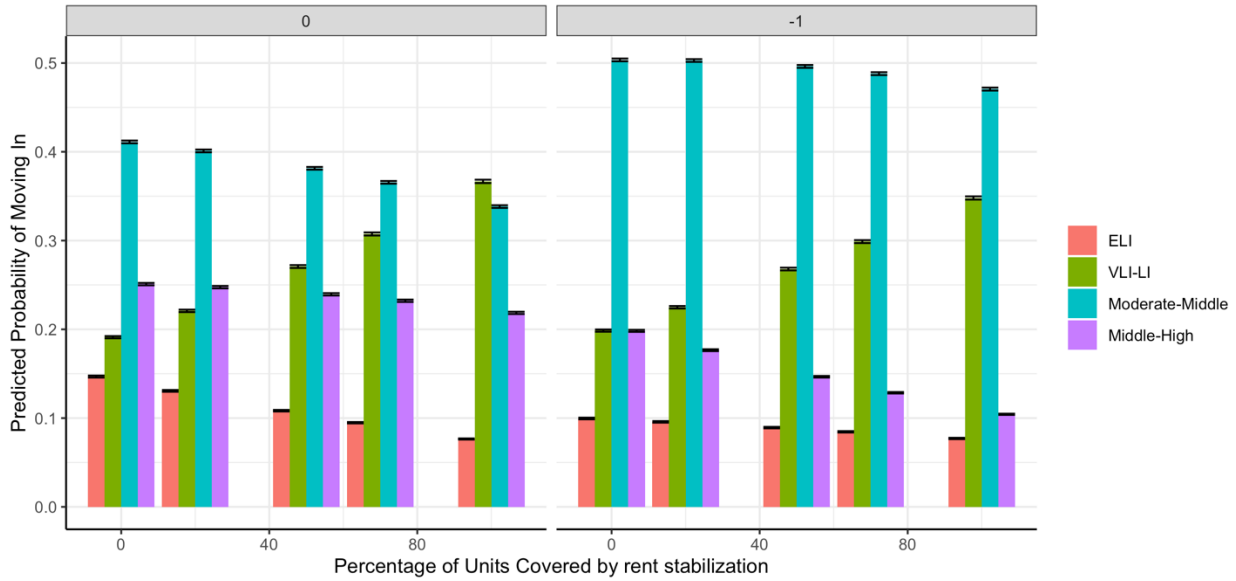
Increases in the shares of units covered by just cause increase the proportion of inmovers who are moderate-middle SES by the most in year after and increases in units covered by rent stabilization increase the proportion of inmovers who are VLI-LI in both years. VLI-LI residents are still the most likely to move in in any given year. There is a negative effect for ELI, and middle-high SES residents in both years for both types of protections.

Figure 54. Predicted Composition of Movers into Block Groups by Percent of Units Covered by (a) Just Cause; and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Summary

In this analysis, we asked, how do new developments and tenant protections impact mobility patterns in the Bay Area? Do the impacts of new developments vary depending on whether the new units are subsidized or market-rate? Do the impacts of tenant protections vary between just cause for eviction policies and rent stabilization policies? Using novel data on new housing production and two unique large-scale datasets of Bay Area residents over the last 20 years, we assess who moves out of neighborhoods when new housing is built and who is moving in.

Findings from the Infogroup data (UC Berkeley) and CCP data (Stanford) generally show similar impacts of market-rate construction on both out- and inmigration, and of subsidized construction on inmigration, but sometimes diverge on other questions (Tables 2 and 3). Note, however, that the tables are comparing different SES groups, so that only the moderate-middle category is strictly comparable. Thus, apparent disagreements might disappear with comparable categories. Because the datasets contain information on distinct units of analysis (individuals vs. households) and distinct dimensions of socioeconomic status (income vs. financial stability), the categories are not directly comparable.

Nonetheless, the two datasets both suggest that outmigration is lowest for lower-SES groups in block groups with new construction. The findings from both teams show that market-rate construction is associated with displacement among some lower-SES groups and is linked to decreased outmigration for the high-SES group, but only the Infogroup data shows that it is correlated with outmigration for the very low-SES (Infogroup)/extremely low-SES (CCP). The findings from both datasets also agree that subsidized construction is associated with outmigration for the middle-SES (Infogroup)/moderate-middle SES (CCP) groups, but only the Infogroup data shows that it is associated with outmigration as well for very low- and high-SES households. The findings from the two datasets generally agree that both market-rate and subsidized construction is correlated with inmigration across income groups, but there is some disagreement in the multinomial results predicting the likelihood of moving into block groups for different groups.

Both sets of results show that tenant protections are associated with reduced outmigration for the lowest income, but there is disagreement on their impacts on other groups. Although the teams find similar tenant protection impacts in the multinomial models on inmigration (negative for higher-income), they generally disagree on the impacts for other groups.

Table 2. Model Results, Stanford/CCP vs. Berkeley/Infogroup

Mobility type	Housing Intervention	Income group (UCB/Stanford)	Stanford/FRBNY-Equifax CCP (25-64 models)	Stanford/FRBNY-Equifax CCP (full models)	Berkeley/Infogroup
Outmigration	Market-rate construction	ELI-Low/ELI	mixed/insig	mixed/insig	+
		Moderate-Middle/VLI-LI	+	+	+
		Middle-High/Moderate-Middle	+	+	mixed/insig
		High/Middle-High	mixed/insig	-	-
	Subsidized construction	ELI-Low/ELI	mixed/insig	mixed/insig	-
		Moderate-Middle/VLI-LI	mixed/insig	mixed/insig	+
		Middle-High/Moderate-Middle	+	+	+
		High/Middle-High	mixed/insig	+	-
	Just cause	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	-	-	-
		Middle-High/Moderate-Middle	+	+	-
		High/Middle-High	mixed/insig	+	-
	Rent stabilization	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	-	-	+
		Middle-High/Moderate-Middle	+	+	-
		High/Middle-High	+	+	+
Inmigation	Market-rate construction	ELI-Low/ELI	mixed/insig	+	+
		Moderate-Middle/VLI-LI	+	+	+
		Middle-High/Moderate-Middle	+	+	+
		High/Middle-High	+	+	+
	Subsidized construction	ELI-Low/ELI	mixed/insig	mixed/insig	mixed/insig
		Moderate-Middle/VLI-LI	+	+	+
		Middle-High/Moderate-Middle	+	+	+
		High/Middle-High	+	+	mixed/insig
	Just cause	ELI-Low/ELI	mixed/insig	-	-
		Moderate-Middle/VLI-LI	mixed/insig	mixed/insig	-
		Middle-High/Moderate-Middle	mixed/insig	+	-
		High/Middle-High	mixed/insig	mixed/insig	-
	Rent stabilization	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	mixed/insig	mixed/insig	-
		Middle-High/Moderate-Middle	+	+	-
		High/Middle-High	-	-	-
Inmigration (multinomial models)	Market-rate construction	ELI-Low/ELI	mixed/insig	-	-
		Moderate-Middle/VLI-LI	mixed/insig	-	mixed/insig
		Middle-High/Moderate-Middle	mixed/insig	mixed/insig	mixed/insig
		High/Middle-High	+	+	+
	Subsidized construction	ELI-Low/ELI	mixed/insig	mixed/insig	mixed/insig
		Moderate-Middle/VLI-LI	-	-	mixed/insig
		Middle-High/Moderate-Middle	mixed/insig	mixed/insig	mixed/insig
		High/Middle-High	+	mixed/insig	mixed/insig
	Just cause	ELI-Low/ELI	mixed/insig	-	+
		Moderate-Middle/VLI-LI	+	+	-
		Middle-High/Moderate-Middle	mixed/insig	+	-
		High/Middle-High	mixed/insig	-	-
	Rent stabilization	ELI-Low/ELI	-	-	+
		Moderate-Middle/VLI-LI	+	+	-
		Middle-High/Moderate-Middle	mixed/insig	-	-
		High/Middle-High	-	-	-

Next, we analyzed the destinations of movers using three measures of constrained moves as an alternative approximation of displacement. We measure a constrained move by comparing if the destination neighborhoods' within-county median household income deciles and median rent deciles are equal to less than the origin, and if the within-county poverty rate deciles is equal to or higher than the origin. The results from the different datasets from the two teams show slightly different impacts for new production, no matter how a constrained move is measured, but are in agreement about the effects of tenant protections on lower-income residents (Table ES2). Findings from the CCP data show that market-rate construction increases the probability of making a constrained move for everyone except for high-SES residents across any measure. Results using the Infogroup data generally show increased probabilities as well, but only after the first year. For new subsidized construction, the Infogroup results generally show that it reduces the probability of making a constrained move for all but high-income residents. While results from the CCP data also find this for the lowest-SES residents using the household income and poverty rate measures, but the opposite is true using the rent measure. Further, the CCP findings show that subsidized construction increases the probability of making a constrained move as measured by rent for higher-SES groups, while the Infogroup findings identify this increased probability only for low-income.

On tenant protections, the findings from the two teams are generally similar that increases in units covered by tenant protections reduce the probability of making a constrained move for lower-income residents, and that increases in percent of units covered by rent stabilization increase the probability to make a constrained move for high-SES residents using the poverty rate measure, but the two teams find some different effects for the high-SES group. The findings using the CCP data show that increases in the percent of units covered by rent stabilization increase the probability of making a constrained move for high-SES residents in the income and rent measures as well.

Table 3. Destination Model Results, Stanford vs. Berkeley

Constrained Move	Housing Intervention	Income group (UCB/Stanford)	Stanford/FRBNY-Equifax CCP (25-64 models)	Stanford/FRBNY-Equifax CCP (full models)	Berkeley/Infogroup
Household income	Market-rate construction	ELI-Low/ELI	+	+	+
		Moderate-Middle/VLI-LI	+	+	+
		Middle-High/Moderate-Middle	+	+	+
		High/Middle-High	mixed/insig	+	+
	Subsidized construction	ELI-Low/ELI	mixed/insig	-	-
		Moderate-Middle/VLI-LI	mixed/insig	mixed/insig	-
		Middle-High/Moderate-Middle	mixed/insig	mixed/insig	-
		High/Middle-High	+	+	mixed/insig
	Just cause	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	-	-	-
		Middle-High/Moderate-Middle	mixed/insig	mixed/insig	-
		High/Middle-High	mixed/insig	mixed/insig	-
	Rent stabilization	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	-	-	-
		Middle-High/Moderate-Middle	mixed/insig	mixed/insig	-
		High/Middle-High	+	+	mixed/insig
Poverty Rate	Market-rate construction	ELI-Low/ELI	+	+	+
		Moderate-Middle/VLI-LI	+	+	+
		Middle-High/Moderate-Middle	+	+	-
		High/Middle-High	-	-	-
	Subsidized construction	ELI-Low/ELI	mixed/insig	-	mixed/insig
		Moderate-Middle/VLI-LI	mixed/insig	mixed/insig	-
		Middle-High/Moderate-Middle	mixed/insig	-	mixed/insig
		High/Middle-High	mixed/insig	mixed/insig	+
	Just cause	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	mixed/insig	-	-
		Middle-High/Moderate-Middle	mixed/insig	mixed/insig	-
		High/Middle-High	mixed/insig	mixed/insig	-
	Rent stabilization	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	mixed/insig	-	-
		Middle-High/Moderate-Middle	mixed/insig	+	-
		High/Middle-High	+	+	mixed/insig
Rent	Market-rate construction	ELI-Low/ELI	+	+	+
		Moderate-Middle/VLI-LI	mixed/insig	+	+
		Middle-High/Moderate-Middle	+	+	-
		High/Middle-High	+	+	-
	Subsidized construction	ELI-Low/ELI	mixed/insig	+	-
		Moderate-Middle/VLI-LI	mixed/insig	+	+
		Middle-High/Moderate-Middle	+	+	-
		High/Middle-High	+	+	mixed/insig
	Just cause	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	-	-	-
		Middle-High/Moderate-Middle	mixed/insig	mixed/insig	-
		High/Middle-High	+	+	-
	Rent stabilization	ELI-Low/ELI	-	-	-
		Moderate-Middle/VLI-LI	-	-	-
		Middle-High/Moderate-Middle	+	+	-
		High/Middle-High	mixed/insig	mixed/insig	mixed/insig

Infogroup findings summary

Very low-SES renter households generally move less frequently than high-SES households. Yet, renter households of very low- and low-SES groups are slightly more likely to move out of their block groups when new market-rate housing is built, with effects decreasing after 2 years. On the other hand, outmigration rates decrease sharply for high-SES households and are mixed for middle-SES households. Subsidized housing production tends to reduce outmigration for very low- and high-SES groups, while increasing it for low- and middle-SES households.

Market-rate production induces new move-ins across SES groups, with impacts decreasing after 2 years. High-SES households generally have the highest probability of moving into block groups with new market-rate production, and very low-SES households have the lowest probability–and multinomial models predicting move-ins suggest that the new housing may have little or negative impact for lower-income groups. The effects of subsidized production on inmigration are more mixed across modeling methods and SES groups. But in general, new production of subsidized housing induces a slight increase in inmigration.

A higher percentage of units in a block group covered by just cause for evictions is associated with fewer move-outs at all SES levels, both the same year and 1 year after, with the biggest impacts for middle-SES groups. Rent stabilization has mixed effects across SES groups: it decreases outmigration for very low-SES households, increases outmigration for low- and high-SES households, and has no effect on move-outs for middle-SES households.

In general, just cause and rent stabilization ordinances reduce move-in rates for all but the very low-SES, who are more likely to move in. The coefficient for market-rate and subsidized housing is positive for both forms of tenant protections, suggesting that new production works in conjunction with tenant protections to make neighborhoods less exclusive.

In general, when new market-rate housing production occurs in a block group, movers tend to make downward, constrained moves, even when we use different measures (income, poverty, or rent) for "constraint." High-SES households are generally less likely than other groups to make these constrained moves. Impacts were generally negative but more mixed for subsidized housing production, perhaps because of the small sample sizes.

Increases in units covered by either just cause for eviction or rent stabilization ordinances decrease the probability of making a constrained move, as assessed with median household income or poverty deciles, for households across all SES groups in both the year units are covered and the year after.

CCP findings summary

Overall, we find that VLI-LI and moderate-middle SES residents are more likely to be displaced by new market-rate production, while it allows middle-high SES residents to stay in place. We find no effects on moving for the lowest-SES residents. These effects for VLI-LI and moderate-middle SES residents last up to 3 years after new housing is built. Because there is so little new production of subsidized housing, estimates of the effect of subsidized housing produce are inexact, but our findings suggest that they do not mitigate displacement among ELI residents. Findings from separate analyses among individuals ages 25-64 in households without mortgages suggest that new subsidized housing may promote flight among higher-SES renters and that new market-rate development primarily keeps middle-high SES homeowners in place.

When we examined how new production affects who moves into different neighborhoods, we found that new production increases the probability that people will move into a neighborhood across all SES groups for at least 3 years after the units are built, and the probabilities are highest

for moderate-middle SES residents, followed by middle-high SES residents. While new subsidized production increases the probability that people will move into a neighborhood for a couple years, it has inconsistent effects for ELI residents. Analysis of the composition of movers into neighborhoods with more new production suggests that both subsidized and market-rate production provides more opportunities for higher-SES residents, especially probable renters. New subsidized housing provides opportunities for ELI residents in the short-term and increases the inmigration of VLI-LI and middle-high SES residents shortly after they are built.

When we examined how new production affects the probabilities for movers to make constrained moves, we find that new subsidized housing generally prevents lower-SES movers from making a constrained move but that new market-rate housing results in increased probabilities of making constrained moves. The results for subsidized units generally hold true only for constrained moves measured by household income and poverty rates, however. When constrained moves are measured by rent, subsidized units increase the probability of making a constrained move for all movers at various points in time. The results for market-rate housing are consistent across all three measures, but only middle-high SES residents experience a decrease in probability to make a constrained move 4 years after for household income.

Our analysis of tenant protections and outmigration show that rent control and just cause seem to prevent displacement of ELI residents and encourage outmigration among middle-high and moderate-middle SES residents. However, when we subset our analysis to non-mortgage holders aged 25-64, the results suggest that only the lowest-SES probably renters are able to take advantage of these stabilization policies.

When we examined how tenant protections affect who moves into neighborhoods, we found that rent control and just cause protections increased the inmigration of moderate-middle SES residents but discouraged inmigration for ELI residents. Nonetheless, the overall composition of movers into neighborhoods had slight increases in the shares of lower-SES residents as the share of protected units increased. The results suggest that moderate-middle SES residents are most likely to take advantage of tenant protection policies. Separate analyses of non-mortgage holders aged 25-64 further support that tenant protections do not appear to encourage lower-SES renters to move in, but rent control does increase the proportion of renters into these neighborhoods who are lower-SES. In other words, protections do not appear to increase the likelihood that lower-SES residents will move into neighborhoods overall (as opposed to not moving), which likely reflects the lower overall inmigration into these neighborhoods as fewer people move out once they are in protected units, but rent control slightly increases the share of movers who are lower-SES among those who move in.

When we examined the impacts of these tenant protections on the probability of movers to make constrained moves, we find that just cause is more effective than rent control at preventing constrained moves among lower-SES groups when measured with income and poverty, but rent control is more effective when measured with rent. Increases in units covered by rent control increase the probability of making a constrained move for VLI-LI and middle-high SES movers as assessed with household income and poverty. Increases in units covered by just cause for eviction protections decrease the probability of making a constrained move for ELI, VLI-LI and moderate-middle SES movers. However, when moves are assessed with rent deciles, increases in

units covered by rent control reduce the probability of making a constrained move for all SES groups at various points in time, whereas increases in units covered by just cause only reduce the probability of making a constrained move for ELI movers.

Policy implications

Despite some areas of disagreement and uncertainty, this study suggests that new market-rate housing production is generally resulting in slight increases in both outmigration and inmigration. New subsidized construction tends to increase inmigration but has mixed effects on outmigration. Thus, new construction fosters churn: some households leave while others move in, and the net impact is minimal, at least over the 4-year period studied. That newcomers at all income levels can move in suggests that market-rate construction is easing housing market pressures. At the same time, some households may be moving involuntarily, with lower-SES groups exhibiting constrained moves. Even if they are replaced by others at similar income/SES levels, displacement would still need to be mitigated in order to avoid the disruption of lives and communities.

Extremely low- to low-SES groups experience increases in outmigration of 1-2% in each subsequent year for 4 years when new market-rate construction occurs in their block group, whether there are 100 or 1,000 new units. For example, while in a normal year 10% of households might move out, new construction will mean that 12% move out per year for the next 4 years. In a block group that houses 500 households with 50 moving out in a typical year, new construction will result in 60 households moving out each year after construction, totaling 40 additional displaced households in 4 years.

This suggests a level of impact that is readily mitigable. Which approach is most appropriate? Since producing new subsidized units may have the unintended consequence of spurring displacement, communities might best look to housing preservation strategies. The most effective may be acquiring multi-unit rental properties that are at risk of becoming unaffordable, via a program like San Francisco's Small Sites Acquisition and Rehab Program. Other potential approaches include tenant opportunity to purchase, property tax incentives for building owners, condominium conversion restrictions, and community land trusts.

Tenant protections have mixed effects across income groups, but they are generally reducing this churn. Where tenant protections fall short is by discouraging inmigration, reflecting reduced housing options. Although the exact mechanism by which this works is unclear, our models and results suggest that new housing production should help mitigate this.

This study examines the effects of new housing production and tenant protections together, finding that they can complement and reinforce each other. In general, even when new market-rate housing production is associated with heightened outmigration, tenant protections (measured together) reduce it. In contexts where tenant protections are reducing outmigration, new subsidized construction can help reduce it further. When tenant protections reduce inmigration, policies to promote housing production can help mitigate it.

The San Francisco Bay Area is an extreme case study, with job growth outpacing new housing production and resulting in supply shortages and price spikes that date back at least thirty years. In this context, the traditional mechanism for providing housing affordability for all but the lowest income households–filtering–is broken. In the face of this structural problem, the policies studied here–market-rate and subsidized housing production, just cause ordinances, and rent stabilization–are only providing minimal relief, and their impacts may be distorted. For example, new construction may result in direct displacement, while tenant protections may result in exclusionary displacement, subsequently leaving local residents with limited opportunities to move by choice. At the same time, the depth of the housing shortage means that tenant protections are critical to keep cities accessible to residents at all income levels in the short and medium timeframe. In regions where there is no shortage of affordable housing to start with, these policies may have very different impacts–and may not necessarily be effective at mitigating displacement.

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V. Appendices

Appendix A: List of Exemptions from Just Cause for Evictions (JC) and Rent Stabilization (RS) Laws, by Jurisdiction

Jurisdiction	Year(s) Adopted	Exemptions
City of Alameda	2015	JC & RS: ● Mobile homes
Berkeley	1980	JC: ● Owner-occupied units RS: ● Owner-occupied units ● Buildings with two or more units built after June 30, 1980* **These types of units were exempt until an amendment in 2017 applied RS to these units as well, so they are counted in years 2017-2019*
East Palo Alto	1988	RS: ● Units built after 1988 ● Owner-occupied 2-3 unit building* **These types of units were only exempt from 2010 onwards, due to a 2010 amendment*
Emeryville	2017 (JC only)	*Emeryville only has JC, not RS. No additional exemptions for JC*
Hayward	1979	JC*: ● Units built after 1979 ● Condos & houses RS: ● Units built after 1979 **In 2019, an amendment was passed that made all units, including ones that were previously exempt, subject to JC, so for 2019 no exemptions are applied*
Los Gatos	1980 (RS only)	JC: ● All units (Los Gatos only has RS)

		RS: ● Properties with 2 or fewer units
Mountain View	2016	JC: ● Properties with 2 or fewer units ● Units built 2017 or later
Oakland	2002 (JC); 1980 (RS)	JC: ● *From 2002-2015:* Units built after 1980 ● *From 2016 onwards:* Units built 1996 or later RS: ● *Always*: Units built 1983 or later ● *2003 onwards:* Owner-occupied duplexes & triplexes
Richmond	2016	*No additional exemptions for JC or RS*
San Francisco	1979	JC & RS: ● Units built after 1979
San Jose	2017 (JC); 1979 (RS)	JC: ● Units built 1980 or later ● Single-family homes ● Duplexes RS: ● Units built 1980 or later ● Duplexes
Union City	2017 (JC only)	*Union City only has JC, no RS. No additional exemptions for JC*

Note: The exemptions listed above are in addition to the exemptions from rent stabilization laws mandated by the Costa Hawkins Rental Housing Act.

Appendix B
Federal Reserve Bank of New York Consumer Credit Panel/Equifax Data (CCP)

The CCP data consist of an anonymized 5% random sample of consumers over 18 years old with Social Security numbers (SSNs) and a credit history, collected quarterly by the credit bureau Equifax. The sample is intended to be a nationally representative sample of consumers in a given quarter. About 1-3% of consumers are dropped and a similar share are added to the panel each quarter to maintain this representativeness. Thus, younger people and new immigrants who become consumers are added and consumers who die, move out of the US, or have a prolonged period of inactivity are dropped. The sample includes consumers with at least one credit account or collection/public record (such as bankruptcy or foreclosure), as well as those with closed or authorized user accounts (Lee and van der Klaauw 2010). While 45 million US adults do not have credit scores (Wherry et al. 2019), nearly half of these adults are represented in our data.

The CCP data includes information on individuals' age, credit information including Equifax Risk Scores—a credit score, census block group of address, and payment activity of mortgages and other credit accounts. Similar information is provided for all other adult consumers in the same household, based on their residential address. The CCP data excludes individuals who lack credit or a credit history, which may underrepresent younger individuals, noncitizens or undocumented immigrants, and very low-SES individuals and may overrepresent older individuals and include those who are deceased. Further, our ability to assess mobility among homeless individuals and those who are severely residentially unstable is limited because their residential data is likely misreported.

The Equifax Risk Score is a proprietary credit score that estimates the likelihood that an individual will pay his or her debts without defaulting. A variety of factors that relate to loan performance contribute to credit scores, including previous payment history, outstanding debts, length of credit history, new accounts opened, and types of credit used (Federal Reserve Board 2007; Fair Isaac Corporation 2015); delinquency, large increases in one's debt, and events of public record (e.g., bankruptcy or foreclosure) often lead to low credit scores (Anderson 2007). The scores range from 280 to 850, with higher scores representing greater financial health and advantage.[30] Having no score indicates that the consumer has a "thin" file, or too few accounts or new credit such that there is too little information to estimate a score (Brevoort et al. 2016). Because the CCP data contain individuals who have a public record for collection, thin files are disproportionately lower-income, but younger consumers are also more likely to have thin files (Brevoort et al. 2016). Credit bureaus do not factor income into calculating credit scores, though credit scores correlate highly with income levels; however, credit scores can reflect individuals across the income and wealth distributions (Bostic, Calem, and Wachter 2005; Brevoort, Grimm, and Kambara 2016).

[30] Transunion and Experian, the other two major credit bureaus, produce scores with similar scoring models but slightly different scales.

Table C1. SES Composition of Bay Area Counties Over Time

County	SES	2002	2003	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alameda	ELI	19.3	19.1	18.7	18.2	18.0	18.9	19.8	19.8	18.0	16.7	15.6	15.3	15.1	15.2	15.3
Alameda	Moderate	12.8	12.2	12.3	12.2	12.1	11.7	11.9	13.0	14.1	14.6	14.2	12.7	11.4	10.0	9.5
Alameda	Moderate -Middle	29.0	28.8	26.2	25.3	24.6	23.0	22.1	22.4	23.3	24.5	25.9	27.0	27.4	27.5	26.3
Alameda	Middle-High	38.9	39.9	42.8	44.3	45.3	46.4	46.1	44.8	44.6	44.2	44.4	45.1	46.1	47.2	49.0
Contra Costa	ELI	16.6	16.5	15.9	15.7	16.3	17.8	19.4	19.2	17.6	16.3	15.3	14.9	14.8	14.8	15.1
Contra Costa	VLI-LI	11.8	11.3	11.3	11.1	11.1	10.8	11.7	13.3	14.7	15.2	14.3	13.4	11.9	10.4	9.7
Contra Costa	Moderate -Middle	27.6	27.5	25.6	24.5	23.4	22.0	20.2	20.7	21.9	23.6	25.9	26.8	27.5	27.5	26.6
Contra Costa	Middle-High	44.0	44.7	47.3	48.7	49.2	49.4	48.7	46.8	45.9	45.0	44.5	44.9	45.8	47.3	48.6
Marin	ELI	10.2	10.4	10.7	10.6	10.6	11.0	11.7	11.7	11.3	10.8	10.1	9.3	9.2	9.2	9.2
Marin	VLI-LI	8.8	8.2	7.7	8.4	8.1	7.5	7.9	8.8	9.2	9.5	9.4	9.4	7.7	6.4	5.8
Marin	Moderate -Middle	27.2	26.2	23.8	22.7	21.6	21.2	21.0	20.9	21.4	21.3	22.7	22.4	23.3	23.5	22.6
Marin	Middle-High	53.8	55.2	57.8	58.3	59.7	60.3	59.4	58.5	58.1	58.3	57.8	58.9	59.8	60.9	62.5
Napa	ELI	15.3	14.8	14.8	14.2	14.4	16.2	18.0	17.9	15.7	14.5	14.4	14.1	14.4	14.0	14.4
Napa	VLI-LI	12.0	11.5	10.7	11.9	11.7	10.7	12.1	13.7	14.9	15.2	14.2	13.5	11.5	10.4	9.9
Napa	Moderate -Middle	28.8	27.6	26.6	25.1	24.6	23.7	22.1	21.7	23.4	25.4	27.5	28.8	29.6	29.4	28.2
Napa	Middle-High	43.9	46.0	47.9	48.8	49.2	49.4	47.9	46.6	46.0	44.9	43.9	43.7	44.5	46.2	47.5
San Francisco	ELI	16.0	15.5	15.5	15.0	14.2	13.8	13.8	13.8	13.3	12.5	12.1	11.7	11.3	11.1	11.0
San Francisco	VLI-LI	11.8	11.6	11.4	11.3	11.0	10.8	10.3	10.5	10.7	10.9	10.1	9.1	8.5	7.7	7.0
San Francisco	Moderate -Middle	31.1	31.2	28.5	27.9	27.8	26.6	26.6	27.1	27.2	27.4	27.7	28.4	28.1	27.6	26.2
San Francisco	Middle-High	41.0	41.7	44.5	45.8	46.9	48.9	49.4	48.5	48.8	49.2	50.2	50.8	52.1	53.6	55.9
San Mateo	ELI	13.4	13.4	13.9	13.2	13.1	13.6	14.1	14.3	13.2	12.2	11.8	11.1	10.8	10.9	11.2
San Mateo	VLI-LI	10.8	10.5	10.4	10.5	10.6	10.3	10.5	11.1	11.9	12.3	11.6	10.6	9.6	8.3	7.5
San Mateo	Moderate -Middle	27.7	27.6	25.0	24.3	24.0	22.7	22.0	22.0	22.5	23.6	24.5	25.1	25.5	25.5	24.4

San Mateo	Middle-High	48.1	48.5	50.7	51.9	52.3	53.5	53.4	52.7	52.4	52.0	52.2	53.2	54.0	55.4	56.9
Santa Clara	ELI	14.4	14.1	14.1	14.0	13.8	14.2	15.3	15.0	13.7	12.7	12.0	11.6	11.3	11.3	11.5
Santa Clara	VLI-LI	11.0	10.8	10.6	10.7	10.6	10.3	10.5	11.6	12.3	12.7	11.9	10.8	9.7	8.2	7.7
Santa Clara	Moderate-Middle	29.9	29.4	26.4	25.1	24.8	23.5	22.8	23.1	23.8	24.7	25.7	26.7	27.2	27.4	26.0
Santa Clara	Middle-High	44.7	45.7	48.9	50.2	50.8	52.0	51.5	50.4	50.3	50.0	50.4	50.9	51.9	53.1	54.8
Solano	ELI	21.7	21.7	20.8	20.7	21.4	24.5	25.9	25.2	22.7	21.6	20.5	19.5	19.5	19.3	19.8
Solano	VLI-LI	15.4	14.7	14.7	14.3	14.1	13.5	14.9	17.0	19.0	19.4	17.9	17.4	15.8	14.1	13.2
Solano	Moderate-Middle	29.7	29.1	27.5	26.9	25.5	23.4	21.6	21.9	23.2	25.1	27.9	29.4	30.1	30.7	29.2
Solano	Middle-High	33.3	34.6	37.0	38.1	39.0	38.7	37.6	35.9	35.1	33.8	33.7	33.7	34.6	35.8	37.7
Sonoma	ELI	15.4	15.0	15.0	14.8	15.1	16.1	16.9	17.1	15.7	15.0	14.1	14.0	13.4	13.4	13.2
Sonoma	VLI-LI	11.6	10.9	11.3	11.1	11.2	11.3	11.5	12.8	14.0	14.6	14.2	12.8	11.9	10.8	10.1
Sonoma	Moderate-Middle	27.6	27.8	24.6	23.9	23.0	21.9	21.5	21.4	22.9	24.0	26.0	27.1	27.5	27.6	27.2
Sonoma	Middle-High	45.4	46.3	49.1	50.2	50.6	50.7	50.1	48.8	47.4	46.4	45.6	46.2	47.2	48.2	49.5

Source: FRBNY Consumer Credit Panel/Equifax Data.

