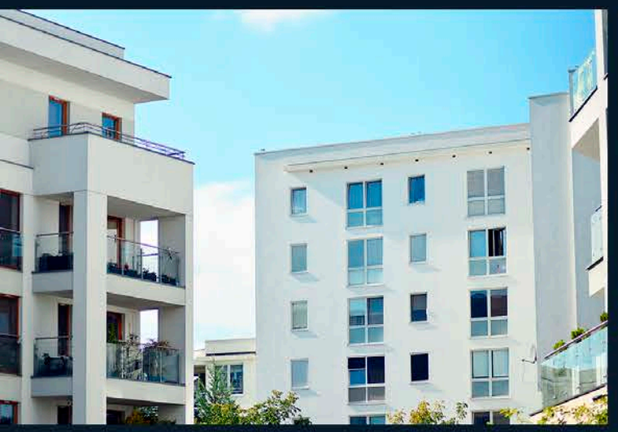
USC Lusk

Casden Real Estate Economics Forecast

2021 Spring Multifamily Forecast



USC Lusk Center For Real Estate
Casden Real Estate Economics Forecast

2021 Spring Multifamily Report

Produced By:

USC Lusk Center for Real Estate

Authors:

Richard K. Green | Director | USC Lusk Center for Real Estate

Evgeny (Gene) Burinskiy | USC Lusk Center for Real Estate

Online at | lusk.usc.edu/casden

Contents

Casden Real Estate Economics Forecast

Under the terms of the generous gift agreement that created the Casden Real Estate Economics Forecast, the Lusk Center has an obligation to do a real estate economics forecast each year. The Lusk Center takes this responsibility very seriously.

We normally put out a multi-family forecast, with a conference that surrounds it, in the fall of each year. This past fall, we decided a conference on the state of the real estate market–one that delved into why renters were paying their rents in the time of a pandemic–would be more informative than a forecasting conference. A video recording of that conference may be found here: https://lusk.usc.edu/casden/resources. For reasons to be discussed below, forecasting at a time of uncertainly is problematic and can indeed be misleading. That is why we decided to postpone doing an actual forecast.

Now that we are in the spring of 2021, we believe the world is more stable than last fall. So, with trepidation, we forecast rents, vacancies, and new construction for Southern California submarkets stretching from San Diego to Ventura Counties, and from the Pacific Ocean to the Colorado River. The foundation of our forecast includes data from Costar, the US Census American Community Survey, and the US Department of Commerce. These data are inputs into econometric models that lead to the forecast output. The econometric equations we estimate are at the end of this report, and the model parameters are available upon request.

Before getting into what the forecast says, we encourage readers to look at the caveats that will come after the forecast summary. They are particularly important and give us less confidence about our forecast than we have in more normal years.

The forecast is a mechanical exercise. Many of the results that we get arise from the fact that vacancies rose in many markets, and a higher vacancy in one period predicts lower rent growth in the next. We also find rents are more likely to grow in outskirt markets than in core markets. Specifically, the model forecasts the following one-year growth rates for different submarkets:

Los Angeles

Submarket	1-year Avg Forecasted Rent Growth
Koreatown-Mid City	-1.2%
Inglewood	-1.1%
Coastal Communities - Beverly Hills	-1.0%
Downtown	-0.7%
Burbank-Glendale	0.6%
San Fernando Valley	0.7%
Long Beach-South Bay	1.1%
South/Southeast Los Angeles	2.0%
Pasadena	2.1%
San Gabriel	3.1%
Palmdale-Lancaster-Santa Clarita	3.4%

Inland Empire

Submarket	1-year Avg Forecasted Rent Growth
Palm Springs-Indio	7.4%
West Riverside County	9.4%
Rancho Cucamonga-San Bernardino	9.9%

Orange County

Submarket	1-year Avg Forecasted Rent Growth
La Habra-North OC	3.1%
Anaheim-West Orange Central	3.7%
Huntington-Seal-Coastal-OC	4.4%
Irvine-South-East-OC	6.2%

Ventura

Submarket	1-year Avg Forecasted Rent Growth
Oxnard-Port Hueneme-Ventura	5.1%
Simi Valley	5.9%

San Diego

Submarket	1-year Avg Forecasted Rent Growth
City of San Diego (Coastal)	3.4%
City of San Diego (Inland)	4.3%
Chula Vista-National City	4.6%
North County	5.5%

Some patterns are quite pronounced. First, the farther one gets away from the city of Los Angeles, the greater seems to be the potential for rent growth. The model forecasts modest further rent declines from downtown Los Angeles moving west to the Pacific Ocean. The most substantial gains are in the Inland Empire, followed by the southern end of Orange County, Ventura County, and suburban San Diego County.

The elements driving the model are: (1) differences in current vacancy rates across the region and (2) differences in recent absorption. One key indicator to look at is whether a vacancy rate in a market is greater than or less than 5 percent–that is roughly the point at which we can determine whether rents will rise or fall in succeeding periods. Note that vacancy rates in the places where we expect rents to fall are above five percent. Conversely, we see that vacancies in the Inland Empire markets have fallen rapidly to rarely seen low levels, driving the model to forecast large rent increases there.

Now for the caveats. The first is broad–we are doing something that we would prefer not to do–forecast outside of the "support of the data." This means that we are forecasting one year based on a previous year unlike any other previous year. The year of COVID changed the behavior of millions, and whether that behavior returns to a pre-COVID normal or is permanently changed will matter a lot for the rental market.

The first and most important change was a large-scale move away from central cities to suburbs, leading to the sharp rise in vacancy in Downtown LA, Koreatown, Beverly Hills, Burbank-Glendale, and coastal areas of LA County, along with the sharp declines in all Inland Empire markets, suburban San Diego County, Southern Orange County, and Ventura County.

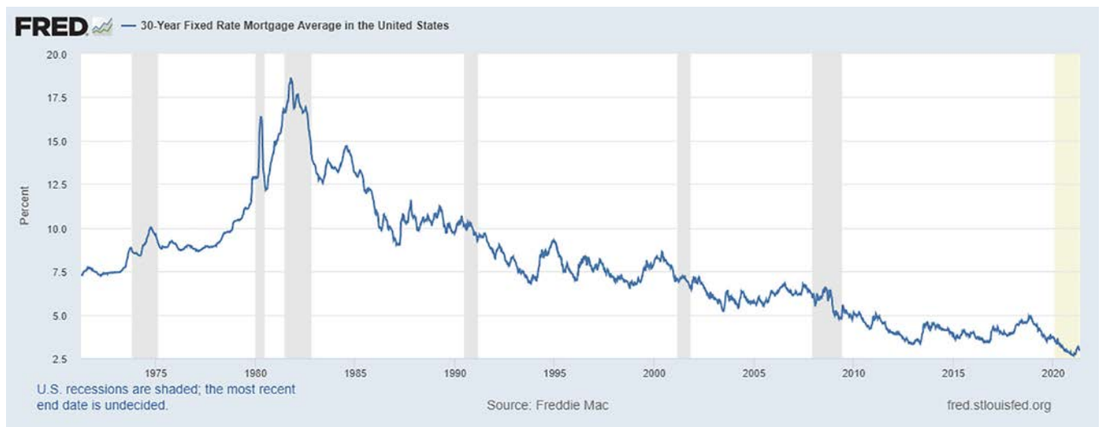
The shuttering of office buildings and amenities such as restaurants reduced the willingness of tenants to pay a rent premium in centrally located places. When commuting ceases to happen and places to gather are not available, renters will find less expensive, larger apartments in what are generally less convenient locations more appealing and will thus move. The critical question of the following year will be whether people return from suburban cities to central cities. We have no expertise as to whether Los Angeles will or will not achieve herd immunity, but if it does, we may expect some, and perhaps substantial, reversal of the population flows from the central parts of the region to the more suburban parts. If this happens, we might see modest rent growth in central markets and slow rent growth at the periphery.

The second change was population loss. For the first time since California became a state in 1850, California lost population. This loss resulted from three elements: deaths from COVID, domestic outmigration (one can think of migration to Phoenix and Las Vegas as about people going a step beyond the Inland Empire), and reduced international in-migration. We hope that the first of these will sharply reverse for all of 2021 (things are looking good for the first five months of the year), but getting a handle on the other two issues is difficult.

Domestic outmigration is happening overwhelmingly among people who have incomes of less than $50,000 per year (see, among others, Public Policy Institute of California 2021). We also know that unlike other places with outmigration, such as the Rust Belt, parts of the Deep South, and Midwestern Farming communities, there continues to be strong demand for California–we know this because house prices keep rising. Indeed, if wealthier people replace lower-income people in California, and the housing stock fails to grow beyond replacement levels, its population will continue to decline, as wealthy people take up more floor space per capita than lower-income people. We may consequently see conversions of some rental property to owner property, reducing the supply of rental housing and reducing rental vacancy rates.

As for international migration, while the current administration is already making policy changes that should make it easier for migrants to enter the United States, differences in vaccination rates across countries may mean that COVID will be an impediment to migration for another year or more.

And this brings us to the third change–unprecedently low mortgage rates. Mortgage rates dropped to levels not before seen in the Post-World War II era. This chart of Freddie Mac data displays mortgage rates since 1971 (the first year such data were systematically collected).



The decline in mortgage interest rates made owner-occupied housing in the suburbs particularly appealing relative to renting in the city. So along with competing with suburban apartments, central city apartments were competing with the owner-occupied housing market. But prices have since risen to the point where the cost of owning is the same or higher than it was before COVID began. The California Association of Realtors reports the median house price in Southern California was 20.5 percent higher in March 2021 than it had been a year earlier. Mortgage rates fell from 4 to 2.5 percent, which was just enough to offset the impact of a 20 percent increase in prices on mortgage payments. But higher sales prices will also mean higher property taxes (typically 1.1 percent of home value) for current homebuyers, meaning that the cash flow burden of owning a house is now higher in Southern California than before COVID. The increase in the relative cost of owner housing could push demand back toward the rental market.

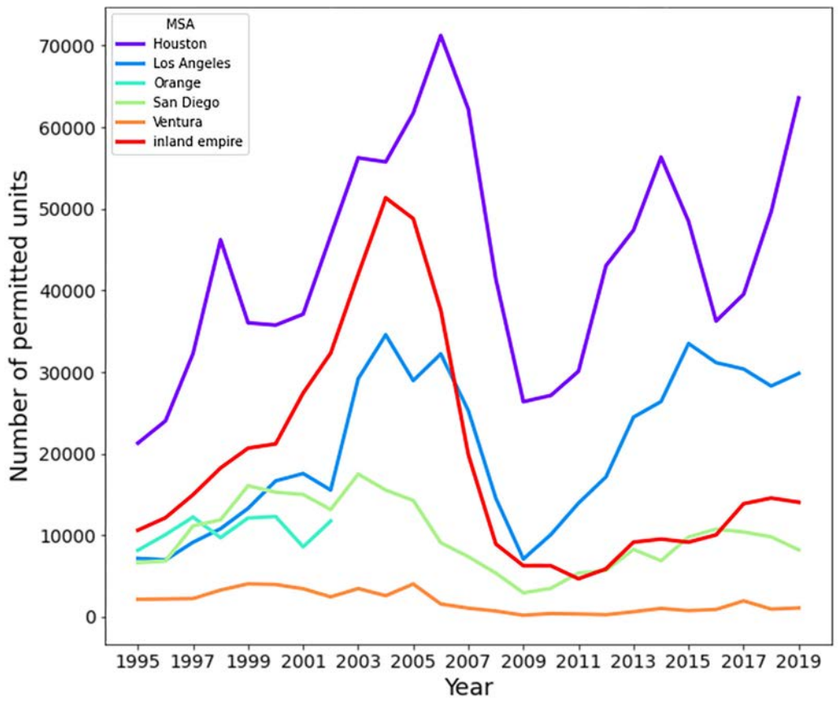
Finally, the rental market in Southern California has been affected by various eviction moratoria from all levels of government. This has allowed tenants to remain in place, but it also means that many tenants will owe substantial back rent. According to the US Census Housing Pulse Survey from late April 2021, 459,000 households in Los Angeles and Orange Counties consider themselves "housing insecure," meaning that are behind on their rent or mortgage payment or think they are about to be. This is eight percent of all households in the region. Evictions of even a fraction of people in such straights will push up vacancy rates.

Reference

Public Policy Institute of California (2021) Who is moving out of California—and who is moving in? https://www.ppic.org/blog/whos-leaving-california-and-whos-moving-in/. Accessed May 12, 2021.

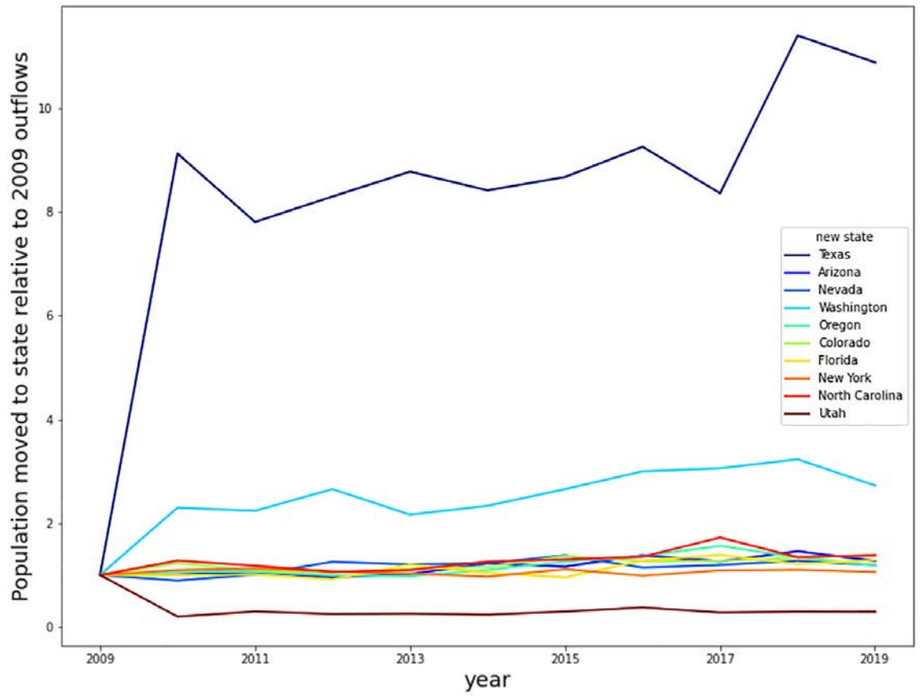
US Bureau of the Census (2021) Pulse survey. Accessed May 12, 2021.

