

But Where Are They To Go?

The Effects of Housing Market Interventions on Where Bay Area Residents Move

March 2022

Karen Chapple, Jackelyn Hwang, Jae Sik Jeon, Iris
Zhang, Julia Greenberg, and Vasudha Kumar



Key Takeaways

- Lower-SES movers tend to end up in urban areas, while higher-SES move to the suburbs (or San Francisco).
- Lower-SES movers are more likely to stay in the same city or at least the Bay Area, while higher-SES movers are more likely to leave California altogether.
- Market-rate construction is associated with a slightly higher chance of making a downward move—a move to a lower-opportunity neighborhood—for all income groups. Renters leaving tracts with tenant protections are more likely to stay within the same city or leave California.
- Renters make fewer downward moves from tracts where more units are covered by Just Cause for Evictions protections, suggesting they are able to make planned rather than forced moves.
- Rent stabilization is also associated with fewer downward moves but has less of an impact than Just Cause.
- Policymakers should consider prioritizing financial housing assistance for renters in neighborhoods with new market-rate construction.

Executive Summary

Displacement—or involuntary household mobility—disrupts lives and livelihoods, often forcing residents to move far from their jobs, schools, and social networks. This research brief examines where residents end up if they move out of neighborhoods with new market-rate housing production or tenant protections. In this study we link data on household mobility to a unique dataset on new market-rate housing units constructed, as well as data on new subsidized housing units constructed and units currently protected by either just cause eviction ordinances or rent stabilization.

Introduction

Displacement—or involuntary household mobility—disrupts lives and livelihoods, often forcing residents to move far from their jobs, schools, and social networks. This outcome matters. If displaced residents end up in better housing or neighborhoods, this harm might be reduced, but a move to a poorer quality living situation could compound the shock of displacement. This research brief examines where residents end up if they move out of neighborhoods with new market-rate housing production or tenant protections. Our intent is to determine if there are unintended consequences of these housing market interventions. If housing policies intended to address the affordability crisis push residents out to neighborhoods where their life chances decline, the chances of them being able to achieve upward mobility and escape housing poverty become very narrow indeed.

Due to a lack of data, few studies on residential mobility and displacement have been able to determine the destinations of household-level moves. Researchers often use “proxy” measures for displacement, like shifts in overall neighborhood demographics,¹ and are unable to draw conclusions about whether low-income residents leave voluntarily or involuntarily and how their lives might be impacted. Developing a complete understanding of why individual households move would require extensive qualitative interviews or surveys. However, evaluating the characteristics of the neighborhoods that households move to—namely, whether they are more or less economically advantaged than the neighborhoods they came from—can provide some insight into households’ motiva-

tions for moving. An “upward” move to a nicer neighborhood may indicate a planned move due to an improved financial situation, for example, while a “downward” or “constrained” move to a more disadvantaged neighborhood may suggest direct or indirect displacement. Evaluating the characteristics of destination neighborhoods may also suggest the potential effects of the move on the household’s quality of life and life chances, due to altered opportunity structures.

Past research has analyzed the destinations of household moves (albeit not from the perspective of how housing policy impacts the geography of moves). However, studies typically either do not investigate the characteristics of the destination neighborhoods, or define destination areas at too large a scale to draw any meaningful conclusions.

This literature typically looks at what happens to vulnerable residents in gentrifying neighborhoods, finding that they are more likely to move to lower-income neighborhoods than residents in neighborhoods that are not gentrifying.² This research brief adds a new dimension to previous work by asking what happens when neighborhoods change, not necessarily by gentrifying, but due specifically to the implementation of tenant protections or the construction of new housing units. We examine the case of the San Francisco Bay Area, a strong market context with a lack of housing production despite steady job

growth.

This policy brief presents findings from a longer report entitled [Housing Market Interventions and Residential Mobility in the San Francisco Bay Area](#), authored by researchers from the Urban Displacement Project at the University of California Berkeley and the University of Toronto, the Changing Cities Research Lab at Stanford University, and the Federal Reserve Bank of San Francisco.³ Our first policy brief detailed the relationship between new market-rate housing production and mobility into and out of neighborhoods. Our second and third briefs focused on the impact of tenant protections and subsidized housing construction on displacement, resident mobility, and neighborhood change in the Bay Area. This final brief takes a deeper look at residential mobility by evaluating where households move, and how these housing market interventions affect their likelihood of moving to more disadvantaged neighborhoods.