Table C2. Regression Results from Linear Probability Models Predicting Outmigration on Logged New Housing Units in Same Year, Two Years Prior, and Four Years Prior

	New Production of Subsidized Units			New Production of Market-rate Units		
	(1)	(2)	(3)	(1)	(2)	(3)
No lag						
SES (ref = ELI)						
VLI-LI	0.051***	0.047***	0.029***	0.051***	0.046***	0.029***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Moderate-Midlde	0.043***	0.057***	0.038***	0.043***	0.057***	0.038***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Middle-High	-0.035***	0.011***	0.022***	-0.035***	0.012***	0.023***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Number of New Units (log-transformed)	0.008***	-0.00001	-0.001	0.004***	0.002***	0.002***
	(0.001)	(0.001)	(0.001)	(0.0002)	(0.0005)	(0.001)
SES (ref = ELI) * Number of New Units						
VLI-LI * Number of New Units		0.003	0.003		0.003***	0.001
		(0.002)	(0.002)		(0.001)	(0.001)
Moderate-Middle * Number of New Units		0.008***	0.005***		0.001	-0.00001
		(0.002)	(0.002)		(0.001)	(0.001)
Middle-High * Number of New Units		0.005***	0.003*		-0.001**	-0.002***
		(0.002)	(0.002)		(0.001)	(0.001)
Individual and household variables included		x	x		x	x
Additional neighborhood variables included			x			x
R-squared	0.013	0.044	0.051	0.013	0.044	0.051
N (person-years)	3,558,807	3,558,807	3,065,898	3,558,807	3,558,807	3,065,898
2-year lag						
SES (ref = ELI)						
VLI-LI	0.051***	0.047***	0.029***	0.051***	0.046***	0.029***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Moderate-Midlde	0.043***	0.058***	0.039***	0.043***	0.058***	0.038***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Middle-High	-0.035***	0.011***	0.022***	-0.035***	0.012***	0.023***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Number of New Units (log-transformed)	0.008***	0.007***	0.005***	0.004***	0.002***	0.001
	(0.001)	(0.001)	(0.001)	(0.0002)	(0.0005)	(0.001)
SES (ref = ELI) * Number of New Units						
VLI-LI * Number of New Units		-0.001	-0.003		0.002**	0.001*
		(0.002)	(0.002)		(0.001)	(0.001)
Moderate-Middle * Number of New Units		-0.003	-0.002		0.0001	0.0001
		(0.002)	(0.002)		(0.001)	(0.001)
Middle-High * Number of New Units		-0.001	-0.003*		-0.002***	-0.002***
		(0.002)	(0.002)		(0.001)	(0.001)
Individual and household variables included		x	x		x	x
Additional neighborhood variables included			x			x
R-squared	0.013	0.044	0.051	0.013	0.044	0.051
N (person-years)	3,558,807	3,558,807	3,065,898	3,558,807	3,558,807	3,065,898
4-year lag						
SES (ref = ELI)						
VLI-LI	0.048***	0.043***	0.029***	0.048***	0.043***	0.029***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Moderate-Midlde	0.041***	0.054***	0.038***	0.041***	0.054***	0.038***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Middle-High	-0.036***	0.009***	0.022***	-0.036***	0.010***	0.023***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Number of New Units (log-transformed)	0.007***	0.002	0.0003	0.003***	0.002**	-0.001
	(0.001)	(0.001)	(0.001)	(0.0002)	(0.0005)	(0.0005)
SES (ref = ELI) * Number of New Units						
VLI-LI * Number of New Units		-0.001	-0.001		0.002**	0.001
		(0.002)	(0.002)		(0.001)	(0.001)
Moderate-Middle * Number of New Units		0.003**	0.002		0.0004	0.00002
		(0.002)	(0.002)		(0.001)	(0.001)
Middle-High * Number of New Units		0.002	0.001		-0.002***	-0.002***
		(0.002)	(0.002)		(0.001)	(0.001)
Individual and household variables included		x	x		x	x
Additional neighborhood variables included			x			x
R-squared	0.012	0.044	0.051	0.012	0.044	0.051
N (person-years)	3,111,471	3,111,471	3,065,898	3,111,471	3,111,471	3,065,898

Note: *p<.10; **p<.05; ***p<.01

Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Table C3. Regression Results from Linear Probability Models Predicting Inmigration on Logged New Housing Units in Same Year, Two Years Prior, and Four Years Prior

	New Production of Subsidized Units			New Production of Market-rate Units		
	(1)	(2)	(3)	(1)	(2)	(3)
No lag						
SES (ref = ELI)						
VLI-LI	0.035***	0.025***	0.005***	0.035***	0.024***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Moderate-Midlde	0.038***	0.046***	0.028***	0.038***	0.045***	0.027***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Middle-High	-0.087***	-0.029***	-0.020***	-0.087***	-0.029***	-0.020***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Number of New Units (log-transformed)	0.011***	-0.001	-0.001	0.01***	0.005***	0.004***
	(0.001)	(0.001)	(0.002)	(0.0002)	(0.001)	(0.001)
SES (ref = ELI) * Number of New Units						
VLI-LI * Number of New Units		0.009***	0.006***		0.005***	0.002***
		(0.002)	(0.003)		(0.001)	(0.001)
Moderate-Middle * Number of New Units		0.012***	0.007***		0.004***	0.003***
		(0.002)	(0.002)		(0.001)	(0.001)
Middle-High * Number of New Units		0.008***	0.003		0.001*	0.0001
		(0.002)	(0.002)		(0.001)	(0.001)
Individual and household variables included		x	x		x	x
Additional neighborhood variables included			x			x
R-squared	0.026	0.078	0.083	0.026	0.078	0.083
N (person-years)	3,335,926	3,335,926	3,065,898	3,335,926	3,335,926	3,065,898
2-year lag						
SES (ref = ELI)						
VLI-LI	0.035***	0.025***	0.005***	0.035***	0.025***	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Moderate-Midlde	0.038***	0.046***	0.028***	0.038***	0.045***	0.027***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Middle-High	-0.088***	-0.029***	-0.020***	-0.088***	-0.029***	-0.020***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Number of New Units (log-transformed)	0.012***	0.003*	0.002	0.010***	0.007**	0.004***
	(0.001)	(0.001)	(0.002)	(0.0002)	(0.001)	(0.001)
SES (ref = ELI) * Number of New Units						
VLI-LI * Number of New Units		0.005**	0.005**		0.002***	0.001
		(0.002)	(0.002)		(0.001)	(0.001)
Moderate-Middle * Number of New Units		0.008***	0.005**		0.002***	0.002***
		(0.002)	(0.002)		(0.001)	(0.001)
Middle-High * Number of New Units		0.006***	0.001		-0.0002	-0.0001
		(0.002)	(0.002)		(0.001)	(0.001)
Individual and household variables included		x	x		x	x
Additional neighborhood variables included			x			x
R-squared	0.026	0.078	0.083	0.026	0.078	0.083
N (person-years)	3,335,926	3,335,926	3,065,898	3,335,926	3,335,926	3,065,898
4-year lag						
SES (ref = ELI)						
VLI-LI	0.035***	0.024***	0.005***	0.035***	0.023***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Moderate-Midlde	0.039***	0.046***	0.028***	0.039***	0.045***	0.027***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Middle-High	-0.087***	-0.030***	-0.020***	-0.087***	-0.029***	-0.020***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Number of New Units (log-transformed)	0.008***	-0.0002	-0.003*	0.007***	0.004***	0.001**
	(0.001)	(0.001)	(0.002)	(0.0002)	(0.001)	(0.001)
SES (ref = ELI) * Number of New Units						
SES (ref = ELI) * Number of New Units		0.006***	0.005**		0.004***	0.003***
VLI-LI * Number of New Units		(0.002)	(0.002)		(0.001)	(0.001)
		0.007***	0.005**		0.001**	0.001*
Moderate-Middle * Number of New Units		(0.002)	(0.002)		(0.001)	(0.001)
		0.006***	0.003*		-0.0004	0.0003
Middle-High * Number of New Units		(0.002)	(0.002)		(0.001)	(0.001)
Individual and household variables included		x	x		x	x
Additional neighborhood variables included			x			x
R-squared	0.026	0.079	0.083	0.026	0.079	0.083
N (person-years)	3,111,471	3,111,471	3,065,898	3,111,471	3,111,471	3,065,898

Note: *p<.10; **p<.05; ***p<.01

Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Appendix D
Table D1a Outmigration – Market Rate

Outmigration	No lag						1-year lag						2-year lag						4-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Number of new units (log-transformed)	0.003***	(0.0001)	-0.001***	(0.0003)	-0.004***	(0.0005)	0.004***	(0.0001)	-0.0002	(0.0003)	-0.0004	(0.0005)	0.003***	(0.0001)	0.0001	(0.0003)	0.002***	(0.0005)	0.002***	(0.0001)	-0.001***	(0.0003)	-0.002***	(0.0005)
High income	-0.013***	(0.001)	-0.010***	(0.001)	-0.008***	(0.001)	-0.013***	(0.001)	-0.010***	(0.001)	-0.008***	(0.001)	-0.013***	(0.001)	-0.009***	(0.001)	-0.006***	(0.001)	-0.013***	(0.001)	-0.009***	(0.001)	-0.007***	(0.001)
Low income	-0.012***	(0.0005)	-0.012***	(0.001)	-0.015***	(0.001)	-0.012***	(0.0005)	-0.011***	(0.001)	-0.014***	(0.001)	-0.012***	(0.0005)	-0.011***	(0.001)	-0.014***	(0.001)	-0.012***	(0.0005)	-0.010***	(0.001)	-0.014***	(0.001)
Very low income	-0.057***	(0.0004)	-0.048***	(0.001)	-0.051***	(0.001)	-0.057***	(0.0004)	-0.048***	(0.001)	-0.050***	(0.001)	-0.057***	(0.0004)	-0.048***	(0.001)	-0.049***	(0.001)	-0.057***	(0.0004)	-0.047***	(0.001)	-0.050***	(0.001)
Household head age 30-34			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.034***	(0.001)	-0.034***	(0.001)			-0.034***	(0.001)	-0.034***	(0.001)			-0.034***	(0.001)	-0.034***	(0.001)			-0.034***	(0.001)	-0.034***	(0.001)
Household head age 40-44			-0.048***	(0.001)	-0.048***	(0.001)			-0.048***	(0.001)	-0.048***	(0.001)			-0.048***	(0.001)	-0.048***	(0.001)			-0.048***	(0.001)	-0.048***	(0.001)
Household head age 45-49			-0.057***	(0.001)	-0.056***	(0.001)			-0.057***	(0.001)	-0.056***	(0.001)			-0.057***	(0.001)	-0.056***	(0.001)			-0.057***	(0.001)	-0.056***	(0.001)
Household head age 50-54			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)
Household head age 55-59			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.061***	(0.001)	-0.059***	(0.001)
Household head age 60-64			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)
Household head age 65-69			-0.045***	(0.001)	-0.046***	(0.001)			-0.045***	(0.001)	-0.046***	(0.001)			-0.045***	(0.001)	-0.046***	(0.001)			-0.045***	(0.001)	-0.046***	(0.001)
Household head age 65+			-0.062***	(0.001)	-0.057***	(0.001)			-0.062***	(0.001)	-0.057***	(0.001)			-0.062***	(0.001)	-0.057***	(0.001)			-0.062***	(0.001)	-0.057***	(0.001)
Household head age 70-74			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)
Household head age 75+			-0.052***	(0.001)	-0.049***	(0.001)			-0.052***	(0.001)	-0.049***	(0.001)			-0.052***	(0.001)	-0.049***	(0.001)			-0.051***	(0.001)	-0.049***	(0.001)
Black			0.005***	(0.001)	0.008***	(0.001)			0.005***	(0.001)	0.008***	(0.001)			0.005***	(0.001)	0.008***	(0.001)			0.005***	(0.001)	0.008***	(0.001)
Latinx			-0.004***	(0.0005)	-0.0004	(0.001)			-0.004***	(0.0005)	-0.0002	(0.001)			-0.004***	(0.0005)	-0.0002	(0.001)			-0.004***	(0.0005)	-0.0004	(0.001)
White			0.027***	(0.0004)	0.025***	(0.0004)			0.027***	(0.0004)	0.025***	(0.0004)			0.027***	(0.0004)	0.025***	(0.0004)			0.027***	(0.0004)	0.025***	(0.0004)
Length of residence			-0.005***	(0.00003)	-0.005***	(0.00003)			-0.005***	(0.00003)	-0.005***	(0.00003)			-0.005***	(0.00003)	-0.005***	(0.00003)			-0.005***	(0.00003)	-0.005***	(0.00003)
Number of children			-0.008***	(0.0005)	-0.009***	(0.0005)			-0.008***	(0.0005)	-0.009***	(0.0005)			-0.008***	(0.0005)	-0.009***	(0.0005)			-0.008***	(0.0005)	-0.009***	(0.0005)
Non-married			0.002***	(0.0005)	-0.002***	(0.001)			0.002***	(0.0005)	-0.002***	(0.001)			0.002***	(0.0005)	-0.002***	(0.001)			0.003***	(0.0005)	-0.002***	(0.001)
Number of adults			0.009***	(0.0004)	0.005***	(0.0004)			0.009***	(0.0004)	0.005***	(0.0004)			0.009***	(0.0004)	0.005***	(0.0004)			0.009***	(0.0004)	0.005***	(0.0004)
Percent vacant in 2000					-0.0003**	(0.0001)					-0.0003***	(0.0001)					-0.0003***	(0.0001)					-0.0003***	(0.0001)
Percent of housing built in past 20 years as of 2000					0.00004**	(0.00001)					0.00001	(0.00001)					0.00001	(0.00001)					0.0001***	(0.00001)
Ownership rate in 2000					-0.0004**	(0.00001)					-0.0004***	(0.00001)					-0.0004***	(0.00001)					-0.0004***	(0.00001)
Percent foreign-born in 2000					-0.0002**	(0.00002)					-0.0002***	(0.00002)					-0.0002***	(0.00002)					-0.0002***	(0.00002)
Median home value in 2000					-0.00000*	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)
Median gross rent in 2000					-0.00003**	(0.00000)					-0.00003**	(0.00000)					-0.00003**	(0.00000)					-0.00003**	(0.00000)
Number of subsidized units in 2016					-0.00001*	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0001**	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Poverty rate in 2000					-0.0005**	(0.00003)					-0.0005***	(0.00003)					-0.0005***	(0.00003)					-0.0005***	(0.00003)
Number of new units - other type of housing (log-transformed)					0.0001	(0.0003)					-0.001*	(0.0003)					-0.001***	(0.0003)					-0.001***	(0.0003)
Percent of units covered by tenant protections					-0.009***	(0.001)					-0.010***	(0.001)					-0.009***	(0.001)					-0.006***	(0.001)
Avg. outmigration rate for 3 previous years					0.034***	(0.001)					0.034***	(0.001)					0.034***	(0.001)					0.034***	(0.001)
Avg. inmigration rate for 3 previous years					-0.003**	(0.001)					-0.003***	(0.001)					-0.004***	(0.001)					-0.003**	(0.001)
Oakland					0.004***	(0.001)					0.005***	(0.001)					0.005***	(0.001)					0.004***	(0.001)
San Francisco					0.0004	(0.001)					0.001*	(0.001)					0.001**	(0.001)					0.0002	(0.001)
San Jose					0.017***	(0.001)					0.017***	(0.001)					0.017***	(0.001)					0.017***	(0.001)
South Bay					0.017***	(0.001)					0.016***	(0.001)					0.017***	(0.001)					0.017***	(0.001)
High * Number of new units			-0.001*	(0.0004)	-0.0002	(0.001)			-0.0004	(0.0004)	-0.001	(0.001)			-0.001***	(0.0004)	-0.004***	(0.001)			-0.001***	(0.0004)	-0.002***	(0.001)
Low * Number of new units			0.002***	(0.0004)	0.006***	(0.001)			0.002***	(0.0004)	0.005***	(0.001)			0.002***	(0.0004)	0.003***	(0.001)			0.001***	(0.0004)	0.005***	(0.001)
Very Low * Number of new units			0.004***	(0.0004)	0.006***	(0.001)			0.005***	(0.0004)	0.003***	(0.001)			0.004***	(0.0004)	0.001	(0.001)			0.004***	(0.0004)	0.004***	(0.001)
Constant	0.123***	(0.0004)	0.156***	(0.001)	0.211***	(0.002)	0.123***	(0.0004)	0.156***	(0.001)	0.210***	(0.002)	0.123***	(0.0004)	0.155***	(0.001)	0.209***	(0.002)	0.123***	(0.0004)	0.155***	(0.001)	0.209***	(0.002)
Observations	4156465		3339164		2845535		4146940		3334177		2845535		4113869		3314908		2845535		3974877		3219637		2845535	
R2	0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035	
Adjusted R2	0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035	
Residual Std. Error	0.367 (df = 4156460)		0.350 (df = 3339138)		0.340 (df = 2845491)		0.367 (df = 4146935)		0.350 (df = 3334151)		0.340 (df = 2845491)		0.366 (df = 4113864)		0.349 (df = 3314882)		0.340 (df = 2845491)		0.364 (df = 3974872)		0.348 (df = 3219611)		0.340 (df = 2845491)	
F Statistic	7,729.738*** (df = 4; 4156460)		4,272.404*** (df = 25; 3339138)		2,376.668*** (df = 43; 2845491)		7,787.057*** (df = 4; 4146935)		4,270.633*** (df = 25; 3334151)		2,381.083*** (df = 43; 2845491)		7,680.547*** (df = 4; 4113864)		4,240.556*** (df = 25; 3314882)		2,380.308*** (df = 43; 2845491)		7,342.021*** (df = 4; 3974872)		4,123.067*** (df = 25; 3219611)		2,373.064*** (df = 43; 2845491)	

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Table D1b Outmigration – Subsidized

Outmigration	No lag						1-year lag						2-year lag						4-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Number of new units (log-transformed)	0.001***	(0.0002)	0.001**	(0.001)	0.0003	(0.001)	0.00001	(0.0002)	0.001	(0.001)	-0.002	(0.001)	-0.001**	(0.0002)	0.002***	(0.001)	0.001	(0.001)	-0.0005**	(0.0002)	0.003***	(0.001)	0.005***	(0.001)
High income	-0.013***	(0.001)	-0.010***	(0.001)	-0.008***	(0.001)	-0.013***	(0.001)	-0.010***	(0.001)	-0.008***	(0.001)	-0.013***	(0.001)	-0.010***	(0.001)	-0.008***	(0.001)	-0.013***	(0.001)	-0.010***	(0.001)	-0.008***	(0.001)
Low income	-0.013***	(0.0005)	-0.010***	(0.001)	-0.013***	(0.001)	-0.013***	(0.0005)	-0.010***	(0.001)	-0.013***	(0.001)	-0.013***	(0.0005)	-0.010***	(0.001)	-0.013***	(0.001)	-0.012***	(0.0005)	-0.009***	(0.001)	-0.013***	(0.001)
Very low income	-0.058***	(0.0004)	-0.046***	(0.001)	-0.049***	(0.001)	-0.058***	(0.0004)	-0.046***	(0.001)	-0.049***	(0.001)	-0.058***	(0.0004)	-0.046***	(0.001)	-0.048***	(0.001)	-0.058***	(0.0004)	-0.045***	(0.001)	-0.049***	(0.001)
Household head age 30-34			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.034***	(0.001)	-0.034***	(0.001)			-0.034***	(0.001)	-0.034***	(0.001)			-0.034***	(0.001)	-0.034***	(0.001)			-0.033***	(0.001)	-0.034***	(0.001)
Household head age 40-44			-0.048***	(0.001)	-0.048***	(0.001)			-0.048***	(0.001)	-0.048***	(0.001)			-0.048***	(0.001)	-0.048***	(0.001)			-0.048***	(0.001)	-0.048***	(0.001)
Household head age 45-49			-0.057***	(0.001)	-0.056***	(0.001)			-0.057***	(0.001)	-0.056***	(0.001)			-0.057***	(0.001)	-0.056***	(0.001)			-0.057***	(0.001)	-0.056***	(0.001)
Household head age 50-54			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)
Household head age 55-59			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.060***	(0.001)	-0.059***	(0.001)			-0.061***	(0.001)	-0.059***	(0.001)
Household head age 60-64			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)
Household head age 65-69			-0.045***	(0.001)	-0.046***	(0.001)			-0.045***	(0.001)	-0.046***	(0.001)			-0.045***	(0.001)	-0.046***	(0.001)			-0.045***	(0.001)	-0.046***	(0.001)
Household head age 65+			-0.062***	(0.001)	-0.057***	(0.001)			-0.062***	(0.001)	-0.057***	(0.001)			-0.062***	(0.001)	-0.057***	(0.001)			-0.061***	(0.001)	-0.056***	(0.001)
Household head age 70-74			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)
Household head age 75+			-0.052***	(0.001)	-0.049***	(0.001)			-0.052***	(0.001)	-0.049***	(0.001)			-0.052***	(0.001)	-0.049***	(0.001)			-0.051***	(0.001)	-0.049***	(0.001)
Black			0.004***	(0.001)	0.008***	(0.001)			0.004***	(0.001)	0.008***	(0.001)			0.004***	(0.001)	0.008***	(0.001)			0.005***	(0.001)	0.008***	(0.001)
Latinx			-0.004***	(0.0005)	-0.0004	(0.001)			-0.004***	(0.0005)	-0.0002	(0.001)			-0.004***	(0.0005)	-0.0003	(0.001)			-0.004***	(0.0005)	-0.0004	(0.001)
White			0.027***	(0.0004)	0.025***	(0.0004)			0.027***	(0.0004)	0.025***	(0.0004)			0.027***	(0.0004)	0.025***	(0.0004)			0.028***	(0.0004)	0.025***	(0.0004)
Length of residence			-0.005***	(0.00003	-0.005***	(0.00003)			-0.005***	(0.00003	-0.005***	(0.00003)			-0.005***	(0.00003	-0.005***	(0.00003)			-0.005***	(0.00003)	-0.005***	(0.00003)
Number of children			-0.008***	(0.0005)	-0.009***	(0.0005)			-0.008***	(0.0005)	-0.009***	(0.0005)			-0.008***	(0.0005)	-0.009***	(0.0005)			-0.008***	(0.0005)	-0.009***	(0.0005)
Non-married			0.002***	(0.0005)	-0.002***	(0.001)			0.002***	(0.0005)	-0.002***	(0.001)			0.003***	(0.0005)	-0.002***	(0.001)			0.003***	(0.0005)	-0.002***	(0.001)
Number of adults			0.009***	(0.0004)	0.005***	(0.0004)			0.009***	(0.0004)	0.005***	(0.0004)			0.009***	(0.0004)	0.005***	(0.0004)			0.009***	(0.0004)	0.005***	(0.0004)
Percent vacant in 2000					-0.0003***	(0.0001)					-0.0003***	(0.0001)					-0.0003***	(0.0001)					-0.0003***	(0.0001)
Percent of housing built in past 20 years as of 2000					0.00002	(0.00001)					-0.00001	(0.00001)					-0.00000	(0.00001)					0.00003**	(0.00001)
Ownership rate in 2000					-0.0004***	(0.00001)					-0.0004***	(0.00001)					-0.0004***	(0.00001)					-0.0004***	(0.00001)
Percent foreign-born in 2000					-0.0002***	(0.00002)					-0.0002***	(0.00002)					-0.0002***	(0.00002)					-0.0002***	(0.00002)
Median home value in 2000					-0.00000**	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)
Median gross rent in 2000					-0.00003**	(0.00000)					-0.00003**	(0.00000)					-0.00003**	(0.00000)					-0.00003**	(0.00000)
Number of subsidized units in 2016					-0.00001**	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0001***	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Poverty rate in 2000					-0.0005***	(0.00003)					-0.001***	(0.00003)					-0.0005***	(0.00003)					-0.0005***	(0.00003)
Number of new units - other type of housing (log-transformed)					0.001***	(0.0002)					0.003***	(0.0002)					0.003***	(0.0002)					0.001***	(0.0002)
Percent of units covered by tenant protections					-0.009***	(0.001)					-0.010***	(0.001)					-0.009***	(0.001)					-0.006***	(0.001)
Avg. outmigration rate for 3 previous years					0.034***	(0.001)					0.034***	(0.001)					0.034***	(0.001)					0.034***	(0.001)
Avg. inmigration rate for 3 previous years					-0.003**	(0.001)					-0.003***	(0.001)					-0.004***	(0.001)					-0.003**	(0.001)
Oakland					0.004***	(0.001)					0.005***	(0.001)					0.005***	(0.001)					0.003***	(0.001)
San Francisco					0.001	(0.001)					0.001*	(0.001)					0.001*	(0.001)					0.0002	(0.001)
San Jose					0.017***	(0.001)					0.017***	(0.001)					0.017***	(0.001)					0.017***	(0.001)
South Bay					0.017***	(0.001)					0.017***	(0.001)					0.017***	(0.001)					0.017***	(0.001)
High * Number of new units			-0.002**	(0.001)	-0.005***	(0.002)			-0.002**	(0.001)	-0.002	(0.002)			0.002	(0.001)	-0.005***	(0.002)			0.003**	(0.001)	-0.006***	(0.002)
Low * Number of new units			0.002**	(0.001)	0.004***	(0.001)			0.002**	(0.001)	0.005***	(0.001)			-0.001	(0.001)	0.001	(0.001)			0.0001	(0.001)	-0.001	(0.002)
Very Low * Number of new units			-0.002***	(0.001)	-0.001	(0.001)			-0.002**	(0.001)	0.001	(0.001)			-0.004***	(0.001)	-0.002*	(0.001)			-0.006***	(0.001)	-0.007***	(0.001)
Constant	0.126***	(0.0004)	0.155***	(0.001)	0.210***	(0.002)	0.126***	(0.0004)	0.155***	(0.001)	0.209***	(0.002)	0.125***	(0.0004)	0.155***	(0.001)	0.209***	(0.002)	0.125***	(0.0004)	0.153***	(0.001)	0.208***	(0.002)
Observations	4156465		3339164		2845535		4146940		3334177		2845535		4113869		3314908		2845535		3974877		3219637		2845535	
R2	0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035	
Adjusted R2	0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035		0.007		0.031		0.035	
Residual Std. Error	0.367 (df = 4156460)		0.350 (df = 3339138		0.340 (df = 2845491		0.367 (df = 4146935)		0.350 (df = 3334151		0.340 (df = 2845491		0.366 (df = 4113864)		0.350 (df = 3314882		0.340 (df = 2845491		0.364 (df = 3974872)		0.348 (df = 3219611)		0.340 (df = 2845491)	
F Statistic	7,554.004*** (df = 4; 415646		4,261.203*** (df = 25; 3339		2,372.720*** (df = 43; 2845		7,538.452*** (df = 4; 414693		4,253.358*** (df = 25; 3334		2,378.493*** (df = 43; 2845		7,497.308*** (df = 4; 411386		4,228.392*** (df = 25; 3314		2,377.201*** (df = 43; 2845		7,271.916*** (df = 4; 397487		4,121.409*** (df = 25; 321961		2,370.657*** (df = 43; 2845491	

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Table D2a Inmigration – Market Rate

Outmigration	No lag						1-year lag						2-year lag						4-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Number of new units (log-transformed)	0.009***	(0.0001)	0.007***	(0.0003)	0.004***	(0.0005)	0.013***	(0.0001)	0.009***	(0.0003)	0.010***	(0.0005)	0.012***	(0.0001)	0.009***	(0.0003)	0.008***	(0.0005)	0.009***	(0.0001)	0.007***	(0.0003)	0.003***	(0.0005)
High income	0.007***	(0.001)	0.008***	(0.001)	0.006***	(0.001)	0.007***	(0.001)	0.007***	(0.001)	0.004***	(0.001)	0.007***	(0.001)	0.007***	(0.001)	0.004***	(0.001)	0.006***	(0.001)	0.007***	(0.001)	0.005***	(0.001)
Low income	-0.022***	(0.0005)	-0.006***	(0.001)	-0.005***	(0.001)	-0.021***	(0.0005)	-0.005***	(0.001)	-0.004***	(0.001)	-0.021***	(0.0005)	-0.005***	(0.001)	-0.004***	(0.001)	-0.021***	(0.0005)	-0.005***	(0.001)	-0.005***	(0.001)
Very low income	-0.065***	(0.0005)	-0.028***	(0.001)	-0.022***	(0.001)	-0.063***	(0.0005)	-0.027***	(0.001)	-0.021***	(0.001)	-0.063***	(0.0005)	-0.027***	(0.001)	-0.021***	(0.001)	-0.065***	(0.0005)	-0.028***	(0.001)	-0.022***	(0.001)
Household head age 30-34			-0.015***	(0.001)	-0.016***	(0.001)			-0.014***	(0.001)	-0.016***	(0.001)			-0.014***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.041***	(0.001)	-0.042***	(0.001)			-0.040***	(0.001)	-0.042***	(0.001)			-0.040***	(0.001)	-0.042***	(0.001)			-0.041***	(0.001)	-0.042***	(0.001)
Household head age 40-44			-0.057***	(0.001)	-0.059***	(0.001)			-0.057***	(0.001)	-0.058***	(0.001)			-0.057***	(0.001)	-0.058***	(0.001)			-0.058***	(0.001)	-0.059***	(0.001)
Household head age 45-49			-0.062***	(0.001)	-0.062***	(0.001)			-0.062***	(0.001)	-0.062***	(0.001)			-0.062***	(0.001)	-0.062***	(0.001)			-0.062***	(0.001)	-0.062***	(0.001)
Household head age 50-54			-0.058***	(0.001)	-0.057***	(0.001)			-0.058***	(0.001)	-0.057***	(0.001)			-0.058***	(0.001)	-0.057***	(0.001)			-0.058***	(0.001)	-0.057***	(0.001)
Household head age 55-59			-0.051***	(0.001)	-0.051***	(0.001)			-0.051***	(0.001)	-0.051***	(0.001)			-0.051***	(0.001)	-0.051***	(0.001)			-0.051***	(0.001)	-0.051***	(0.001)
Household head age 60-64			-0.044***	(0.001)	-0.045***	(0.001)			-0.044***	(0.001)	-0.044***	(0.001)			-0.044***	(0.001)	-0.044***	(0.001)			-0.045***	(0.001)	-0.045***	(0.001)
Household head age 65-69			-0.020***	(0.001)	-0.025***	(0.001)			-0.020***	(0.001)	-0.025***	(0.001)			-0.020***	(0.001)	-0.025***	(0.001)			-0.021***	(0.001)	-0.025***	(0.001)
Household head age 65+			-0.037***	(0.001)	-0.036***	(0.001)			-0.037***	(0.001)	-0.036***	(0.001)			-0.037***	(0.001)	-0.036***	(0.001)			-0.038***	(0.001)	-0.037***	(0.001)
Household head age 70-74			-0.020***	(0.001)	-0.024***	(0.001)			-0.020***	(0.001)	-0.024***	(0.001)			-0.020***	(0.001)	-0.024***	(0.001)			-0.020***	(0.001)	-0.024***	(0.001)
Household head age 75+			-0.003***	(0.001)	-0.007***	(0.001)			-0.003***	(0.001)	-0.006***	(0.001)			-0.003***	(0.001)	-0.007***	(0.001)			-0.003***	(0.001)	-0.007***	(0.001)
Black			-0.0002	(0.001)	0.003***	(0.001)			0.0001	(0.001)	0.003***	(0.001)			0.00003	(0.001)	0.003***	(0.001)			0.0001	(0.001)	0.002***	(0.001)
Latinx			-0.013***	(0.0005)	-0.004***	(0.001)			-0.012***	(0.0005)	-0.004***	(0.001)			-0.013***	(0.0005)	-0.004***	(0.001)			-0.012***	(0.0005)	-0.004***	(0.001)
White			0.019***	(0.0004)	0.019***	(0.0004)			0.020***	(0.0004)	0.020***	(0.0004)			0.020***	(0.0004)	0.020***	(0.0004)			0.020***	(0.0004)	0.019***	(0.0004)
Length of residence			-0.012***	(0.00003)	-0.011***	(0.00003)			-0.012***	(0.00003)	-0.011***	(0.00003)			-0.012***	(0.00003)	-0.011***	(0.00003)			-0.012***	(0.00003)	-0.011***	(0.00003)
Number of children			-0.002***	(0.0004)	-0.004***	(0.0004)			-0.002***	(0.0004)	-0.004***	(0.0004)			-0.002***	(0.0004)	-0.004***	(0.0004)			-0.002***	(0.0004)	-0.004***	(0.0004)
Non-married			-0.028***	(0.0005)	-0.028***	(0.001)			-0.027***	(0.0005)	-0.028***	(0.001)			-0.027***	(0.0005)	-0.028***	(0.001)			-0.026***	(0.0005)	-0.028***	(0.001)
Number of adults			0.020***	(0.0003)	0.016***	(0.0004)			0.020***	(0.0003)	0.016***	(0.0004)			0.020***	(0.0003)	0.016***	(0.0004)			0.019***	(0.0003)	0.016***	(0.0004)
Percent vacant in 2000					0.0001***	(0.00005)					0.0001	(0.00005)					0.0001	(0.00005)					0.0001*	(0.00005)
Percent of housing built in past 20 years as of 2000					0.0001***	(0.00001)					0.00002*	(0.00001)					0.00003**	(0.00001)					0.0001***	(0.00001)
Ownership rate in 2000					-0.0001***	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Percent foreign-born in 2000					-0.0001***	(0.00002)					-0.0001***	(0.00002)					-0.0001***	(0.00002)					-0.0001***	(0.00002)
Median home value in 2000					-0.00000**	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)
Median gross rent in 2000					-0.00002**	(0.00000)					-0.00002**	(0.00000)					-0.00002**	(0.00000)					-0.00002**	(0.00000)
Number of subsidized units in 2016					-0.00001**	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0003***	(0.00001)					-0.0003***	(0.00001)					-0.0003***	(0.00001)					-0.0002***	(0.00001)
Poverty rate in 2000					-0.0003***	(0.00003)					-0.0003***	(0.00003)					-0.0003***	(0.00003)					-0.0003***	(0.00003)
Number of new units - other type of housing (log-transformed)					0.001***	(0.0003)					0.003***	(0.0003)					0.001***	(0.0003)					-0.001***	(0.0003)
Percent of units covered by tenant protections					-0.015***	(0.001)					-0.015***	(0.001)					-0.016***	(0.001)					-0.016***	(0.001)
Avg. outmigration rate for 3 previous years					0.031***	(0.001)					0.030***	(0.001)					0.031***	(0.001)					0.030***	(0.001)
Avg. inmigration rate for 3 previous years					0.016***	(0.001)					0.015***	(0.001)					0.014***	(0.001)					0.015***	(0.001)
Oakland					0.007***	(0.001)					0.008***	(0.001)					0.009***	(0.001)					0.009***	(0.001)
San Francisco					0.001*	(0.001)					0.001	(0.001)					0.003***	(0.001)					0.005***	(0.001)
San Jose					0.010***	(0.001)					0.010***	(0.001)					0.010***	(0.001)					0.012***	(0.001)
South Bay					0.013***	(0.001)					0.011***	(0.001)					0.012***	(0.001)					0.014***	(0.001)
High * Number of new units			0.002***	(0.0004)	-0.002***	(0.001)			0.004***	(0.0004)	0.001	(0.001)			0.004***	(0.0004)	0.001*	(0.001)			0.002***	(0.0004)	-0.0003	(0.001)
Low * Number of new units			-0.001***	(0.0004)	0.002***	(0.001)			-0.001***	(0.0004)	-0.0002	(0.001)			-0.001***	(0.0004)	0.001**	(0.001)			-0.003***	(0.0004)	0.001**	(0.001)
Very Low * Number of new units			-0.002***	(0.0004)	-0.001**	(0.001)			-0.003***	(0.0004)	-0.005***	(0.001)			-0.003***	(0.0004)	-0.004***	(0.001)			-0.004***	(0.0004)	-0.001**	(0.001)
Constant	0.130***	(0.0004)	0.206***	(0.001)	0.222***	(0.002)	0.128***	(0.0004)	0.203***	(0.001)	0.219***	(0.002)	0.128***	(0.0004)	0.203***	(0.001)	0.220***	(0.002)	0.130***	(0.0004)	0.203***	(0.001)	0.221***	(0.002)
Observations	4015932		3256166		2773775		4011126		3253703		2773775		3990502		3241751		2773775		3875902		3159838		2773775	
R2	0.012		0.083		0.080		0.013		0.084		0.081		0.013		0.083		0.081		0.012		0.082		0.080	
Adjusted R2	0.012		0.083		0.080		0.013		0.084		0.081		0.013		0.083		0.081		0.012		0.082		0.080	
Residual Std. Error	0.361 (df = 4015927)		0.328 (df = 3256140)		0.313 (df = 2773731)		0.361 (df = 4011121)		0.327 (df = 3253677)		0.313 (df = 2773731)		0.360 (df = 3990497)		0.327 (df = 3241725)		0.313 (df = 2773731)		0.359 (df = 3875897)		0.326 (df = 3159812)		0.313 (df = 2773731)	
F Statistic	11,841.350*** (df = 4; 40159		11,768.800*** (df = 25; 3256		5,643.768*** (df = 43; 27737		13,097.860*** (df = 4; 40111		11,866.200*** (df = 25; 3253		5,695.636*** (df = 43; 27737		12,751.540*** (df = 4; 39904		11,780.070*** (df = 25; 3241		5,682.189*** (df = 43; 27737		11,280.500*** (df = 4; 38758		11,311.040*** (df = 25; 3159		5,634.959*** (df = 43; 27737	

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Table D2b Inmigration – Subsidized