Construction Activity in Select CA Counties & Houston, Texas



Note: MSA definitions vary across years

Population Outflow From California

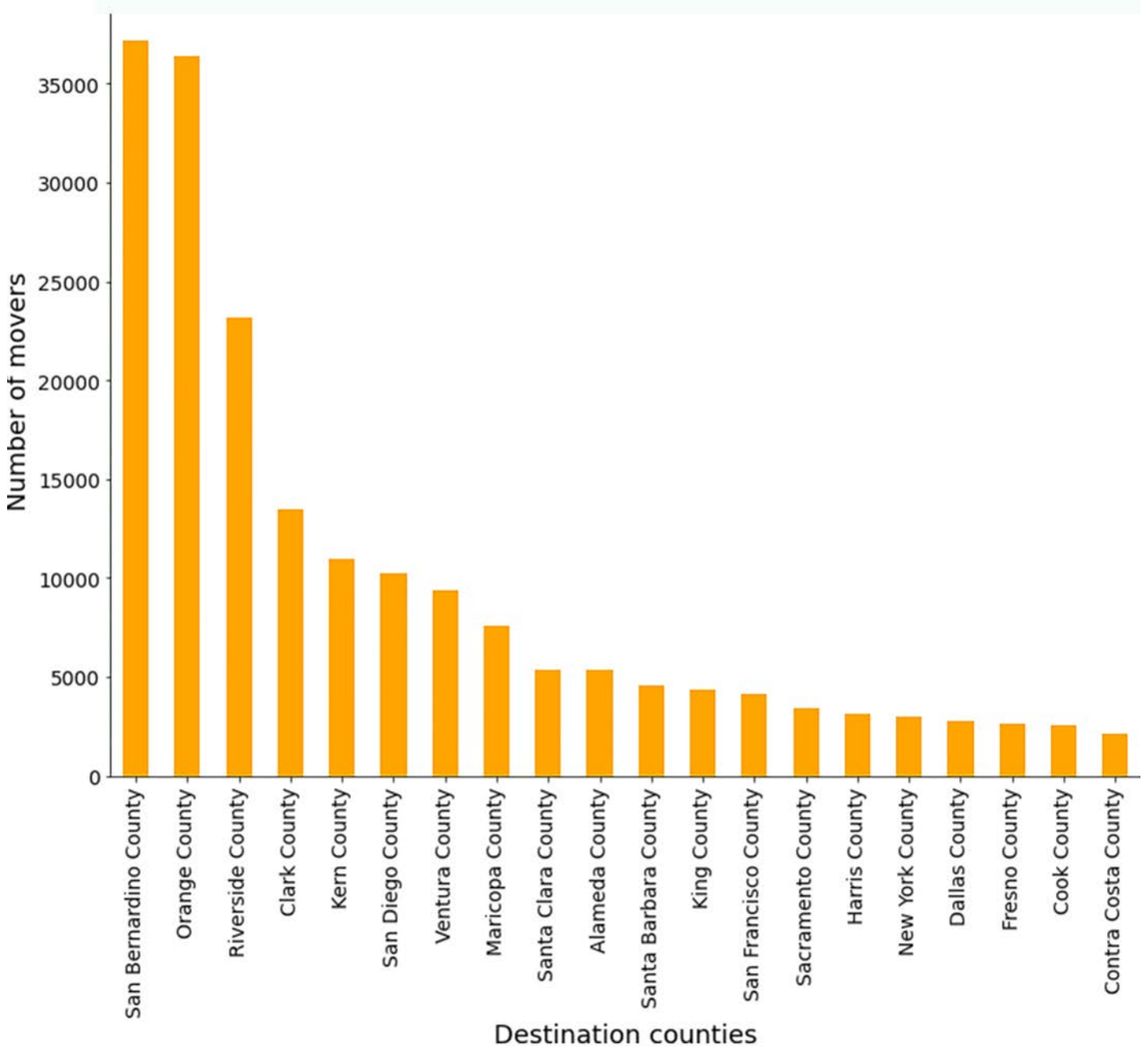


Net Annual Migration from Select CA Counties

2020 Location Quotients

	County					
Industry	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Ventura
Construction	0.68	1.29	1.77	0.97	1.13	1.03
Education and health services	1.23	0.91	0.96	1.02	0.93	0.92
Financial activities	0.87	1.29	0.49	0.51	0.91	0.85
Information	2.19	0.82	0.38	0.28	0.82	0.65
Leisure and hospitality	1.04	1.15	1.17	0.92	1.16	1.06
Manufacturing	0.88	1.14	0.68	0.8	0.95	0.94
Natural resources and mining	0.12	0.11	1.33	0.32	0.55	6.7
Other services	1.06	0.97	0.87	0.81	1.09	0.81
Professional and business services	0.98	1.39	0.67	0.74	1.22	0.93
Trade, transportation, and utilities	1	0.84	1.25	1.59	0.8	0.9
Unclassified	0.03	0.03	0.02	0.02	0.03	0.04

20 Leading Destinations for Movers from Los Angeles County 2019



Los Angeles County

Race

White	31%
Black	11%
Asian	13%
Hispanic	43%
All other races	3%

Education

Less than HS	20%
HS Diploma	21%
Bachelor's Degree	22%
Graduate Degree	9%

Housing Type

1 Unit	54%
2-4 units	9%
10 to 19	8%
20+ units	20%

Rental Units By Size of Structure

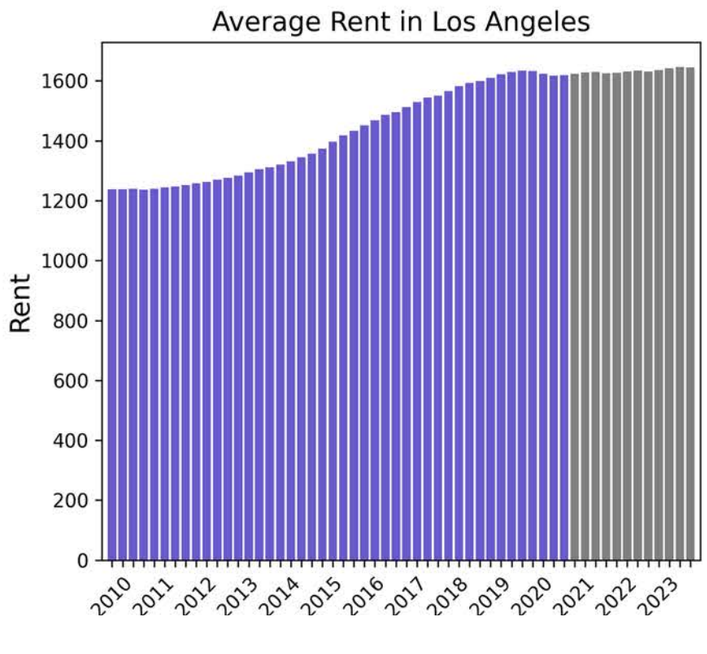
before 1970	55%
1970-1999	36%
after 2000	9%

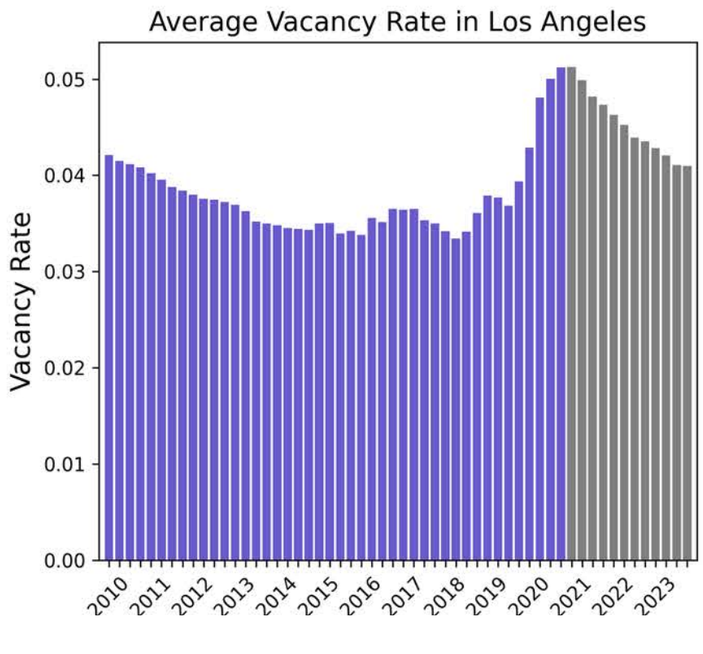
Household statistics

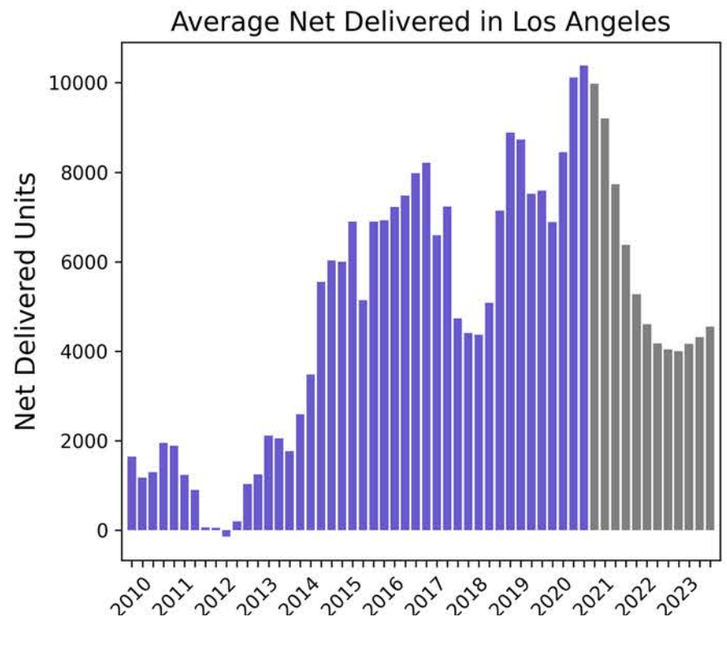
Share of Rent Burdened Households	54%
Percent with Children	32%
Median Household Income	$75,007
Average Household Size	3.09

All Demographic and Migration Data are based on Casden Forecast Tabulations of 2019 Five-year American Community Survey Data.

Los Angeles County Rents/Vacancy

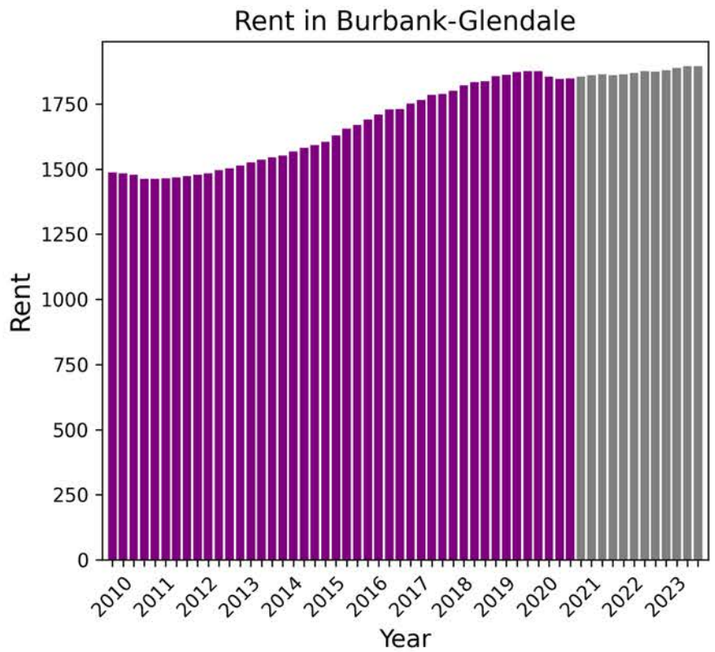


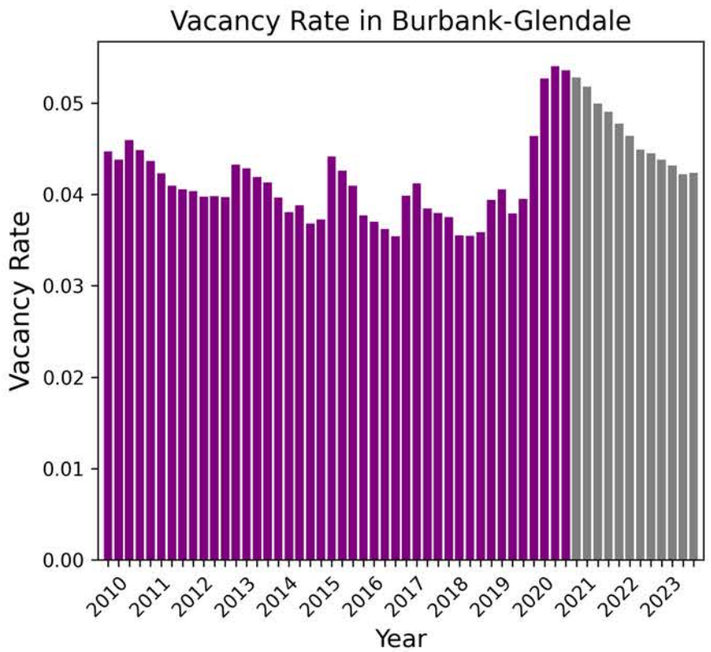


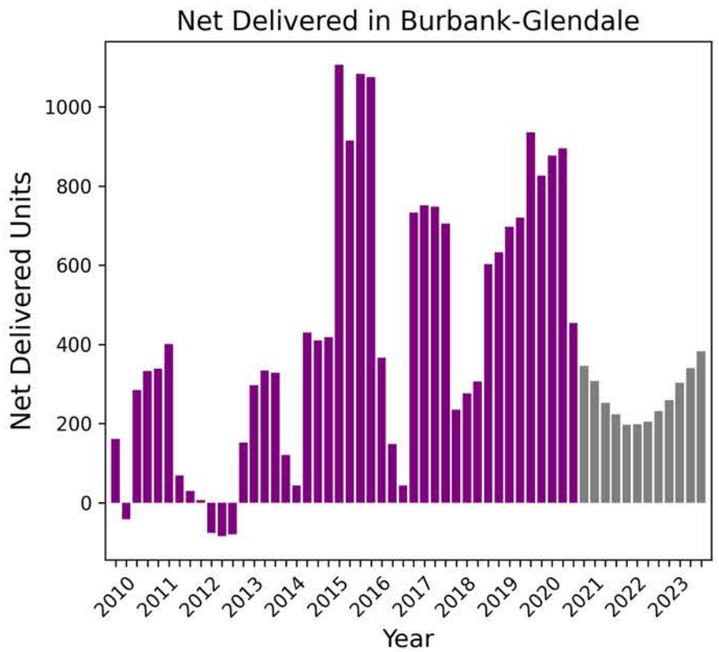


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Burbank-Glendale Market • Los Angeles County, 2010 to 2020