If housing policies intended to address the affordability crisis push residents out to neighborhoods where their life chances decline, the chances of them being able to achieve upward mobility and escape housing poverty become very narrow indeed.

We begin by providing an overview of our data and methods. After a description of Bay Area residents' mobility patterns and how they vary by income, we provide our model results. A conclusion outlines policy recommendations and next steps for research.

A note on data and methods

In this study we link data on household mobility to a unique block-level dataset on new market-rate housing units constructed, as well as data on new subsidized housing units constructed and units protected by either just cause eviction ordinances or rent stabilization (used to control for policy).⁴ To measure mobility, we use both Infogroup⁵ and Federal Reserve Bank of New York Consumer Credit Panel/Equifax (CCP) data, excluding data for individuals or households where the head is less than 25 years old. Running models separately for each dataset, we examine mobility each year out of tracts, a census geographic unit containing an average of 4,000 residents (although this total varies widely). 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 socio-economic status (SES). Both teams mapped their datasets to four categories: extremely low (under 30% area median income (AMI)), very low-low (30%-50%

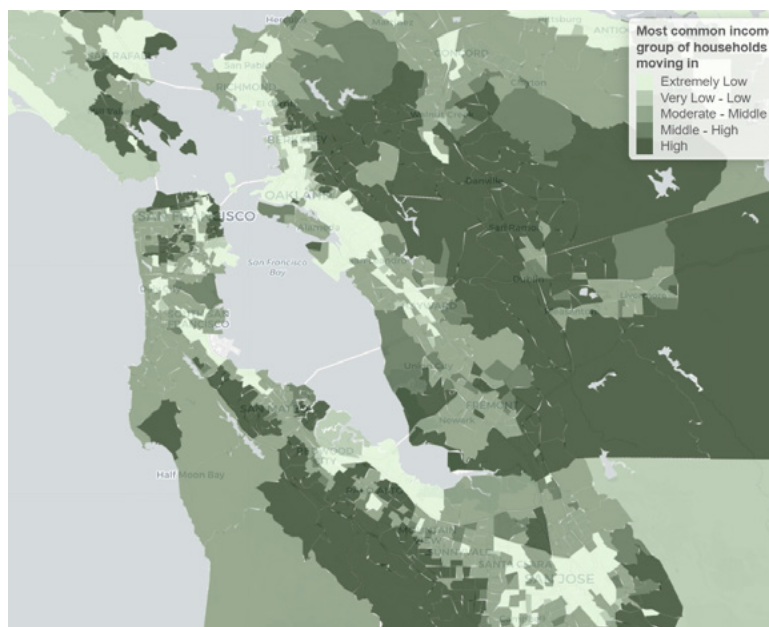
AMI), moderate-middle (50%-100% AMI), middle-high (over 100% AMI), and the Infogroup analysis added a high category (over 150% AMI).⁶

We examine how new production and tenant protections affect residential mobility, in terms of the characteristics of mover destinations, by using a series of linear probability models. Specifically, we assess the impact of new production and tenant protections on the likelihood that an individual (CCP) or household (Infogroup) makes a "constrained" move, either to a tract with a lower median household income or a higher poverty rate. See Appendix A for more detail about the data and methods, including the definition of a "constrained" move.

Lower-SES movers tend to end up in urban areas, while higher-SES move to the suburbs (or San Francisco)

Figure 1 below shows the predominant SES group to move into each census tract in the Bay Area. Extremely low-income households generally move to urban areas, like Oakland, Richmond, and San Jose, while high-income households are more likely to move to the suburbs and parts of San Francisco. Households in the remaining income groups (very low-low, moderate-middle, and middle-high) are more dispersed and often move into tracts that are located between areas that receive the high- and extremely low-income households.