Outmigration	No lag						1-year lag						2-year lag						4-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Number of new units (log-transformed)	0.003***	(0.0002)	0.008***	(0.001)	0.009***	(0.001)	0.005***	(0.0002)	0.011***	(0.001)	0.013***	(0.001)	0.003***	(0.0002)	0.007***	(0.001)	0.002*	(0.001)	-0.0005**	(0.0002)	0.004***	(0.001)	0.004***	(0.001)
High income	0.008***	(0.001)	0.011***	(0.001)	0.005***	(0.001)	0.007***	(0.001)	0.011***	(0.001)	0.005***	(0.001)	0.008***	(0.001)	0.012***	(0.001)	0.005***	(0.001)	0.007***	(0.001)	0.011***	(0.001)	0.005***	(0.001)
Low income	-0.024***	(0.0005)	-0.008***	(0.001)	-0.004***	(0.001)	-0.024***	(0.0005)	-0.008***	(0.001)	-0.004***	(0.001)	-0.024***	(0.0005)	-0.008***	(0.001)	-0.004***	(0.001)	-0.024***	(0.0005)	-0.008***	(0.001)	-0.004***	(0.001)
Very low income	-0.069***	(0.0005)	-0.032***	(0.001)	-0.022***	(0.001)	-0.069***	(0.0005)	-0.032***	(0.001)	-0.022***	(0.001)	-0.069***	(0.0005)	-0.032***	(0.001)	-0.022***	(0.001)	-0.069***	(0.0005)	-0.032***	(0.001)	-0.022***	(0.001)
Household head age 30-34			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)			-0.015***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.041***	(0.001)	-0.042***	(0.001)			-0.041***	(0.001)	-0.042***	(0.001)			-0.041***	(0.001)	-0.042***	(0.001)			-0.041***	(0.001)	-0.042***	(0.001)
Household head age 40-44			-0.058***	(0.001)	-0.059***	(0.001)			-0.058***	(0.001)	-0.058***	(0.001)			-0.058***	(0.001)	-0.058***	(0.001)			-0.058***	(0.001)	-0.059***	(0.001)
Household head age 45-49			-0.063***	(0.001)	-0.062***	(0.001)			-0.063***	(0.001)	-0.062***	(0.001)			-0.063***	(0.001)	-0.062***	(0.001)			-0.063***	(0.001)	-0.062***	(0.001)
Household head age 50-54			-0.059***	(0.001)	-0.057***	(0.001)			-0.058***	(0.001)	-0.057***	(0.001)			-0.058***	(0.001)	-0.057***	(0.001)			-0.059***	(0.001)	-0.057***	(0.001)
Household head age 55-59			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)			-0.051***	(0.001)	-0.051***	(0.001)
Household head age 60-64			-0.045***	(0.001)	-0.045***	(0.001)			-0.045***	(0.001)	-0.044***	(0.001)			-0.044***	(0.001)	-0.045***	(0.001)			-0.045***	(0.001)	-0.045***	(0.001)
Household head age 65-69			-0.020***	(0.001)	-0.025***	(0.001)			-0.020***	(0.001)	-0.025***	(0.001)			-0.020***	(0.001)	-0.025***	(0.001)			-0.021***	(0.001)	-0.025***	(0.001)
Household head age 65+			-0.037***	(0.001)	-0.036***	(0.001)			-0.037***	(0.001)	-0.036***	(0.001)			-0.037***	(0.001)	-0.036***	(0.001)			-0.037***	(0.001)	-0.037***	(0.001)
Household head age 70-74			-0.019***	(0.001)	-0.024***	(0.001)			-0.019***	(0.001)	-0.024***	(0.001)			-0.019***	(0.001)	-0.024***	(0.001)			-0.020***	(0.001)	-0.024***	(0.001)
Household head age 75+			-0.002**	(0.001)	-0.007***	(0.001)			-0.002**	(0.001)	-0.006***	(0.001)			-0.002**	(0.001)	-0.007***	(0.001)			-0.002**	(0.001)	-0.007***	(0.001)
Black			-0.001	(0.001)	0.003***	(0.001)			-0.001	(0.001)	0.003***	(0.001)			-0.001	(0.001)	0.003***	(0.001)			-0.0003	(0.001)	0.002***	(0.001)
Latinx			-0.013***	(0.0005)	-0.004***	(0.001)			-0.013***	(0.0005)	-0.004***	(0.001)			-0.013***	(0.0005)	-0.004***	(0.001)			-0.012***	(0.0005)	-0.004***	(0.001)
White			0.019***	(0.0004)	0.019***	(0.0004)			0.019***	(0.0004)	0.020***	(0.0004)			0.019***	(0.0004)	0.020***	(0.0004)			0.020***	(0.0004)	0.019***	(0.0004)
Length of residence			-0.012***	(0.00003)	-0.011***	(0.00003)			-0.012***	(0.00003)	-0.011***	(0.00003)			-0.012***	(0.00003)	-0.011***	(0.00003)			-0.012***	(0.00003)	-0.011***	(0.00003)
Number of children			-0.002***	(0.0004)	-0.004***	(0.0004)			-0.001***	(0.0004)	-0.004***	(0.0004)			-0.002***	(0.0004)	-0.004***	(0.0004)			-0.002***	(0.0004)	-0.004***	(0.0004)
Non-married			-0.028***	(0.0005)	-0.028***	(0.001)			-0.028***	(0.0005)	-0.028***	(0.001)			-0.028***	(0.0005)	-0.028***	(0.001)			-0.027***	(0.0005)	-0.028***	(0.001)
Number of adults			0.020***	(0.0003)	0.016***	(0.0004)			0.020***	(0.0003)	0.016***	(0.0004)			0.020***	(0.0003)	0.016***	(0.0004)			0.019***	(0.0003)	0.016***	(0.0004)
Percent vacant in 2000					0.0001**	(0.00005)					0.0001	(0.00005)					0.0001	(0.00005)					0.0001*	(0.00005)
Percent of housing built in past 20 years as of 2000					0.0001***	(0.00001)					0.00004***	(0.00001)					0.00004***	(0.00001)					0.0001***	(0.00001)
Ownership rate in 2000					-0.0001***	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Percent foreign-born in 2000					-0.0001***	(0.00002)					-0.0001***	(0.00002)					-0.0001***	(0.00002)					-0.0001***	(0.00002)
Median home value in 2000					-0.00000**	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)					-0.00000**	(0.000)
Median gross rent in 2000					-0.00002**	(0.00000)					-0.00002**	(0.00000)					-0.00002**	(0.00000)					-0.00002**	(0.00000)
Number of subsidized units in 2016					-0.00001**	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0003***	(0.00001)					-0.0003***	(0.00001)					-0.0003***	(0.00001)					-0.0002***	(0.00001)
Poverty rate in 2000					-0.0003***	(0.00003)					-0.0003***	(0.00003)					-0.0003***	(0.00003)					-0.0003***	(0.00003)
Number of new units - other type of housing (log-transformed)					0.004***	(0.0002)					0.008***	(0.0002)					0.007***	(0.0002)					0.003***	(0.0002)
Percent of units covered by tenant protections					-0.015***	(0.001)					-0.014***	(0.001)					-0.016***	(0.001)					-0.016***	(0.001)
Avg. outmigration rate for 3 previous years					0.031***	(0.001)					0.030***	(0.001)					0.031***	(0.001)					0.030***	(0.001)
Avg. inmigration rate for 3 previous years					0.015***	(0.001)					0.015***	(0.001)					0.014***	(0.001)					0.015***	(0.001)
Oakland					0.007***	(0.001)					0.008***	(0.001)					0.009***	(0.001)					0.009***	(0.001)
San Francisco					0.001*	(0.001)					0.001	(0.001)					0.003***	(0.001)					0.005***	(0.001)
San Jose					0.010***	(0.001)					0.010***	(0.001)					0.010***	(0.001)					0.012***	(0.001)
South Bay					0.014***	(0.001)					0.012***	(0.001)					0.012***	(0.001)					0.014***	(0.001)
High * Number of new units			-0.002*	(0.001)	-0.010***	(0.001)			-0.005***	(0.001)	-0.010***	(0.001)			-0.005***	(0.001)	-0.003**	(0.002)			-0.005***	(0.001)	-0.007***	(0.002)
Low * Number of new units			-0.003***	(0.001)	-0.005***	(0.001)			-0.004***	(0.001)	-0.007***	(0.001)			-0.002**	(0.001)	0.002	(0.001)			-0.003***	(0.001)	-0.002	(0.001)
Very Low * Number of new units			-0.008***	(0.001)	-0.010***	(0.001)			-0.008***	(0.001)	-0.011***	(0.001)			-0.006***	(0.001)	-0.002*	(0.001)			-0.006***	(0.001)	-0.006***	(0.001)
Constant	0.138***	(0.0004)	0.212***	(0.001)	0.222***	(0.002)	0.138***	(0.0004)	0.212***	(0.001)	0.219***	(0.002)	0.138***	(0.0004)	0.211***	(0.001)	0.220***	(0.002)	0.138***	(0.0004)	0.210***	(0.001)	0.221***	(0.002)
Observations	4015932		3256166		2773775		4011126		3253703		2773775		3990502		3241751		2773775		3875902		3159838		2773775	
R2	0.010		0.082		0.080		0.010		0.082		0.081		0.010		0.082		0.081		0.010		0.082		0.080	
Adjusted R2	0.010		0.082		0.080		0.010		0.082		0.081		0.010		0.082		0.081		0.010		0.082		0.080	
Residual Std. Error	0.361 (df = 4015927)		0.328 (df = 3256140)		0.313 (df = 2773731)		0.361 (df = 4011121)		0.328 (df = 3253677)		0.313 (df = 2773731)		0.361 (df = 3990497)		0.327 (df = 3241725)		0.313 (df = 2773731)		0.359 (df = 3875897)		0.326 (df = 3159812)		0.313 (df = 2773731)	
F Statistic	10,365.890*** (df = 4; 401592		11,672.900*** (df = 25; 32561		5,644.783*** (df = 43; 277373		10,461.730*** (df = 4; 401112		11,668.280*** (df = 25; 32536		5,692.793*** (df = 43; 277373		10,265.340*** (df = 4; 399049		11,595.070*** (df = 25; 32417		5,677.251*** (df = 43; 277373		9,860.465*** (df = 4; 3875897		11,224.430*** (df = 25; 31598		5,635.394*** (df = 43; 277373	

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Table D3a Outmigration – Just Cause

Outmigration	No lag						1-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Percent of units covered	-0.015***	(0.0004)	-0.023***	(0.001)	-0.025***	(0.001)	-0.016***	(0.0004)	-0.024***	(0.001)	-0.029***	(0.001)
High income	-0.012***	(0.001)	-0.018***	(0.001)	-0.018***	(0.001)	-0.012***	(0.001)	-0.018***	(0.001)	-0.019***	(0.001)
Low income	-0.015***	(0.001)	-0.018***	(0.001)	-0.021***	(0.001)	-0.015***	(0.001)	-0.018***	(0.001)	-0.021***	(0.001)
Very low income	-0.062***	(0.0005)	-0.057***	(0.001)	-0.057***	(0.001)	-0.062***	(0.0005)	-0.057***	(0.001)	-0.057***	(0.001)
Household head age 30-34			-0.016***	(0.001)	-0.016***	(0.001)			-0.016***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.035***	(0.001)	-0.034***	(0.001)			-0.035***	(0.001)	-0.034***	(0.001)
Household head age 40-44			-0.050***	(0.001)	-0.048***	(0.001)			-0.050***	(0.001)	-0.048***	(0.001)
Household head age 45-49			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)
Household head age 50-54			-0.061***	(0.001)	-0.059***	(0.001)			-0.061***	(0.001)	-0.059***	(0.001)
Household head age 55-59			-0.061***	(0.001)	-0.059***	(0.001)			-0.061***	(0.001)	-0.059***	(0.001)
Household head age 60-64			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)
Household head age 65-69			-0.046***	(0.001)	-0.046***	(0.001)			-0.046***	(0.001)	-0.046***	(0.001)
Household head age 65+			-0.060***	(0.001)	-0.057***	(0.001)			-0.060***	(0.001)	-0.057***	(0.001)
Household head age 70-74			-0.051***	(0.001)	-0.051***	(0.001)			-0.051***	(0.001)	-0.051***	(0.001)
Household head age 75+			-0.050***	(0.001)	-0.049***	(0.001)			-0.050***	(0.001)	-0.049***	(0.001)
Black			0.006***	(0.001)	0.008***	(0.001)			0.006***	(0.001)	0.008***	(0.001)
Latinx			-0.003***	(0.001)	-0.0002	(0.001)			-0.003***	(0.001)	-0.0002	(0.001)
White			0.029***	(0.0004)	0.025***	(0.0004)			0.030***	(0.0004)	0.025***	(0.0004)
Length of residence			-0.005***	(0.00003)	-0.005***	(0.00003)			-0.005***	(0.00003)	-0.005***	(0.00003)
Number of children			-0.009***	(0.0005)	-0.009***	(0.0005)			-0.009***	(0.0005)	-0.009***	(0.0005)
Non-married			0.005***	(0.001)	-0.002***	(0.001)			0.005***	(0.001)	-0.002***	(0.001)
Number of adults			0.007***	(0.0004)	0.005***	(0.0004)			0.007***	(0.0004)	0.005***	(0.0004)
Percent vacant in 2000					-0.0003***	(0.0001)					-0.0003***	(0.0001)
Percent of housing built in past 20 years as of 2000					-0.00002	(0.00001)					-0.00003**	(0.00001)
Ownership rate in 2000					-0.0004***	(0.00001)					-0.0004***	(0.00001)
Percent foreign-born in 2000					-0.0002***	(0.00002)					-0.0002***	(0.00002)
Median home value in 2000					-0.00000**	(0.000)					-0.00000**	(0.000)
Median gross rent in 2000					-0.00003**	(0.00000)					-0.00003**	(0.00000)
Number of subsidized units in 2016					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Poverty rate in 2000					-0.001***	(0.00003)					-0.001***	(0.00003)
Avg. number of new market-rate units built in 3 previous years					0.005***	(0.0003)					0.005***	(0.0003)
Avg. number of new subsidized units built in 3 previous years					-0.003***	(0.0005)					-0.003***	(0.0005)
Avg. outmigration rate for 3 previous years					0.035***	(0.001)					0.035***	(0.001)
Avg. inmigration rate for 3 previous years					-0.004***	(0.001)					-0.004***	(0.001)
Oakland					0.004***	(0.001)					0.006***	(0.001)
San Francisco					0.001	(0.001)					0.003***	(0.001)
San Jose					0.014***	(0.001)					0.014***	(0.001)
South Bay					0.015***	(0.001)					0.015***	(0.001)
High * Percent of units			0.018***	(0.002)	0.019***	(0.002)			0.019***	(0.002)	0.020***	(0.002)
Low * Percent of units			0.016***	(0.001)	0.019***	(0.002)			0.015***	(0.001)	0.018***	(0.002)
Very low * Percent of units			0.017***	(0.001)	0.017***	(0.001)			0.017***	(0.001)	0.018***	(0.001)
Constant	0.134***	(0.0005)	0.167***	(0.001)	0.215***	(0.002)	0.135***	(0.0005)	0.167***	(0.001)	0.215***	(0.002)
Observations	3533678		2868366		2845535		3533678		2868366		2845535	
R2	0.009		0.033		0.035		0.009		0.033		0.035	
Adjusted R2	0.009		0.033		0.035		0.009		0.033		0.035	
Residual Std. Error	0.359 (df = 3533673)		0.343 (df = 2868340)		0.340 (df = 2845491)		0.359 (df = 3533673)		0.343 (df = 2868340)		0.340 (df = 2845491)	
F Statistic	7,588.373*** (df = 4; 3533673)		3,903.629*** (df = 25; 286834		2,382.863*** (df = 43; 284549		7,641.340*** (df = 4; 3533673)		3,908.246*** (df = 25; 286834		2,385.641*** (df = 43; 284549	
Note:	*p<0.1; **p<0.05; ***p<0.01											

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Table D3b Outmigration – Rent Stabilization

Outmigration	No lag						1-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Percent of units covered	-0.010***	(0.0005)	0.005***	(0.001)	-0.001	(0.002)	-0.011***	(0.0005)	0.004**	(0.001)	-0.002	(0.002)
High income	-0.013***	(0.001)	-0.019***	(0.001)	-0.018***	(0.001)	-0.013***	(0.001)	-0.019***	(0.001)	-0.018***	(0.001)
Low income	-0.014***	(0.001)	-0.012***	(0.001)	-0.014***	(0.001)	-0.014***	(0.001)	-0.012***	(0.001)	-0.014***	(0.001)
Very low income	-0.061***	(0.0005)	-0.044***	(0.001)	-0.043***	(0.001)	-0.060***	(0.0005)	-0.044***	(0.001)	-0.043***	(0.001)
Household head age 30-34			-0.016***	(0.001)	-0.016***	(0.001)			-0.016***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.035***	(0.001)	-0.034***	(0.001)			-0.035***	(0.001)	-0.034***	(0.001)
Household head age 40-44			-0.050***	(0.001)	-0.048***	(0.001)			-0.050***	(0.001)	-0.048***	(0.001)
Household head age 45-49			-0.058***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)
Household head age 50-54			-0.061***	(0.001)	-0.059***	(0.001)			-0.061***	(0.001)	-0.059***	(0.001)
Household head age 55-59			-0.061***	(0.001)	-0.059***	(0.001)			-0.061***	(0.001)	-0.059***	(0.001)
Household head age 60-64			-0.057***	(0.001)	-0.056***	(0.001)			-0.058***	(0.001)	-0.056***	(0.001)
Household head age 65-69			-0.046***	(0.001)	-0.046***	(0.001)			-0.046***	(0.001)	-0.046***	(0.001)
Household head age 65+			-0.060***	(0.001)	-0.056***	(0.001)			-0.060***	(0.001)	-0.056***	(0.001)
Household head age 70-74			-0.051***	(0.001)	-0.051***	(0.001)			-0.051***	(0.001)	-0.051***	(0.001)
Household head age 75+			-0.049***	(0.001)	-0.049***	(0.001)			-0.049***	(0.001)	-0.049***	(0.001)
Black			0.005***	(0.001)	0.007***	(0.001)			0.005***	(0.001)	0.007***	(0.001)
Latinx			-0.003***	(0.001)	-0.0004	(0.001)			-0.003***	(0.001)	-0.0004	(0.001)
White			0.028***	(0.0004)	0.025***	(0.0004)			0.028***	(0.0004)	0.025***	(0.0004)
Length of residence			-0.005***	(0.00003)	-0.005***	(0.00003)			-0.005***	(0.00003)	-0.005***	(0.00003)
Number of children			-0.009***	(0.0005)	-0.009***	(0.0005)			-0.009***	(0.0005)	-0.009***	(0.0005)
Non-married			0.003***	(0.001)	-0.003***	(0.001)			0.003***	(0.001)	-0.003***	(0.001)
Number of adults			0.007***	(0.0004)	0.005***	(0.0004)			0.007***	(0.0004)	0.005***	(0.0004)
Percent vacant in 2000					-0.0003***	(0.0001)					-0.0003***	(0.0001)
Percent of housing built in past 20 years as of 2000					0.00005***	(0.00001)					0.00004***	(0.00001)
Ownership rate in 2000					-0.0004***	(0.00001)					-0.0004***	(0.00001)
Percent foreign-born in 2000					-0.0001***	(0.00002)					-0.0001***	(0.00002)
Median home value in 2000					-0.00000**	(0.000)					-0.00000**	(0.000)
Median gross rent in 2000					-0.00002**	(0.00000)					-0.00002**	(0.00000)
Number of subsidized units in 2016					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Poverty rate in 2000					-0.0005***	(0.00003)					-0.0005***	(0.00003)
Avg. number of new market-rate units built in 3 previous years					0.005***	(0.0003)					0.005***	(0.0003)
Avg. number of new subsidized units built in 3 previous years					-0.002***	(0.0005)					-0.002***	(0.0005)
Avg. outmigration rate for 3 previous years					0.034***	(0.001)					0.034***	(0.001)
Avg. inmigration rate for 3 previous years					-0.003**	(0.001)					-0.003**	(0.001)
Oakland					0.003***	(0.001)					0.003***	(0.001)
San Francisco					-0.002**	(0.001)					-0.001**	(0.001)
San Jose					0.017***	(0.001)					0.017***	(0.001)
South Bay					0.017***	(0.001)					0.017***	(0.001)
High * Percent of units			0.021***	(0.002)	0.023***	(0.002)			0.022***	(0.002)	0.023***	(0.002)
Low * Percent of units			0.005***	(0.002)	0.006***	(0.002)			0.005***	(0.002)	0.006***	(0.002)
Very low * Percent of units			-0.013***	(0.002)	-0.014***	(0.002)			-0.012***	(0.002)	-0.013***	(0.002)
Constant	0.131***	(0.0005)	0.157***	(0.001)	0.205***	(0.002)	0.131***	(0.0005)	0.158***	(0.001)	0.206***	(0.002)
Observations	3533678		2868366		2845535		3533678		2868366		2845535	
R2	0.008		0.033		0.035		0.008		0.033		0.035	
Adjusted R2	0.008		0.033		0.035		0.008		0.033		0.035	
Residual Std. Error	0.359 (df = 3533673)		0.343 (df = 2868340)		0.340 (df = 2845491)		0.359 (df = 3533673)		0.343 (df = 2868340)		0.340 (df = 2845491)	
F Statistic	7,344.225*** (df = 4; 3533673)		3,901.194*** (df = 25; 286834		2,388.013*** (df = 43; 284549		7,355.777*** (df = 4; 3533673)		3,900.545*** (df = 25; 286834		2,388.098*** (df = 43; 284549	
Note:	*p<0.1; **p<0.05; ***p<0.01											

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Table D4a Inmigration – Just Cause

Outmigration	No lag						1-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Percent of units covered	-0.038***	(0.0004)	-0.040***	(0.001)	-0.037***	(0.001)	-0.038***	(0.0004)	-0.040***	(0.001)	-0.037***	(0.001)
High income	0.002***	(0.001)	0.014***	(0.001)	0.007***	(0.001)	0.002***	(0.001)	0.015***	(0.001)	0.008***	(0.001)
Low income	-0.025***	(0.001)	-0.024***	(0.001)	-0.018***	(0.001)	-0.025***	(0.001)	-0.023***	(0.001)	-0.018***	(0.001)
Very low income	-0.067***	(0.001)	-0.053***	(0.001)	-0.039***	(0.001)	-0.068***	(0.001)	-0.053***	(0.001)	-0.039***	(0.001)
Household head age 30-34			-0.016***	(0.001)	-0.016***	(0.001)			-0.016***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.043***	(0.001)	-0.042***	(0.001)			-0.043***	(0.001)	-0.042***	(0.001)
Household head age 40-44			-0.060***	(0.001)	-0.058***	(0.001)			-0.060***	(0.001)	-0.058***	(0.001)
Household head age 45-49			-0.064***	(0.001)	-0.062***	(0.001)			-0.064***	(0.001)	-0.062***	(0.001)
Household head age 50-54			-0.059***	(0.001)	-0.057***	(0.001)			-0.059***	(0.001)	-0.057***	(0.001)
Household head age 55-59			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)
Household head age 60-64			-0.045***	(0.001)	-0.045***	(0.001)			-0.045***	(0.001)	-0.044***	(0.001)
Household head age 65-69			-0.024***	(0.001)	-0.025***	(0.001)			-0.024***	(0.001)	-0.025***	(0.001)
Household head age 65+			-0.038***	(0.001)	-0.036***	(0.001)			-0.038***	(0.001)	-0.036***	(0.001)
Household head age 70-74			-0.023***	(0.001)	-0.024***	(0.001)			-0.023***	(0.001)	-0.024***	(0.001)
Household head age 75+			-0.005***	(0.001)	-0.007***	(0.001)			-0.005***	(0.001)	-0.007***	(0.001)
Black			0.003***	(0.001)	0.003***	(0.001)			0.002***	(0.001)	0.003***	(0.001)
Latinx			-0.008***	(0.0005)	-0.004***	(0.001)			-0.008***	(0.0005)	-0.004***	(0.001)
White			0.024***	(0.0004)	0.020***	(0.0004)			0.024***	(0.0004)	0.020***	(0.0004)
Length of residence			-0.011***	(0.00003)	-0.011***	(0.00003)			-0.011***	(0.00003)	-0.011***	(0.00003)
Number of children			-0.005***	(0.0004)	-0.004***	(0.0004)			-0.005***	(0.0004)	-0.004***	(0.0004)
Non-married			-0.021***	(0.001)	-0.028***	(0.001)			-0.020***	(0.001)	-0.028***	(0.001)
Number of adults			0.017***	(0.0004)	0.016***	(0.0004)			0.017***	(0.0004)	0.016***	(0.0004)
Percent vacant in 2000					0.0001*	(0.00005)					0.0001*	(0.00005)
Percent of housing built in past 20 years as of 2000					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Ownership rate in 2000					-0.0001***	(0.00001)					-0.0001***	(0.00001)
Percent foreign-born in 2000					-0.0001***	(0.00002)					-0.0001***	(0.00002)
Median home value in 2000					-0.000***	(0.000)					-0.000***	(0.000)
Median gross rent in 2000					-0.00002**	(0.00000)					-0.00002**	(0.00000)
Number of subsidized units in 2016					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0002***	(0.00001)					-0.0002***	(0.00001)
Poverty rate in 2000					-0.0004***	(0.00003)					-0.0004***	(0.00003)
Avg. number of new market-rate units built in 3 previous years					0.012***	(0.0002)					0.012***	(0.0002)
Avg. number of new subsidized units built in 3 previous years					0.003***	(0.0004)					0.003***	(0.0004)
Avg. outmigration rate for 3 previous years					0.031***	(0.001)					0.031***	(0.001)
Avg. inmigration rate for 3 previous years					0.012***	(0.001)					0.012***	(0.001)
Oakland					0.005***	(0.001)					0.005***	(0.001)
San Francisco					-0.002**	(0.001)					-0.001*	(0.001)
San Jose					0.007***	(0.001)					0.007***	(0.001)
South Bay					0.007***	(0.001)					0.007***	(0.001)
High * Percent of units			-0.009***	(0.002)	-0.002	(0.002)			-0.010***	(0.002)	-0.003	(0.002)
Low * Percent of units			0.032***	(0.001)	0.029***	(0.002)			0.032***	(0.001)	0.029***	(0.002)
Very low * Percent of units			0.040***	(0.001)	0.035***	(0.001)			0.041***	(0.001)	0.036***	(0.001)
Constant	0.153***	(0.0005)	0.220***	(0.001)	0.232***	(0.002)	0.152***	(0.0005)	0.220***	(0.001)	0.231***	(0.002)
Observations	3422623		2797226		2773775		3422623		2797226		2773775	
R2	0.012		0.080		0.081		0.012		0.080		0.081	
Adjusted R2	0.012		0.080		0.081		0.012		0.080		0.081	
Residual Std. Error	0.349 (df = 3422618)		0.316 (df = 2797200)		0.313 (df = 2773731)		0.349 (df = 3422618)		0.316 (df = 2797200)		0.313 (df = 2773731)	
F Statistic	10,115.770*** (df = 4; 342261		9,692.678*** (df = 25; 279720		5,715.020*** (df = 43; 277373		10,117.780*** (df = 4; 342261		9,696.261*** (df = 25; 279720		5,716.511*** (df = 43; 277373	
Note:	*p<0.1; **p<0.05; ***p<0.01											

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Table D4a Inmigration – Rent Stabilization

Outmigration	No lag						1-year lag					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Percent of units covered	-0.048***	(0.001)	-0.029***	(0.001)	-0.027***	(0.002)	-0.049***	(0.001)	-0.031***	(0.001)	-0.029***	(0.002)
High income	0.001**	(0.001)	0.012***	(0.001)	0.005***	(0.001)	0.002**	(0.001)	0.012***	(0.001)	0.006***	(0.001)
Low income	-0.022***	(0.001)	-0.016***	(0.001)	-0.011***	(0.001)	-0.022***	(0.001)	-0.017***	(0.001)	-0.012***	(0.001)
Very low income	-0.063***	(0.001)	-0.042***	(0.001)	-0.030***	(0.001)	-0.063***	(0.001)	-0.042***	(0.001)	-0.031***	(0.001)
Household head age 30-34			-0.016***	(0.001)	-0.016***	(0.001)			-0.016***	(0.001)	-0.016***	(0.001)
Household head age 35-39			-0.043***	(0.001)	-0.042***	(0.001)			-0.043***	(0.001)	-0.042***	(0.001)
Household head age 40-44			-0.060***	(0.001)	-0.058***	(0.001)			-0.060***	(0.001)	-0.058***	(0.001)
Household head age 45-49			-0.064***	(0.001)	-0.062***	(0.001)			-0.064***	(0.001)	-0.062***	(0.001)
Household head age 50-54			-0.059***	(0.001)	-0.057***	(0.001)			-0.059***	(0.001)	-0.057***	(0.001)
Household head age 55-59			-0.052***	(0.001)	-0.051***	(0.001)			-0.052***	(0.001)	-0.051***	(0.001)
Household head age 60-64			-0.046***	(0.001)	-0.044***	(0.001)			-0.046***	(0.001)	-0.044***	(0.001)
Household head age 65-69			-0.024***	(0.001)	-0.025***	(0.001)			-0.024***	(0.001)	-0.025***	(0.001)
Household head age 65+			-0.038***	(0.001)	-0.036***	(0.001)			-0.038***	(0.001)	-0.036***	(0.001)
Household head age 70-74			-0.023***	(0.001)	-0.024***	(0.001)			-0.023***	(0.001)	-0.024***	(0.001)
Household head age 75+			-0.005***	(0.001)	-0.007***	(0.001)			-0.005***	(0.001)	-0.007***	(0.001)
Black			0.002***	(0.001)	0.003***	(0.001)			0.002***	(0.001)	0.003***	(0.001)
Latinx			-0.008***	(0.0005)	-0.004***	(0.001)			-0.008***	(0.0005)	-0.004***	(0.001)
White			0.023***	(0.0004)	0.020***	(0.0004)			0.023***	(0.0004)	0.020***	(0.0004)
Length of residence			-0.011***	(0.00003)	-0.011***	(0.00003)			-0.011***	(0.00003)	-0.011***	(0.00003)
Number of children			-0.004***	(0.0004)	-0.004***	(0.0004)			-0.004***	(0.0004)	-0.004***	(0.0004)
Non-married			-0.021***	(0.001)	-0.028***	(0.001)			-0.021***	(0.001)	-0.028***	(0.001)
Number of adults			0.017***	(0.0004)	0.016***	(0.0004)			0.017***	(0.0004)	0.016***	(0.0004)
Percent vacant in 2000					-0.00003	(0.00005)					-0.00003	(0.00005)
Percent of housing built in past 20 years as of 2000					0.00001	(0.00001)					0.00000	(0.00001)
Ownership rate in 2000					-0.0002***	(0.00001)					-0.0002***	(0.00001)
Percent foreign-born in 2000					-0.0001***	(0.00002)					-0.0001***	(0.00002)
Median home value in 2000					-0.000***	(0.000)					-0.000***	(0.000)
Median gross rent in 2000					-0.00002**	(0.00000)					-0.00002**	(0.00000)
Number of subsidized units in 2016					-0.00001**	(0.00000)					-0.00001**	(0.00000)
Percent college-educated in 2000					0.0004***	(0.00002)					0.0004***	(0.00002)
Percent Hispanic in 2000					-0.0002***	(0.00001)					-0.0002***	(0.00001)
Poverty rate in 2000					-0.0004***	(0.00003)					-0.0004***	(0.00003)
Avg. number of new market-rate units built in 3 previous years					0.012***	(0.0002)					0.012***	(0.0002)
Avg. number of new subsidized units built in 3 previous years					0.003***	(0.0004)					0.003***	(0.0004)
Avg. outmigration rate for 3 previous years					0.031***	(0.001)					0.031***	(0.001)
Avg. inmigration rate for 3 previous years					0.013***	(0.001)					0.012***	(0.001)
Oakland					0.005***	(0.001)					0.005***	(0.001)
San Francisco					-0.003***	(0.001)					-0.002***	(0.001)
San Jose					0.010***	(0.001)					0.010***	(0.001)
South Bay					0.010***	(0.001)					0.010***	(0.001)
High * Percent of units			-0.010***	(0.002)	-0.001	(0.002)			-0.010***	(0.002)	-0.002	(0.002)
Low * Percent of units			0.023***	(0.002)	0.019***	(0.002)			0.024***	(0.002)	0.021***	(0.002)
Very low * Percent of units			0.024***	(0.002)	0.022***	(0.002)			0.026***	(0.002)	0.023***	(0.002)
Constant	0.152***	(0.0005)	0.212***	(0.001)	0.228***	(0.002)	0.152***	(0.0005)	0.212***	(0.001)	0.229***	(0.002)
Observations	3422623		2797226		2773775		3422623		2797226		2773775	
R2	0.012		0.079		0.081		0.012		0.079		0.081	
Adjusted R2	0.012		0.079		0.081		0.012		0.079		0.081	
Residual Std. Error	0.349 (df = 3422618)		0.316 (df = 2797200)		0.313 (df = 2773731)		0.348 (df = 3422618)		0.316 (df = 2797200)		0.313 (df = 2773731)	
F Statistic	10,254.430*** (df = 4; 342261		9,637.267*** (df = 25; 279720		5,699.270*** (df = 43; 277373		10,327.270*** (df = 4; 342261		9,642.798*** (df = 25; 279720		5,701.677*** (df = 43; 277373	
Note:	*p<0.1; **p<0.05; ***p<0.01											

Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Appendix E. Renter Proxy, CCP

We separately examined residents younger than 65 years old in our sample who live in households without mortgages as a proxy for renters for all models. This sample can still include households who have paid off their mortgage.

New Production

Outmigration

The differences in results for new production and outmigration between the samples suggest that new market-rate development primarily keeps middle-high SES homeowners in place and that new subsidized housing may promote flight among higher-SES homeowners.

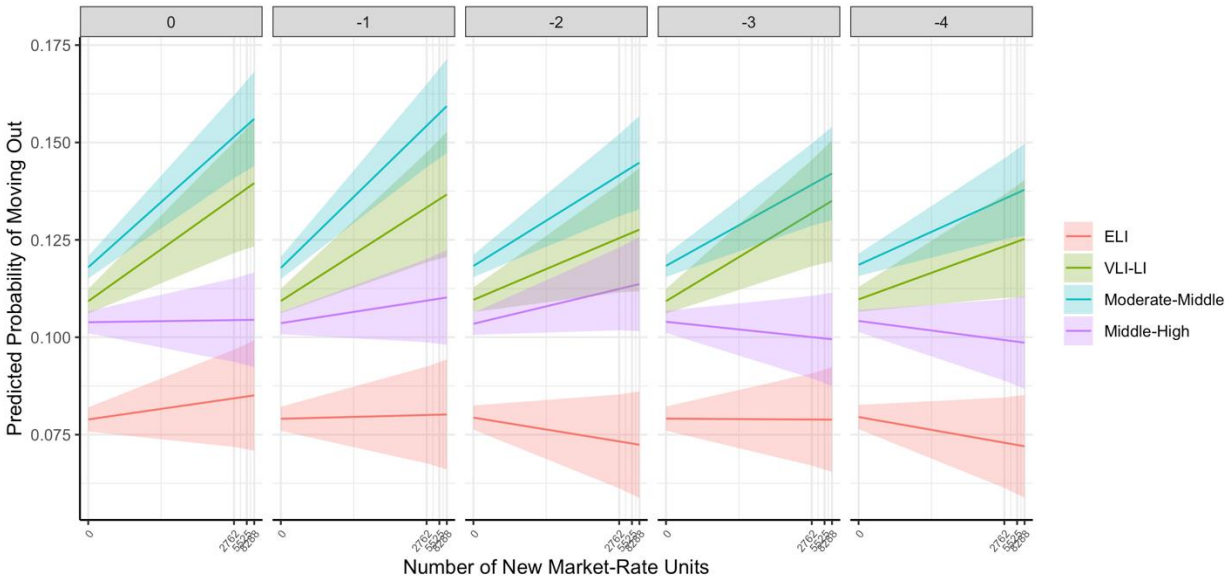
First, for new market-rate units, there is a weak positive effect 2 years after new market-rate construction is built. New market-rate construction increases the probability that VLI-LI and moderate-middle SES residents move out, with the effect lasting up to 4 years after new housing is built. For ELI residents in this sample, new market-rate housing is not associated with a greater probability of moving out in the year housing is built. Moreover, the probability that middle-high SES residents move out is significantly higher than for ELI residents in neighborhoods with new market-rate housing across most of the distribution in all years after the new housing is built, while the differences between ELI and middle-high SES residents in the sample including mortgage holders are slightly smaller.[31] For subsidized units, moderate-middle SES residents are also more likely to move out in the year they are built, in addition to the same years as the full sample. Middle-high SES residents are only more likely to move out in the same year that units are built.[32]

[31] In logistic regression models, results for ELI and moderate-middle SES residents are the same. VLI-LI residents are only more likely to move out in the same year, 1, and 3 years after. Middle-high SES residents are also more likely to move out 1 year after units are built, and effects are stronger than in the LPM results.