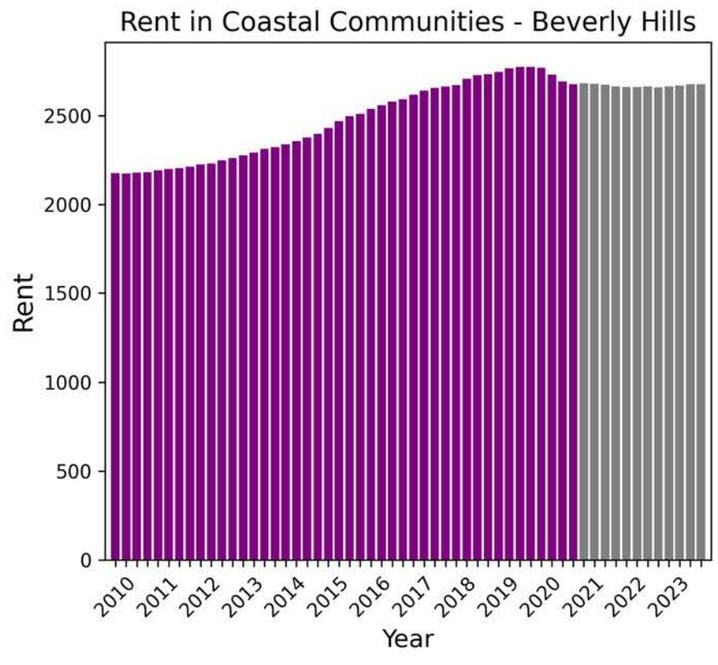


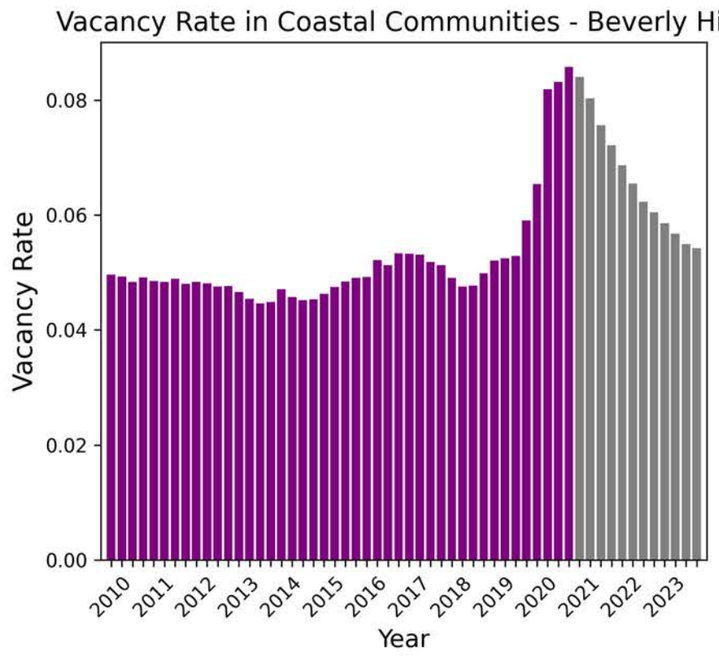


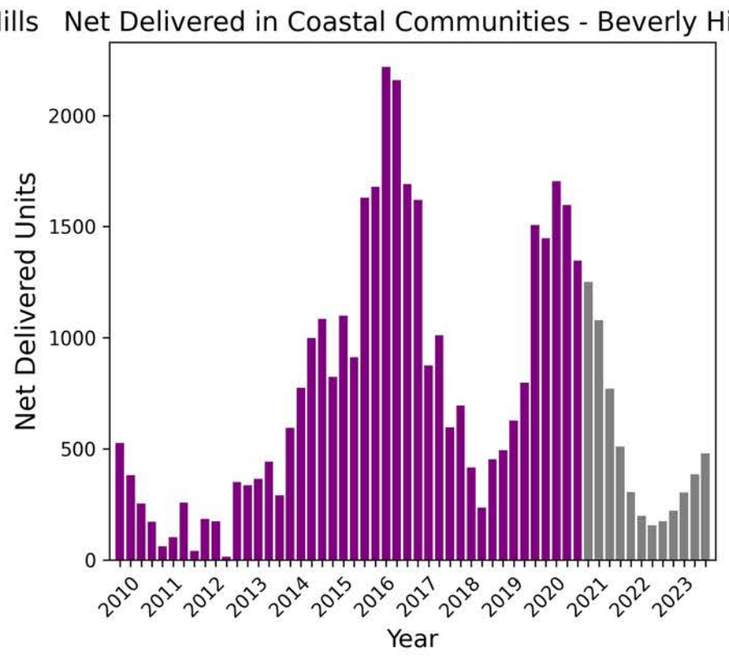


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Coastal Communities-Beverly Hills Market • Los Angeles County, 2010 to 2020

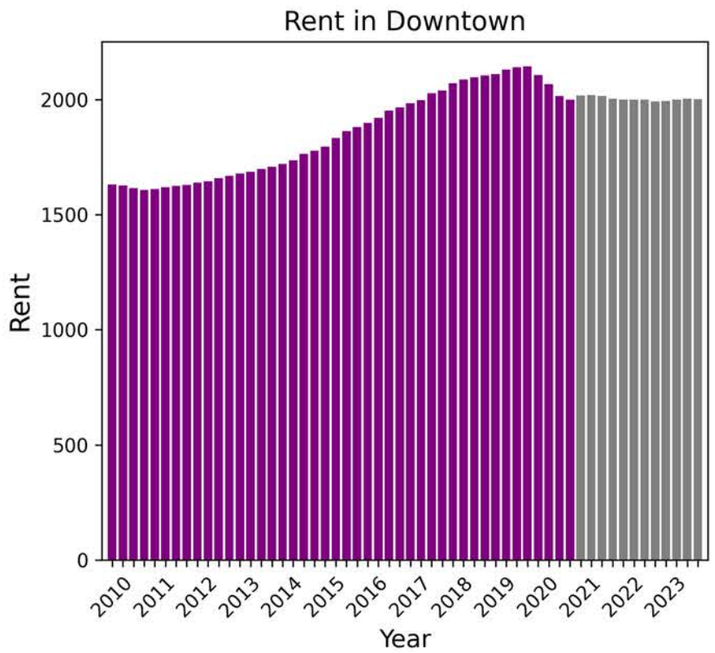


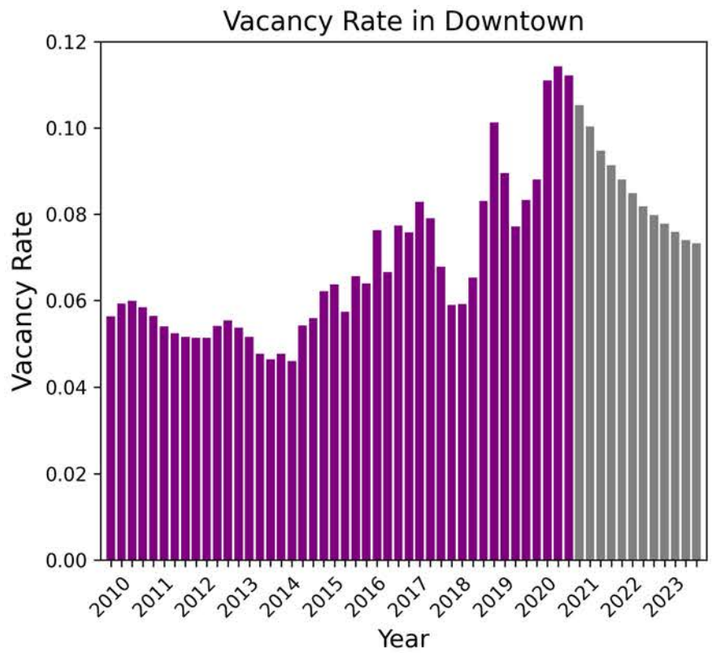


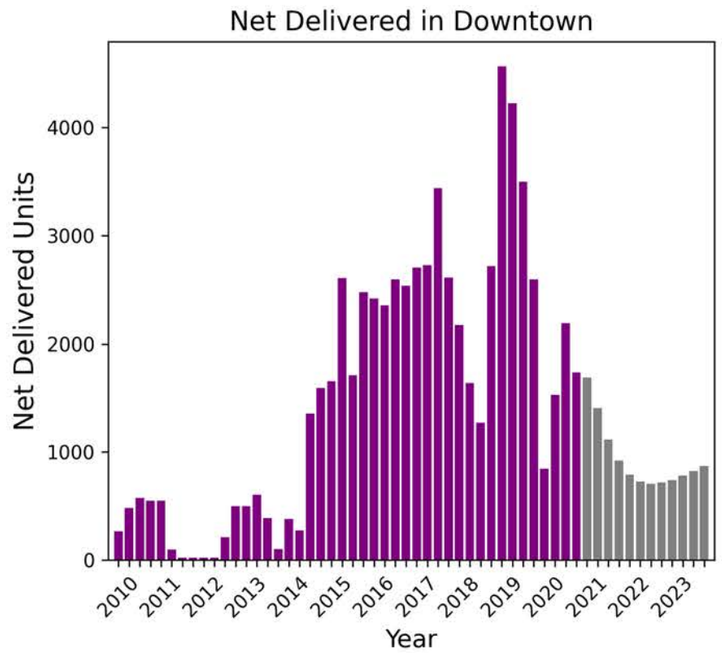


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Downtown Market • Los Angeles County, 2010 to 2020

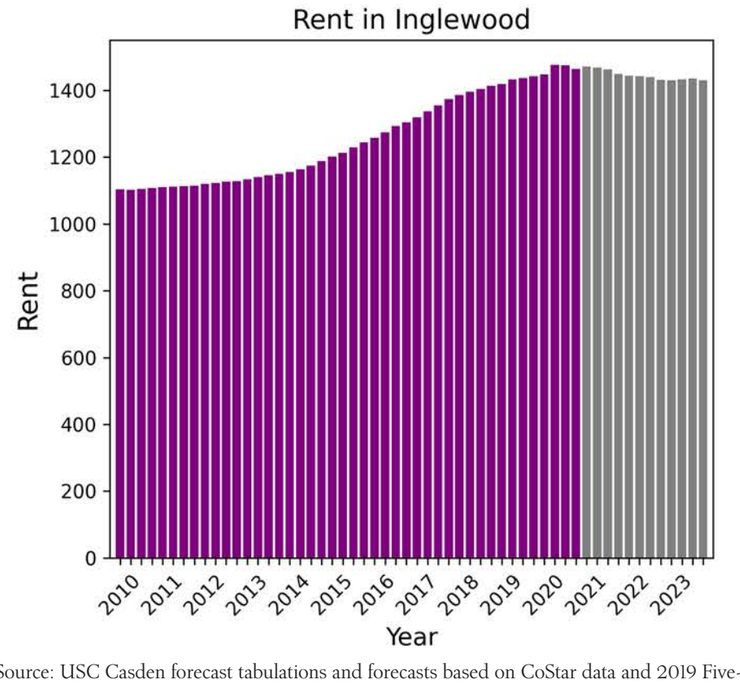


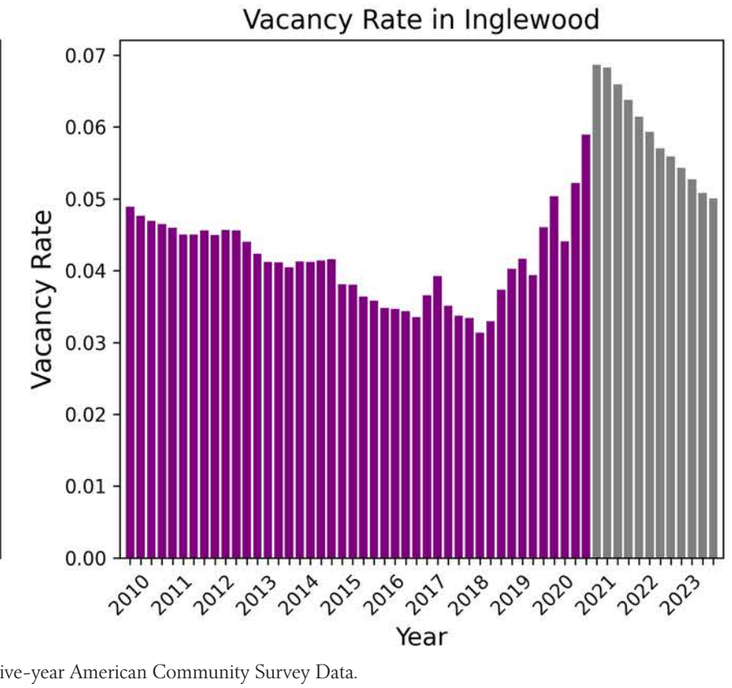


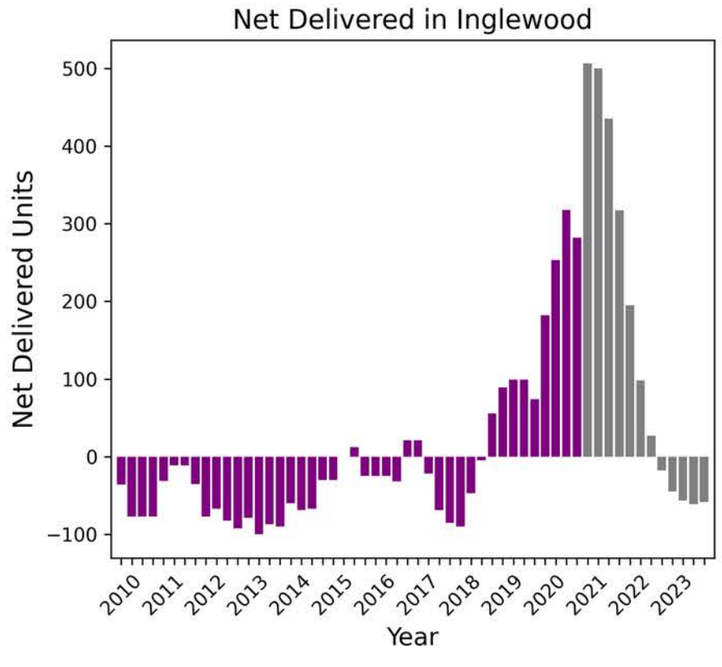


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Inglewood Market • Los Angeles County, 2010 to 2020