Figure 1. Most Common Income Group of In-Movers in the Bay Area, 2006-2019



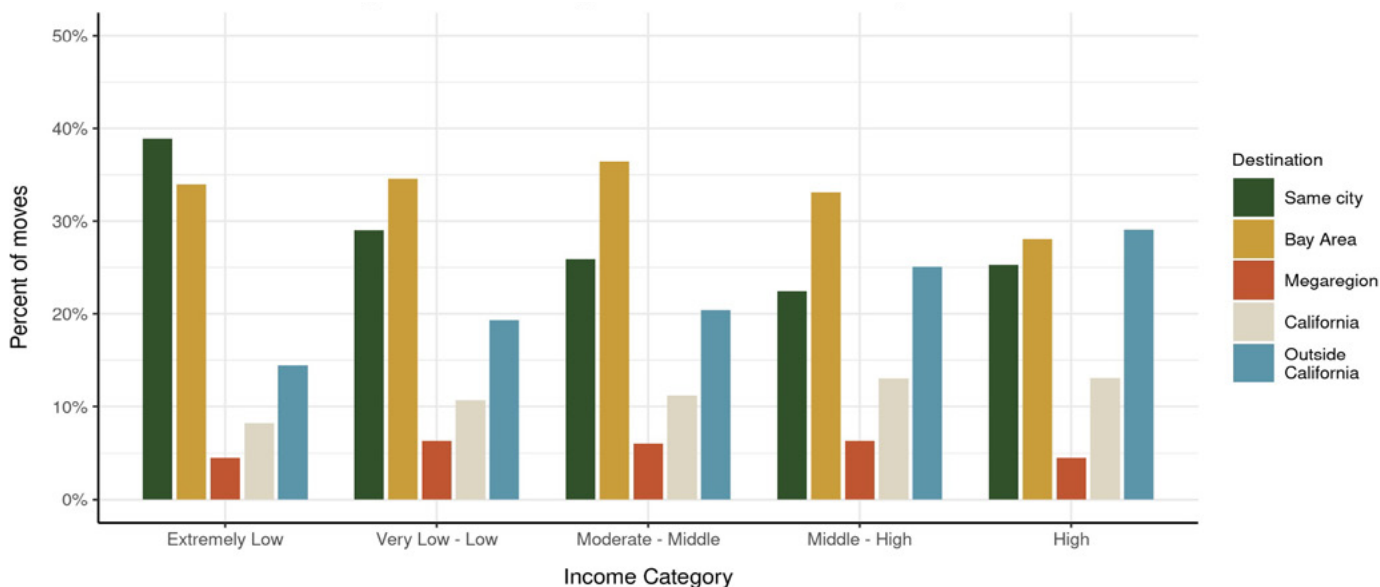
Source: Infogroup

Lower-SES movers are more likely to stay in the same city or at least the Bay Area, while higher-SES movers are more likely to leave California altogether.

Lower-socio-economic status movers are more likely to stay in the same city or at least the Bay Area, while higher-socio-economic status movers

are more likely to leave California altogether (Figure 2). Renters in the moderate-middle income group are the most likely to move to a different city within the Bay Area. Contrary to popular lore, few renters leaving the Bay Area migrate to the “megaregion”, which includes Sacramento, Yolo, San Joaquin, Santa Cruz counties.

Figure 2. Moving Destinations of Bay Area Renters 2006-2019, by Income



Almost half of extremely low-income renters relocating to a different city within the Bay Area move to Alameda County or San Mateo County, while the majority of low-to middle-income renters end up in Santa Clara County or Alameda County. High-income renters moving within the Bay Area also are most likely to relocate to Alameda County and Santa Clara County, with many moving to San Francisco County as well.

Market-rate construction is associated with a slightly higher chance of making a downward move—a move to a lower-opportunity neighborhood—for all income groups. When market-rate construction occurs in a neighborhood, the residents who move out are slightly more likely to move to neighborhoods with a lower median income or higher poverty rate (i.e., a downward or “constrained” move). Although the effects of market-rate construction on the probability of making a constrained move do not fully emerge until two years after construction, they continue for several years, especially for lower-income households.