[32] In logistic regression models, results for ELI and VLI-LI residents are the same. Moderate-middle SES residents are only more likely to move out with new construction in the same year and 2 years after, while middle-high SES residents are more likely to move out in the same year, 1, and 4 years after units are built.

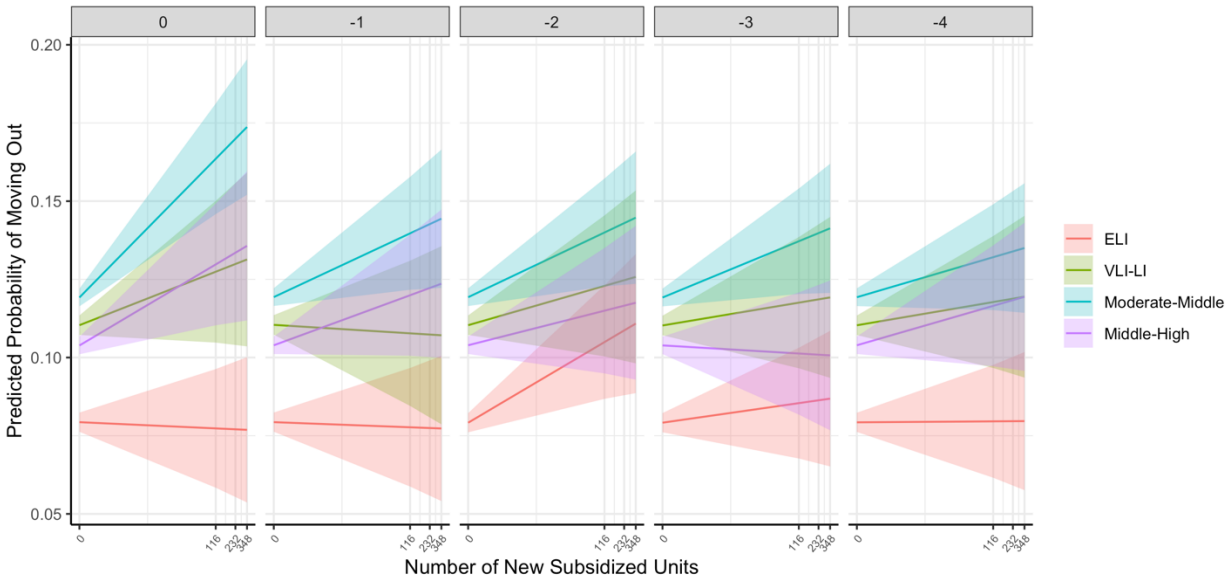
Figure E1. Predicted Probabilities by SES for Non-Mortgage Holders between Ages 25-64 of Moving Out from Block Groups by Number of New (a) Market-Rate, and (b) Subsidized Units

(a) Market-Rate



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

(b) Subsidized



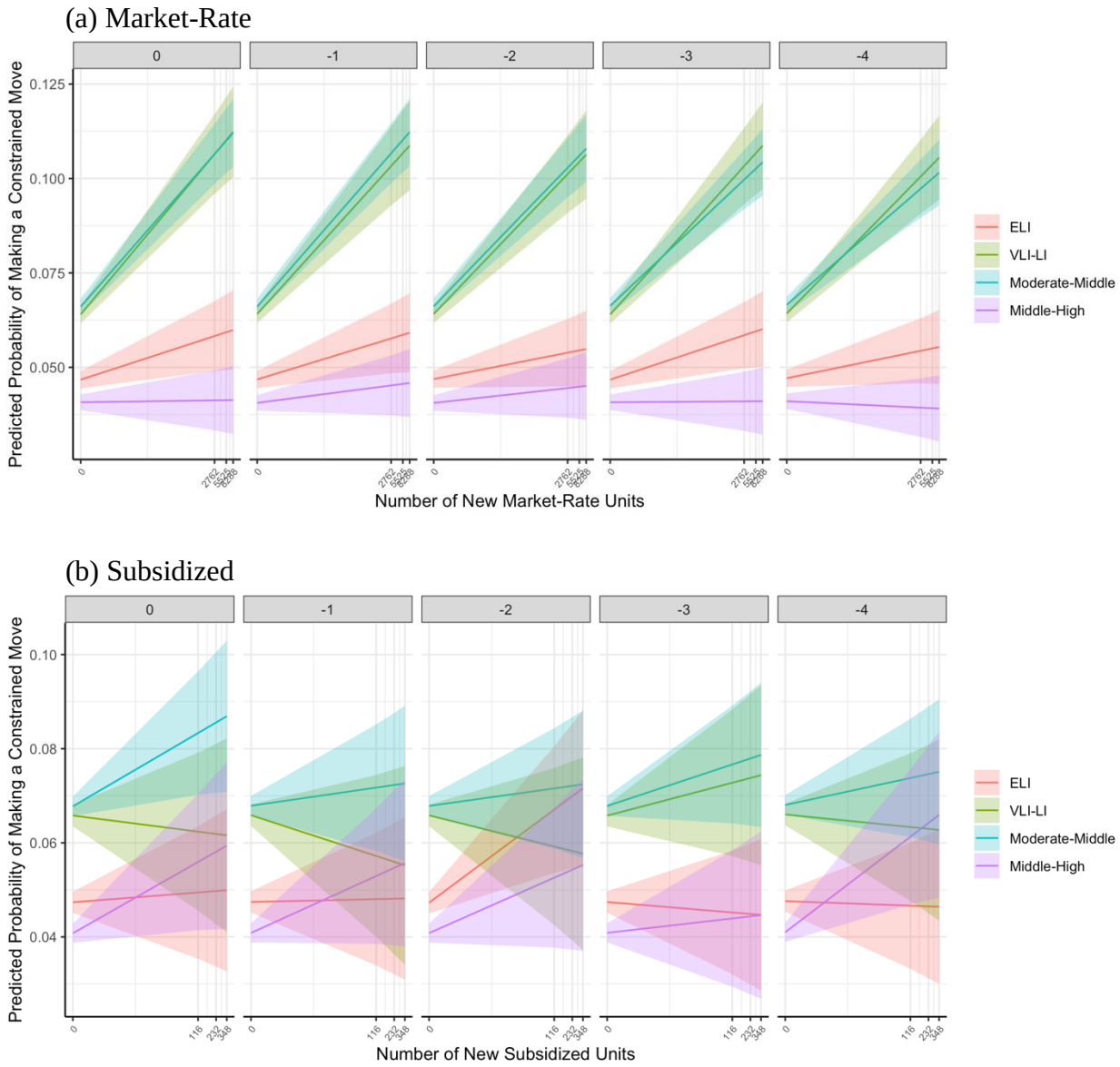
Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Constrained Moves

For constrained moves, results are relatively similar between the full and non-mortgage holder samples, but there are a few small differences. Figures E2 to E4 illustrate these differences.

First, when considering destination household income deciles, for new market-rate units, results are extremely similar, but with wider error bars and additionally with smaller gaps between high-SES movers and everyone else. For subsidized units, there are no longer any effects for ELI residents. The error bars are also wider, and middle-high SES residents are more likely to make a constrained move 4 years after subsidized units are built. [Figure E2]

Figure E2. Predicted Probability of Making a Constrained Move by SES among Non-Mortgage Holders between Ages 25-64 from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Median Household Income Deciles

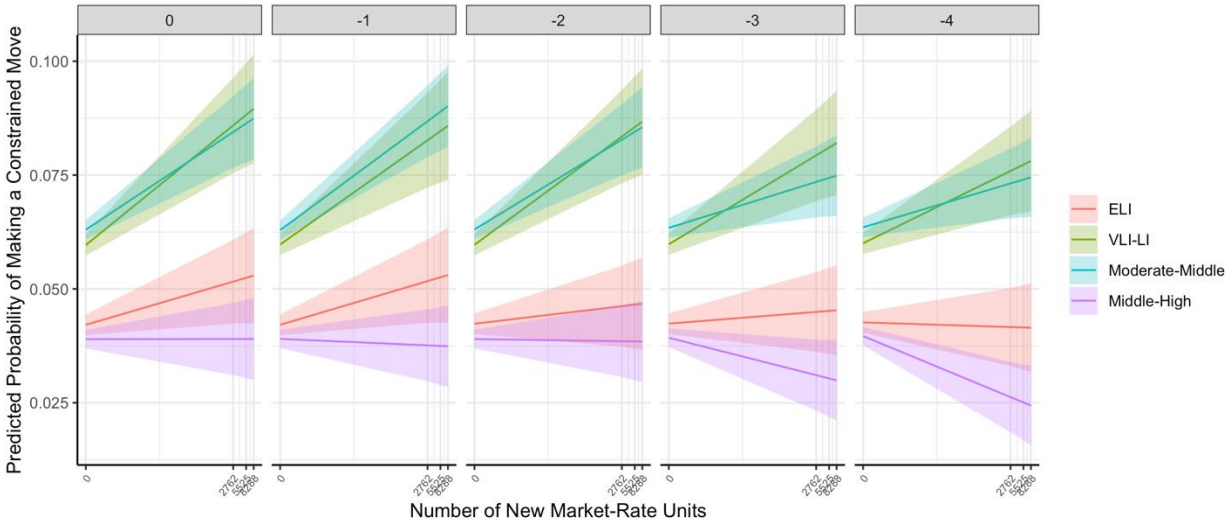


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

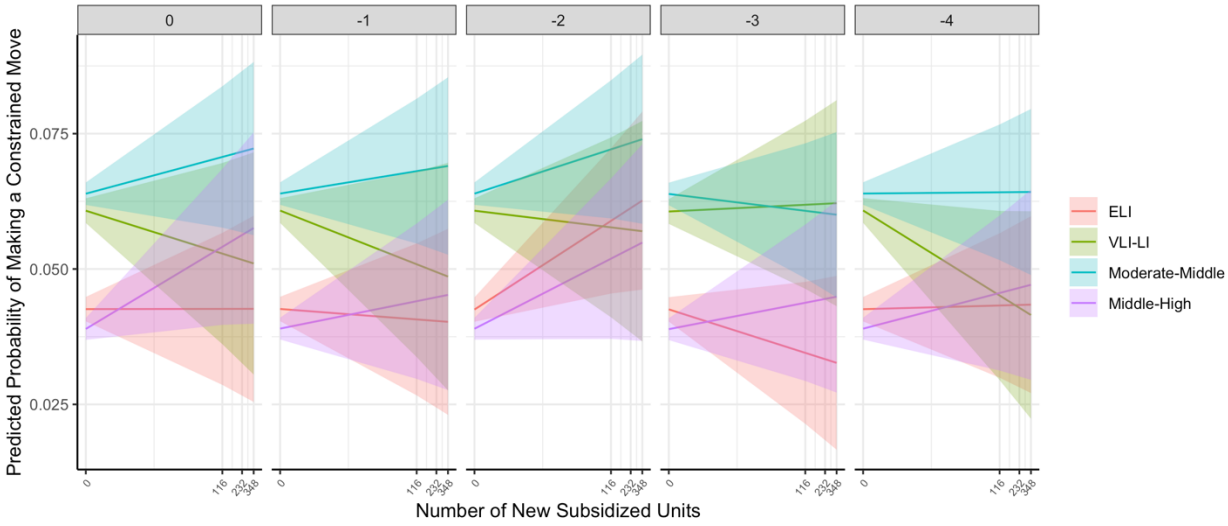
When assessing destinations using poverty rate deciles, figure E3 shows that for market-rate units, the effects are smaller than in the full sample. The effects are still the same for ELI and moderate-middle SES residents, but there are no longer any positive effects for VLI-LI residents starting 2 years after units are built. For middle-high SES residents, negative effects start 3 years after units are built instead of 2 years after in the full sample. Subsidized units only have a negative effect for ELI residents 4 years after units are built. There are no longer had any negative effects for VLI-LI and moderate-middle SES residents, and no longer any significant effects for middle-high SES residents.

Figure E3. Predicted Probability of Making a Constrained Move by SES among Non-Mortgage Holders between Ages 25-64 from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Poverty Rate Deciles

(a) Market-Rate



(b) Subsidized

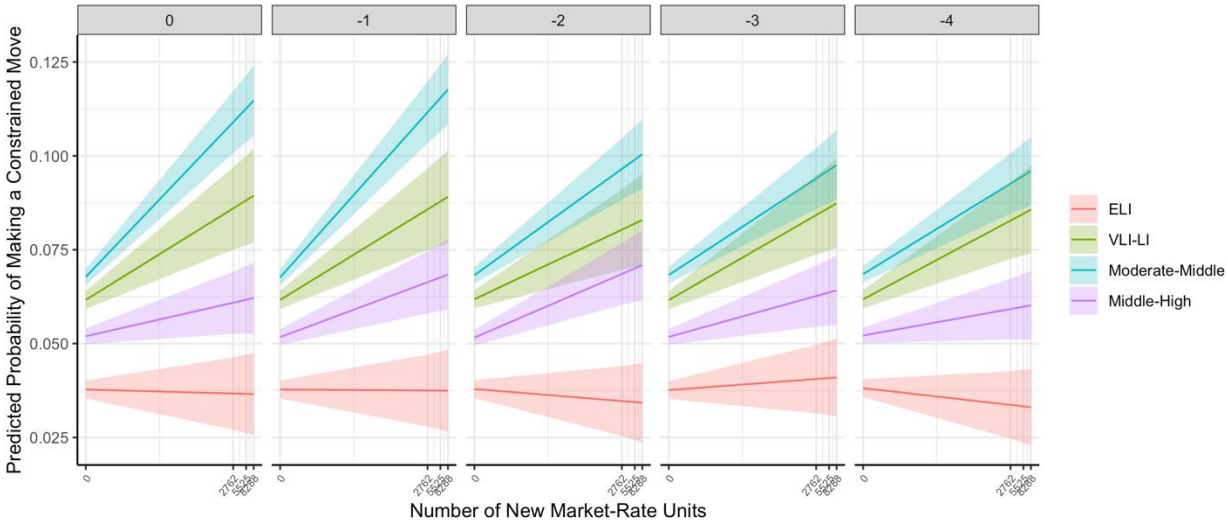


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

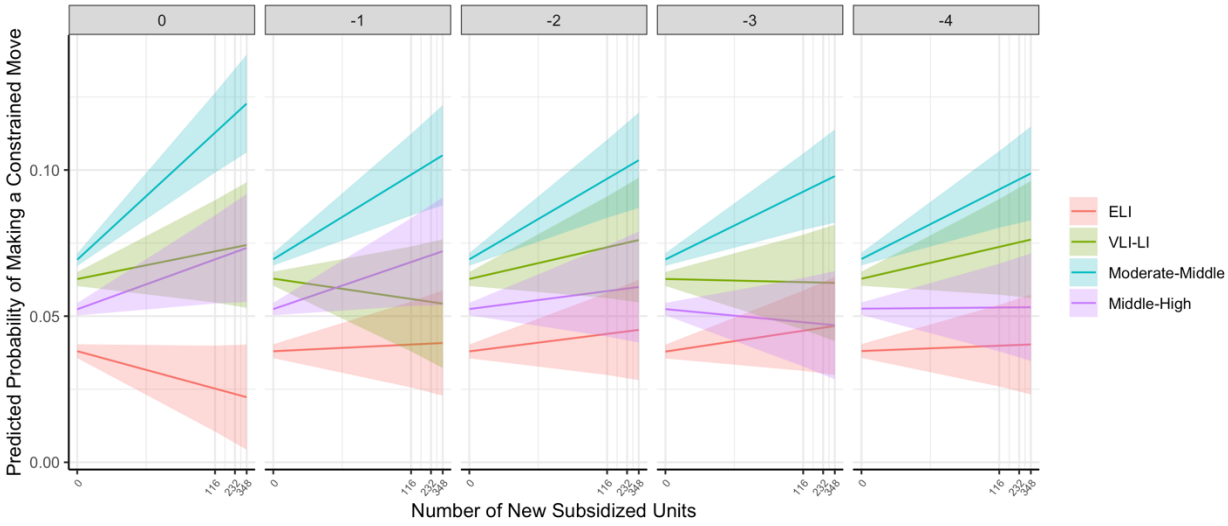
Results using median rent deciles [Figure E4] to assess destination neighborhoods also differ slightly with the non-mortgage holding sample. For market-rate units, results for ELI and moderate-middle SES residents remain consistent. While VLI-LI residents are more likely to make a constrained move in all years in the full sample, there are no effects for VLI-LI residents in the subsample. While there are no effects for middle-high SES residents in the full sample, middle-high SES probable renters in the subsample are more likely to make a constrained move starting the year units are built, with effects lasting up to 3 years after. Subsidized units no longer increase the probability to make a constrained move for ELI residents 2 and 4 years later For VLI-LI residents, new subsidized units no longer increase the probability to make a constrained move 2 years after and instead reduces it in the same year units are built. There are no changes for moderate-middle SES residents, who experience an increased likelihood to make a constrained move in all years. High-SES residents are more likely to make a constrained move in the same year and in the year after only instead of in the same year, 1, 2, and 4 years after.

Figure E4. Predicted Probability of Making a Constrained Move by SES among Non-Mortgage Holders between Ages 25-64 from Block Groups with New Units (a) Market-Rate (b) Subsidized, Using Median Rent Deciles

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

Individual-level linear probability model

The differences in the market-rate linear probability models and multinomial models suggest that concentrations of new housing production—both market-rate and subsidized—have a stronger effect attracting higher-SES probable renters and inconsistently attract lower-SES ones.

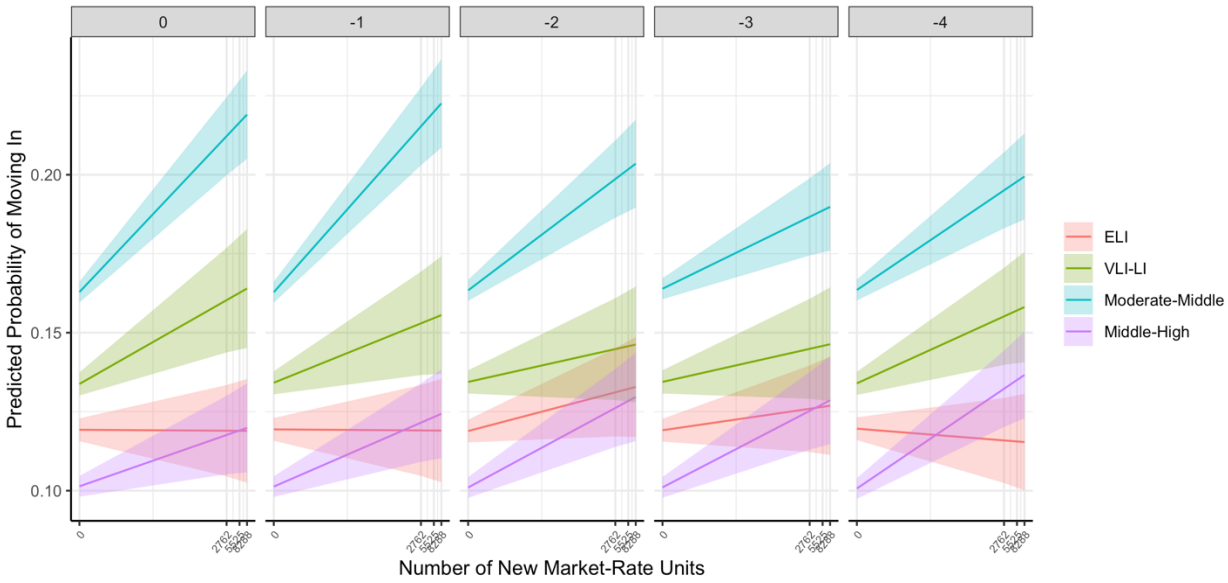
The results from the full linear probability model with interaction terms, presented in Figure E5, show that the effects do differ slightly from results for the full sample with inmigration. New market-rate housing is no longer associated with inmigration of ELI residents except very weakly 2 years after. It is only associated with inmigration of VLI-LI residents in the same year, 1 and 4 years after instead of in all years. It still has a positive effect for moderate-middle SES and middle-high SES residents in all years.[33] New subsidized units encourage inmigration of ELI residents weakly 3 years after they are built, but no longer encourages inmigration of VLI-LI residents 4 years after they are built. Instead of encouraging inmigration of middle-high SES residents starting in the same year and lasting up to 3 years after, there are effects for middle-high SES residents in the year and 2 years after only.[34]

[33] In logistic models, results are the same for all.

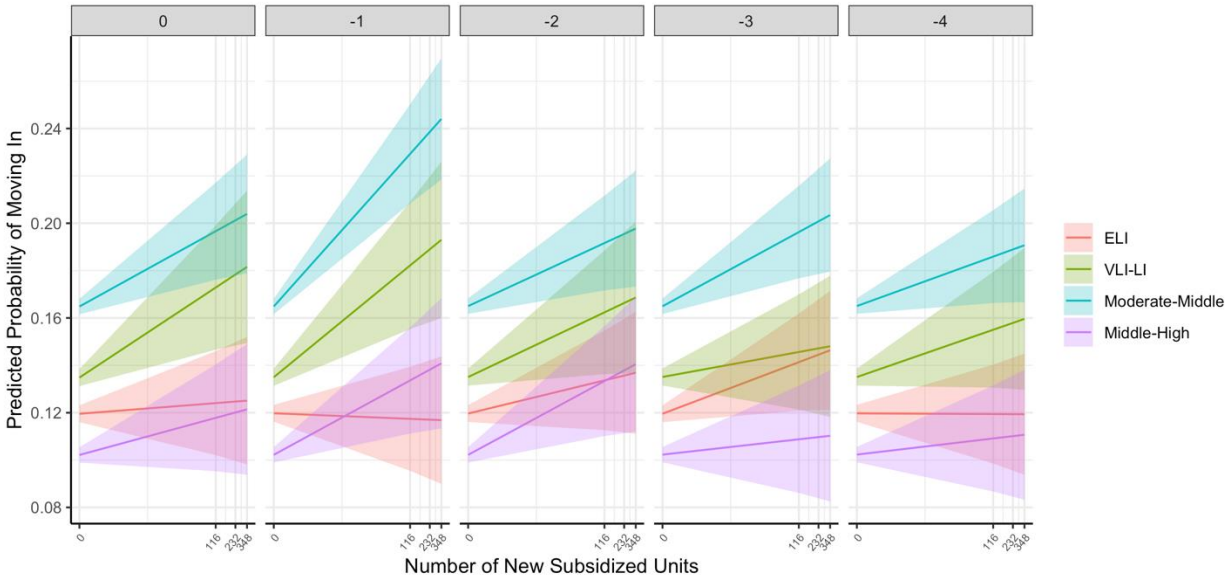
[34] In logistic regression models, results are the same for ELI residents. The difference for VLI-LI residents is that they are not more likely to move in 2 years after subsidized units are built. Moderate-middle SES residents are not more likely to move in 4 years after, and high-SES residents are also more likely to move in in the same year in addition to 1 and 2 years after.

Figure E5. Predicted Probabilities by SES of Moving into Block Groups among Non-Mortgage Holders between Ages 25-64 by Number of New (a) Market-Rate, and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

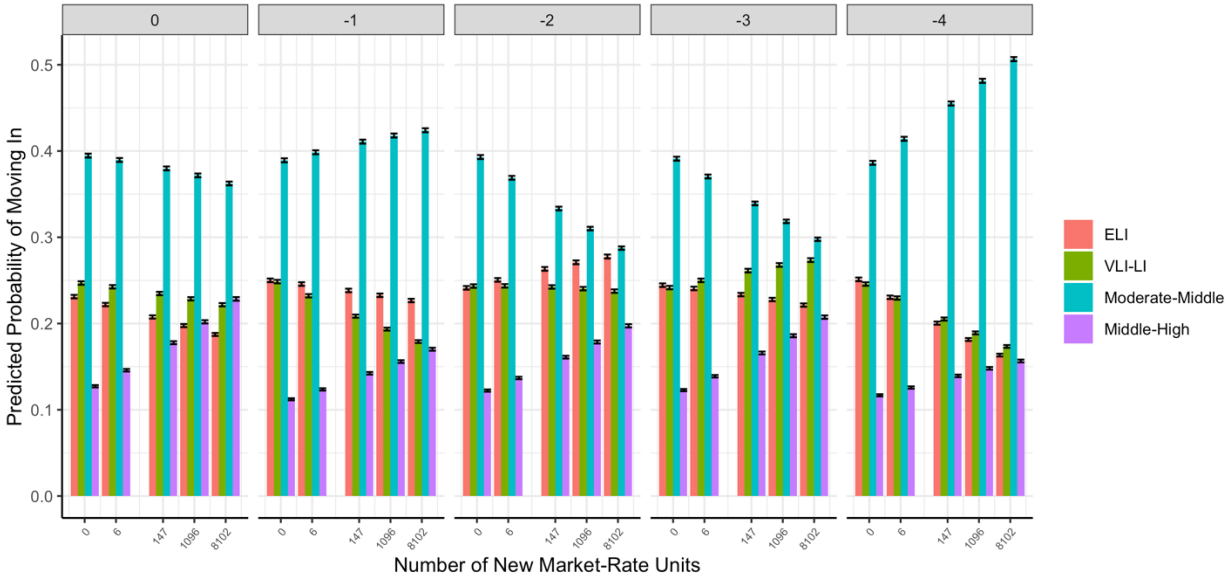
Inmigration

Individual-level multinomial logit model

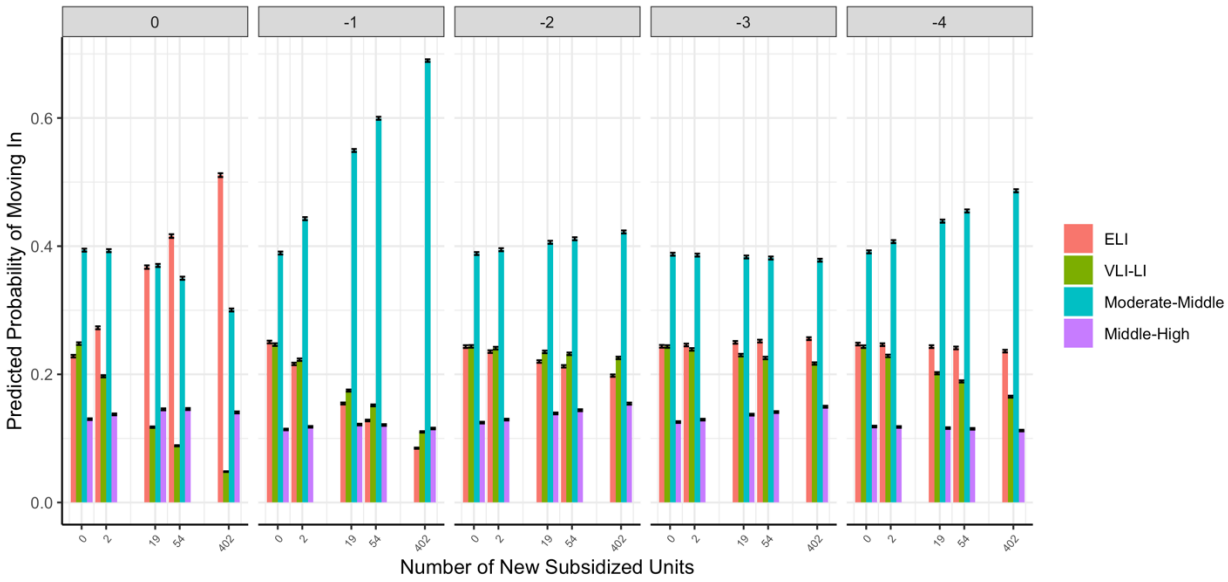
Results from multinomial models for inmigration, presented in Figure E6, differ for the non-mortgage subsample. Among younger non-mortgage holding inmovers, most are moderate-middle SES, and middle-high SES residents comprise a smaller share. For market-rate units, the likelihood that inmovers are middlle-to-high-SES residents increases with more new housing across all years, but, unlike the full sample, the likelihood that residents are ELI increases with more new housing 2 years after it is built, though this positive effect is not present in other years. VLI-LI residents are also consistently less likely to move into neighborhoods as more market-rate units are built, except 3 years after, where there is a slightly positive effect. Moderate-middle SES residents are more likely to move in 1 and 4 years after, but are less likely to in other years. For subsidized units, the likelihood that inmovers are moderate-middle SES increases substantially with new subsidized units in the year after new subsidized production is built and 2 and 4 years after but are slightly decreasing in other years, while the likelihood that they are ELI increases with more production in the year they are built and 3 years after but decreases in other years. The likelihood that inmovers are VLI-LI decreases with new production in all years. The likelihood that inmovers are middle-high SES increases with new production very slightly in all years except for 4 years after.

Figure E6. Predicted Composition of Non-Mortgage Holding Movers Ages 25-64 into Block Groups by Number of New (a) Market-Rate, and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Tenant Protections

Outmigration

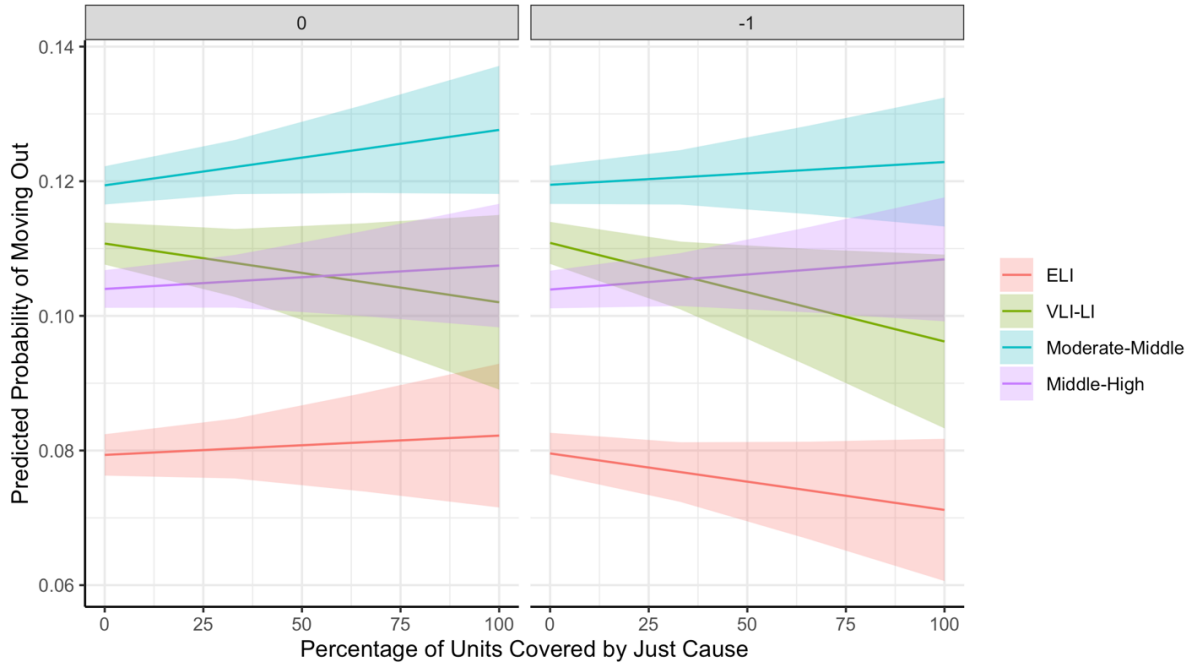
Analyses of outmigration for non-mortgage holders aged 25-64 suggest that the lowest-SES residents are not necessarily able to take full advantage of these stabilization policies.

Figure E7 shows that the differences between the SES groups become narrower and probable renters have a lower rate of moving out in general. Both just cause protections and rent stabilization decrease the probability of outmigration for both ELI and VLI-LI residents the year after units are covered. Nonetheless, increases in just cause and rent stabilized units still increase the probability of outmigration for moderate-middle and middle-high SES residents—in the same year and the year after just cause protections and for rent stabilization respectively for moderate-middle SES, and in both years and the year after for rent stabilization and just cause protections respectively for middle-high SES residents.[35]

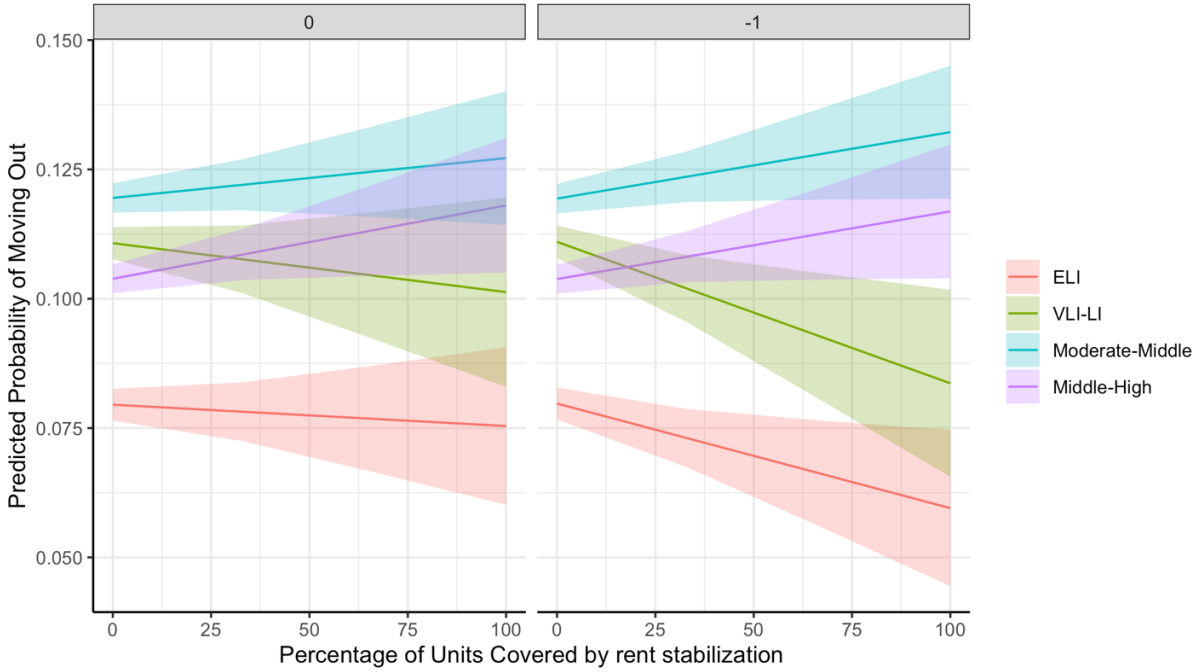
[35] In logistic regression models, results were the same for all.