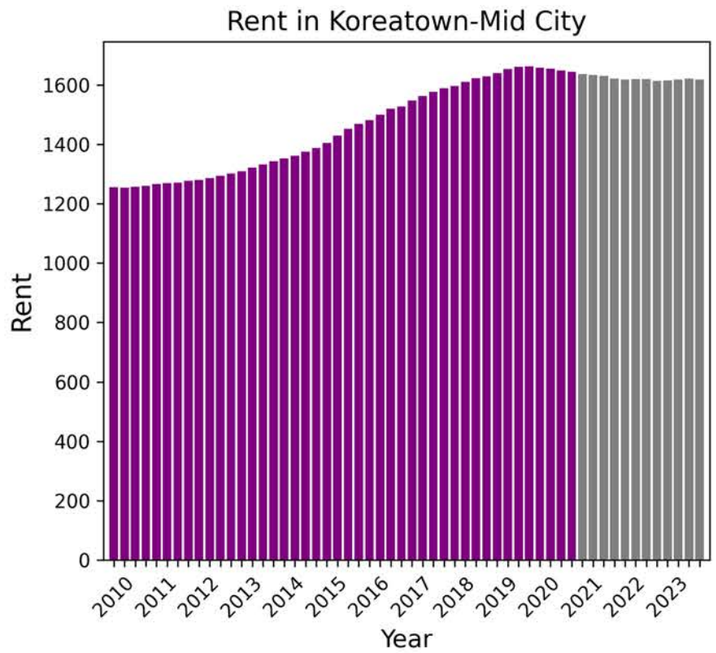


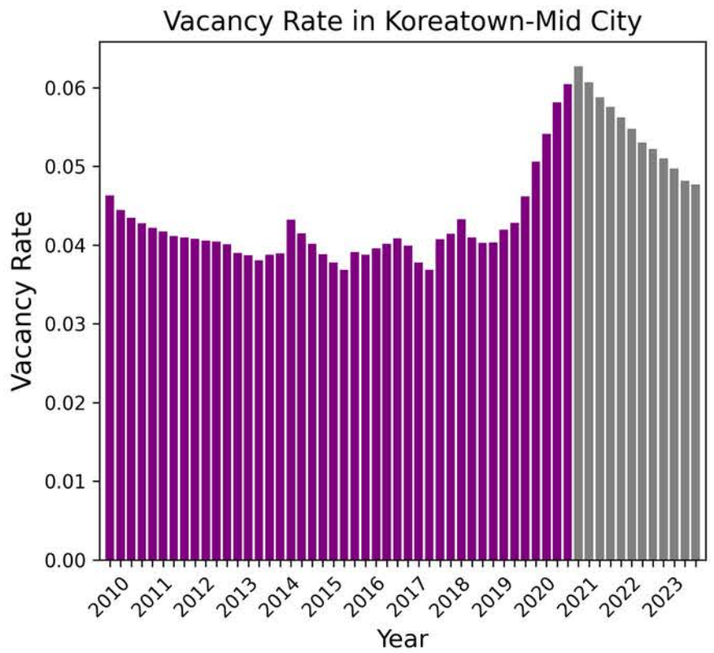


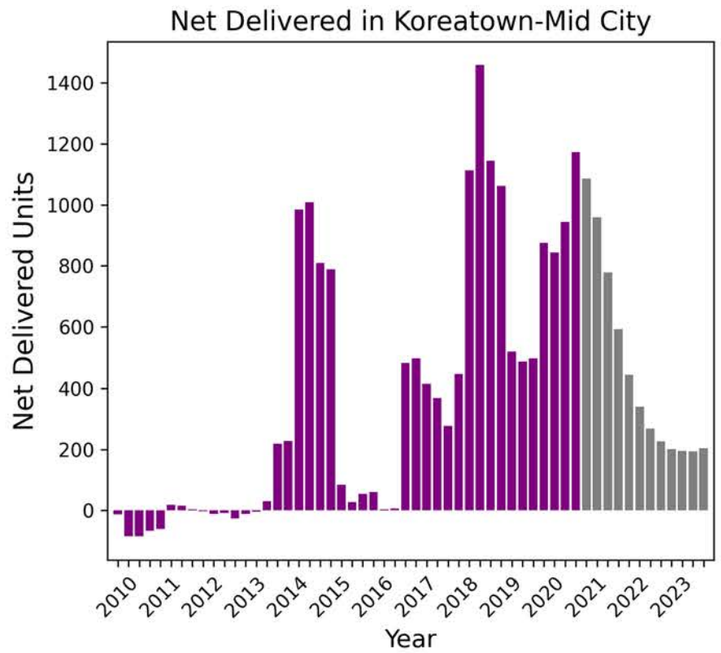


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Koreatown-Mid-City Market • Los Angeles County, 2010 to 2020

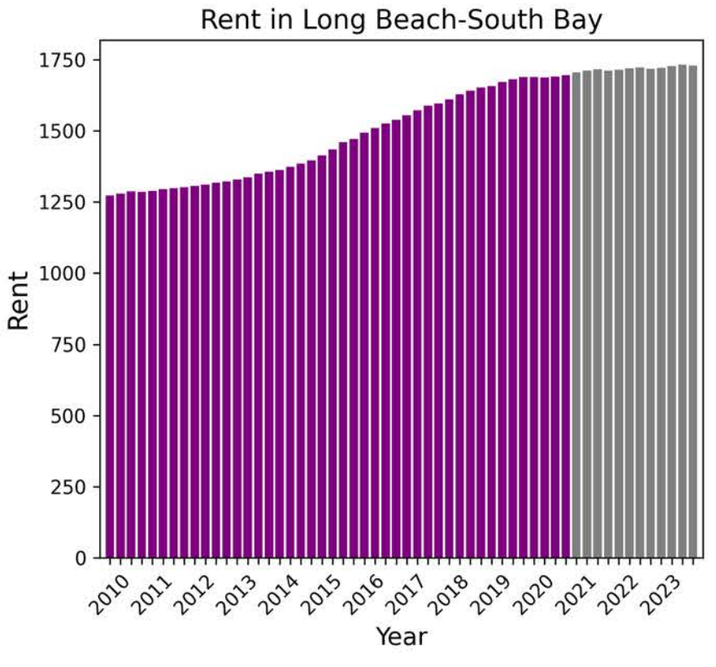


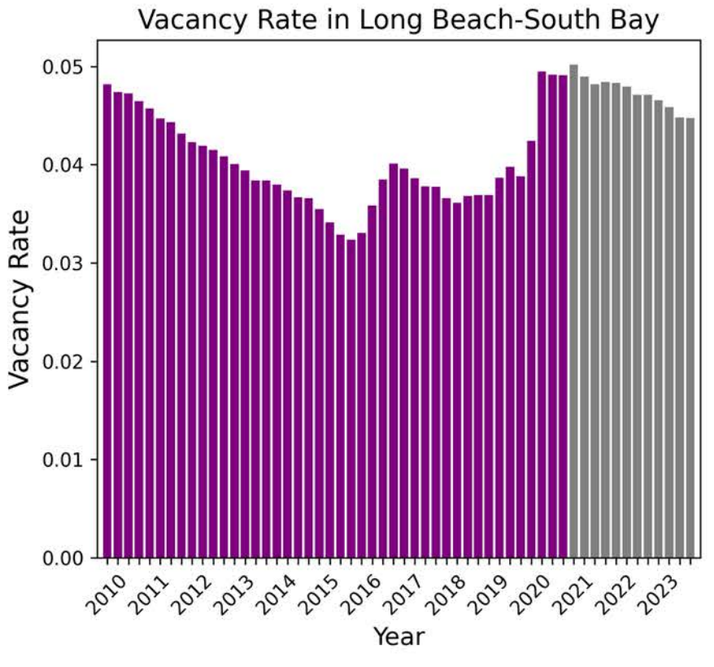


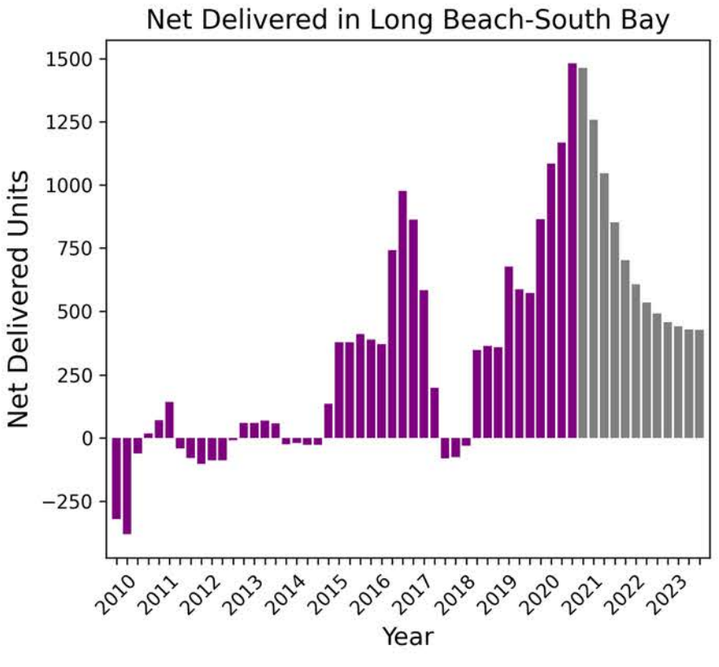


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Long Beach-South Bay Market • Los Angeles County, 2010 to 2020

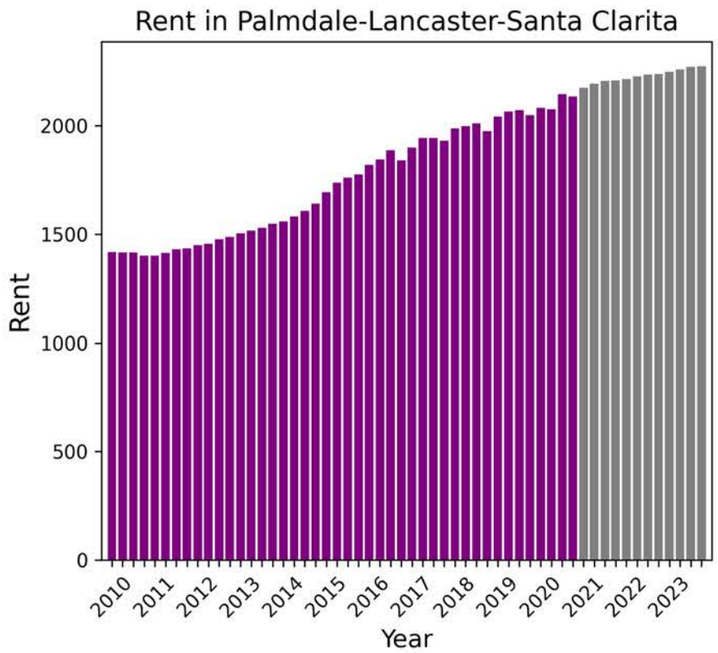


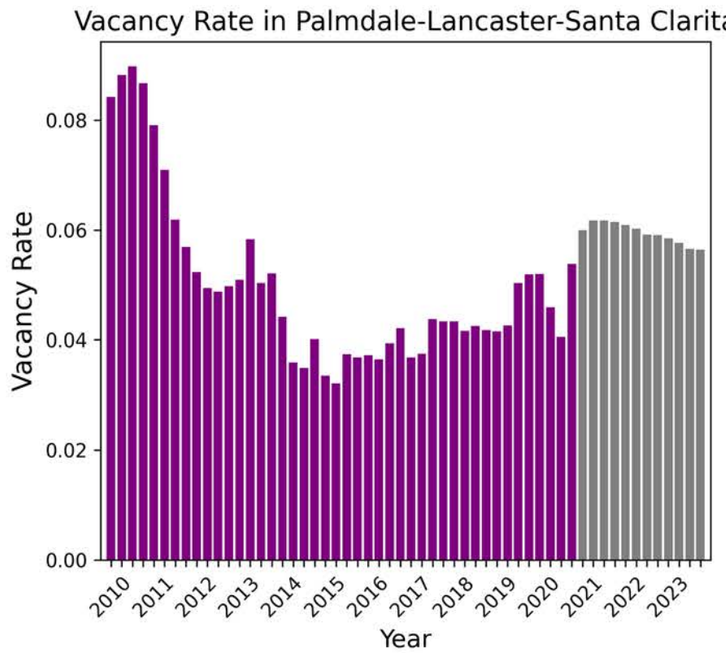


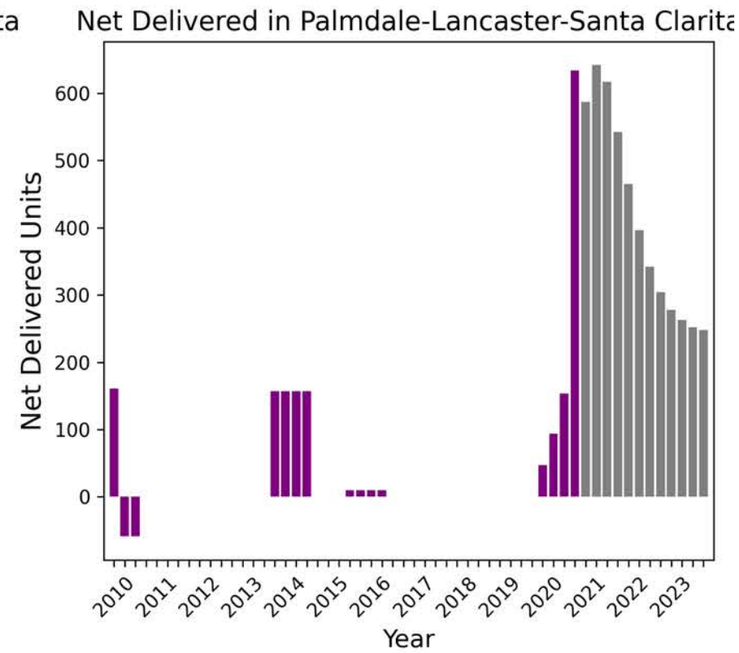


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Palmdale-Lancaster -Santa Clarita Market • Los Angeles County, 2010 to 2020