For all income groups except middle-high, 100 new mar-

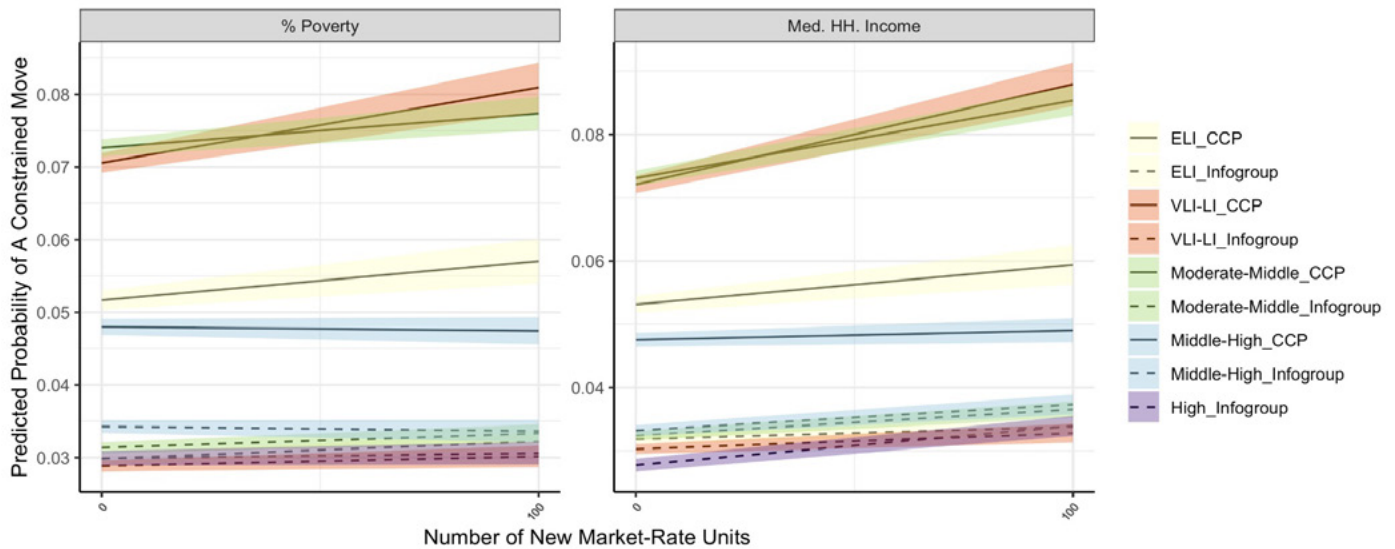
ket-rate units are associated with marginal increases in the probability of making a constrained move two years after construction (when a “constrained move” is defined as moving to a tract with a higher poverty rate) that range from 0.07 to 0.24 percentage points.⁷ A 0.07 percentage point increase, for example, would mean that for a household whose probability of making a constrained move is 10% in a tract with no new market-rate production, the household’s probability of making a constrained move would be 10.07% in a tract with 100 new market-rate units. Impacts are highest for extremely low-income and low-income households, and nonexistent for households in the middle-high category.

When a “constrained move” is defined as moving to a tract with a lower median household income, the results are similar, with even greater increases associated with new construction. For all income groups, 100 new market-rate units are associated with increases in the probability of making a constrained move that range from 0.2 to 0.62 percentage points. High-income households are most affected and extremely low- and very low-income households are least affected.

The impacts change only slightly four years after construction. After four years, high-income households are less likely to make a constrained move (when defined as moving to a neighborhood with a higher poverty rate),

and “middle-high”-income households do not experience any change in their probability of making a constrained move (when defined as moving to a neighborhood with a lower median household income).