Figure E7. Predicted Probability of Moving Out among Non-Mortgage Holders between Ages 25-64 by SES and Percent of Units Covered by (a) Just Cause; and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



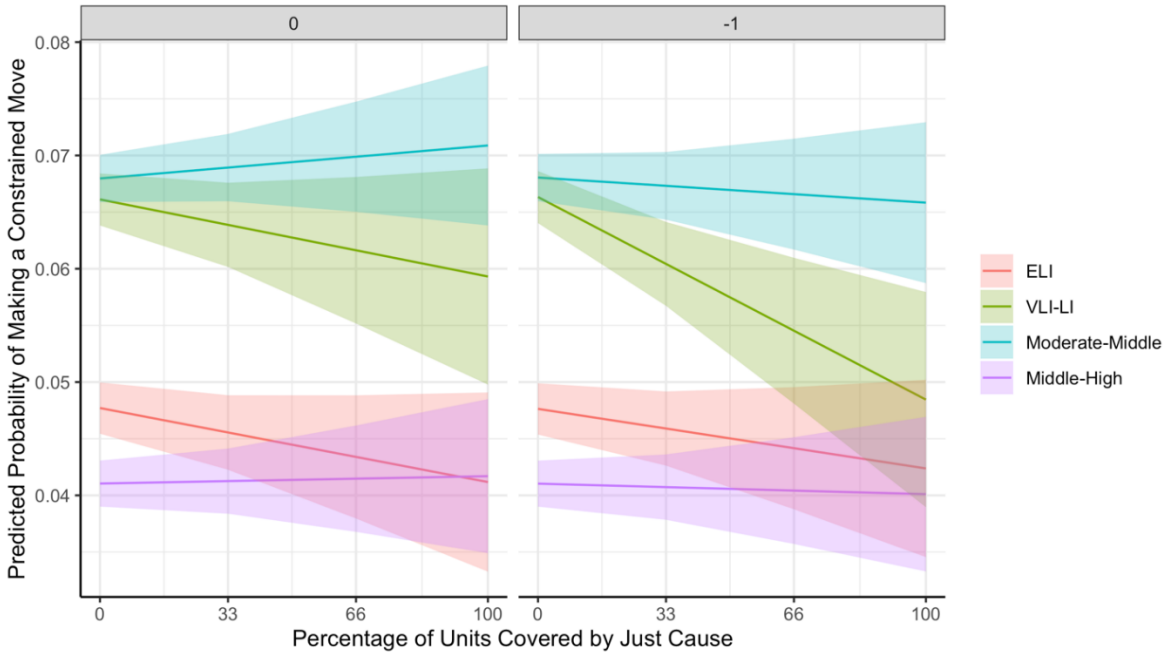
Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Constrained Moves

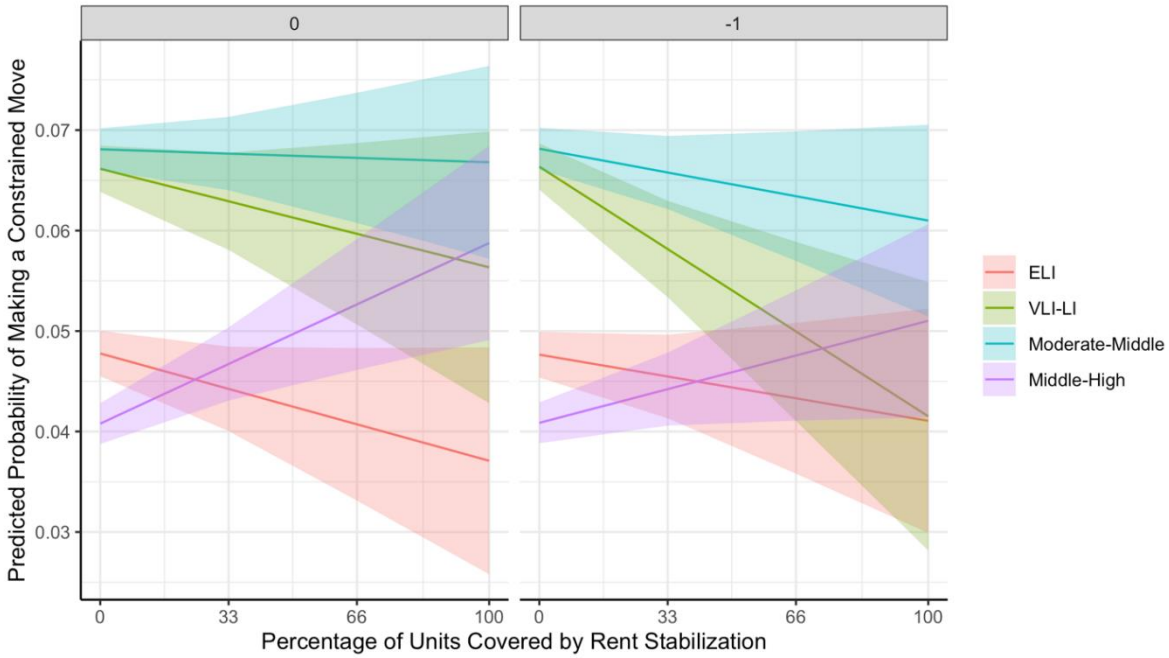
For constrained moves, figure E8 shows that increases in the percent of units covered by just cause protections no longer have a significant effect for ELI residents in the same year and for VLI-LI residents in the year after. The effect for ELI residents in the same year that rent stabilization units are covered is no longer significant, and the effect for VLI-LI resident in the year after is no longer significant.

Figure E8. Predicted Probability of Making a Constrained Move among Non-Mortgage Holders Ages 25-64 by SES from Block Groups by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization, Using Median Household Income Deciles

(a) Just Cause for Evictions



(b) Rent Stabilization

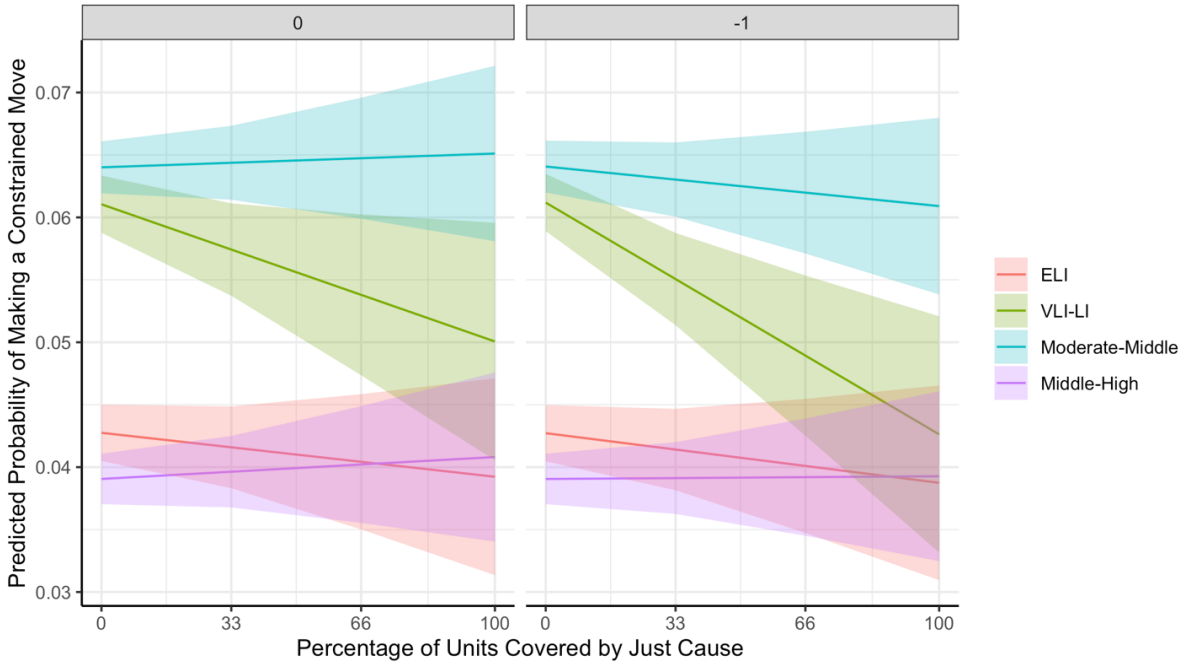


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

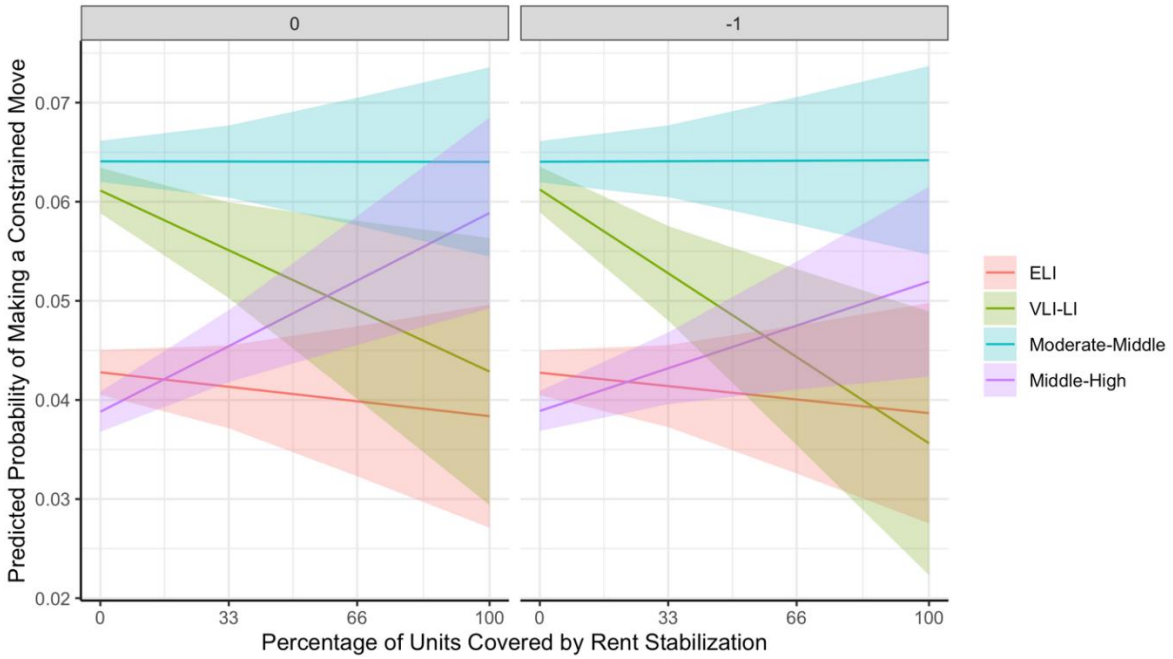
Figure E9 shows that when considering just cause units, increases in the percent of units covered by just cause protections no longer has effects for VLI-LI residents in both years. There are no longer any effects for VLI-LI residents in the same year units are covered by rent stabilization, and for moderate-middle SES residents the year after, using poverty rate deciles.

Figure E9. Predicted Probability of Making a Constrained Move among Non-Mortgage Holders Ages 25-64 by SES from Block Groups by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization, Using Poverty Rate Deciles

(a) Just Cause for Evictions



(b) Rent Stabilization

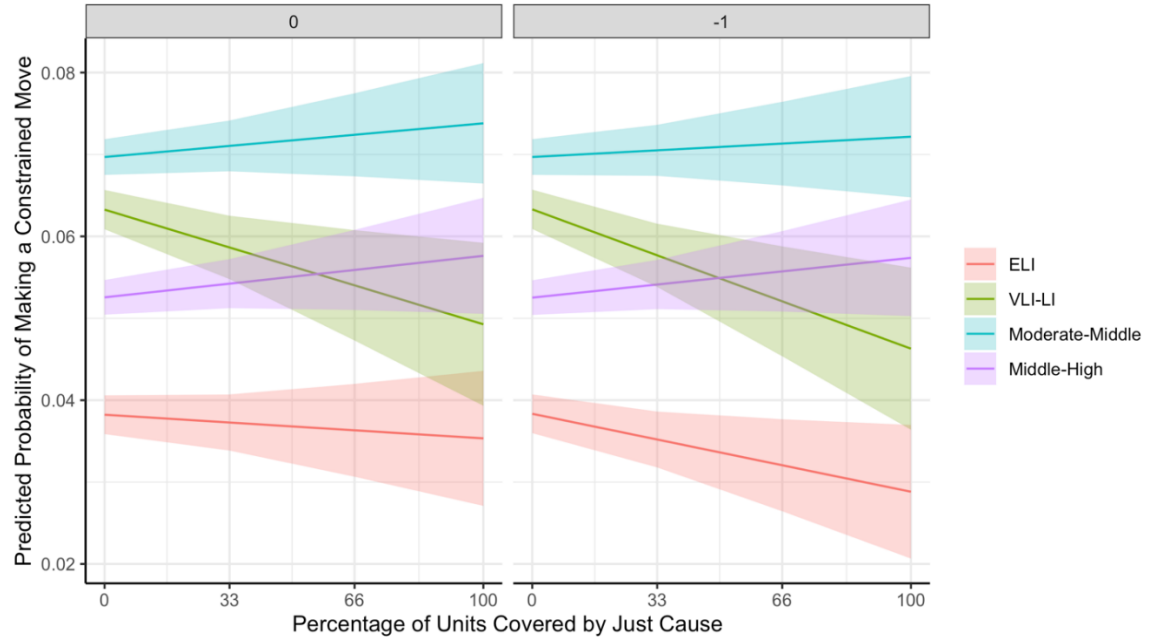


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

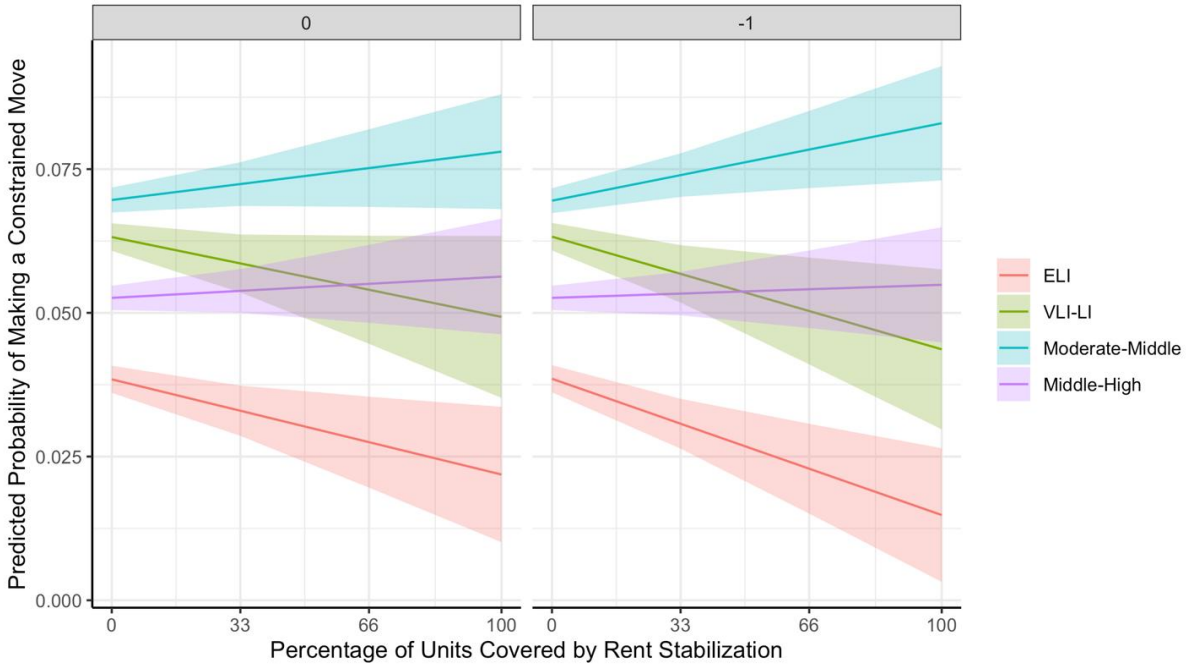
Figure E10 shows the predicted probabilities for constrained moves using median rent deciles. Increases in just cause units no longer decrease the probability of making a constrained move for VLI-LI residents in the same year, but results remain the same for other groups. Increases in percent of units covered by rent control now decrease the probability of making a constrained move for ELI residents in both years instead of only in the year after. And, there are no longer significant effects for moderate-middle SES residents in the same year.

Figure E10. Predicted Probability of Making a Constrained Move among Non-Mortgage Holders Ages 25-64 by SES from Block Groups by Percent of Units Covered by (a) Just Cause and (b) Rent Stabilization, Using Median Rent Deciles

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Inmigration

Individual-level linear probability model

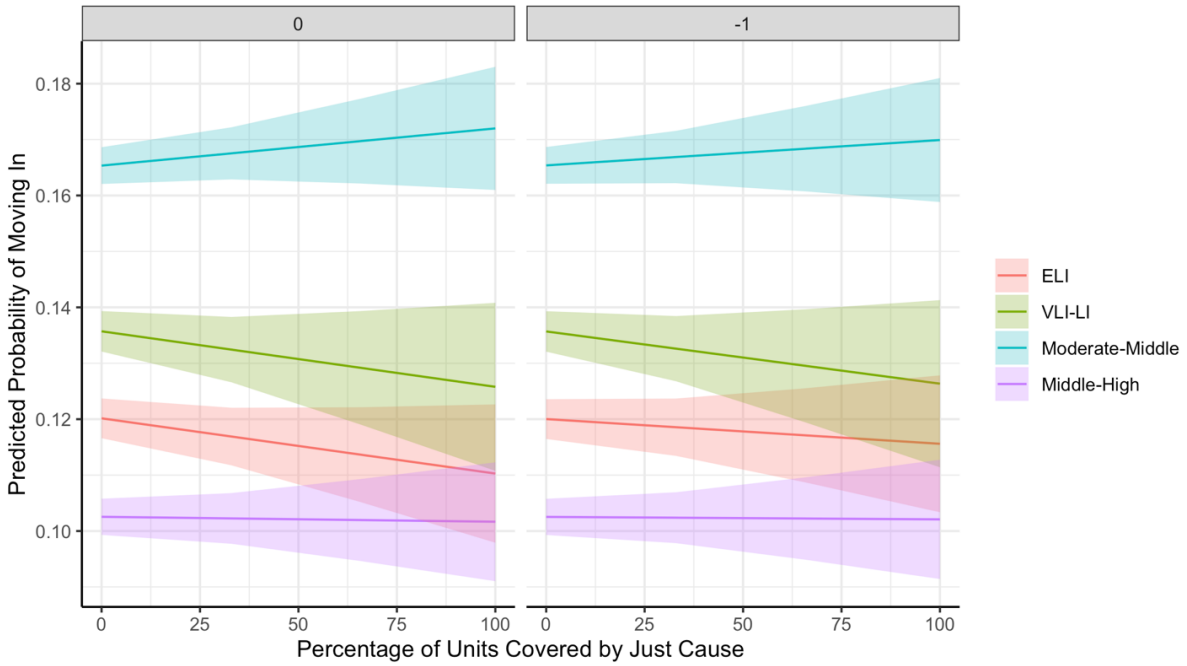
Like the findings for the full sample, tenant protections do not appear to encourage lower-SES renters to move in, but rent stabilization increases the proportions of probable renters who move in who are lower-SES.

We separately examined the effects of tenant protections for non-mortgage holders ages 25-64 for inmigration. This sample could still include those who have paid off their mortgage. The trends in Figure E11 based on the linear probability models predicting the likelihood of moving into a neighborhood on SES and the percentage of protected units are similar to those in the full sample but have wider errors in the estimates, making them insignificant. Nonetheless, rent stabilization still has a positive effect for moderate-middle SES residents the year after, but it has no effects for other groups. Just cause units do not have significant effects for any groups in any year.[36]

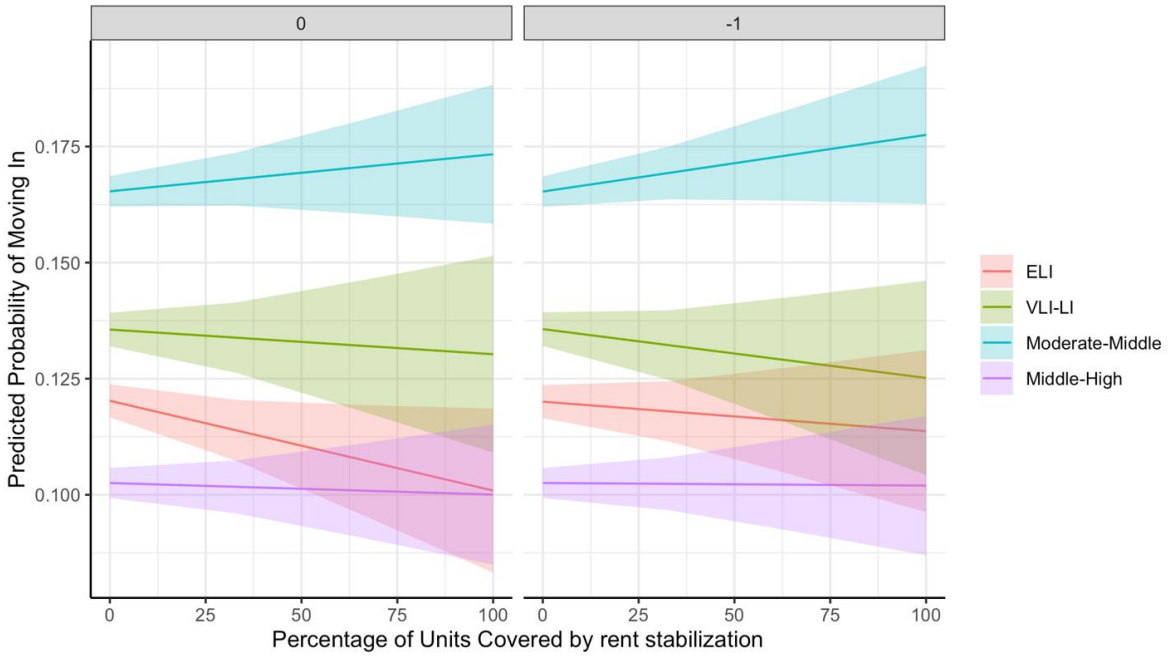
[36] In logistic regression models, there was a slightly negative effect for ELI residents in the same year, and positive effects for middle-high SES residents in both year for rent control units. There were similarly no significant effects for any group in either year for just cause protected units.

Figure E11. Predicted Probabilities by SES of Moving into Block Groups among Non-Mortgage Holders between Ages 25-64 by Percent of Units Covered by (a) Just Cause; and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Inmigration

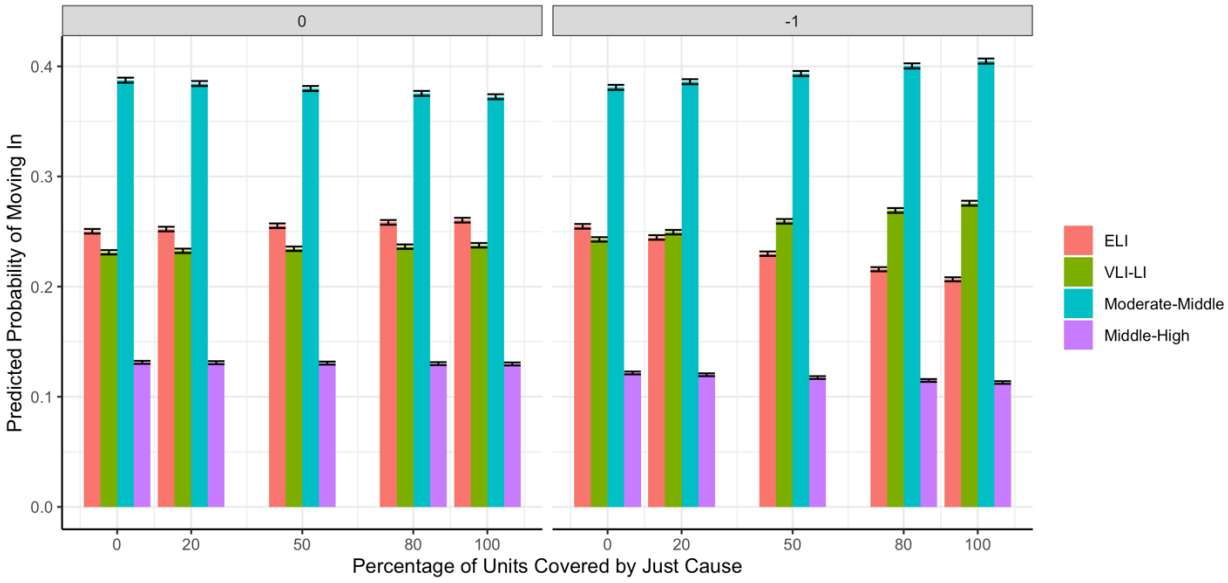
Individual-level multinomial logit model

Figure E12 shows that in the year just cause-covered units are counted, higher shares of just cause units slightly increase the likelihood that non-mortgage holding inmovers are moderate-middle SES and VLI-LI and decrease the likelihood of inmovers being in other SES groups. By the year after, just cause units increase the likelihood that non-mortgage holding inmovers are VLI-LI while decreasing their likelihood of being moderate-middle SES. Increases in the share of rent-controlled units slightly increases the likelihood that non-mortgage holding inmovers will be VLI-LI and moderate-middle SES in both years and the year after respectively, while decreasing the share of ELI and middle-high SES residents who move in in both year that units are measured.

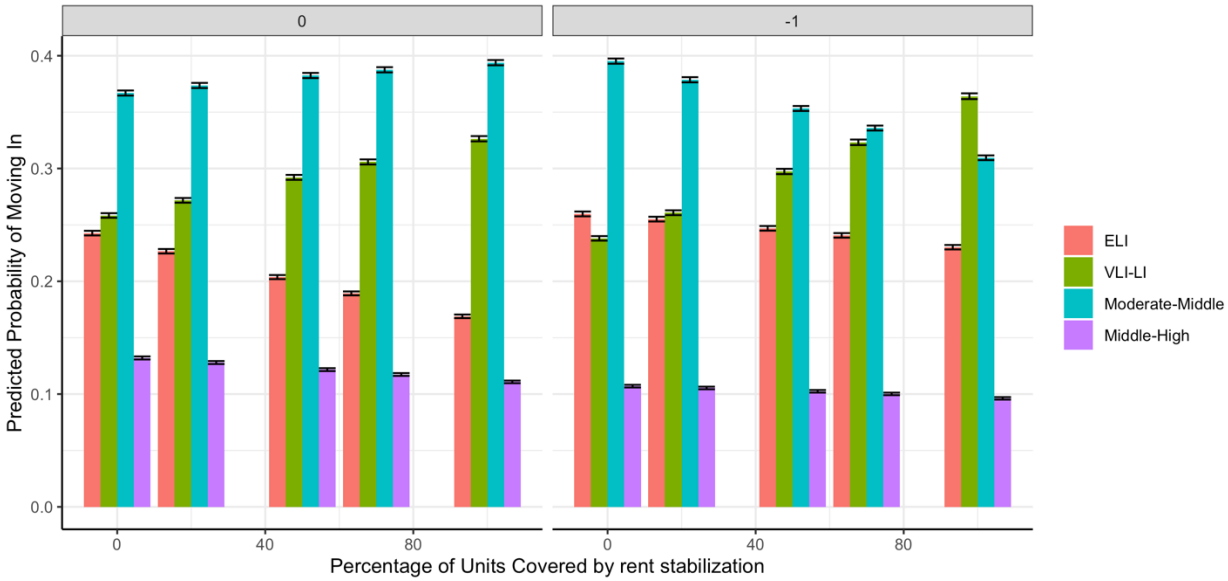
These results and trends likely reflect decreases in the number of residents moving into neighborhoods with higher shares of protected units. This is not surprising given that people are less likely to move out of protected units, hence limiting housing availability for potential inmovers.

Figure E12. Predicted Composition of Non-Mortgage Holding Movers Ages 25-64 into Block Groups by Percent of Units Covered by (a) Just Cause; and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Appendix F. Block Group models, CCP

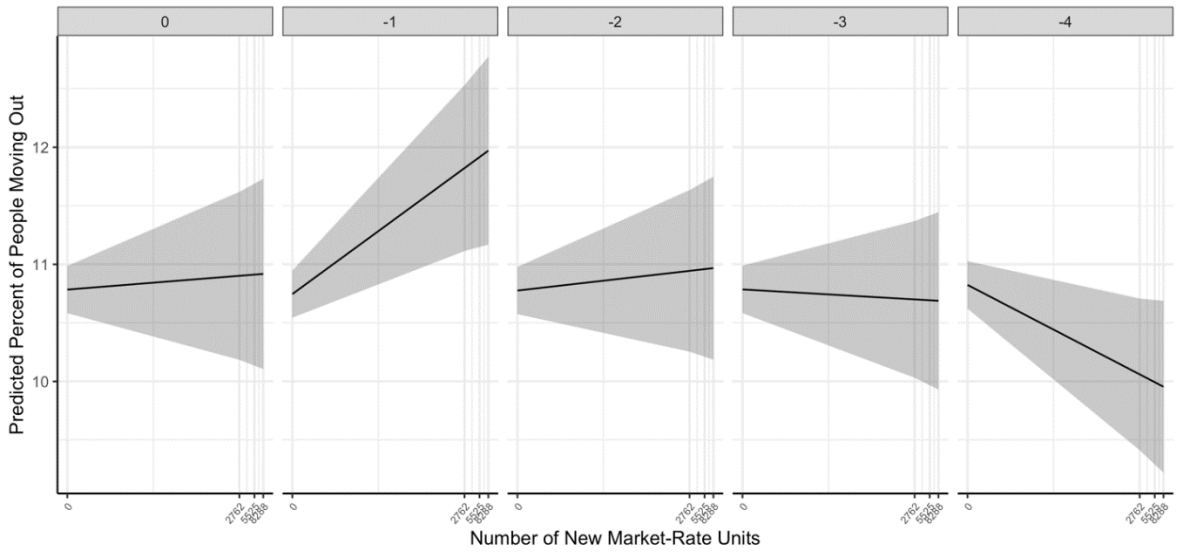
New Production

Outmigration

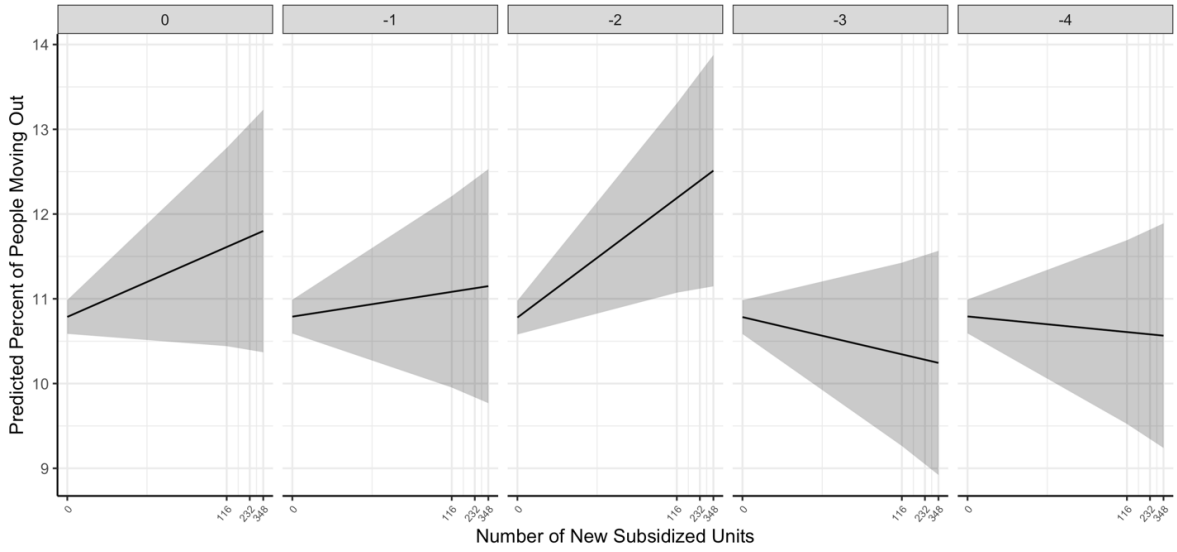
Overall, we find that new production of subsidized units had little to no effect on aggregate block group-level outmigration rates for both the full sample and just among ELI and VLI-LI residents. New production of market-rate units increased outmigration rates in some years but decreased them in others. Figure F1 shows that the production of market-rate units increases outmigration in the first year after units are built and decreases the outmigration rate 4 years after the units are built. The production of new subsidized units increases the outmigration rate 2 years after units are built.

Figure F1. Predicted Block Group Outmigration Rate by Number of New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



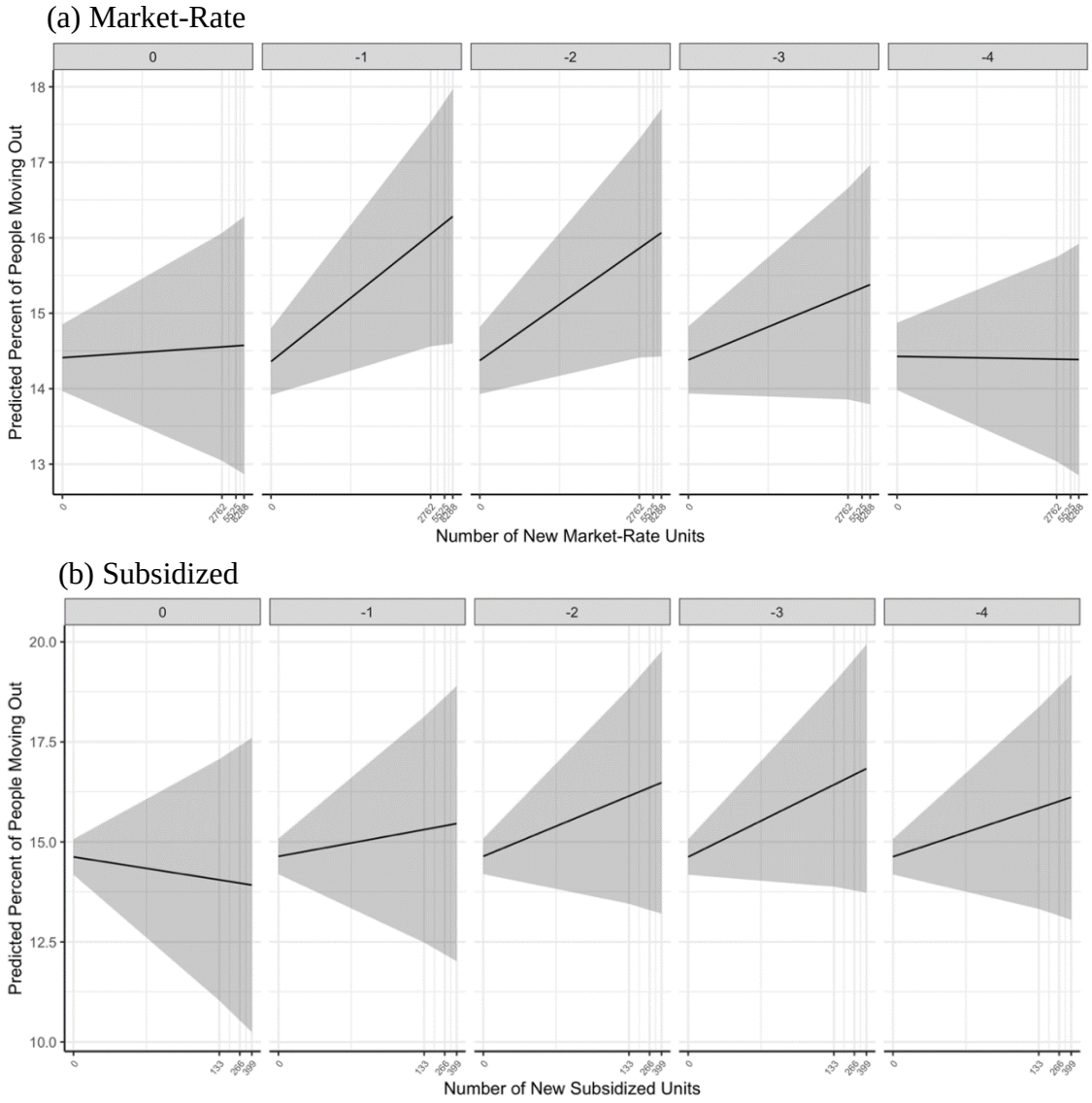
(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Next, we examine the outmigration rates for ELI and VLI-LI residents only. Figure F2 shows that new production of market-rate units had a positive effect on outmigration 1 and 2 years after the units were built. New production of subsidized units had no effects on the percent of ELI and VLI-LI residents who move out in any years. Altogether, these trends are relatively consistent with the results from individual-level models.