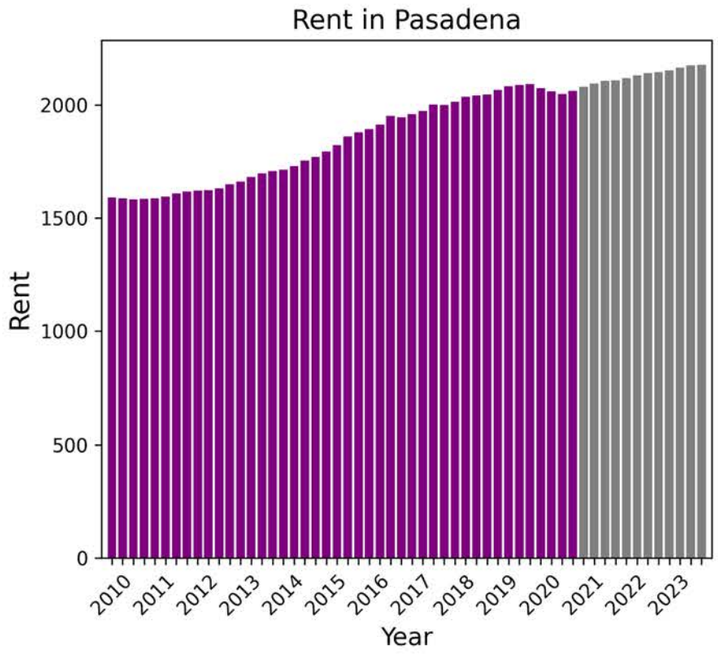


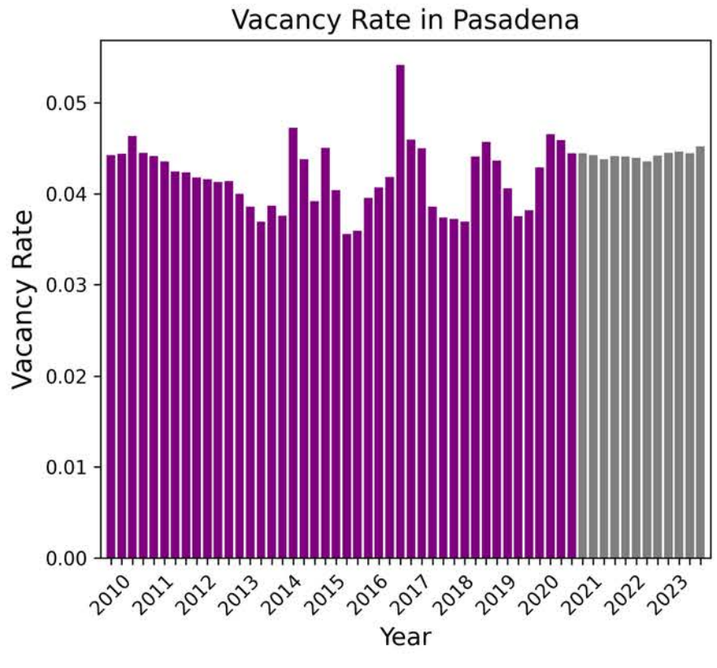


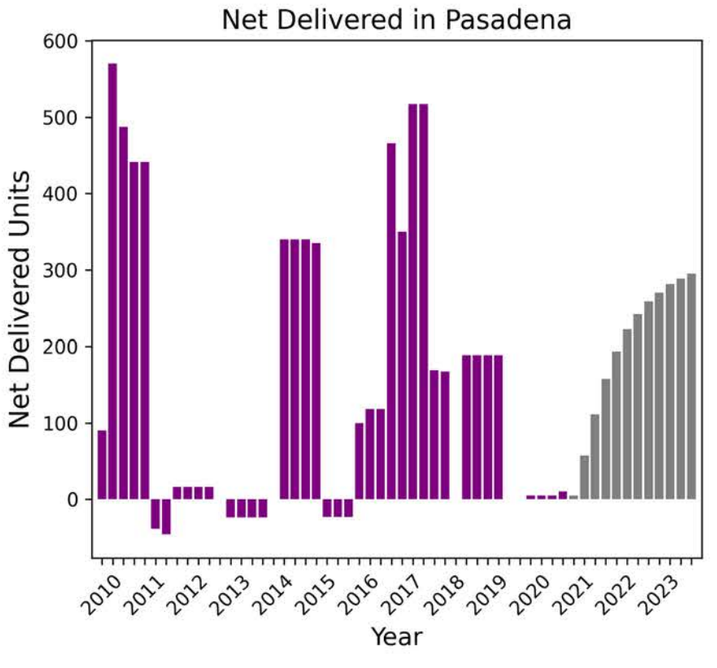


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Pasadena Market • Los Angeles County, 2010 to 2020