Figure 3. San Francisco Bay Area: Making a Constrained Move after Two Years



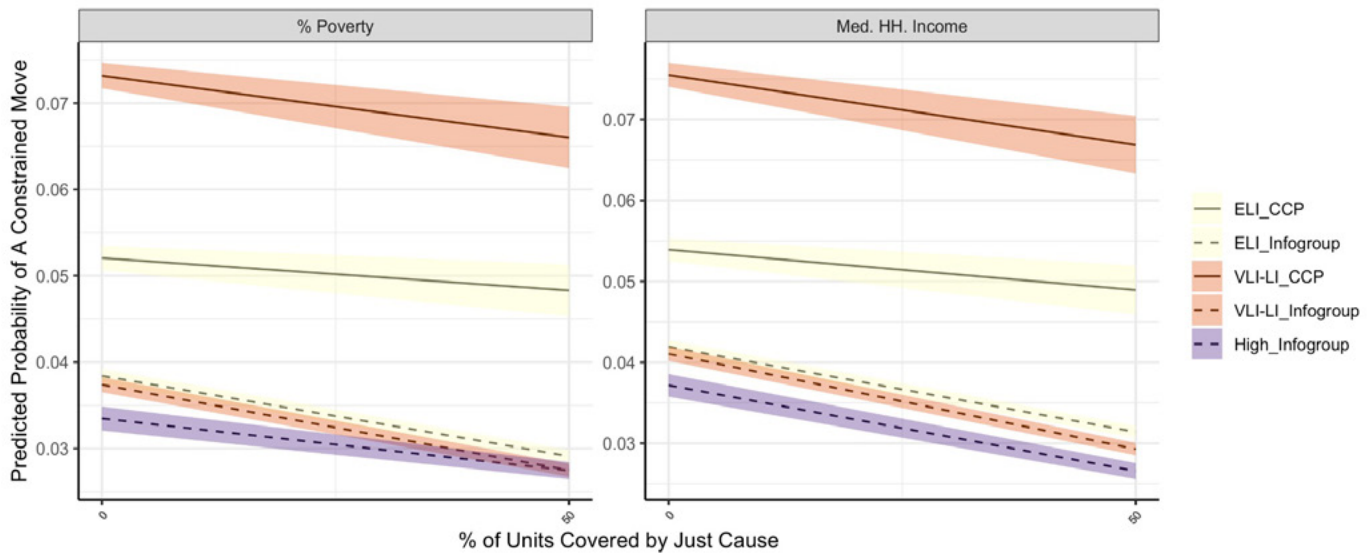
Renters leaving tracts with tenant protections are more likely to stay within the same city or leave California

While the amount of new market-rate housing built in a tract generally does not have much of an effect on the types of places renters move to, tenant protections have more of an impact. When there are more units covered by tenant protections (just cause for evictions and/or rent stabilization) in a census tract, renters in all income groups who move away from that tract are more likely to stay within the same city, less likely to move elsewhere in the Bay Area, and more likely to move outside of California. In other words, tenant protections shift migration patterns in two opposing ways, facilitating moves either nearby to their original homes or out of the state entirely.

Renters make fewer downward moves from tracts where more units are covered by just cause protections—suggesting people are able to make planned moves.

When there are more units in a tract covered by Just Cause for Evictions protections, extremely-low, very low-low, and high-income households are less likely to make a downward move. When a “constrained move” is defined using poverty deciles, the decreases range from 0.6 to 1 percentage points (with the largest impacts on very low-income households), and using median household income deciles the decreases range from 1.05 to 1.18 percentage points (with the largest impacts on very low-income households).