Figure F2. Predicted Percent of Low- and Moderate-SES Residents Moving Out with New Units (a) Market-Rate (b) Subsidized

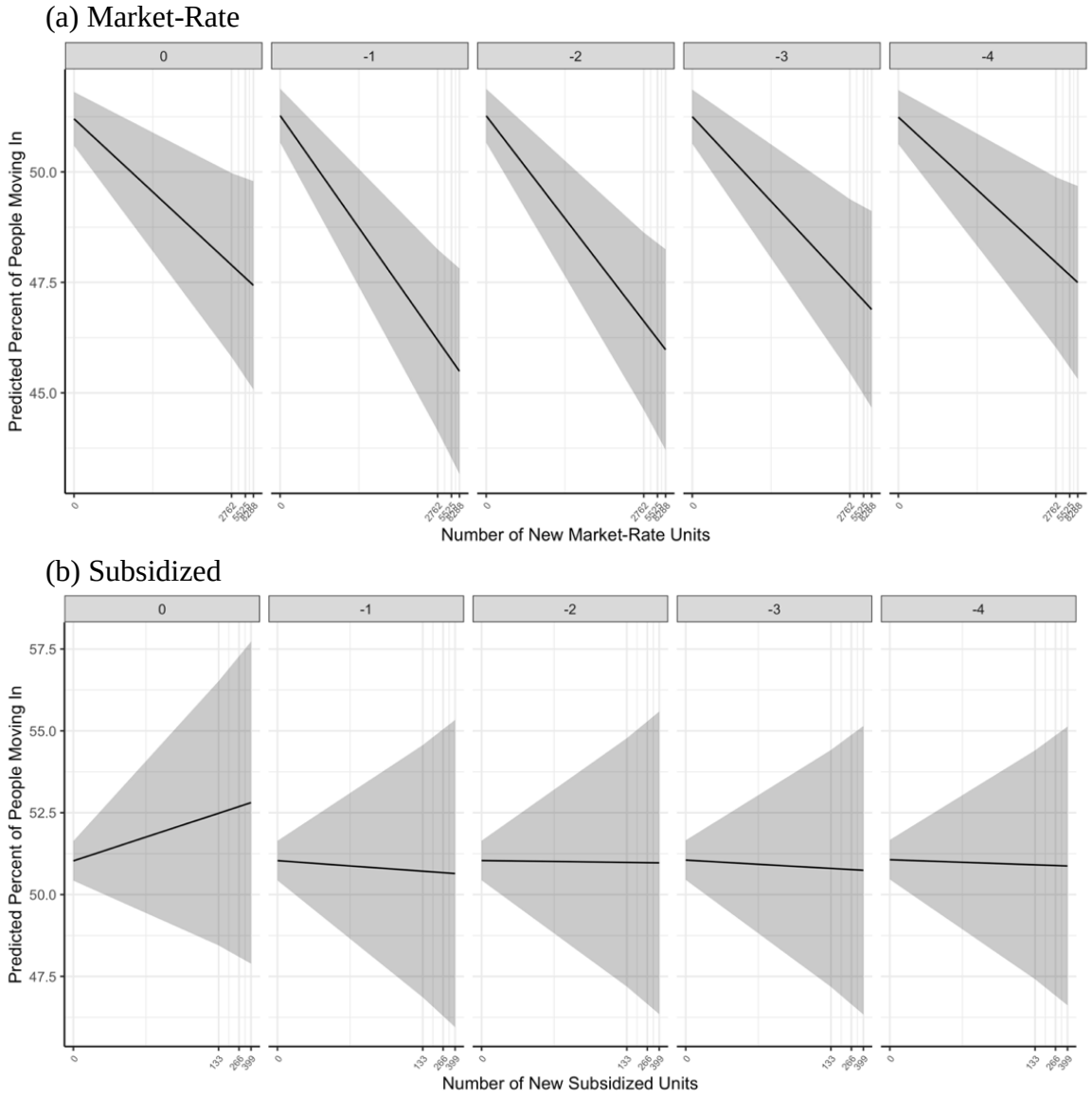


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

The block-group level models show that market-rate units discourage higher proportions of inmovers who are ELI and VLI-LI but subsidized units have no effects. Figure F3 illustrates that new production of market-rate units consistently decreased the percent of inmovers who are ELI and VLI-LI every year. New production of subsidized units did not encourage a higher percent of inmovers who are ELI and VLI-LI in any year. Overall, these results are consistent with the multinomial models.

Figure F3. Predicted Percent of Inmovers Who Are Extremely or Very Low-to-Low-Income with New Units (a) Market-Rate (b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

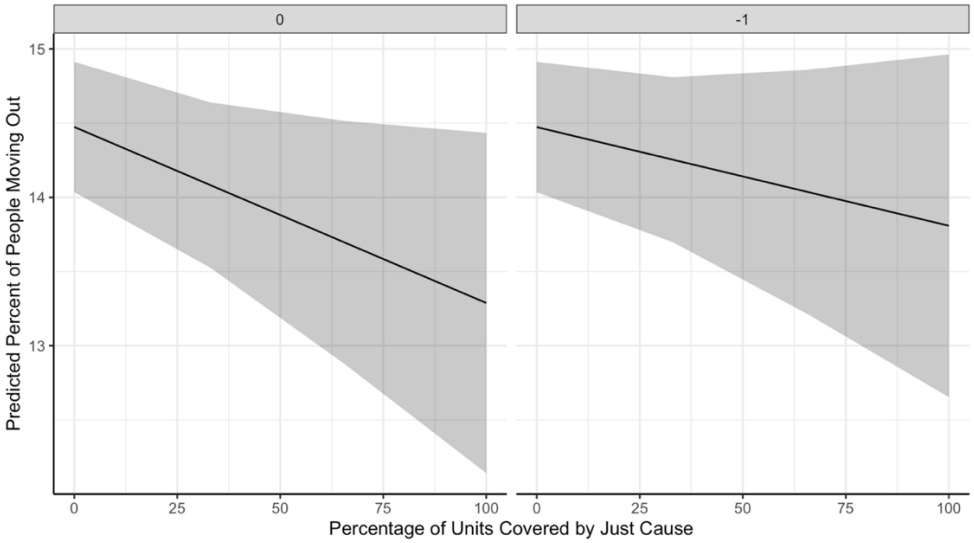
Tenant Protections

Outmigration

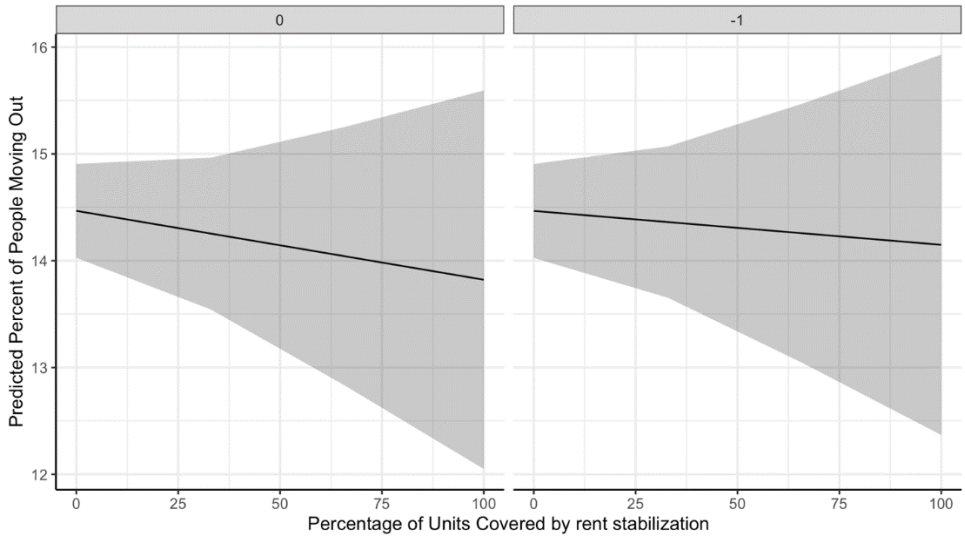
Figure F4 illustrates that the share of units covered by stabilization had no effects on the overall percent of ELI and VLI-LI residents who move. However, increases in the share of units covered by just cause protections reduce the outmigration rate of ELI and VLI-LI residents in the same year.

Figure F4. Predicted Percent of Extremely Low- and Very Low-Income Moving Out by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



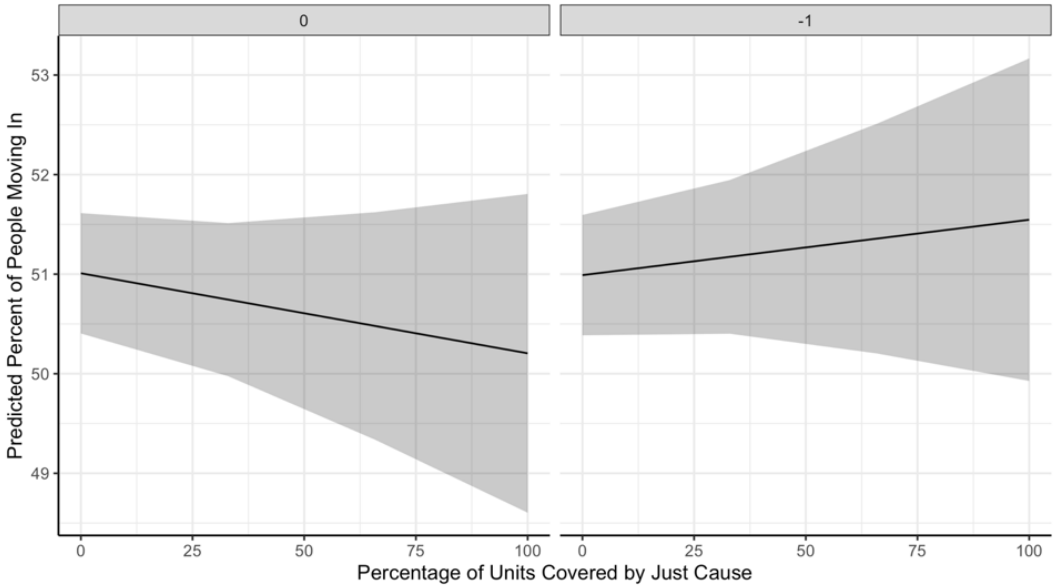
Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Inmigration

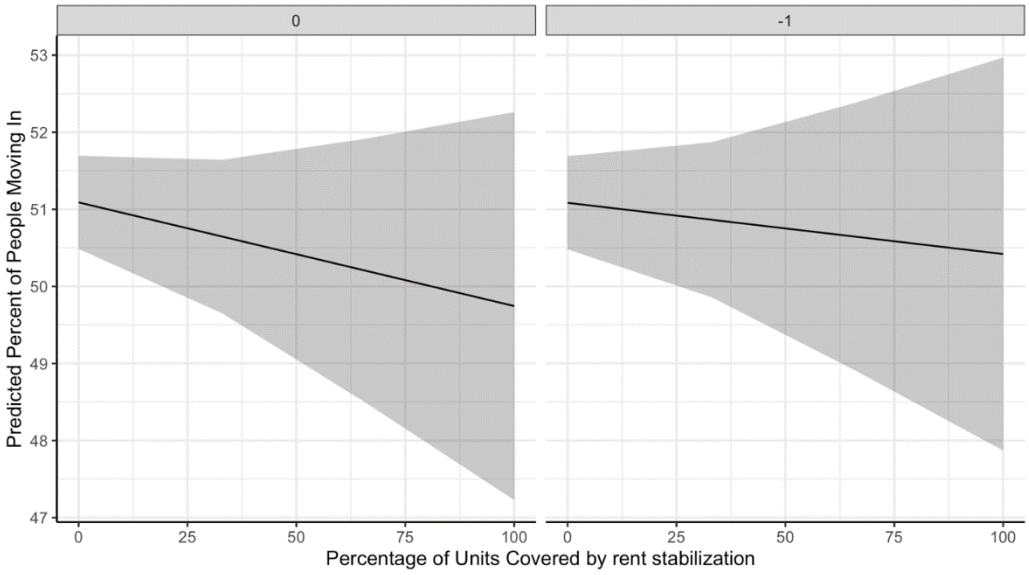
Results from the block-group level models, presented in Figure F5, show that tenant protections have no significant effects on the proportion of inmovers who are ELI and VLI-LI, both in the same year and the year after.

Figure F5. Predicted Percent of Inmovers Who Are Extremely Low- or Very Low-Income by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database.

Appendix G. Sensitivity Analyses, CCP

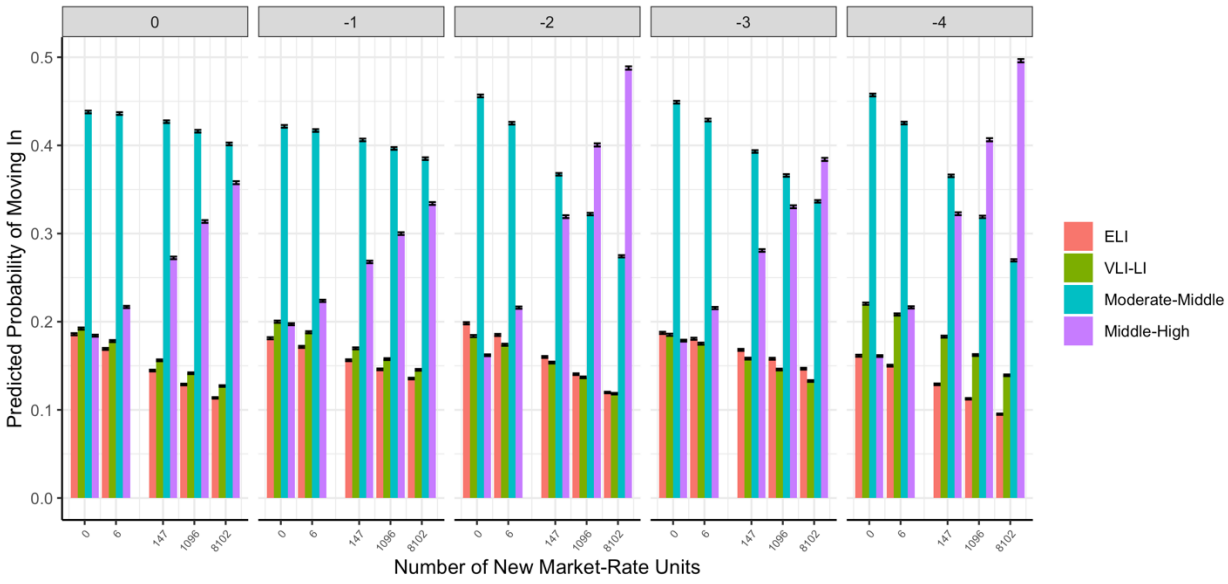
Tract-level moves

To account for the possibility that our results are sensitive to the geographic unit of analysis, we ran models predicting outmigration and inmigration to and from census tracts rather than the census block group. In general, results were consistent across the geographic unit for linear probability models. However, a few differences emerged from the multinomial models predicting the SES composition of inmovers, which is expected since these models examine the surrounding areas of block groups where new production is built or tenant protections are in place. Results are plotted at the same mean and mode values as our main models.

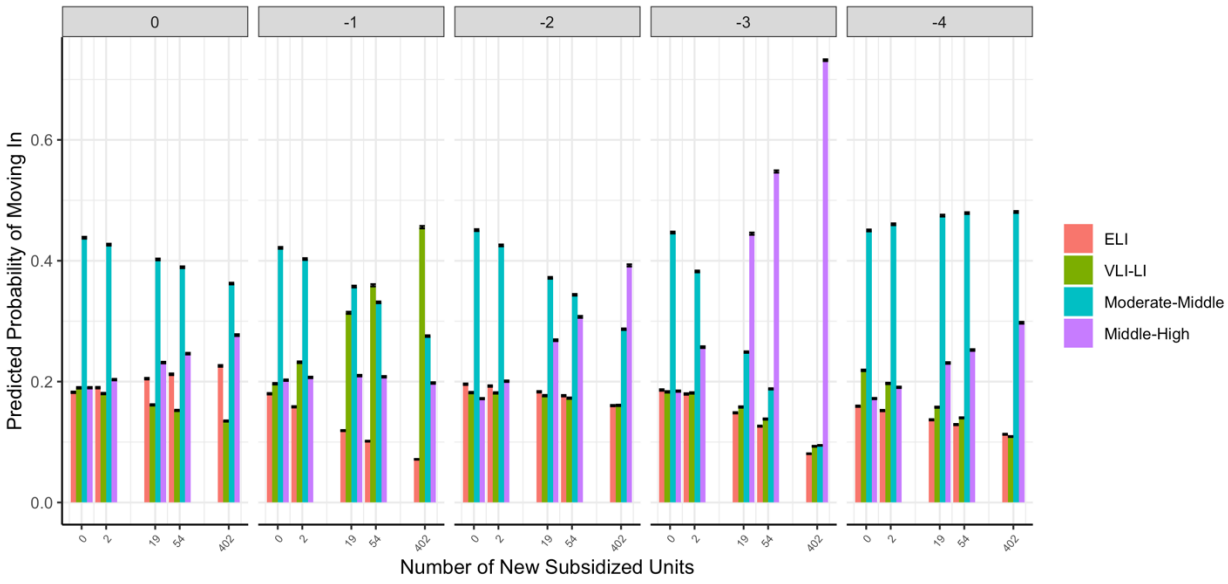
When looking at movers in census tracts containing block groups with subsidized units, the increased number of subsidized units increases the likelihood that inmovers are middle-high SES residents across all years except the year after units are built. Instead, the probabilities that inmovers are moderate-middle SES residents decrease across all years except for 4 years after. VLI-LI residents are more likely to move in 1 year after, where they are also most likely to be inmovers. ELI residents are less likely to be inmovers across all yeas. Trends are more consistent when looking at market-rate units in comparison to subsidized units, with the main difference being that high-SES residents are even more likely to be inmovers, and that probabilities for ELI/VLI-LI are more similar.

Figure G1. Predicted Composition of Movers into Tracts by Number of New (a) Market-Rate (b) Subsidized Units

(a) Market-Rate



(b) Subsidized

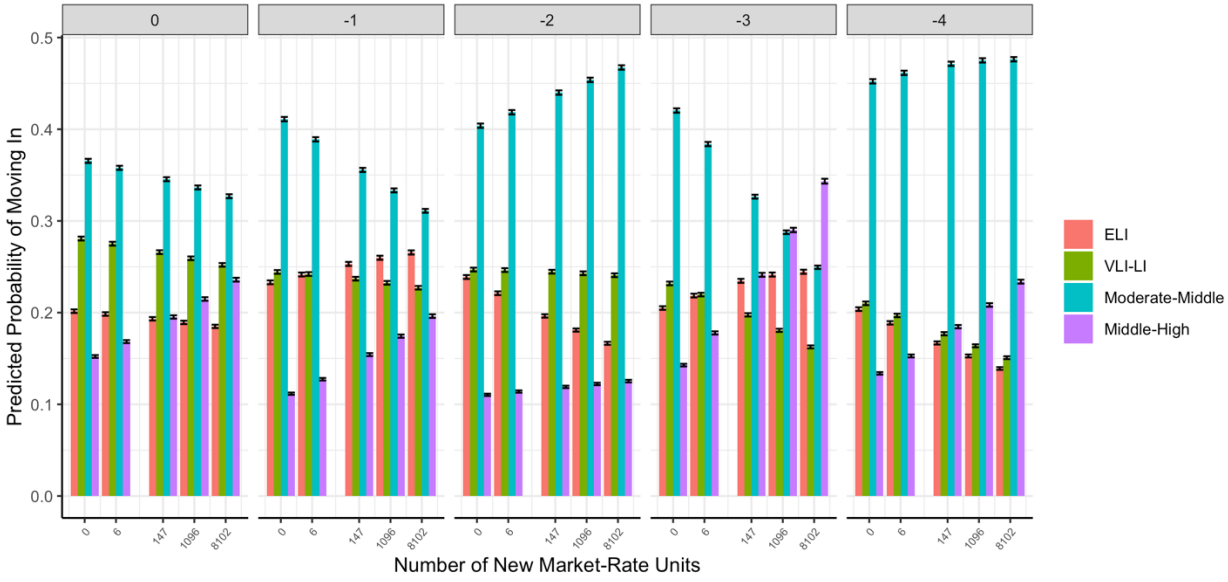


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

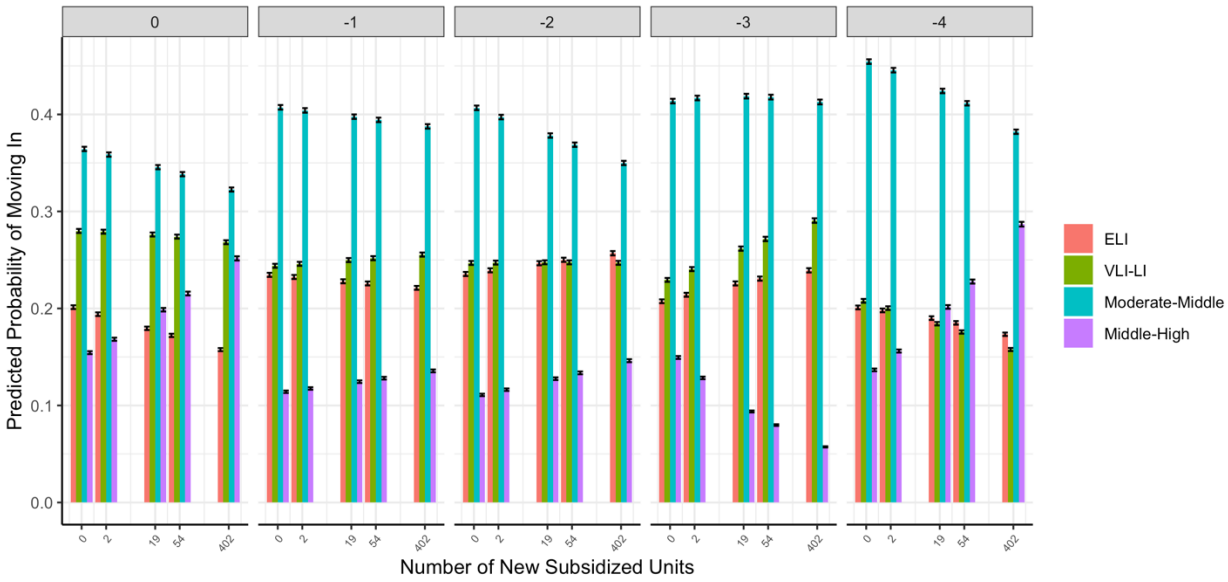
Results for non-mortgage holders ages 25-64 were also consistent across the geographic units for the linear probability models, but there were a few differences for the multinomial models. In these models, for subsidized units, the probability of being an inmover for ELI residents only increases very mildly 2 and 3 years after, whereas in the block group models, they are most likely to be inmovers in the same year. The results for VLI-LI residents are similar. Moderate-middle SES residents are less likely to move in in all years except for years after, and middle-high SES residents are more likely to in all years except 1 year after. For market-rate units, ELI residents are more likely to move in 1 and 5 years after, instead of only 2 years after. VLI-LI residents are less likely to move in in all years instead of being more likely to move in 3 years after. Moderate-middle SES residents are more likely to move in 2 and 4 years after instead of 1 and 4 years after, and middle-high SES residents are similarly more likely to move in in all years.

Figure G2. Predicted Composition of Non-Mortgage Holding Movers Ages 25-64 into Tracts by Number of New (a) Market-Rate (b) Subsidized Units

(a) Market-Rate



(b) Subsidized

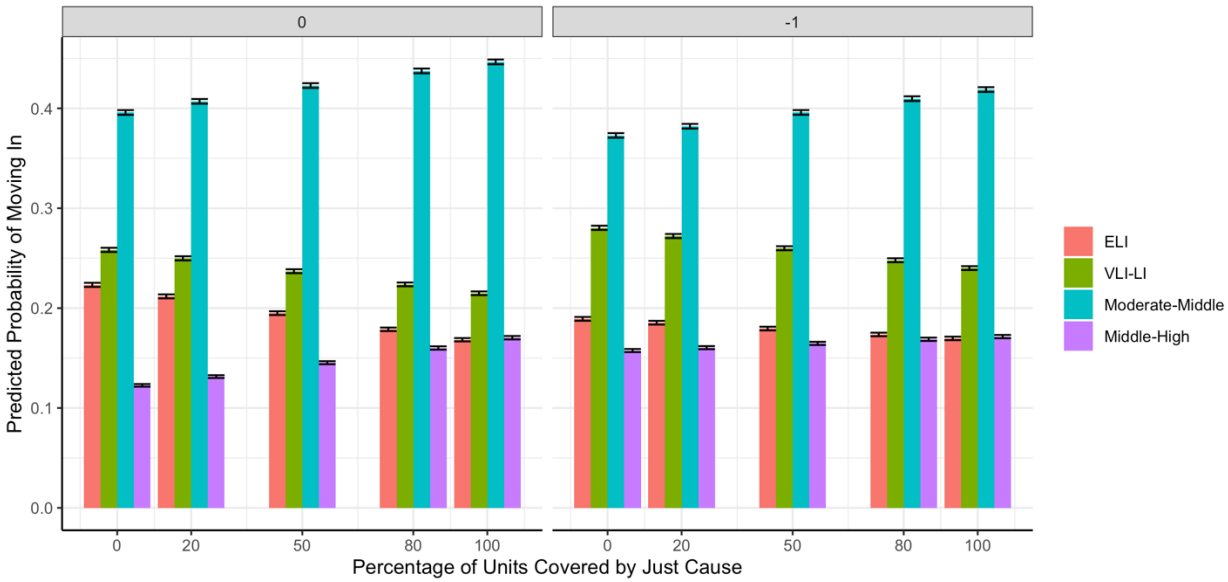


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

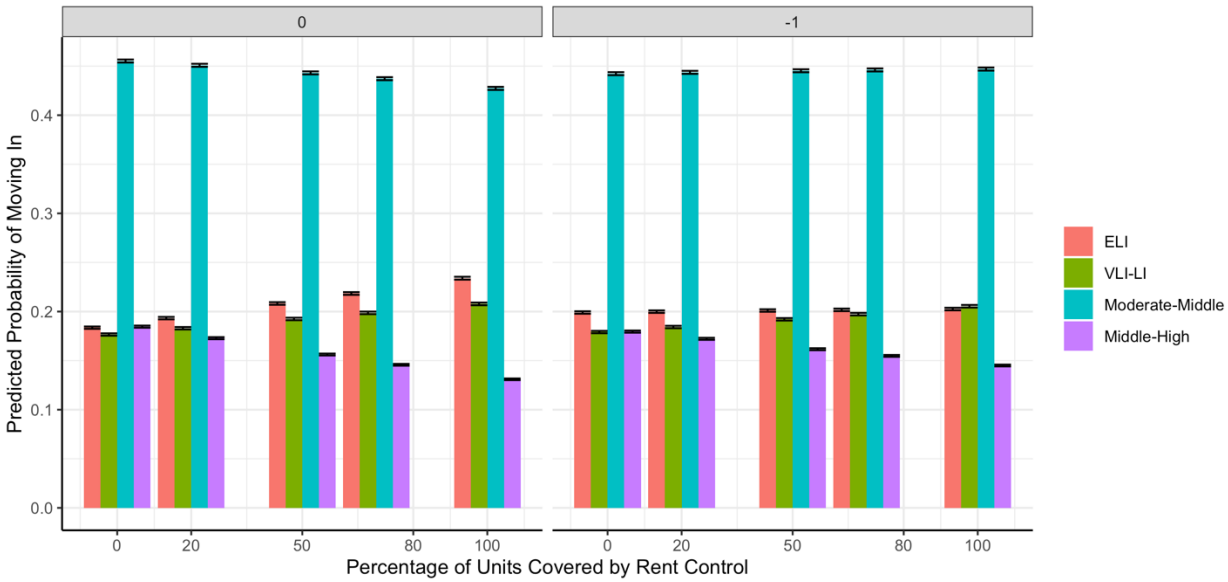
When considering inmigration into tracts containing block groups with tenant protections, there are some differences in the relative probabilities of each SES group moving in. More units covered by rent control in a block group is associated with relatively higher probabilities of lower SES inmovers to the surrounding census tracts, compared to the block group itself. ELI residents are more likely to be inmovers in the year units are covered and slightly more likely the year after, whereas VLI-LI residents are more likely to in both years. Moderate-middle SES residents are less likely to be inmovers in the same year but slightly more likely to by the year after. Middle-high SES residents are less likely to be inmovers in both years. For the share of just cause protected units, the effect is significant and negative for ELI residents and positive for moderate-middle SES residents in both years but negative for VLI-LI residents. Middle-high SES residents are more likely to be inmovers across both years. While moderate-middle SES residents are still the most likely to be inmovers, the probability of being an inmover is higher for ELI and VLI-LI residents overall in these models than in the block-group models.

Figure G3. Predicted Composition of Movers into Tracts by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization

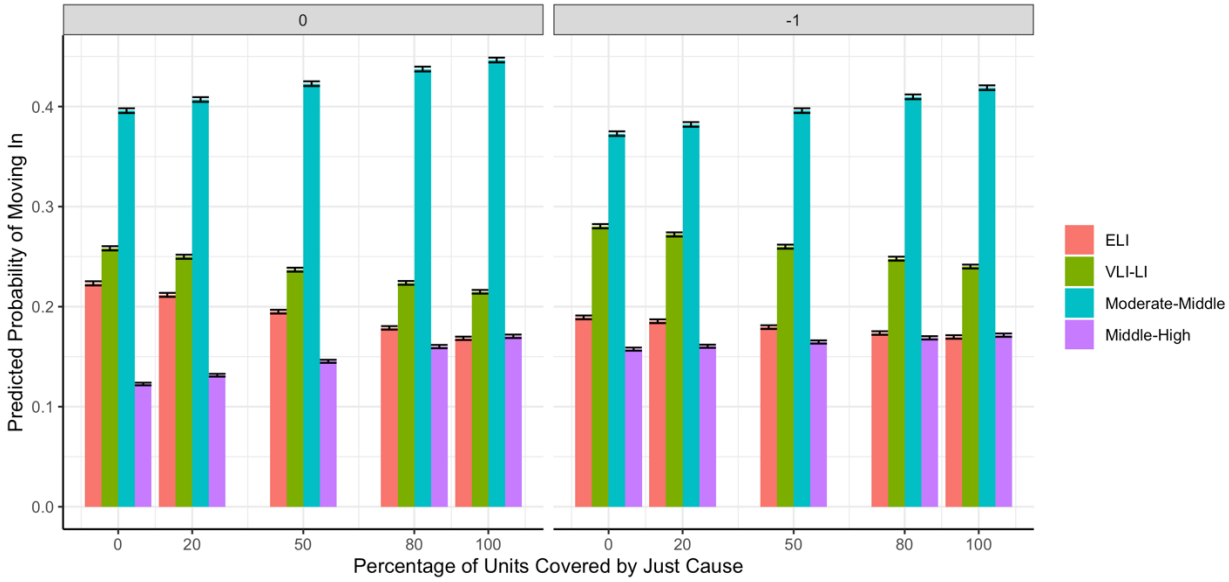


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

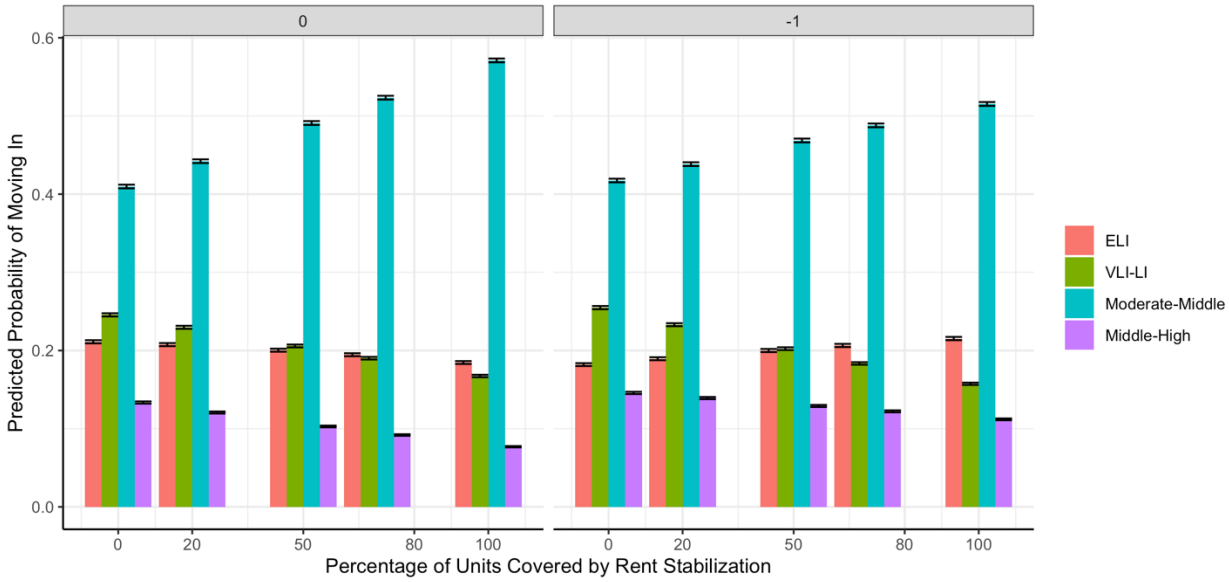
When considering the composition of inmigration of non-mortgage holders aged 25-64, it appears that rent control encourages inmigration of moderate-middle SES residents and of ELI residents the year after units are covered, but discourages it for everyone else. Just cause eviction protections discourage inmigration of ELI and VLI-LI residents but increases the probabilities of being an inmover for moderate-middle and middle-high SES residents.

Figure G4. Predicted Composition of Non-Mortgage Holding Movers Ages 25-64 into Tracts by Percent of Units Covered by (a) Just Cause (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Major Cities

We ran models separately for four select cities—Oakland, San Francisco, San Jose, and Santa Rosa. Recall that our predicted plots are based on the "average" case, which is the region East Bay (excluding Oakland). In these models, we removed the region variable and instead ran each

model separately for residents in our sample in each city. Note also that there were no units covered by tenant protections in Santa Rosa and no units were covered by just cause eviction protections prior to 2017 in San Jose. Results are plotted at the mean and mode values of the control variables for each city. Overall, we found that results are sensitive to the particular city, which is not surprising given the differing housing contexts of each city.