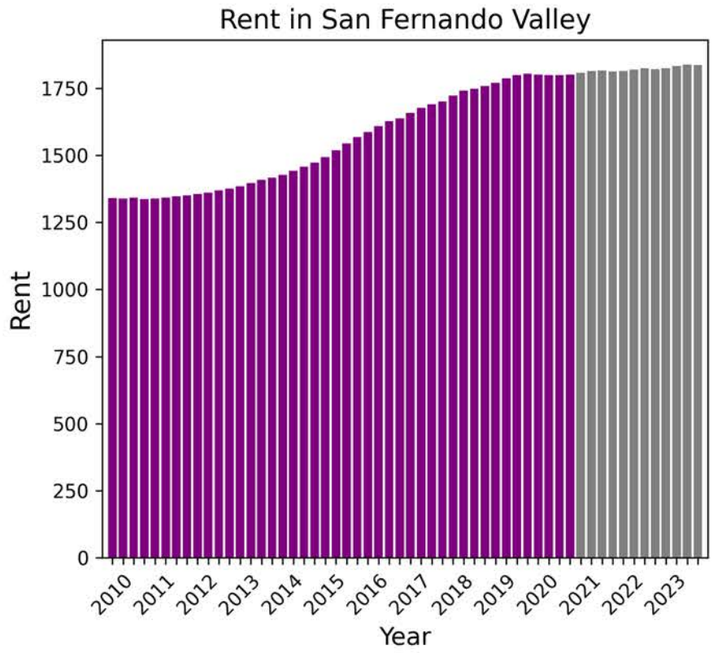


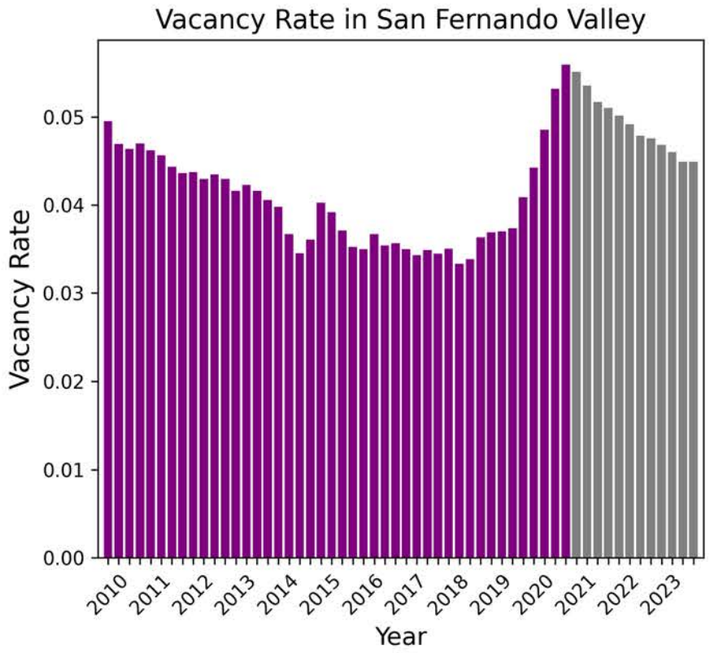


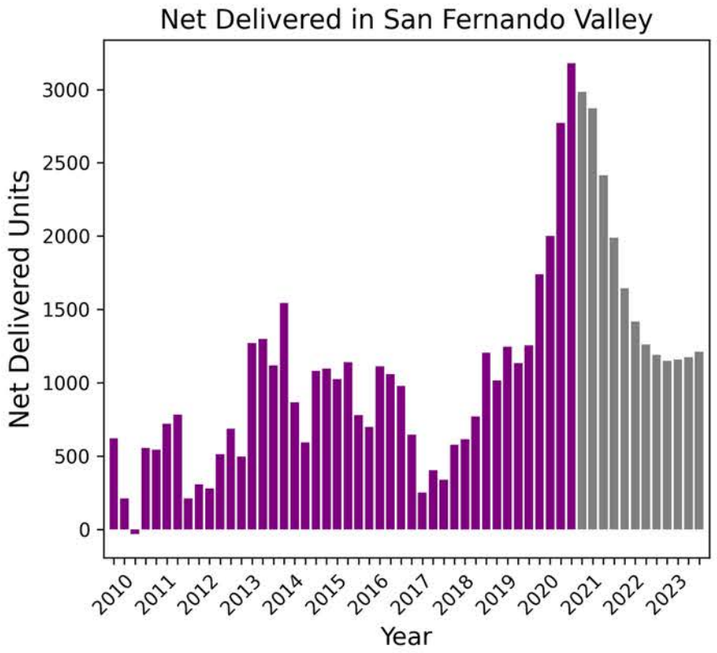


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

San Fernando Valley Market • Los Angeles County, 2010 to 2020

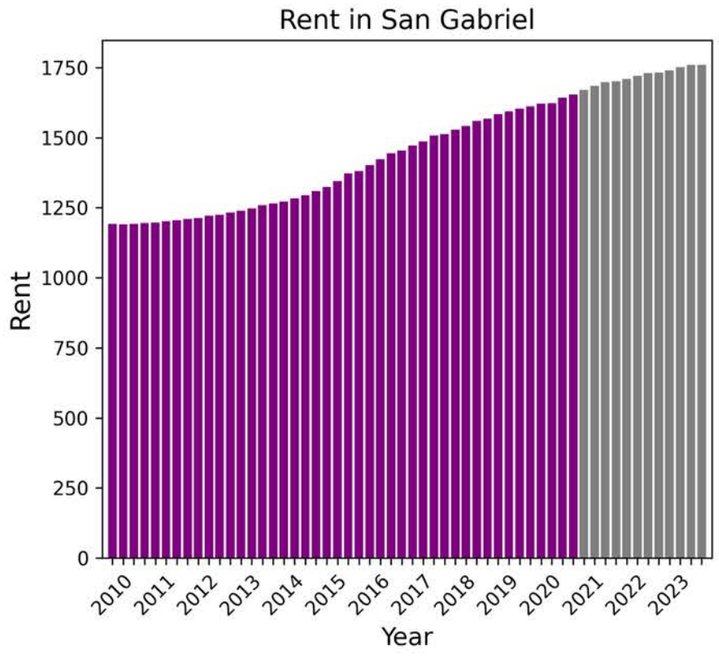


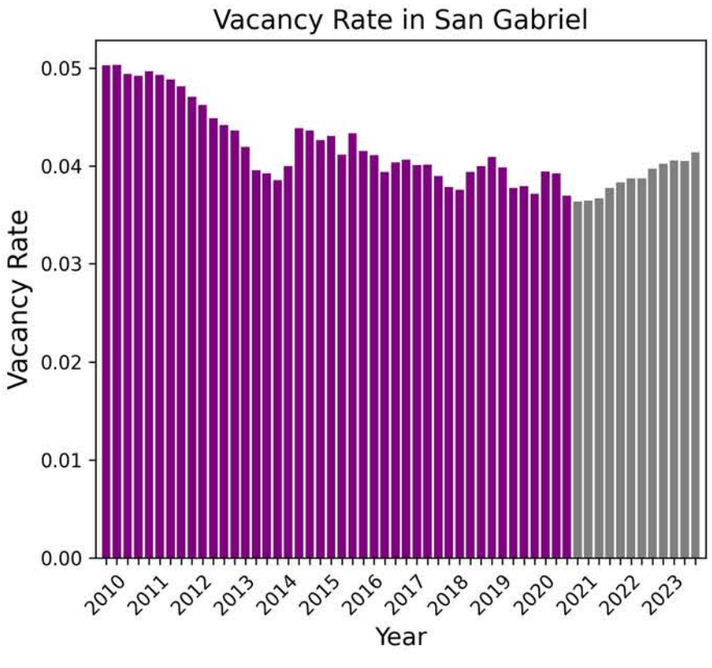


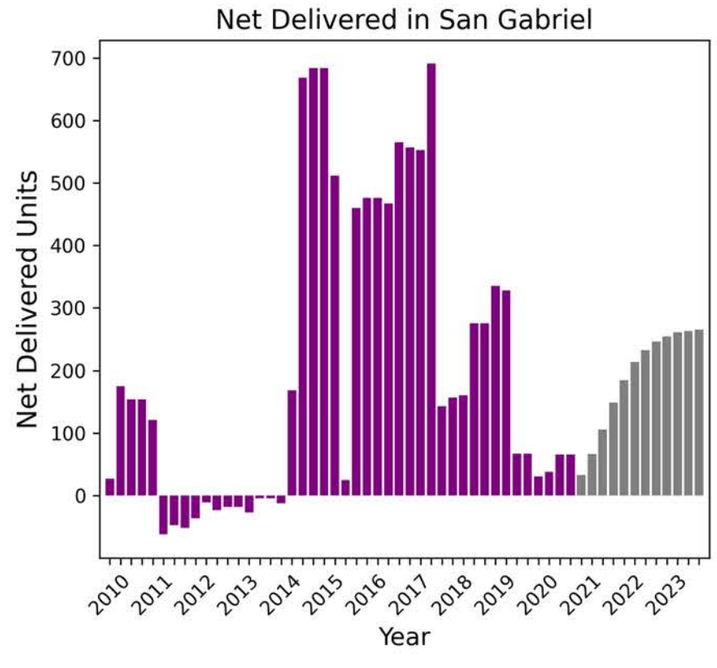


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

San Gabriel Market • Los Angeles County, 2010 to 2020

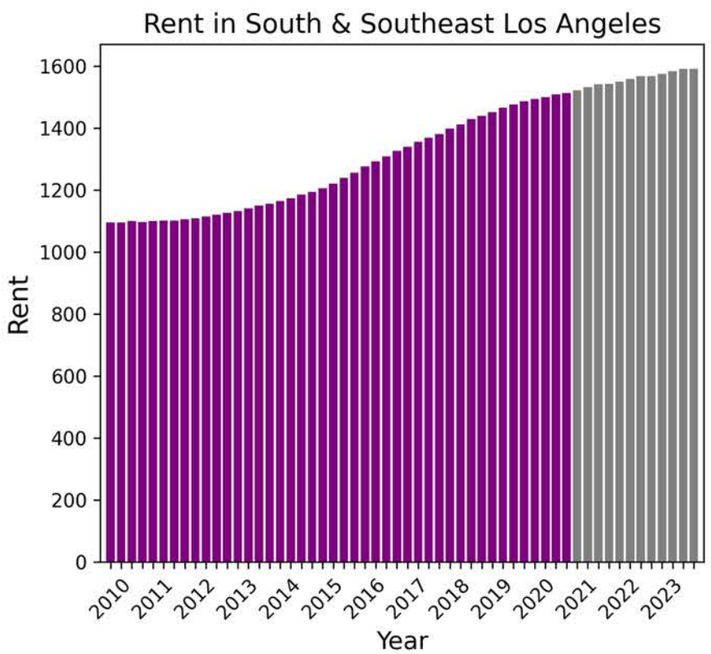


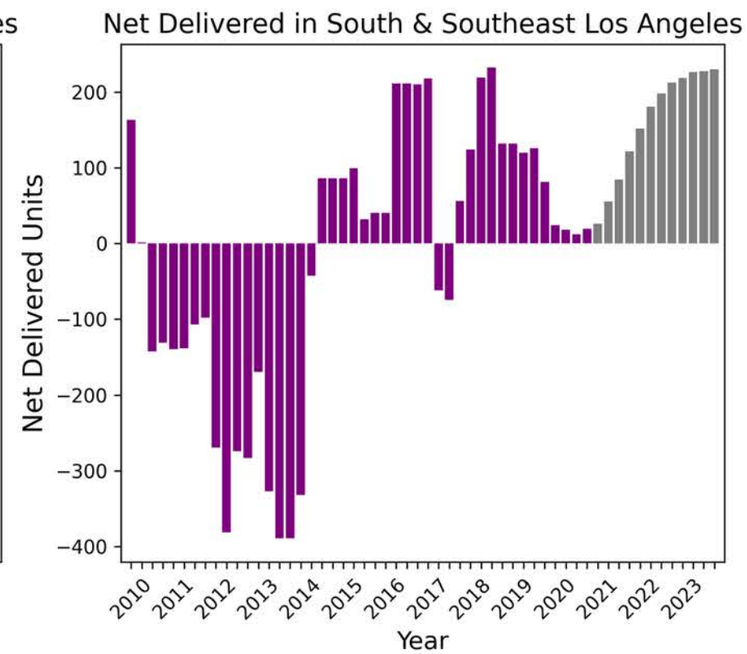




Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

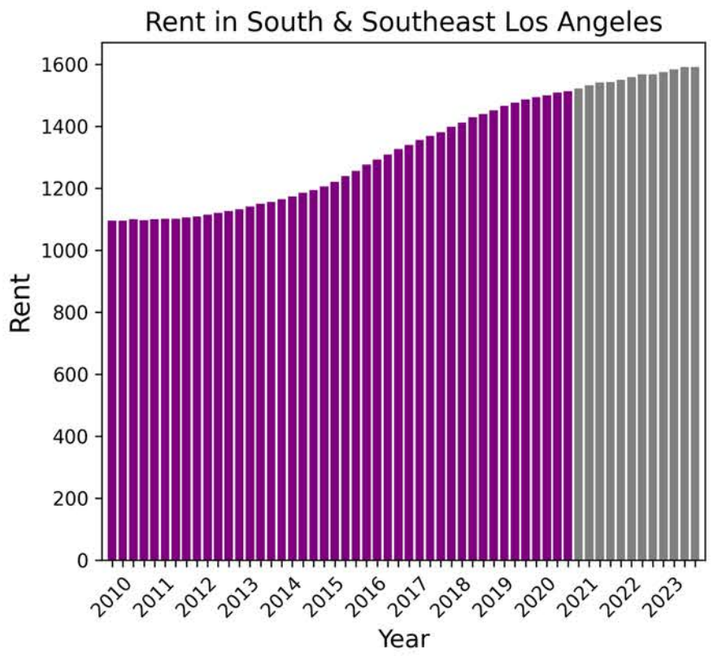
San Gabriel Market • Los Angeles County, 2010 to 2020

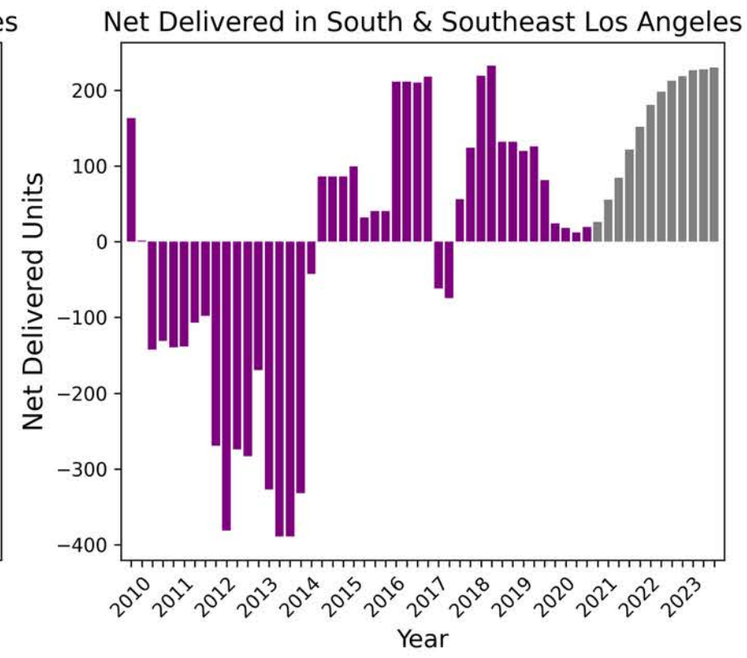




Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

South & Southeast Market • Los Angeles County, 2010 to 2020





Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

West San Gabriels

Race

White	34%
Black	4%
Asian	35%
Hispanic	24%
All other races	3%

Education

Less than HS	9%
HS Diploma	17%
Bachelor's Degree	30%
Graduate Degree	16%

Housing Type

1 Unit	79%
2-4 units	5%
10 to 19	4%
20+ units	8%

Rental Units By Size of Structure

before 1970	64%
1970-1999	32%
after 2000	5%

Household statistics

Share of Rent Burdened Households	45%
Percent with Children	35%
Median Household Income	$106,895
Average Household Size	2.93

Beach Cities - Santa Monica - West Hollywood - Beverly Hills

Race

White	73%
Black	5%
Asian	6%
Hispanic	12%
All other races	4%

Education

Less than HS	4%
HS Diploma	9%
Bachelor's Degree	41%
Graduate Degree	18%

Housing Type

1 Unit	35%
2-4 units	12%
10 to 19	13%
20+ units	25%

Rental Units By Size of Structure

before 1970	57%
1970-1999	36%
after 2000	7%

Household statistics

Share of Rent Burdened Households	44%
Percent with Children	15%
Median Household Income	$104,499
Average Household Size	2.08

East Central (San Gabriels)

Race	
White	24%
Black	5%
Asian	21%
Hispanic	49%
All other races	1%
Education	
Less than HS	17%
HS Diploma	23%
Bachelor's Degree	21%
Graduate Degree	9%
Housing Type	
1 Unit	74%
2-4 units	5%
10 to 19	3%
20+ units	10%
Rental Units By Size of Structure	
before 1970	51%
1970-1999	42%
after 2000	7%
Household statistics	
Share of Rent Burdened Households	50%
Percent with Children	40%
Median Household Income	$81,316
Average Household Size	3.39

Inglewood-Gardena-Hawthorne

Race	
White	8%
Black	33%
Asian	8%
Hispanic	49%
All other races	2%
Education	
Less than HS	25%
HS Diploma	23%
Bachelor's Degree	17%
Graduate Degree	6%
Housing Type	
1 Unit	47%
2-4 units	13%
10 to 19	9%
20+ units	17%
Rental Units By Size of Structure	
before 1970	55%
1970-1999	40%
after 2000	5%
Household statistics	
Share of Rent Burdened Households	55%
Percent with Children	40%
Median Household Income	$60,538
Average Household Size	3.13

Koretown - Mid City

Race	
White	32%
Black	5%
Asian	28%
Hispanic	30%
All other races	6%
Education	
Less than HS	18%
HS Diploma	17%
Bachelor's Degree	31%
Graduate Degree	11%
Housing Type	
1 Unit	16%
2-4 units	13%
10 to 19	13%
20+ units	44%
Rental Units By Size of Structure	
before 1970	68%
1970-1999	24%
after 2000	8%
Household statistics	
Share of Rent Burdened Households	56%
Percent with Children	22%
Median Household Income	$59,610
Average Household Size	2.37

Long beach - South Bay

Race	
White	31%
Black	17%
Asian	11%
Hispanic	38%
All other races	2%
Education	
Less than HS	19%
HS Diploma	19%
Bachelor's Degree	22%
Graduate Degree	9%
Housing Type	
1 Unit	46%
2-4 units	15%
10 to 19	10%
20+ units	16%
Rental Units By Size of Structure	
before 1970	65%
1970-1999	29%
after 2000	6%
Household statistics	
Share of Rent Burdened Households	55%
Percent with Children	32%
Median Household Income	$67,046
Average Household Size	2.74

San Fernando

Race

White	25%
Black	33%
Asian	4%
Hispanic	37%
All other races	2%

Education

Less than HS	20%
HS Diploma	29%
Bachelor's Degree	13%
Graduate Degree	5%

Housing Type

1 Unit	75%
2-4 units	4%
10 to 19	3%
20+ units	6%

Rental Units By Size of Structure

before 1970	17%
1970-1999	72%
after 2000	11%

Household statistics

Share of Rent Burdened Households	54%
Percent with Children	44%
Median Household Income	$64,107
Average Household Size	3.32

Burbank-Glendale

Race

White	64%
Black	2%
Asian	11%
Hispanic	20%
All other races	4%

Education

Less than HS	11%
HS Diploma	21%
Bachelor's Degree	29%
Graduate Degree	12%

Housing Type

1 Unit	39%
2-4 units	13%
10 to 19	12%
20+ units	24%

Rental Units By Size of Structure

before 1970	60%
1970-1999	32%
after 2000	8%

Household statistics

Share of Rent Burdened Households	57%
Percent with Children	24%
Median Household Income	$72,029
Average Household Size	2.5

Downtown LA

Race

White	19%
Black	5%
Asian	26%
Hispanic	44%
All other races	6%

Education

Less than HS	28%
HS Diploma	17%
Bachelor's Degree	26%
Graduate Degree	7%

Housing Type

1 Unit	18%
2-4 units	10%
10 to 19	13%
20+ units	50%

Rental Units By Size of Structure

before 1970	62%
1970-1999	28%
after 2000	10%

Household statistics

Share of Rent Burdened Households	53%
Percent with Children	24%
Median Household Income	$49,524
Average Household Size	2.51

Central Los Angeles

Race

White	29%
Black	13%
Asian	15%
Hispanic	39%
All other races	4%

Education

Less than HS	24%
HS Diploma	17%
Bachelor's Degree	24%
Graduate Degree	10%

Housing Type

1 Unit	31%
2-4 units	11%
10 to 19	12%
20+ units	37%

Rental Units By Size of Structure

before 1970	61%
1970-1999	28%
after 2000	11%

Household statistics

Share of Rent Burdened Households	54%
Percent with Children	23%
Median Household Income	$60,833
Average Household Size	2.75

Southeast Los Angeles

Race

White	23%
Black	11%
Asian	9%
Hispanic	54%
All other races	2%

Education

Less than HS	23%
HS Diploma	23%
Bachelor's Degree	18%
Graduate Degree	7%

Housing Type

1 Unit	63%
2-4 units	9%
10 to 19	7%
20+ units	12%

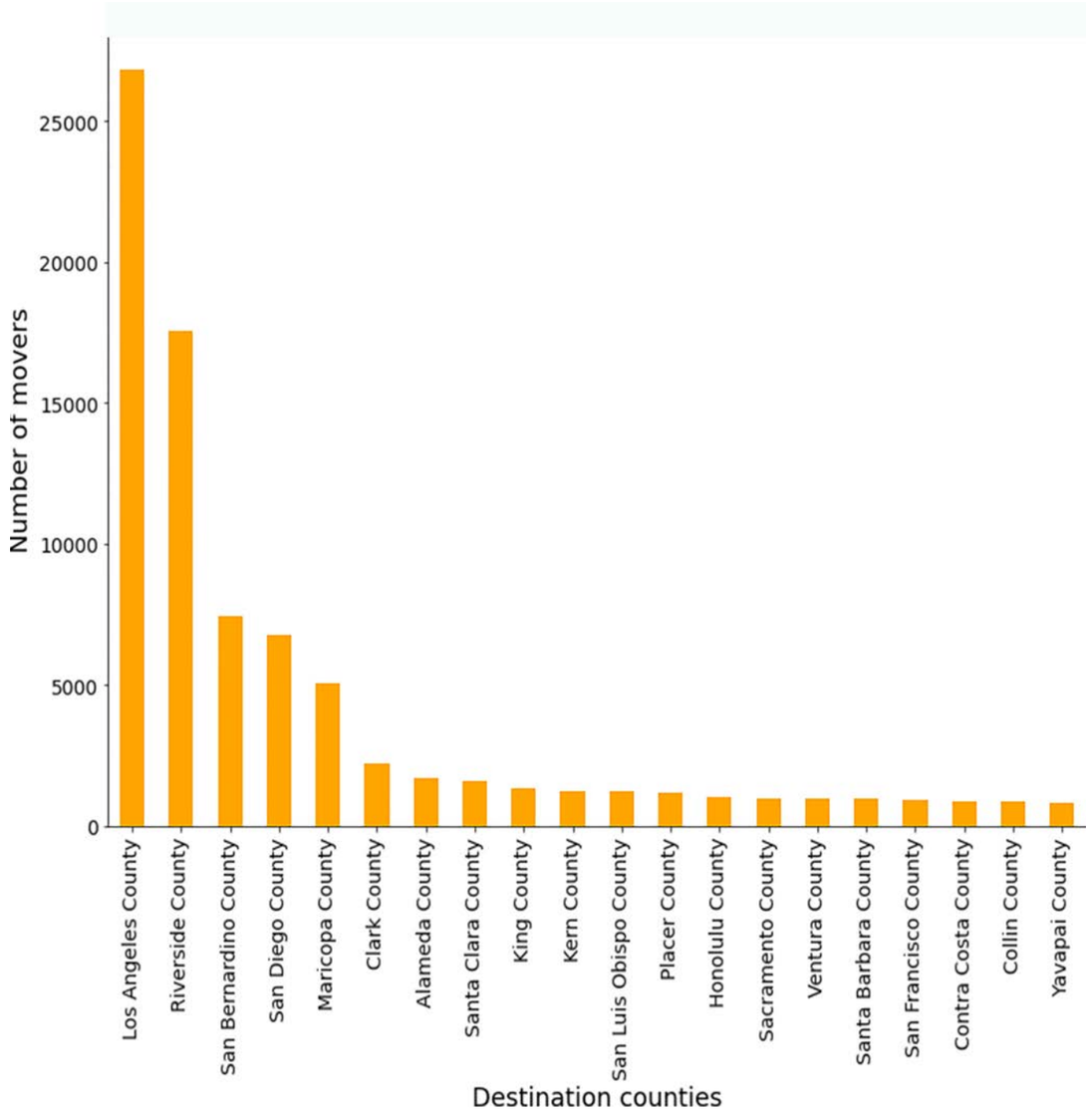
Rental Units By Size of Structure

before 1970	62%
1970-1999	34%
after 2000	4%

Household statistics

Share of Rent Burdened Households	55%
Percent with Children	39%
Median Household Income	$72,457
Average Household Size	3.36