Figure 4. San Francisco Bay Area: Making a Constrained Move after One Year

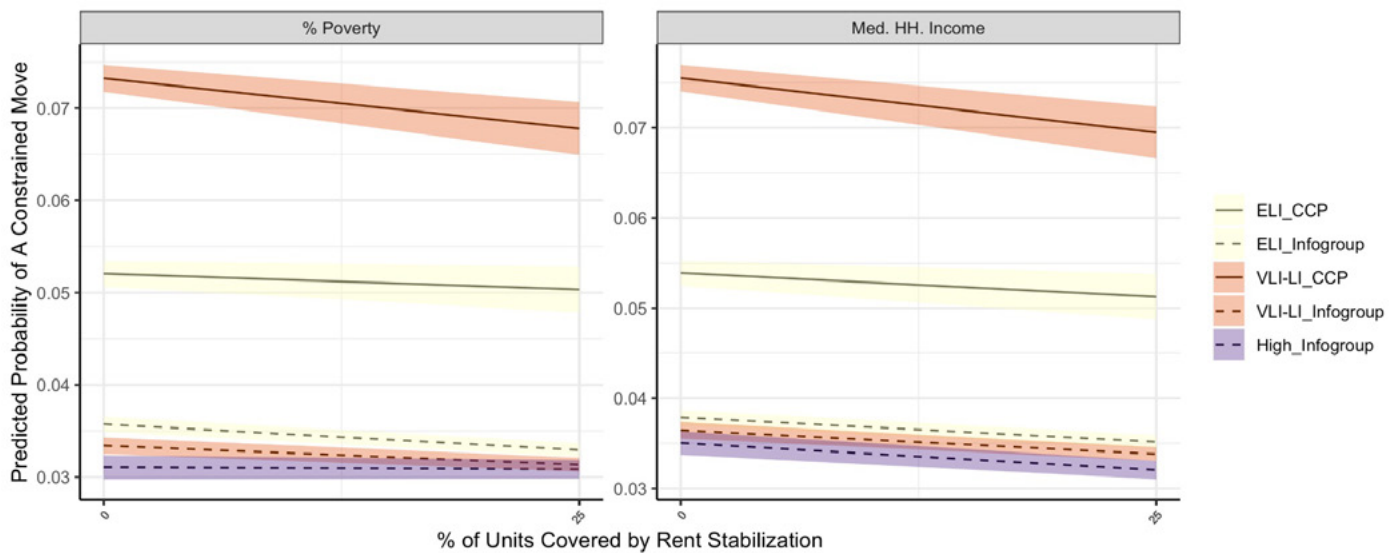


Rent stabilization is also associated with fewer downward moves but has less of an impact than Just Cause.

Similarly to Just Cause for Evictions protections, when there are more units in a tract covered by rent stabilization, extremely-low, very low-low, and high-income households are less likely to make a constrained move. However, these impacts are smaller. When a “constrained move” is defined as moving to a tract with a higher pov-

erty rate, the decreases range from 0.02 to 0.28 percentage points, with the largest impacts on extremely low- and very low-income households. When a “constrained move” is defined as moving to a tract with a lower median household income, the decreases range from 0.26 to 0.3 percentage points, with the largest impacts on high-income households.

Figure 5. San Francisco Bay Area: Making a Constrained Move after One Year



Conclusion and policy implications

Our analysis shows that new market-rate production increases the chances that households will move to more economically disadvantaged neighborhoods, whereas tenant protections have the opposite effect. These findings suggest that building new housing may displace people, while tenant protections increase the chance that residents are able to stay in place or make “upward” moves to neighborhoods with more opportunity. One possible explanation for this is that the housing stability and lower rent levels in neighborhoods with these protections allow households to save up the resources necessary for an upward move.

These findings have important implications for policymakers enacting housing policies to address the affordable housing crisis. In a strong market like the San Francisco Bay Area, there are few housing options if residents are pushed out. As shown by the first policy brief in this series, “New Production for Whom?”, new market-rate housing production slightly increases the outmigration rate of existing residents. This brief establishes that those who do move out are slightly more likely to make a downward move than their counterparts from neighborhoods without new construction, even controlling for tenant protections.

outcomes by pushing residents out. To ensure that new market-rate construction supports fair housing laws, policymakers should require mitigation in the form of the preservation of affordable housing for some existing tenants. Further research is needed to determine the amount of preservation necessary to mitigate impacts. This may help communities avoid the unintended consequences of new market-rate housing construction.



Image Credit: Center for Community Innovation

Given these findings, policymakers should consider prioritizing financial housing assistance for renters in neighborhoods with new market-rate construction.

This research also has implications for fair housing policy in strong market areas. Downward moves typically mean moves away from opportunity; thus, allowing new market-rate construction may impede fair housing

About the Authors

Karen Chapple, Ph.D., is Professor Emerita of City & Regional Planning at UC Berkeley, and Director of the School of Cities/Professor of Geography & Planning at the University of Toronto.

Jackelyn Hwang, Ph.D., is Assistant Professor of Sociology and Director of the Changing Cities Research Lab at Stanford University.

Jae Sik Jeon, Ph.D., is Assistant Professor of Real Estate Studies at Konkuk University.

Iris Zhang, M.A., is a Ph.D. student in Sociology at Stanford University

Julia Greenberg, M.P.P., is Research Manager at the Urban Displacement Project at UC Berkeley.

Vasudha Kumar, B.Sc. is the Social Science Research Analyst at the Changing Cities Research Lab at Stanford University

About IGS

The Institute of Governmental Studies is California's oldest public policy research center. As an Organized Research Unit of the University of California, Berkeley, IGS expands the understanding of governmental institutions and the political process through a vigorous program of research, education, public service, and publishing.

About CCRL

The Changing Cities Research Lab at Stanford University uses innovative data and methods to study the relationship between contemporary changes in U.S. cities and the durability of neighborhood inequality and segregation. With a focus on gentrification and racial stratification, CCRL aims to advance policy solutions that promote equity as cities change.