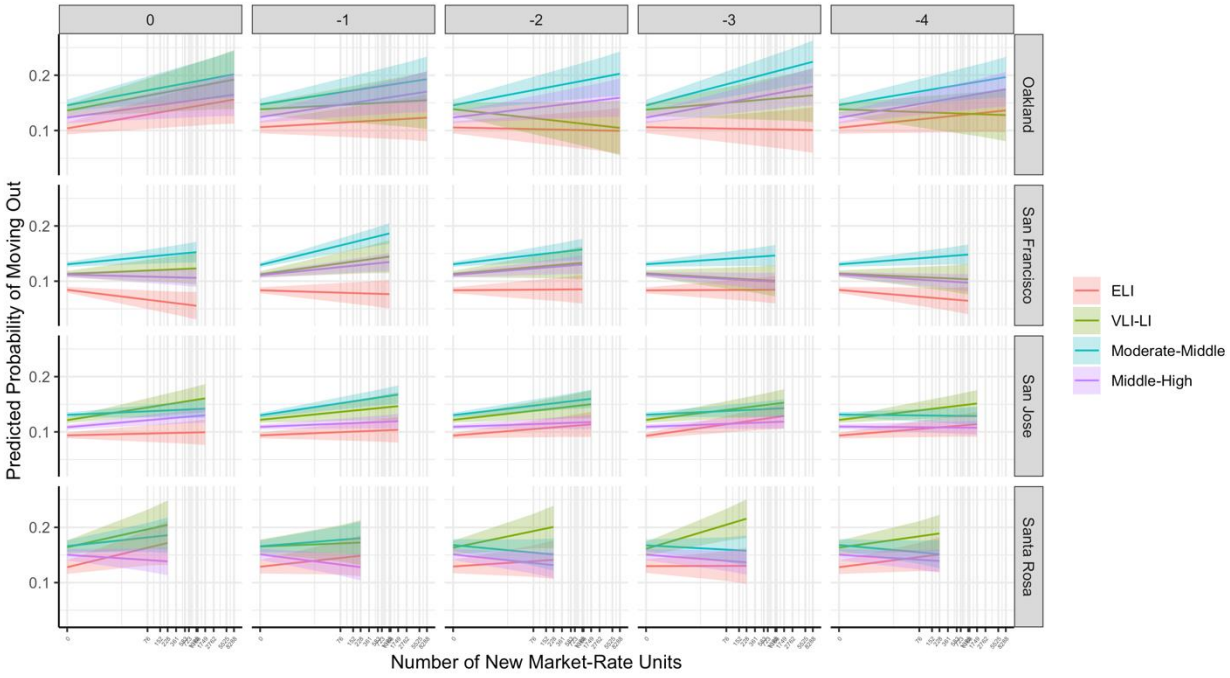
Outmigration

In Oakland, VLI-LI residents are more likely to move out in the year new subsidized units are built and ELI residents are more likely to do so 4 years after. In San Francisco, moderate-middle SES residents are more likely to move out in the year new subsidized units are built. In San Jose, VLI-LI residents are more likely to move out the year after. Effects of new market-rate production on ELI residents differ across all cities. Increases in market-rate units increases outmigration of ELI residents in some years in all cities except San Francisco where the effects are negative in some years. For VLI-LI residents, effects are positive in all cities except Oakland, where the effects vary between positive, negative, or insignificant over time. Effects are consistently positive in all cities except Santa Rosa, where the effects vary between negative and insignificant over time. Finally, effects are positive for middle-high SES resident in Oakland but vary between positive and negative in San Francisco and are insignificant in San Jose and Santa Rosa.

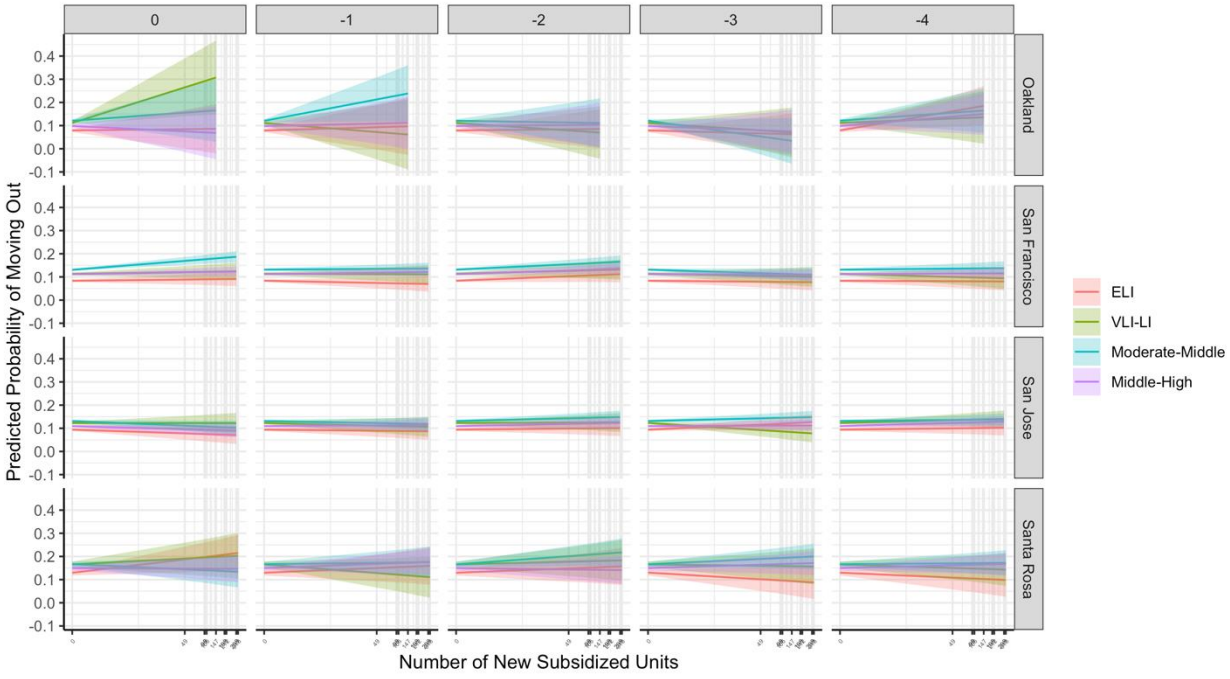
In Oakland, increases in rent control decrease outmigration for ELI, moderate-middle and middle-high SES people the year after units are covered but in San Francisco the effect is positive for moderate-middle SES residents in the same year and the year after. Increases in the percent of units covered by just cause protections generally increase outmigration for everyone in Oakland and San Francisco in the year units are covered but decrease it for everyone by the year after. Errors are wider for San Jose, which only adopted just cause protections in 2017, so did not have any just cause units in t-1.

Figure G5. Predicted Probabilities by SES of Moving Out of Block Groups by Number of New (a) Market-Rate (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



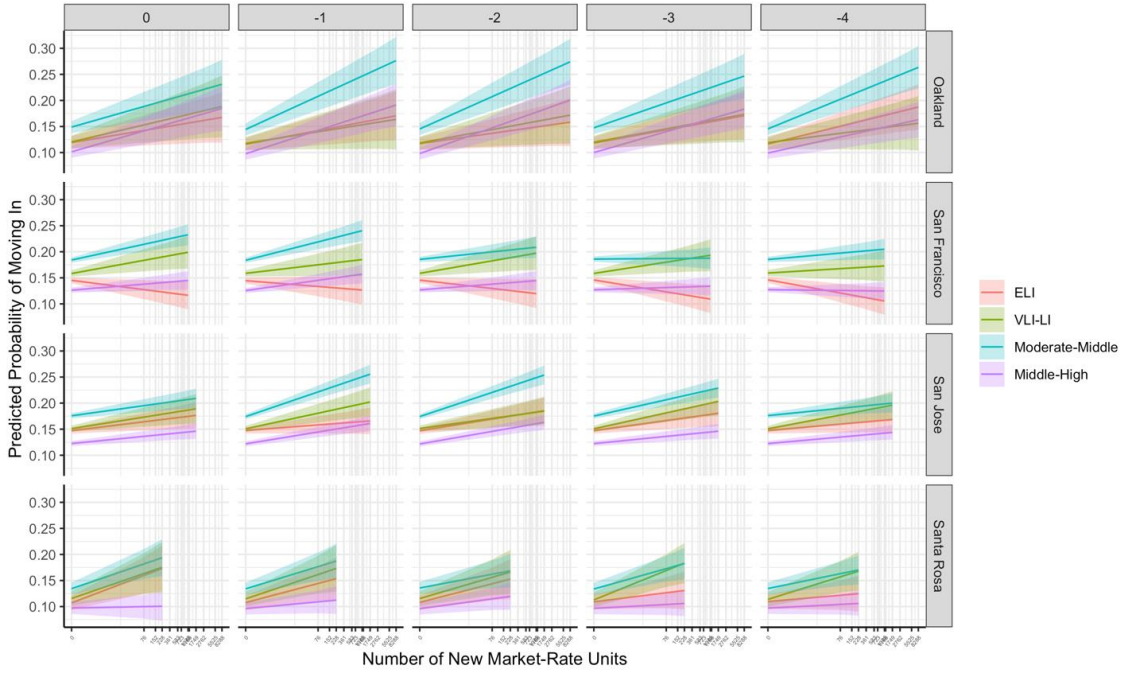
Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

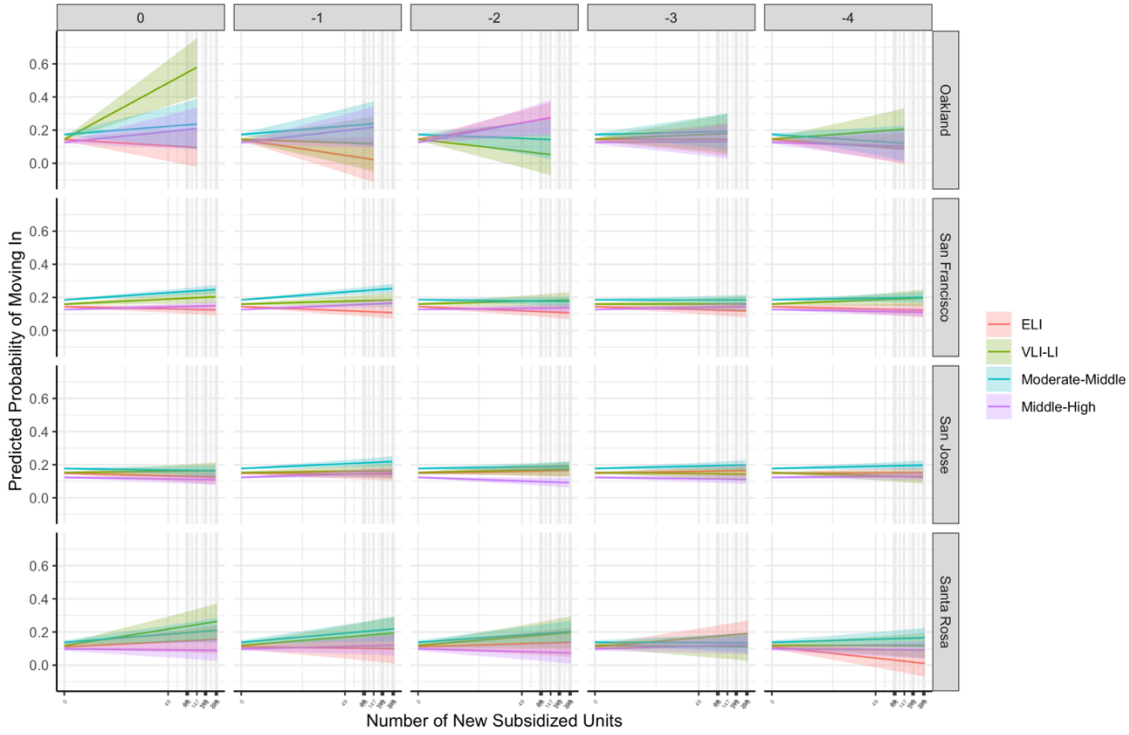
Construction of new subsidized units generally encouraged inmigration for a few years for all SES groups except ELI residents, and market-rate units generally encouraged inmigration for all SES groups in the main models. This is inconsistent across cities for subsidized units, with varying effects by SES. For example, in Oakland there is a positive effect only for VLI-LI residents in the year units are built and for ELI residents 2 years after. In San Francisco and San Jose there is a positive effect only for moderate-middle and high-SES residents the year after units are built but a negative one for ELI residents in San Francisco. Results in Oakland and San Jose are consistent with the findings from the main models, while in Santa Rosa results are consistent for all except middlde-to-high-SES residents for whom there are no significant effects. ELI residents stand out in San Francisco as having the opposite results from the main models for new market-rate production. In the main models, tenant protections increase the inmigration of moderate-middle SES residents but discourage inmigration for ELI residents, which is generally the case across the cities for rent control. One difference is that VLI-LI residents are also more likely to move in in the year units are covered by rent control. Just cause for eviction protections have no significant effects in San Francisco and Oakland, and estimates are too imprecise in San Jose due to the lack of block groups with protections over the period.

Figure G6. Predicted Probabilities by SES of Moving into Block Groups by Number of New (a) Market-Rate (b) Subsidized Units

(a) Market-Rate



(b) Subsidized

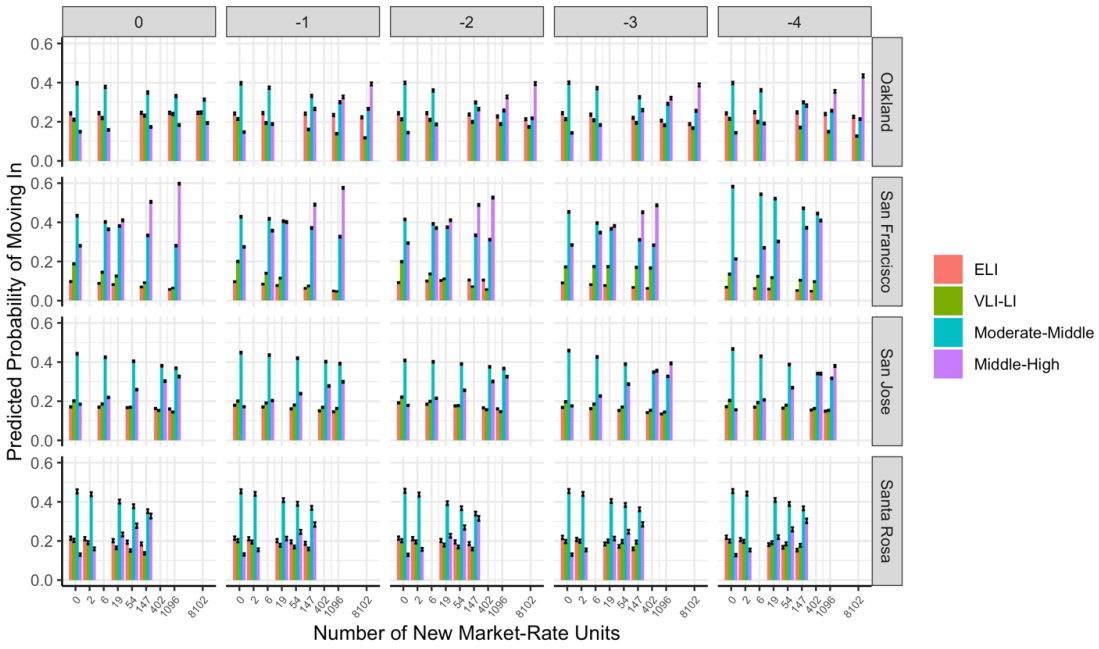


Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

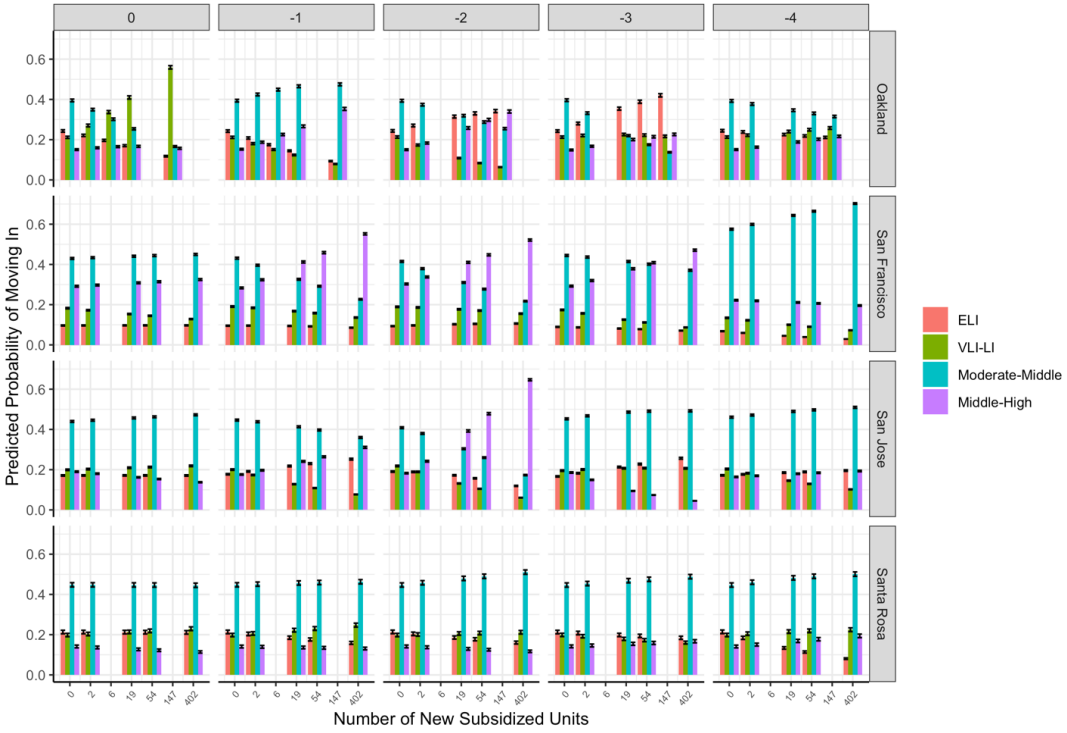
The predicted relative proportion of inmovers by SES on new production and tenant protections, based on multinomial logit models, differs markedly by city. In Oakland, for example, construction of subsidized units increases the proportion of inmovers who are ELI and VLI-LI in some years, whereas new subsidized units consistently increase the likelihood that inmovers are middle-high SES in San Francisco. Moderate-middle SES residents are consistently most likely to be inmovers in Santa Rosa. Market-rate units increases the proportion of inmovers who are middle-high SES but decrease it for everyone else in all cities, but the baseline proportion of inmovers who are ELI and VLI-LI is lowest in San Francisco. Rent control and tenant protections have little effects on the relative SES composition of inmovers, but the baseline proportions are very different across cities. Moderate-middle SES residents are still most likely to be inmovers everywhere, but the second most likely group is ELI residents in Oakland, middle-high SES residents in San Francisco, and ELI or VLI-LI residents in San Jose. San Jose stands out in the year units are covered (2017 only for San Jose) by just cause protections for the dramatic increase in proportion of inmovers who are middle-high SES. Due to the smaller sample sizes and scarcity of new production and tenant protections, we were not able to estimate models for non-mortgage holders ages 25-64 for each city.

Figure G7. Predicted Composition of Movers into Tracts by Number of New (a) Market-Rate (b) Subsidized Units

(a) Market-Rate



(b) Subsidized



Source: FRBNY Consumer Credit Panel/Equifax Data, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

ELI/VLI Residents

We ran alternative models combining extremely low- and very low-to-low-income ("ELI" and "VLI-LI") residents into one SES group to test whether results for the ELI/VLI combined group would be more similar to Berkeley's very low-SES groups. In these models, the effects of new subsidized units on outmigration are strong and positive for ELI/VLI-LI residents 2 years after units were built but not otherwise. This is the same in the non-mortgage-holding sub-sample. The results are still different from Berkeley's results showing a negative effect for very low-income households starting the year after units are built. The effects of new market-rate units on outmigration are positive for ELI/VLI-LI residents with effects lasting up to 3 years after units were built. In the non-mortgage-holding sample of residents ages 25 to 64, there were effects only in the same year, the year after and 3 years after. This is similar to Berkeley results showing an increased likely to move out among very low-income households in all years.

The linear probability models predicting the effect of subsidized units on inmigration showed positive effects for ELI/VLI-LI residents 2 years after units were built. In the non-mortgage holding subsample, there were weak positive effects lasting up to 3 years after. This is similar to Berkeley results showing positive effects for very low-income households 2 years after units are built, but dissimilar from Berkeley results showing a negative effect 3 and 4 years after. Market-rate units have a positive effect on ELI/VLI-LI inmigration in all years, but, in the non-mortgage holding subsample, there are only weak positive effects 1 and 3 years after units are built. This is consistent with results from Berkeley.

The multinomial probability models predicting the composition of inmovers showed that both subsidized and market-rate units decrease the probability that inmovers are ELI/VLI-LI in all years. However, the non-mortgage holding sample between 25-64 years old showed that ELI/VLI-LI residents are most likely to be inmovers, with positive effects for subsidized units in the same year and the year after units are built. This is generally consistent with Berkeley results showing a negative effect for very low-income households in the year, 2 and 3 years after units are built but inconsistent with Berkeley results showing a positive effect in the other years. When considering market-rate units, ELI/VLI-LI people are less likely to be inmovers across all years as the number of new units increased, but are still nevertheless most likely to be inmovers overall. In the non-mortgage holding sample, ELI/VLI-LI residents are less likely to be inmovers than are moderate-middle SES people at higher number of market-rate units in the same year, 1 year, and 2 years after units are built. This is consistent with Berkeley results showing a negative effect for very low-income households in all years.

Models predicting outmigration on the share of rent controlled units show negative effects for ELI/VLI-LI outmigration in the year after covered units are counted. This is also the case in the non-mortgage holding sub-sample. Just cause protections also decrease ELI/VLI-LI outmigration the year after in both the full and non-mortgage holding sub-sample. This is overall consistent with Berkeley results showing a negative effect for very low-income households in both years.

Models predicting inmigration show that increases in units covered by rent control reduces inmigration of ELI/VLI-LI people in the year units are covered in both the full sample and the subsample of non-mortgage holding individuals ages 25 to 64. Results are the same for just cause

protected units. This is overall consistent with Berkeley results showing a negative effect for very low-income households in both years.

The multinomial probability models predicting the composition of inmovers showed that inmovers are more likely to be ELI/VLI-LI as the percent of units covered by rent control and just cause increased in both years. In the non-mortgage holding subsample for individuals ages 25-64, ELI/VLI-LI residents are again most likely to be inmovers. Increases in percent of units covered by rent control increase the probability that inmovers are ELI/VLI-LI in both years, and only in the year after for percent of units covered by just cause, where there were no effects for them in the same year. This is overall consistent with Berkeley results showing a positive effect for very low-income households in both years.

Appendix H. Block Group-Level Models, Infogroup

New Production

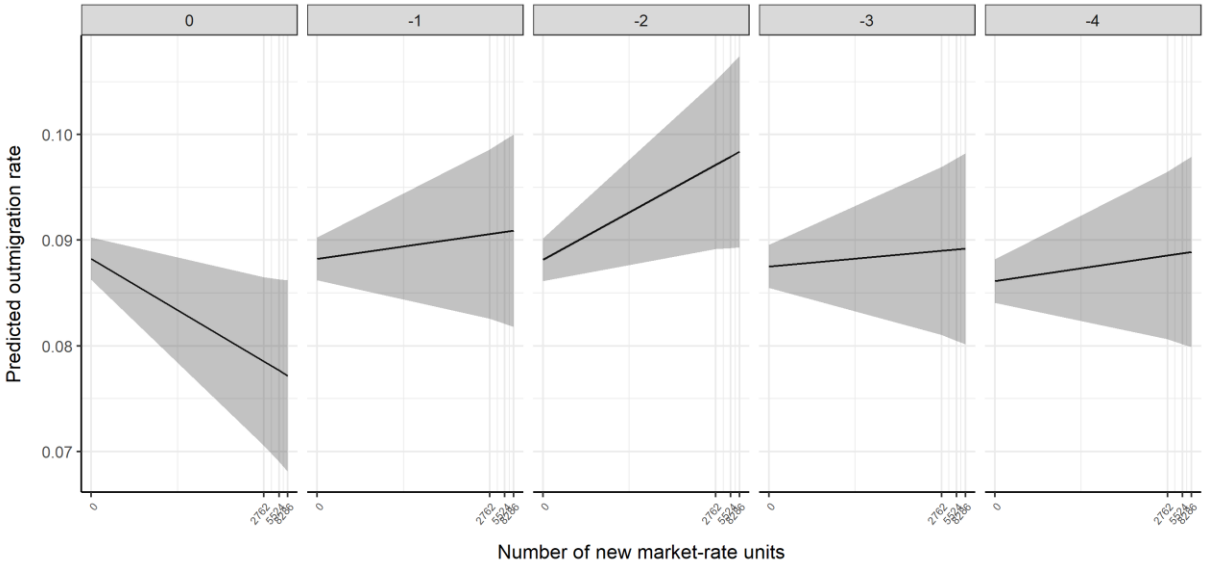
Outmigration

Block group models present the aggregate out- and inmigration rates for the affected block groups, instead of individual household impacts. These thus offer less precise estimates of household movements; for example, we do not know if an individual household moving out lived in the area prior to the housing market intervention (such as new construction or just cause). New production of market-rate units had mixed effects on outmigration rates. Overall, after an initial decrease in outmigration rate, it increases sharply after 2 years before stabilizing (Figure H1a). For low- and moderate-SES households (Figure H2a), outmigration also declines in year 0 and increases sharply after 2 years, and continues to increase through year 4, albeit at a decreasing rate.

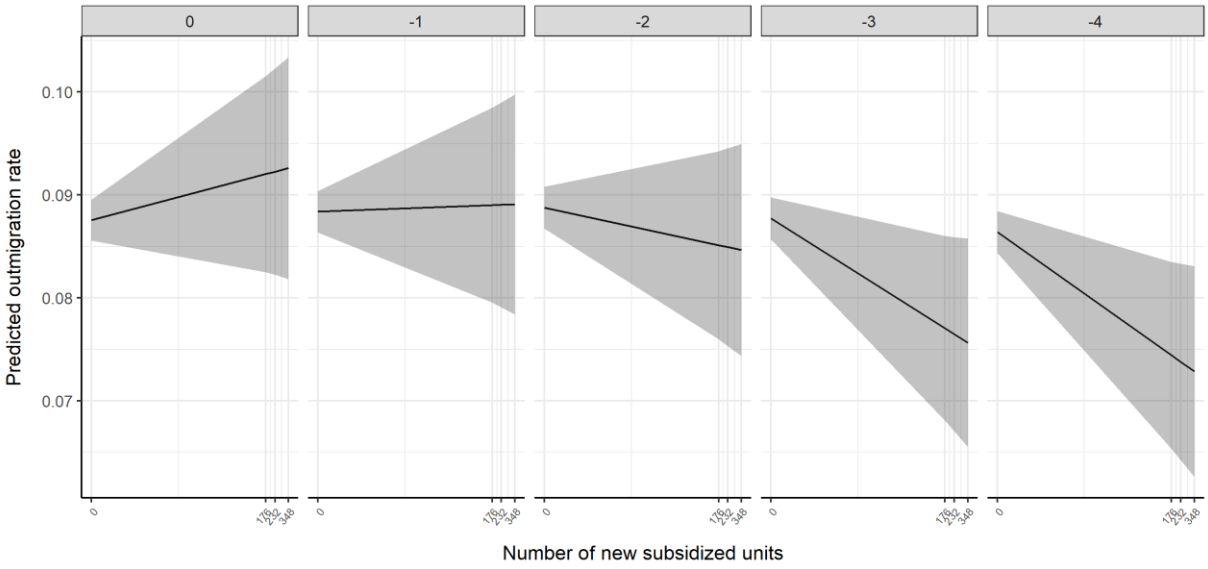
With new production of subsidized units, overall outmigration rates increase through year 2, but then decrease in year 3 and 4 (Figure H1b). For low- and moderate-SES groups (Figure H2b), results are mixed in the first 2 years, but by the third year outmigration declines.

Figure H1. Predicted Block Group Outmigration Rate by Number of New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



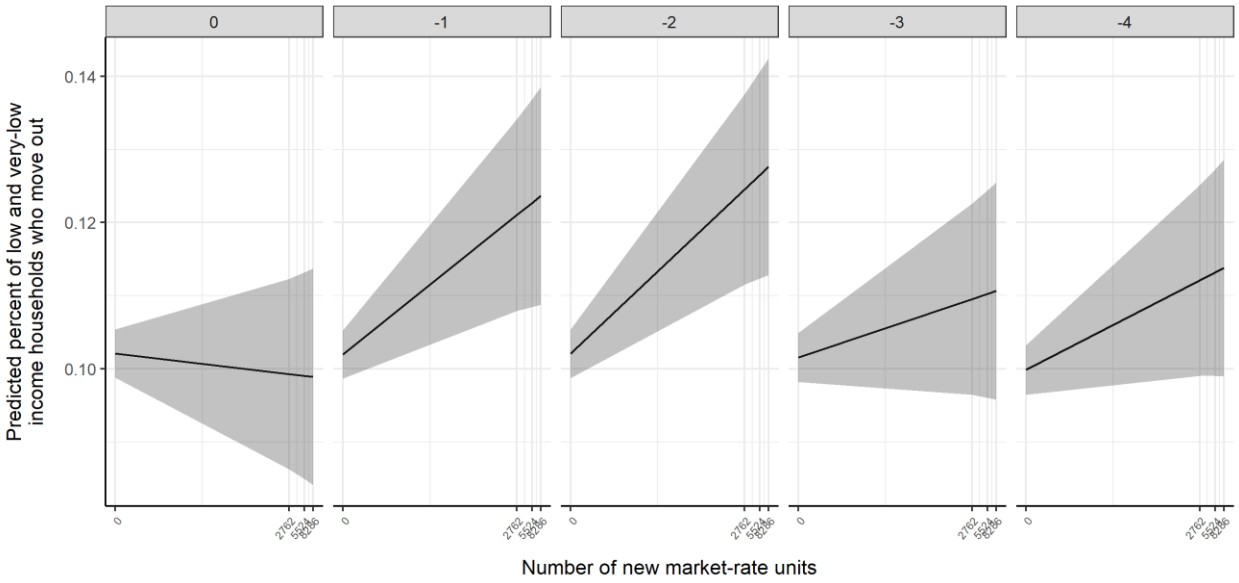
(b) Subsidized



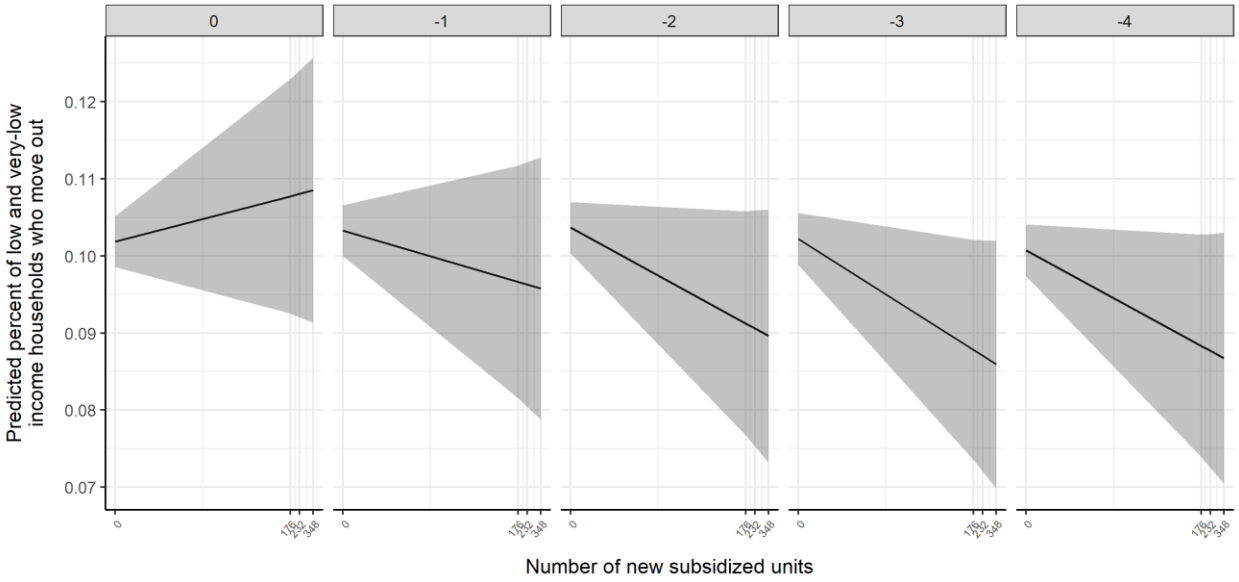
Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Figure H2. Predicted Percent of Very Low- and Low-Income Residents Moving Out with New (a) Market-Rate and (b) Subsidized Units

(a) Market-Rate



(b) Subsidized

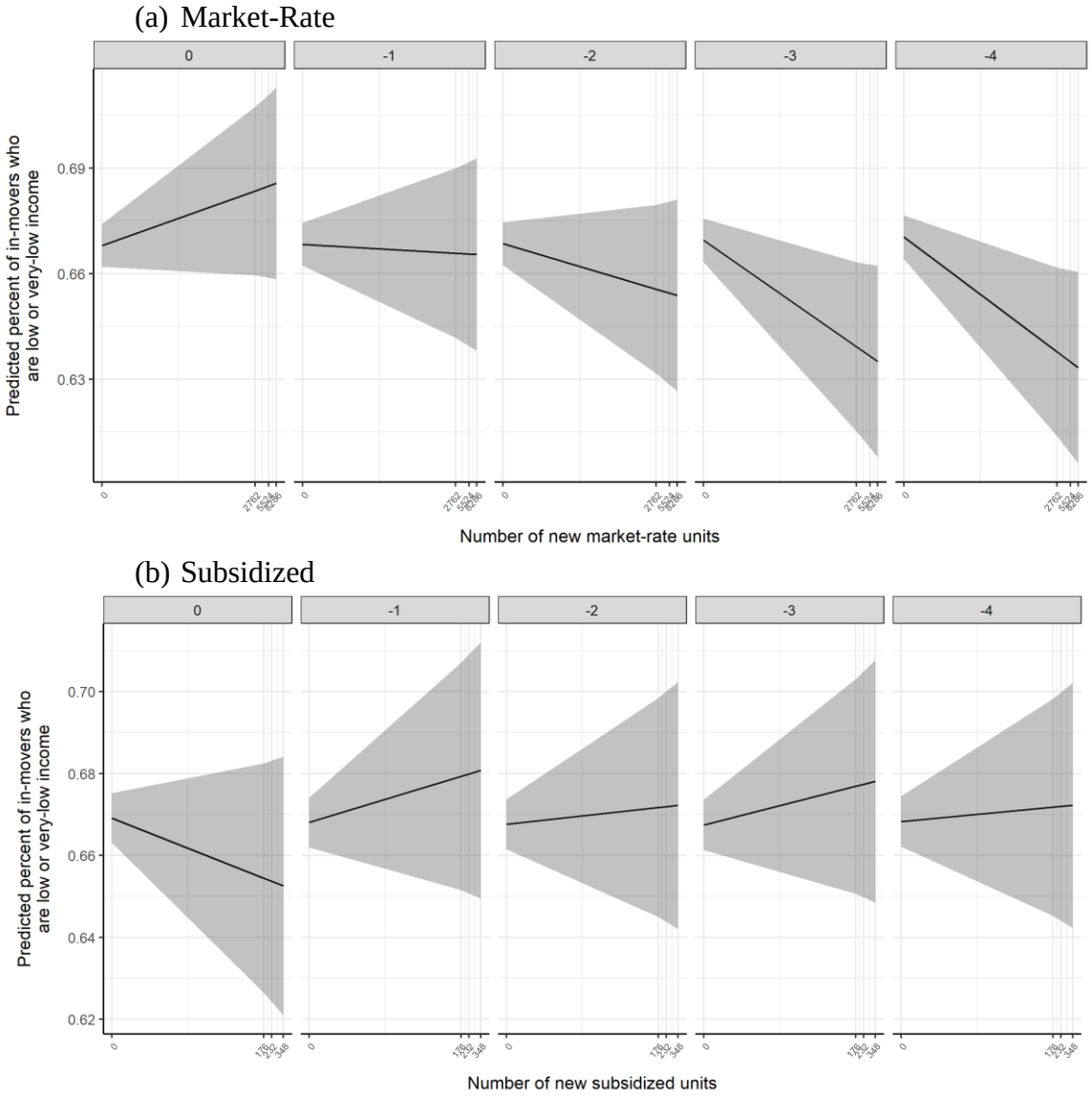


Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

Looking at aggregate inmigration rates at the block group level (Figure 18) reveals that market-rate construction is associated with overall decreases in inmigration, except for in the year of construction. In contrast, new subsidized units increase overall inmigration, except for in the year of construction. These results use multinomial logistic regression models predicting whether very low-, low-, or middle-income residents relative to high-income residents move into neighborhoods.