20 Leading Destinations for Movers from Orange County 2019



Orange County

Race

White	41%
Black	2%
Asian	18%
Hispanic	35%
All other races	4%

Education

Less than HS	14%
HS Diploma	18%
Bachelor's Degree	26%
Graduate Degree	12%

Housing Type

1 Unit	62%
2-4 units	9%
10 to 19	5%
20+ units	14%

Rental Units By Size of Structure

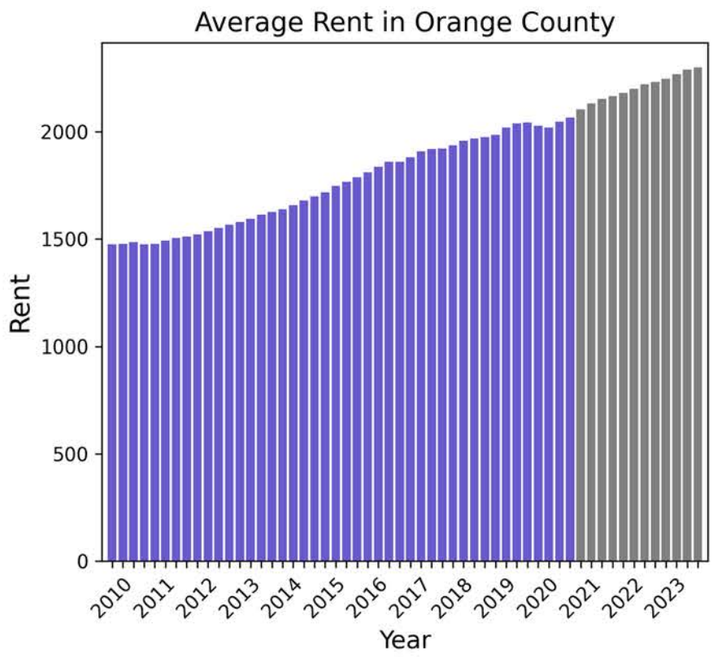
before 1970	35%
1970-1999	49%
after 2000	16%

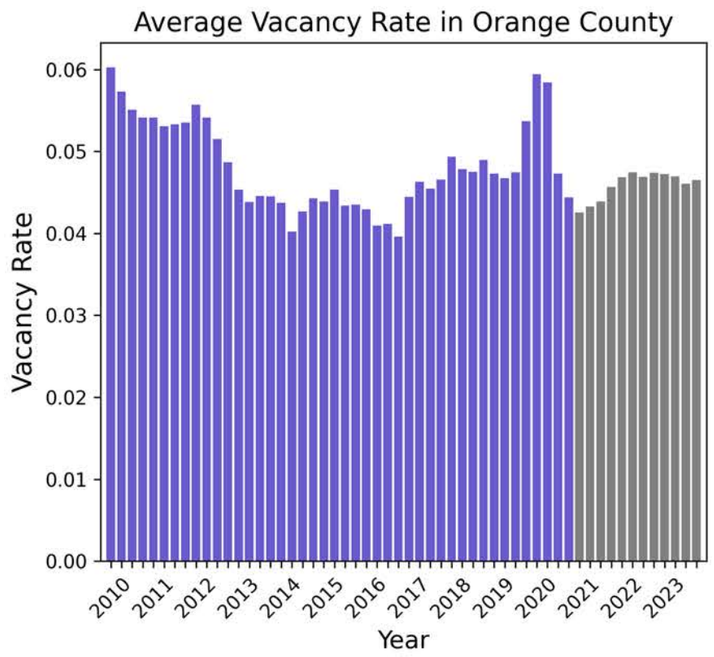
Household Statistics

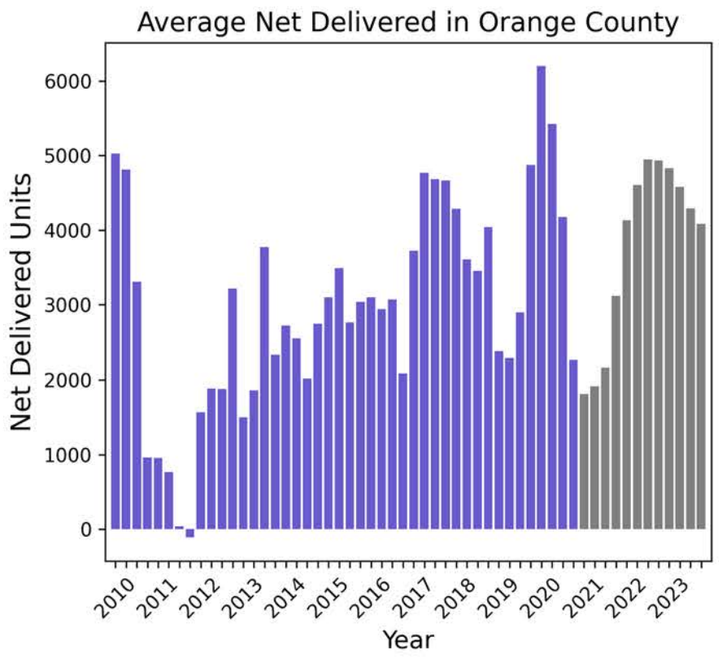
Share of Rent Burdened Households	52%
Percent with Children	37%
Median Household Income	$95,489
Average Household Size	3.09

All Demographic and Migration Data are based on Casden Forecast Tabulations of 2019 Five-year American Community Survey Data.

Orange County Rents/Vacancy • Multifamily Permit Activity Orange County

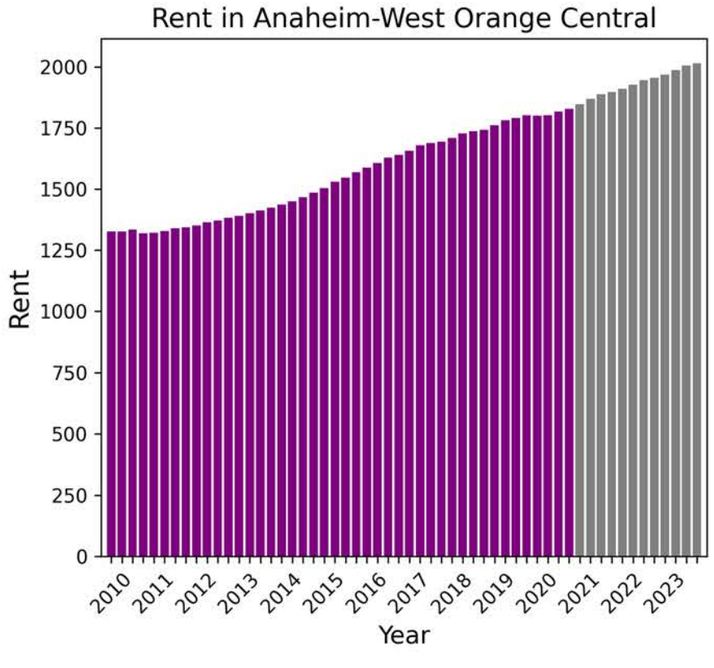


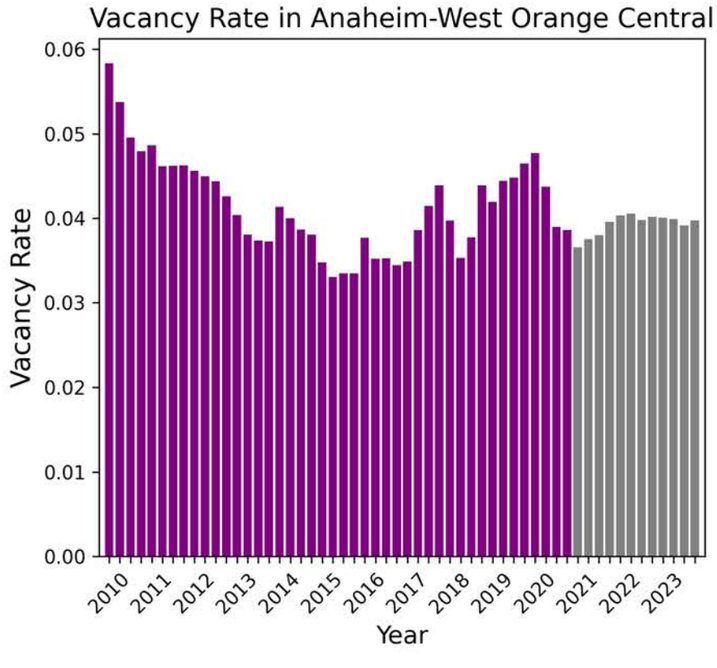


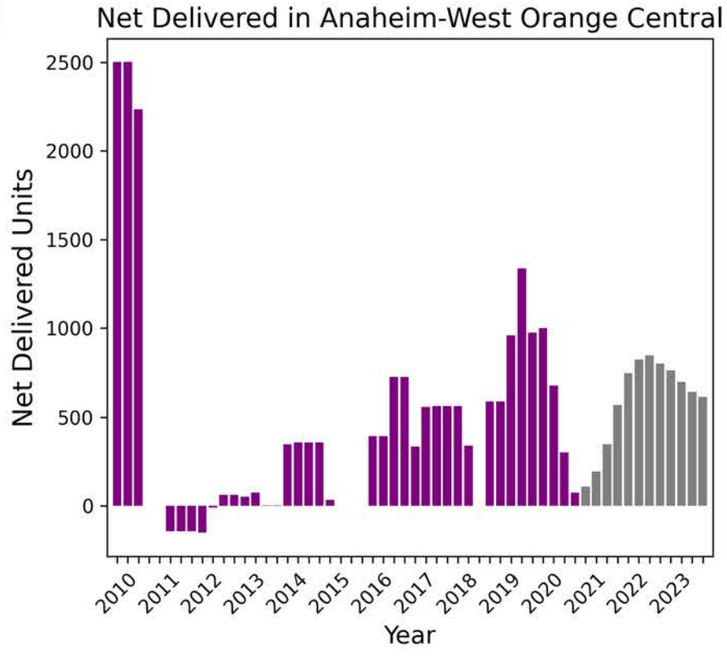


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Anaheim-West Orange Central Market • Orange County, 2010 to 2020

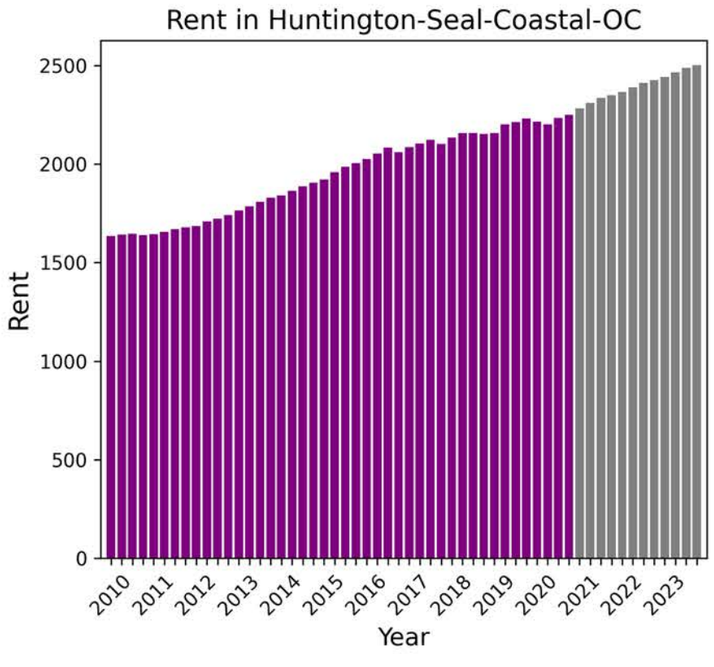


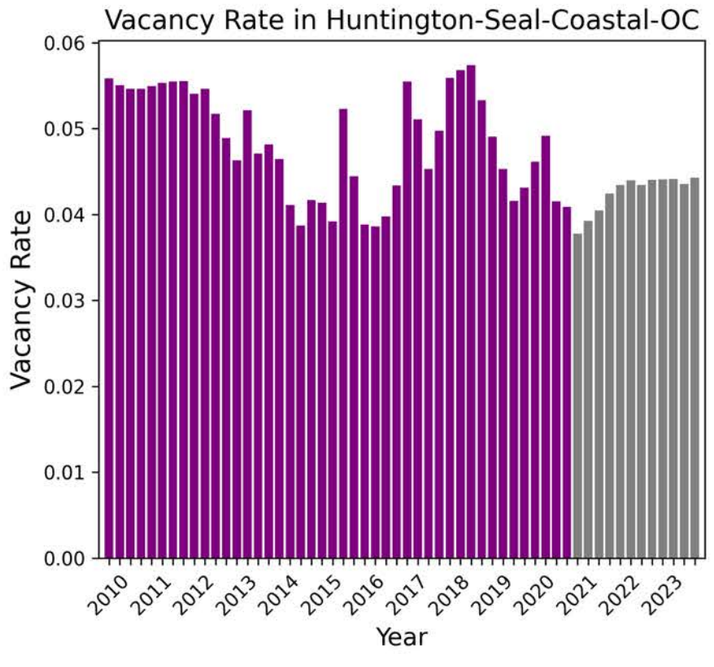


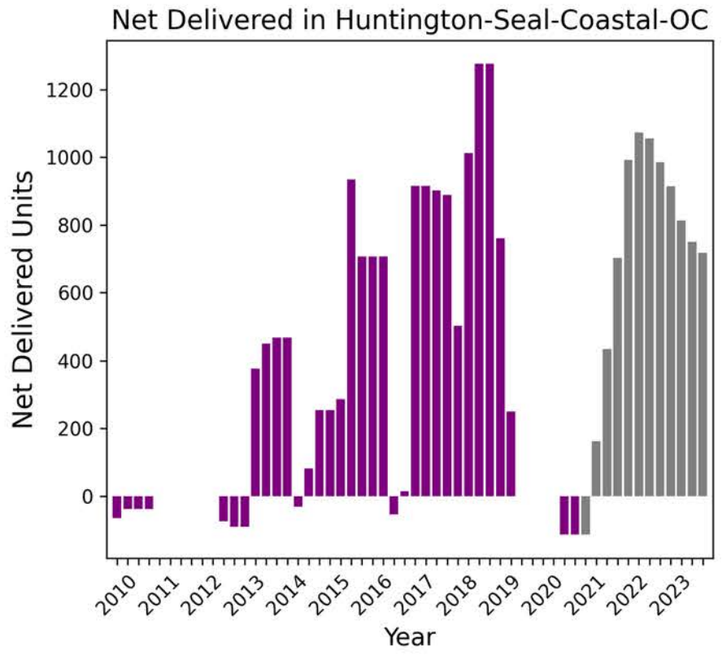


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Huntington-Seal-Coastal Ranch Market • Orange County, 2010 to 2020