Acknowledgements

We thank Casey Pablo Butcher, Alex Kim, Brooke Ada Tran, Patricia Wei, Alisha Zhao, and Isaac Schmidt for their excellent research assistance with the full report, Lizzy Mattiuzzi, Rocio Sanchez-Moyano, James Pappas, Pedro Peterson, Brian Asquith, and Kate Pennington for their thoughtful comments, and Rachel Schten for formatting and graphic support. Funding for the 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.

About UDP

The Urban Displacement Project (UDP) is a research and action initiative of the University of California Berkeley and the University of Toronto. UDP conducts community-centered, data-driven, applied research toward more equitable and inclusive futures for cities. Our research aims to understand and describe the nature of gentrification, displacement, and exclusion, and also to generate knowledge on how policy interventions and investment can support more equitable development.

Endnotes

1 Carlson, 2020.

2 Freeman 2005; Ding Hwang & Divringi 2016; Hwang & Ding 2020; Newman & Wyly 2006

3 Freeman 2005; Ding Hwang & Divringi 2016; Hwang & Ding 2020; Newman & Wyly 2006

4 Freeman 2005; Ding Hwang & Divringi 2016; Hwang & Ding 2020; Newman & Wyly 2006

5 Now called Data Axle.

6 Category names are consistent with the Federal Reserve Bank definitions, accessed at https://www.federalreserve.gov/consumerscommunities/cra_resources.htm. Infogroup categories are relative to the AMI for the county, while the CCP/Equifax data is relative to the region as a whole. Categories for the CCP/Equifax data were assigned as follows:

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

7 The numbers listed represent the Infogroup results, not the CCP results.

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

9 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.

10 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 to obtain this information.

11 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.

References

Carlson, H. J. (2020). Measuring displacement: Assessing proxies for involuntary residential mobility. *City & Community, 19*(3), 573-592.

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.

Ding, L., Hwang, J., & Divringi, E. (2016). Gentrification and residential mobility in Philadelphia. *Regional science and urban economics, 61*, 38-51.

Freeman, L. (2005). Displacement or succession? Residential mobility in gentrifying neighborhoods. *Urban Affairs Review, 40*(4), 463-491.

Hwang, J., & Ding, L. (2020). Unequal displacement: gentrification, racial stratification, and residential destinations in Philadelphia. *American Journal of Sociology, 126*(2), 354-406.

Newman, K., & Wyly, E. K. (2006). The right to stay put, revisited: Gentrification and resistance to displacement in New York City. *Urban studies, 43*(1), 23-57.

Appendix A. Data and Model Construction

Data

The Infogroup Residential Historical Data provides annual information on individual owner and renter households from 2006-2019, including geographic coordinates of where the households live, household income, and demographic characteristics (many imputed), with an average of approximately 3 million Bay Area households per year. The process of validation revealed that the Infogroup data requires careful data cleaning and wrangling, including elimination of households not consistently represented in the dataset, and weighting to be consistent with the American Community Survey. The CCP data provides quarterly information on a 5% sample of adult consumers from 2002-2018, with census block-level⁸ 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), with an average of 240,000 Bay Area residents per year.

We also 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, along with California Department of Housing and Community Development's Annual Progress Report (APR) data from 2018 and 2019, spans the years 2000-2019 and aggregates new production by year and census block group.⁹ 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).¹⁰

Model Construction

The analysis estimates two models. Both models estimate the probability that an individual (CCP) or household (Infogroup) of different SES makes a downward (or "constrained") move, but each one defines "constrained move" differently. The definitions are as follows:

- 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

To account for household-level characteristics that are related to differences in whether individuals (or households) move, the Infogroup team controls for age and race of household head, length of residence, number of children, number of adults, and marital status. The CCP/Equifax team controls 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. Both 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. The Stanford team also includes indicators in our models for the panel year.

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. To account for the possibility that outmigration and immigration rates are simply a product of neighborhood churning, we also include a rolling prior 3-years' average of the block group out- and immigration rates by SES.¹¹

Finally, we account for several neighborhood-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, and percent of housing built in the last 20 years, all based on 2000 U.S. Census data. In addition, we include the number of subsidized housing units as of 2016 from the National Housing Preservation Database.

Since neither of these data sources accounts for household size in assigning SES categories, the analysis controls for this. We subset the Infogroup data to renters, but the Equifax/CCP data does not differentiate between renters and owners. We ran supplementary analyses separately for individuals under age 65 without a mortgage.