Figure 18. Predicted Percent of Inmovers Who Are Very Low- and Low-Income with New (a) Market-Rate and (b) Subsidized Units



Source: Infogroup, UDP New Housing Production Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

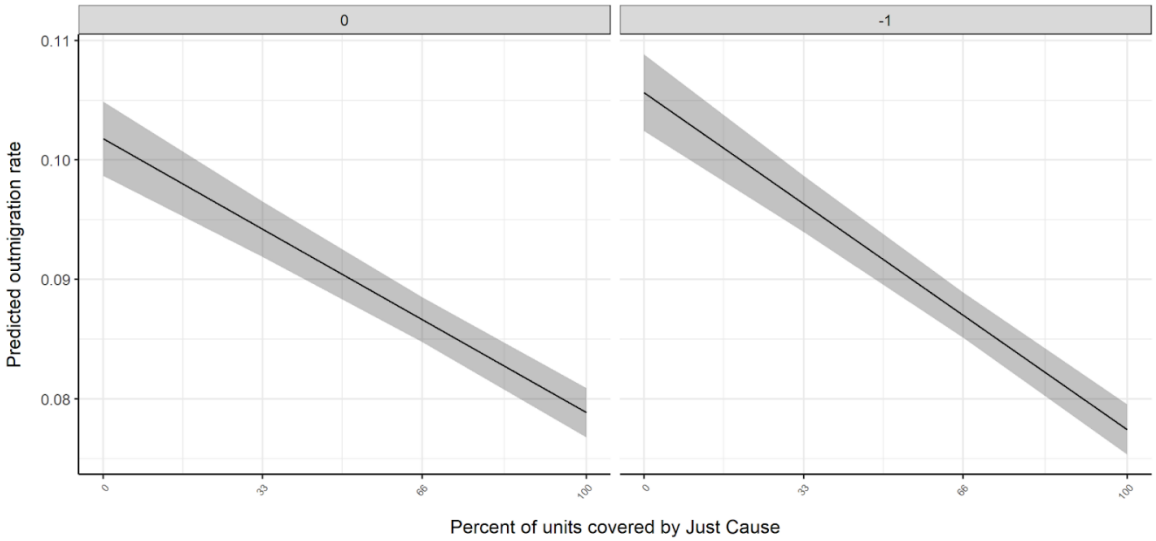
Tenant protections

Outmigration

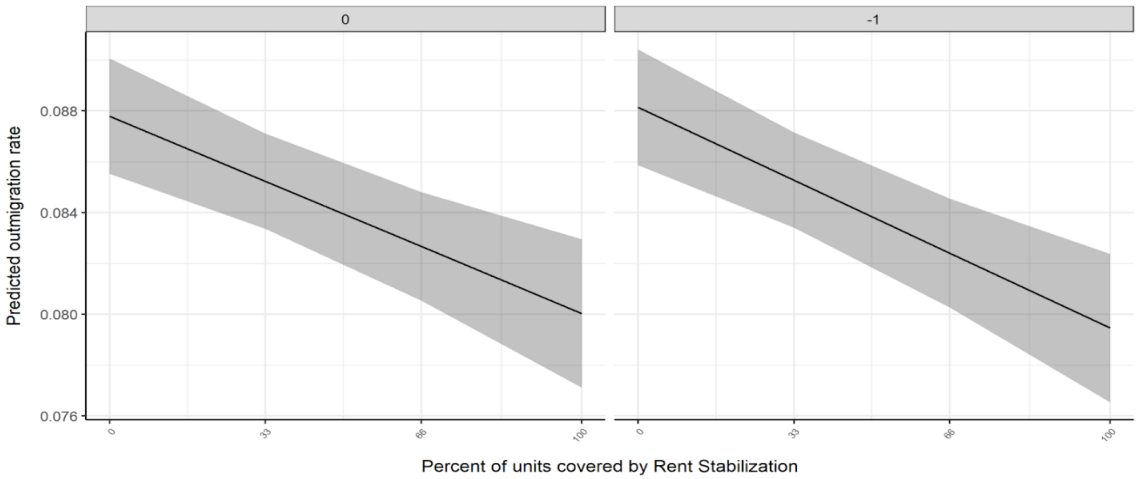
Looking again at aggregate outmigration at the block group level, Figure H1 shows sharp declines in outmigration with increasing shares of units covered by just cause, as well as somewhat more moderate declines associated with rent stabilization. Figure H2 confirms these results looking only at very low- and low-income households.

Figure H1. Predicted Block Group Outmigration Rate by Percent of Units Covered by (a) Just Cause and (b) Rent Stabilization

(a) Just Cause for Evictions



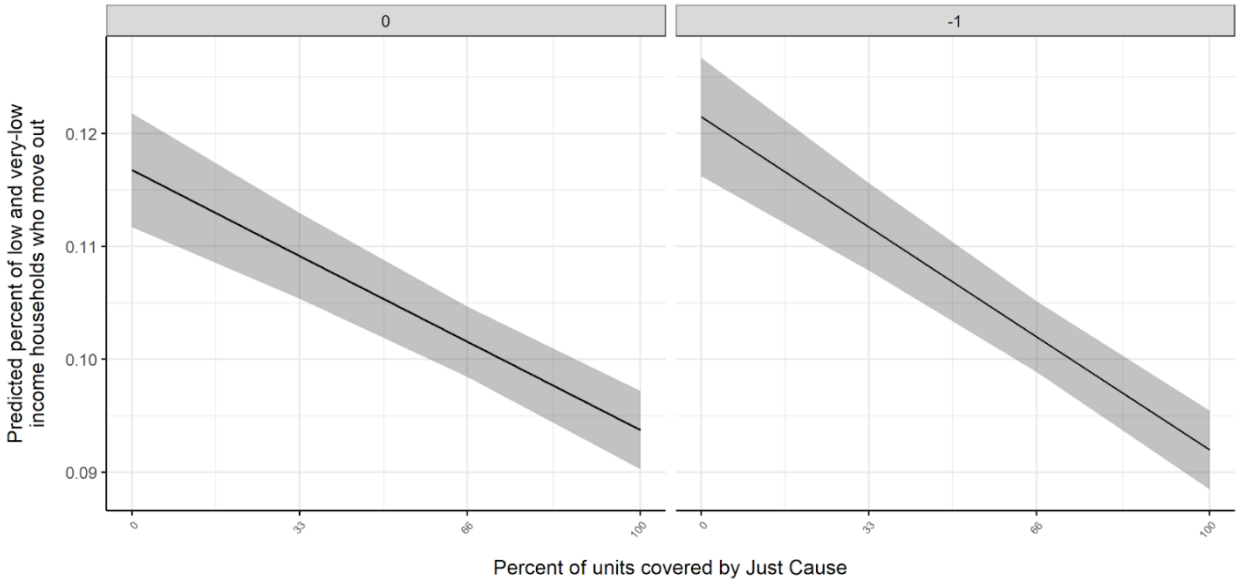
(b) Rent Stabilization



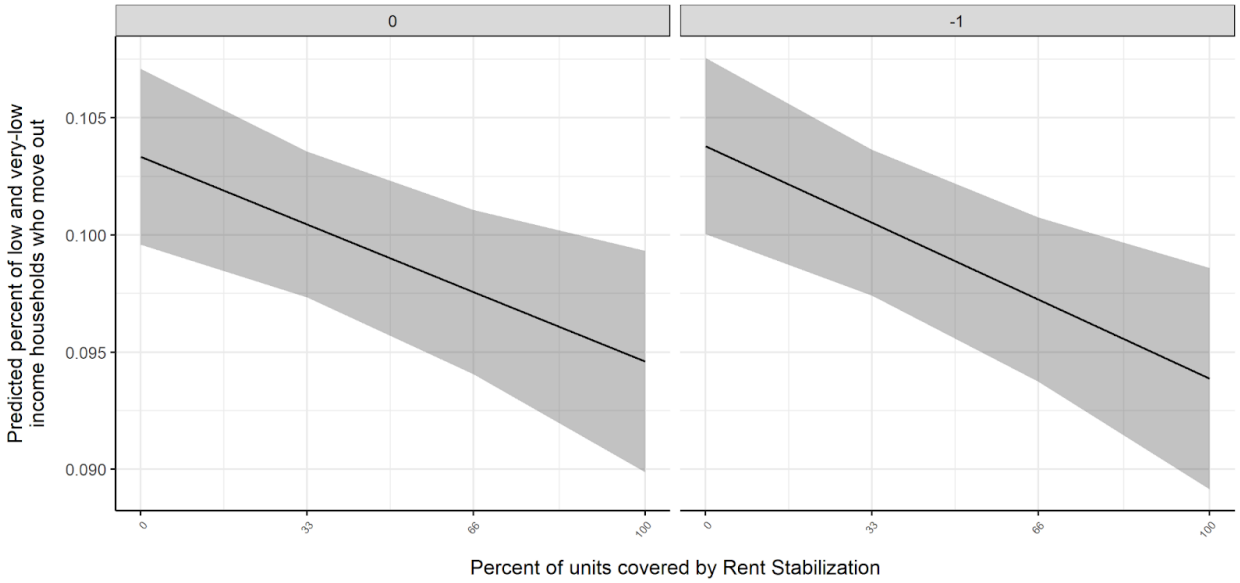
Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Figure H2. Predicted Percent of Very Low- and Low-Income Households Moving Out by Percent of Units Covered by (a) Just Cause and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



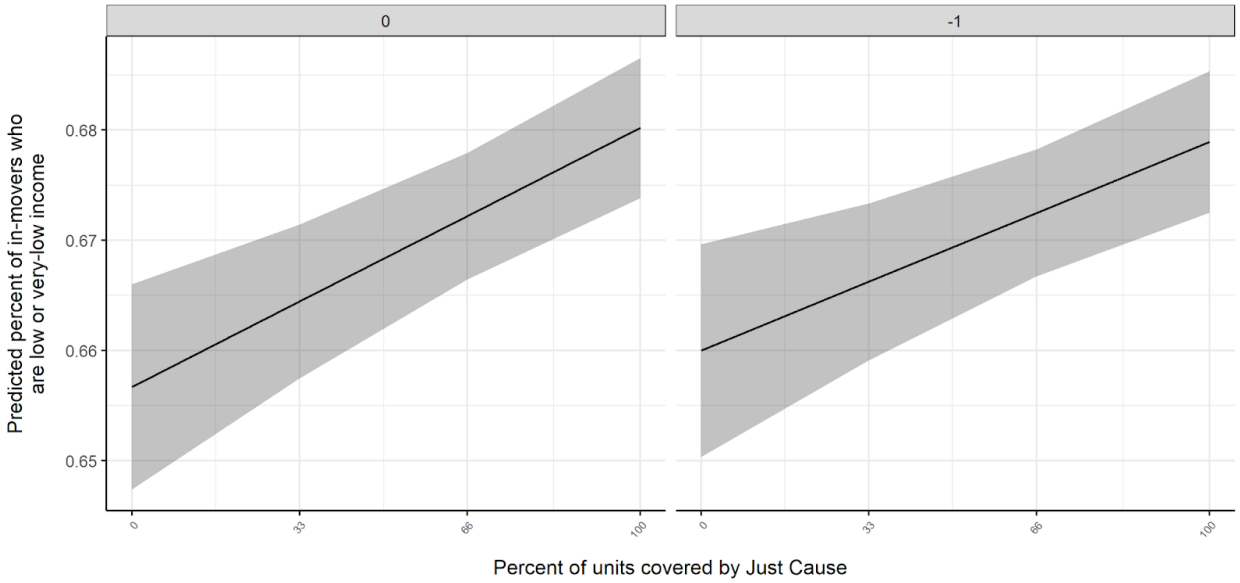
Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

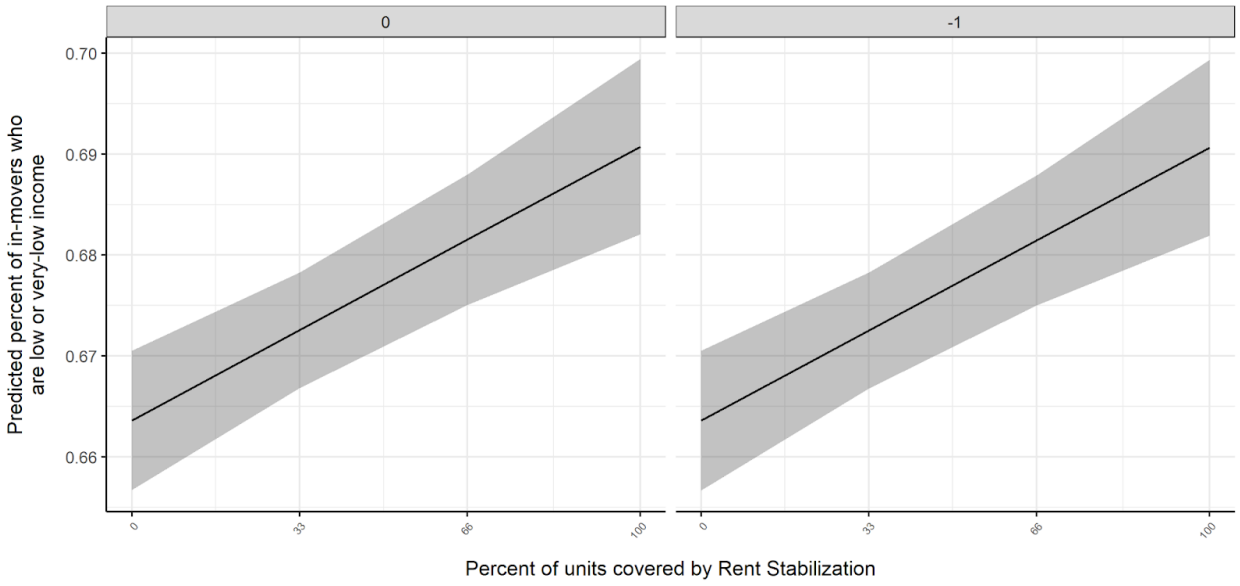
The block-group level models looking at aggregate results (Figure H3) show that tenant protections predict a significantly greater share of inmovers who are very low- and low-income, both in the same year and the year after.

Figure H3. Predicted Percent of Inmovers Who Are Very Low- and Low-Income by Percent of Units Covered by (a) Just Cause and (b) Rent Stabilization

(a) Just Cause for Evictions



(b) Rent Stabilization



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Appendix I. Sensitivity Analysis, Infogroup

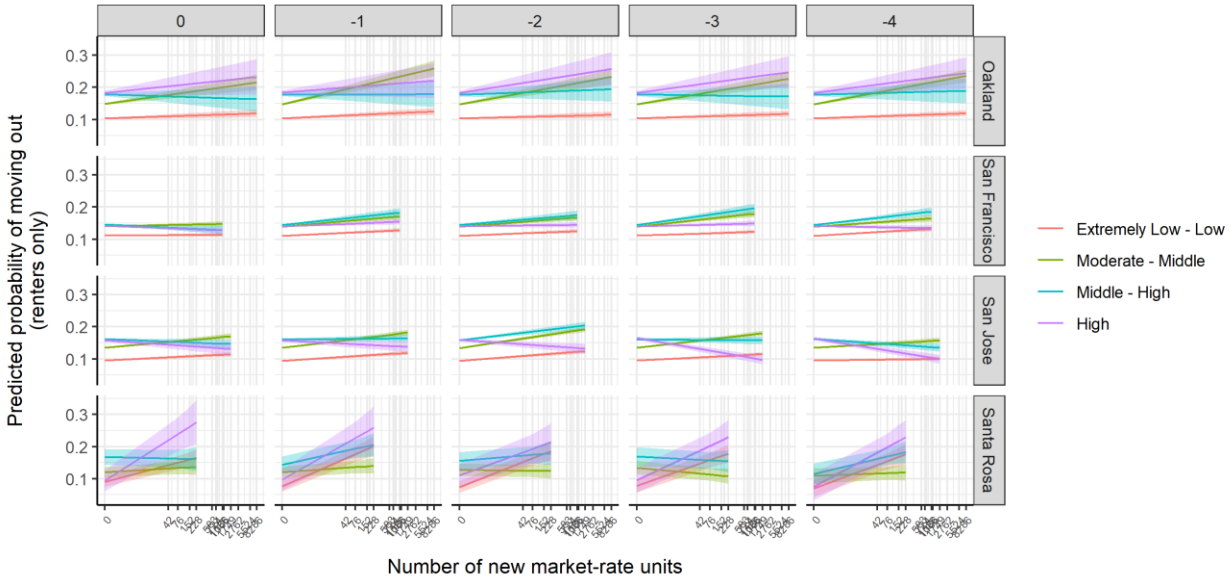
Major Cities (Oakland, San Francisco, San Jose, and Santa Rosa)

In order to determine whether our effects were robust across different geographies, we ran regression models separately for four select cities that contrast in terms of location, housing policies, and density—Oakland, San Francisco, San Jose, and Santa Rosa. (There were no units covered by tenant protections in Santa Rosa and no units were covered by just cause eviction protections prior to 2017 in San Jose.) Results of the sensitive analyses follow.

Outmigration

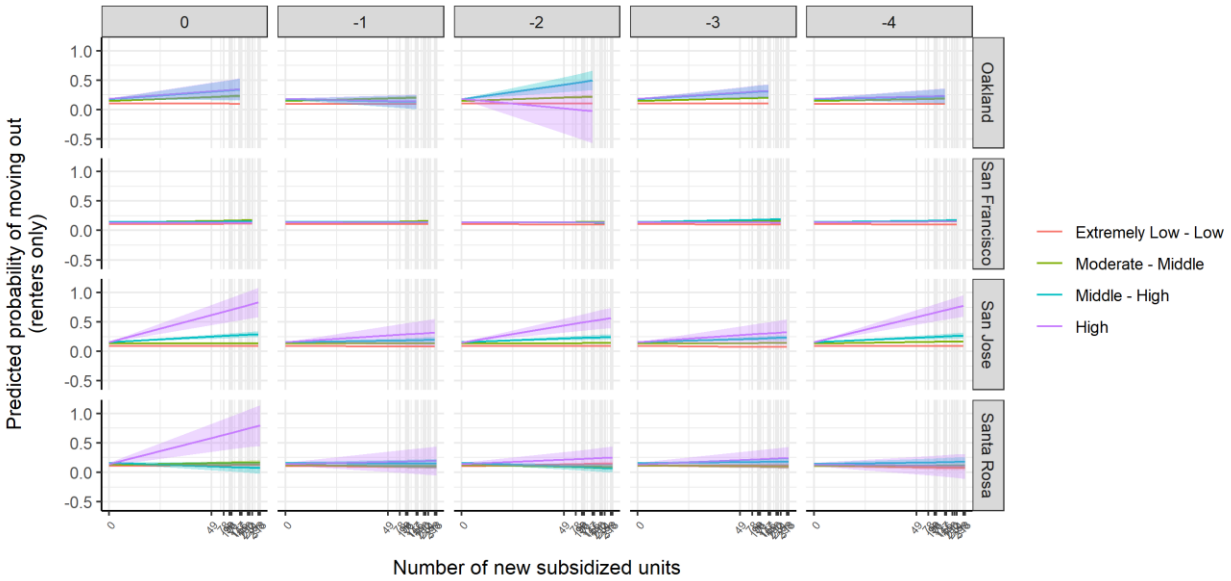
Across the cities, market-rate construction is associated with slight increases in outmigration, with some notable exceptions for high-income groups, for whom outmigration is flat or decreases in San Francisco and San Jose. In general, new housing construction has the least impact on low-SES households in these cities except for Santa Rosa. In contrast, subsidized housing construction seems to have little or no impact on outmigration across the selected cities.

(a) Market-Rate Units



Source: Infogroup, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

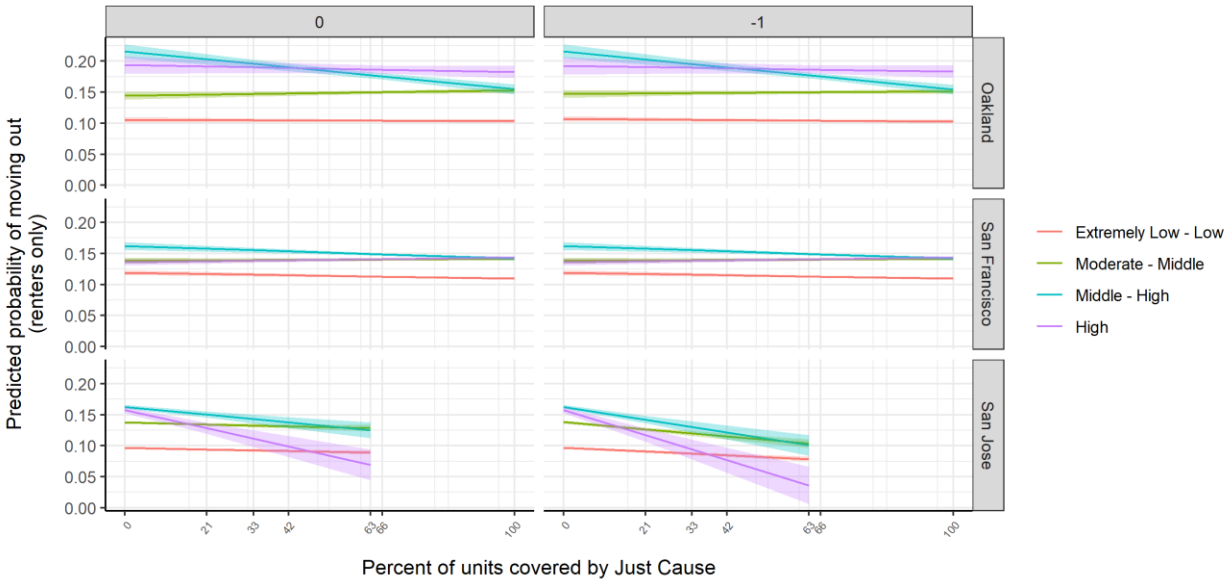
(b) Subsidized Units



Source: Infogroup, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

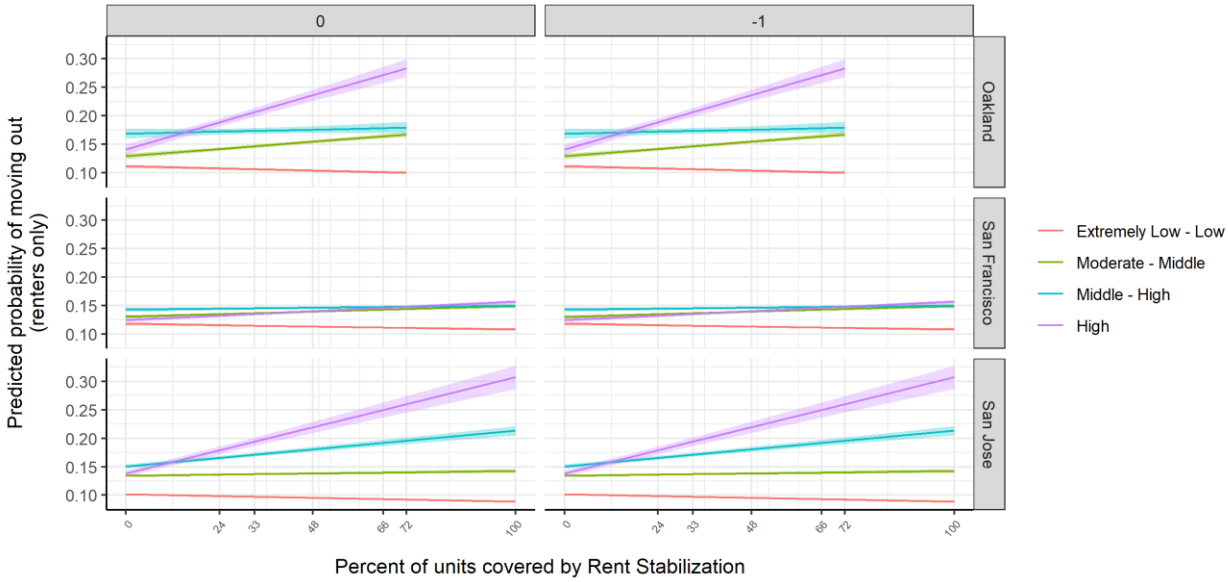
Just cause ordinances are generally associated with stable or declining outmigration rates across cities, with the steepest declines for middle-SES households. In contrast, rent stabilization ordinances are generally associated with increased outmigration from the core cities for all SES groups except low-SES households, who are more likely to remain in place.

(c) Just Cause for Evictions



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

(d) Rent Stabilization

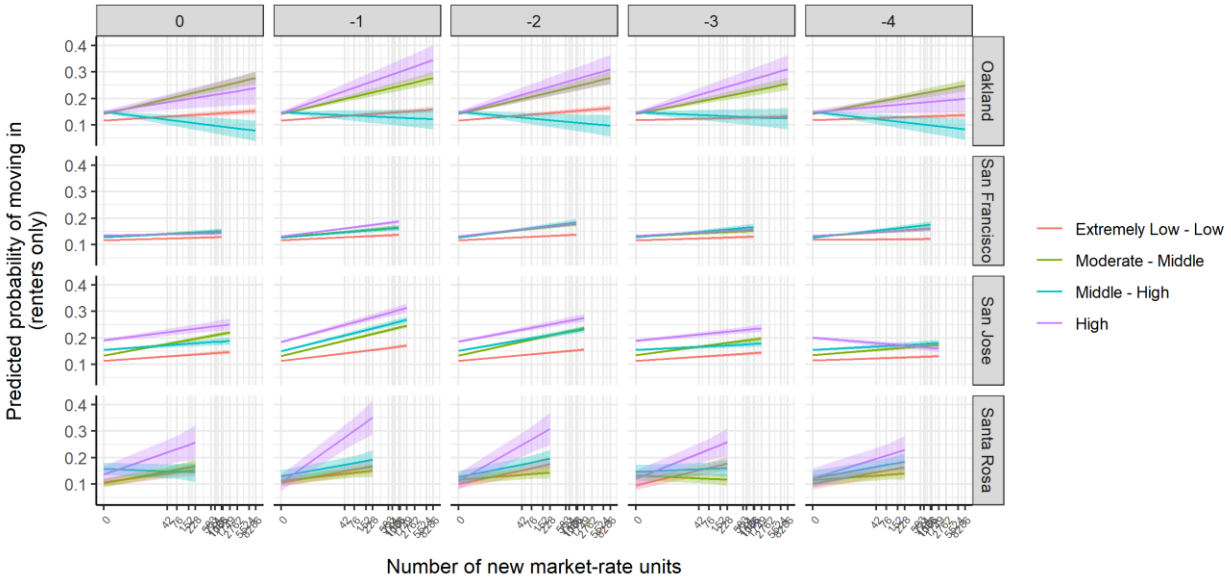


Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

Inmigration

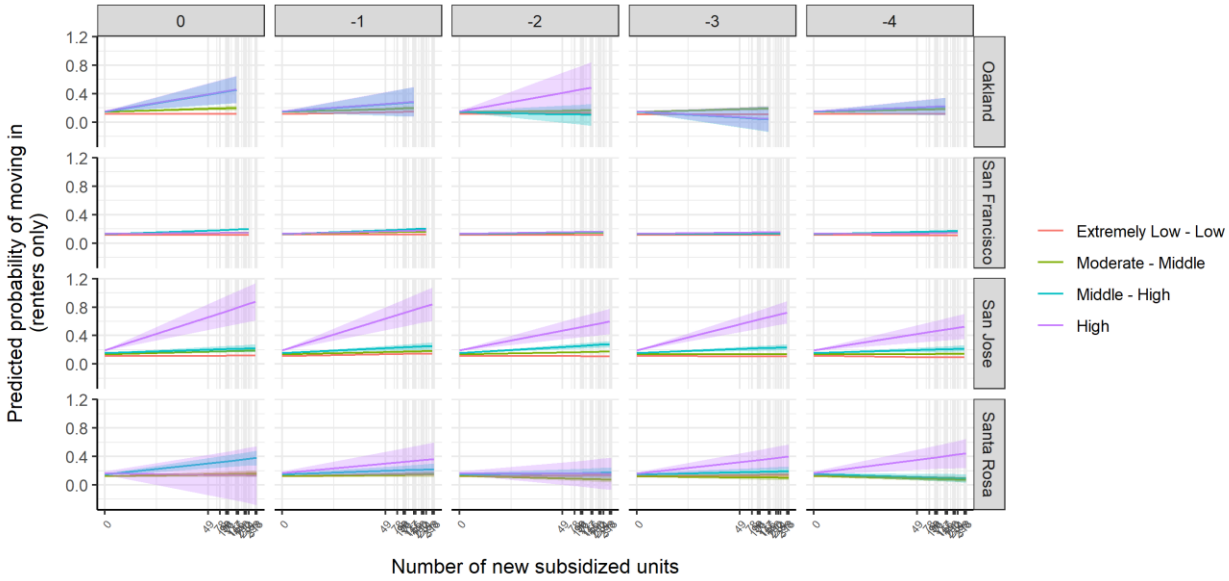
For most cities and income groups, market-rate production spurs increased inmigration; one notable exception is middle-SES households in Oakland, where inmigration decreased. The construction of subsidized units has little impact on inmigration with the exception of high-SES households, who are more likely to move into San Jose and Santa Rosa.

(a) Market-Rate Units



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

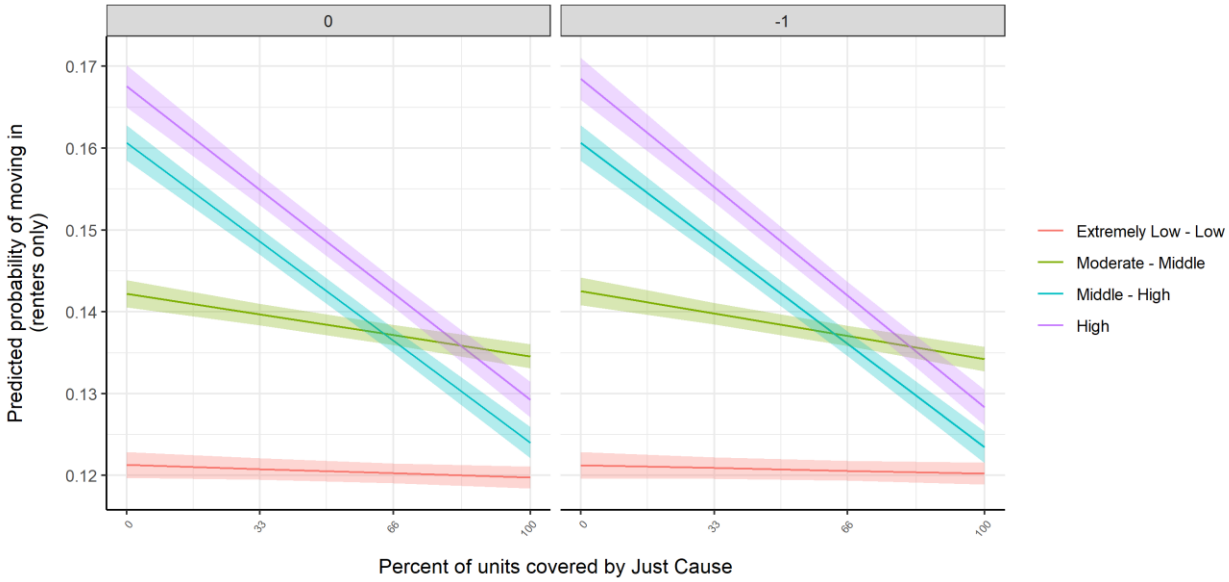
(b) Subsidized Units



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

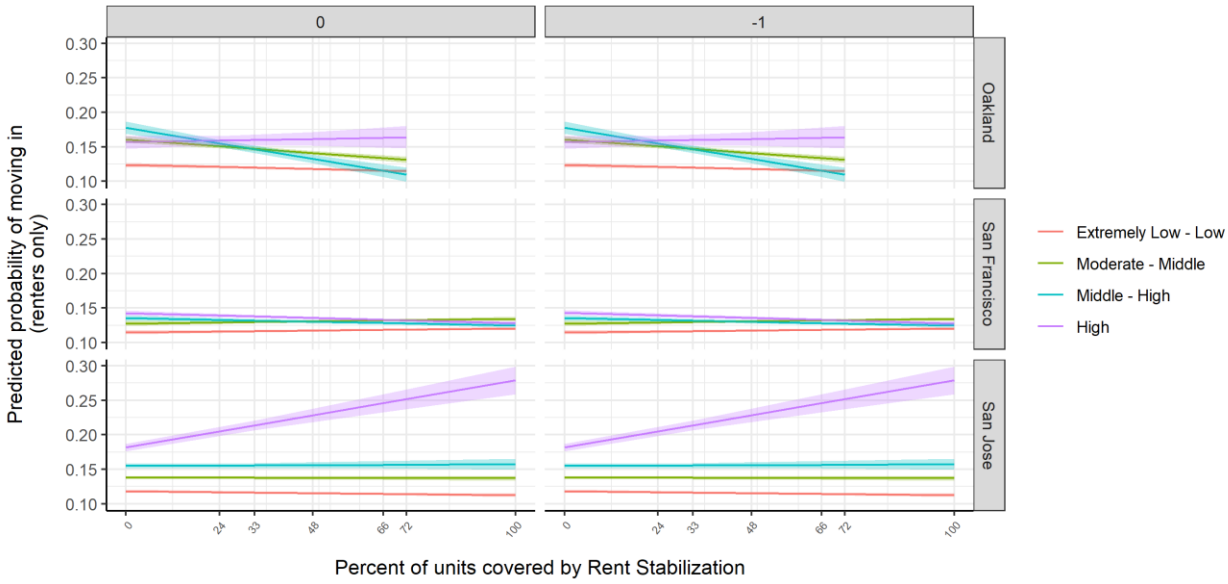
Just cause ordinances are associated with declines in inmigration across SES groups, particularly for middle-SES households in Oakland and middle- and high-SES households in San Jose. However, low-SES households in San Francisco and San Jose experience slight increases in inmigration rates. Rent stabilization ordinances are associated with flat or decreasing inmigration across cities and SES groups with the exception of high-SES households moving into San Jose.

(c) Just Cause for Evictions



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database

(d) Rent Stabilization



Source: Infogroup, UDP Tenant Protection Database, 2000 US Census, and the 2016 Neighborhood Housing Preservation Database