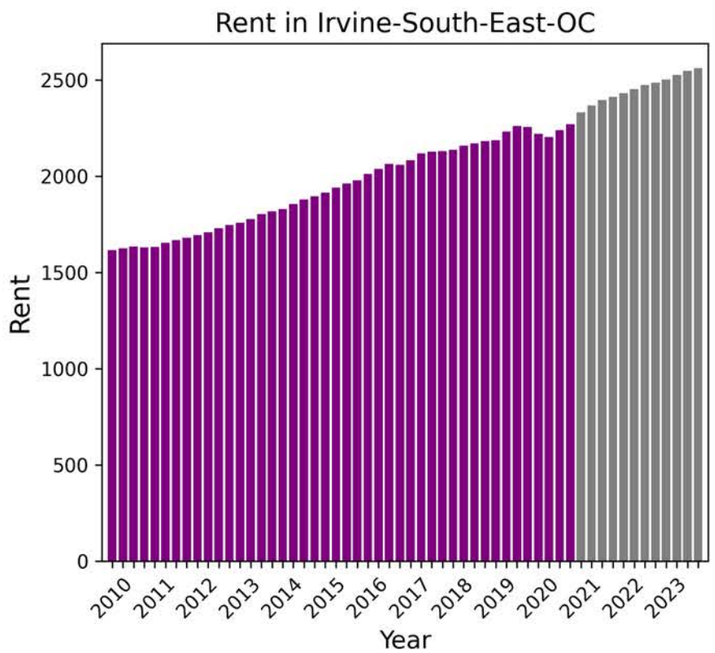


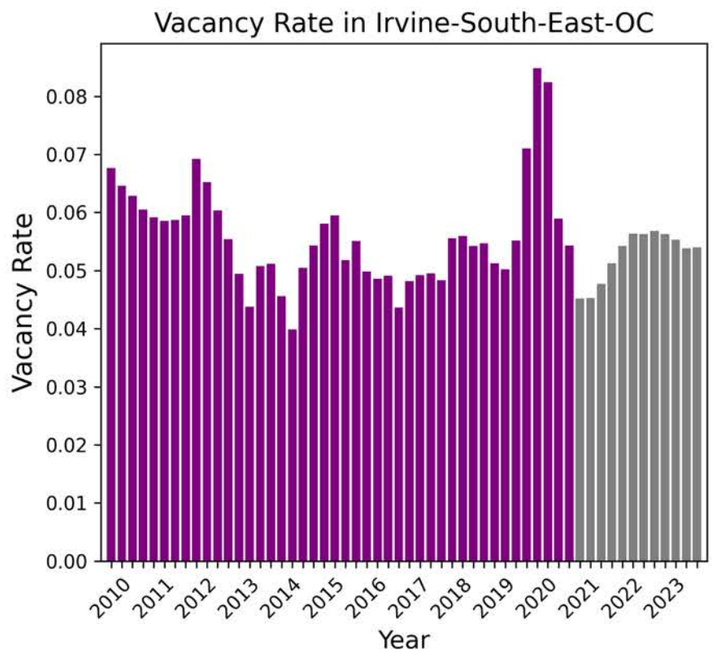


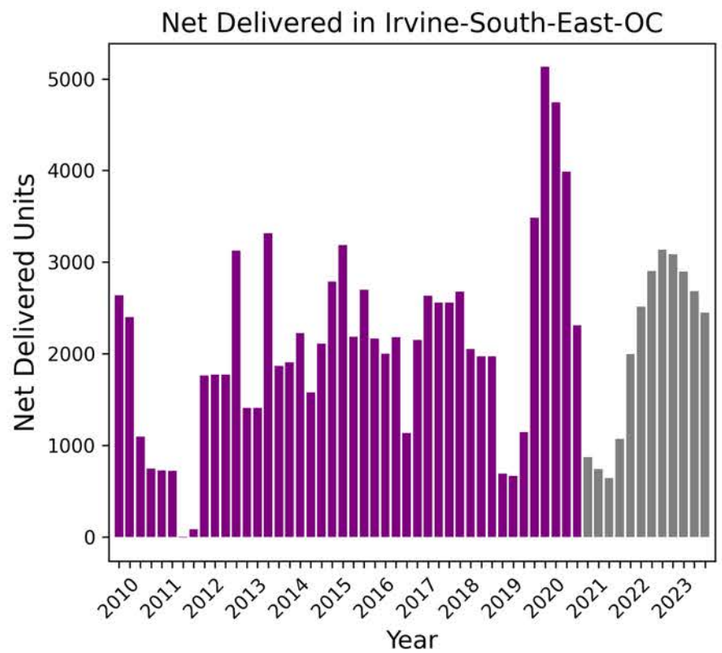


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Irvine-South-East Market • Orange County, 2010 to 2020

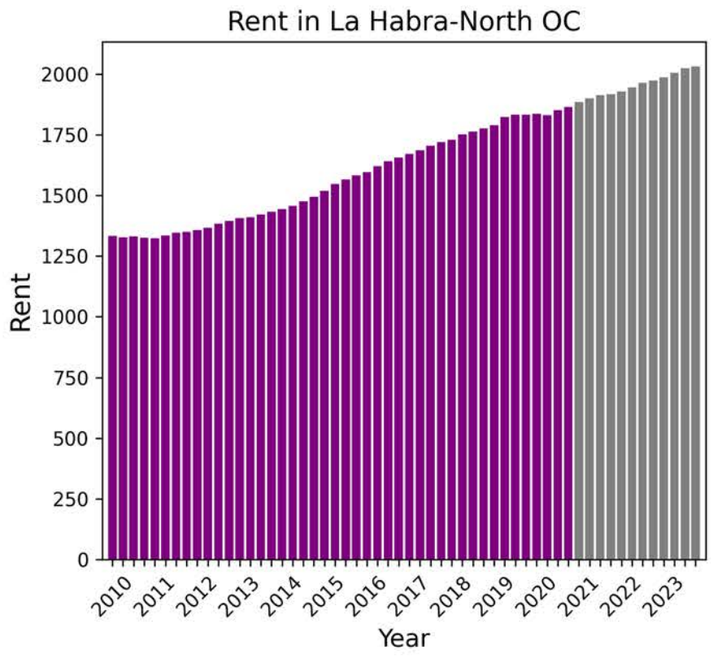


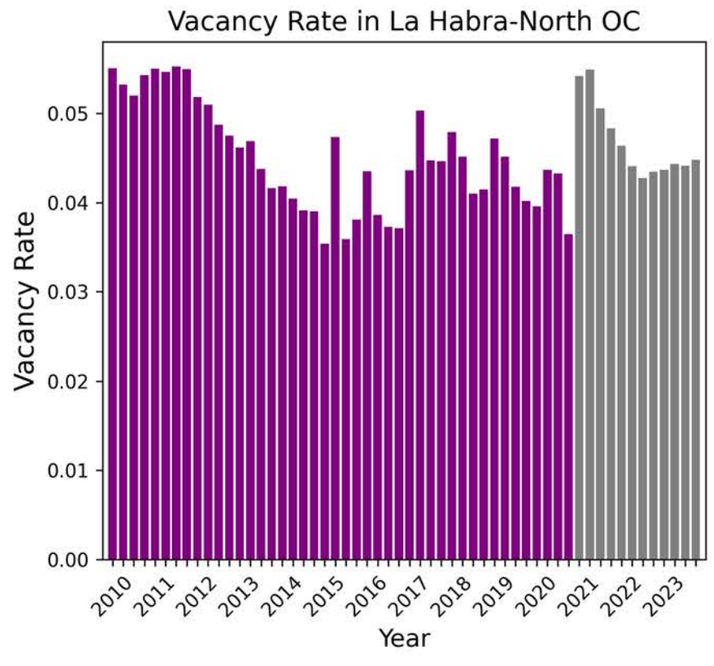


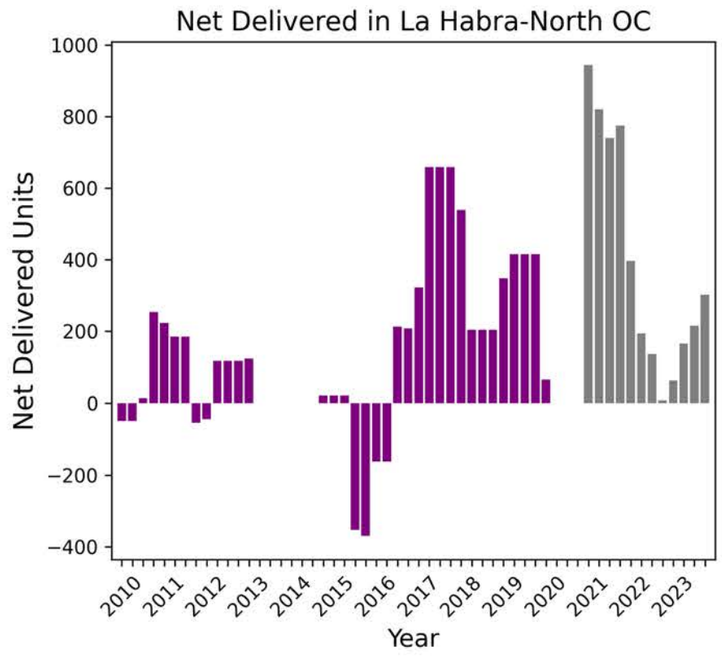


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

La Habra-North Market • Orange County, 2010 to 2020

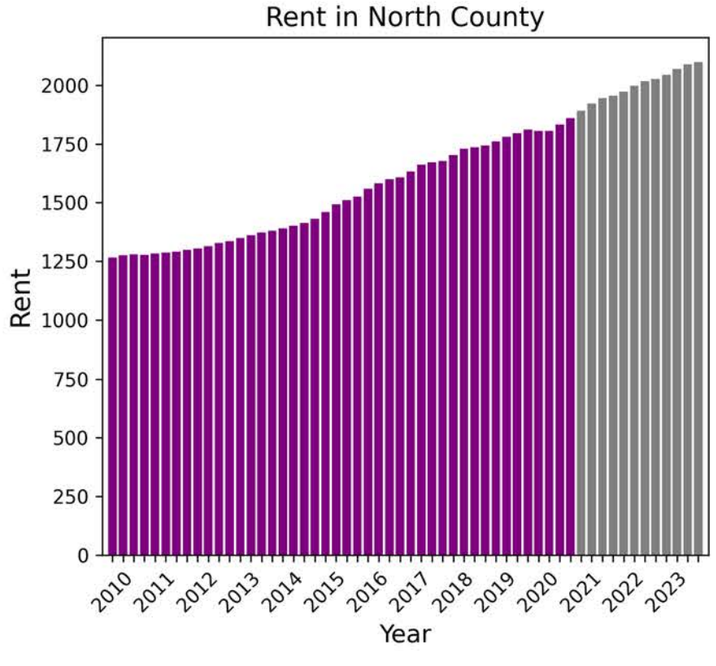


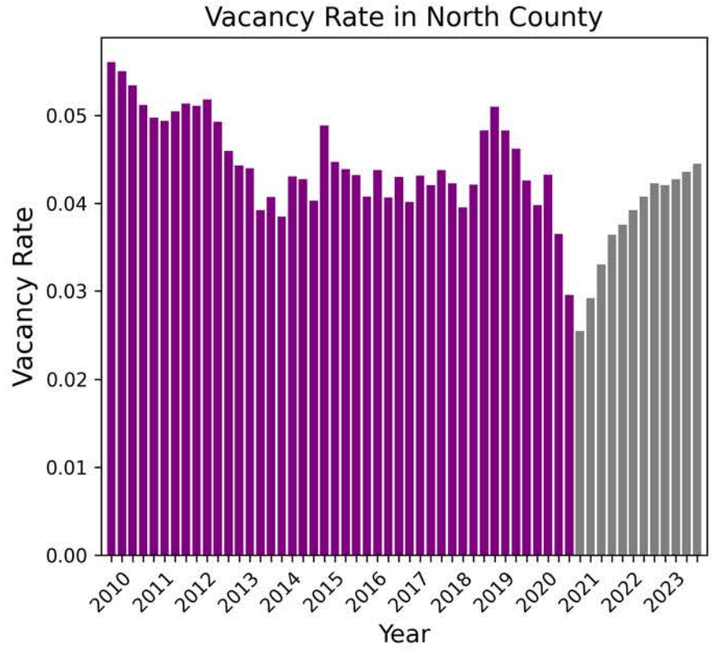


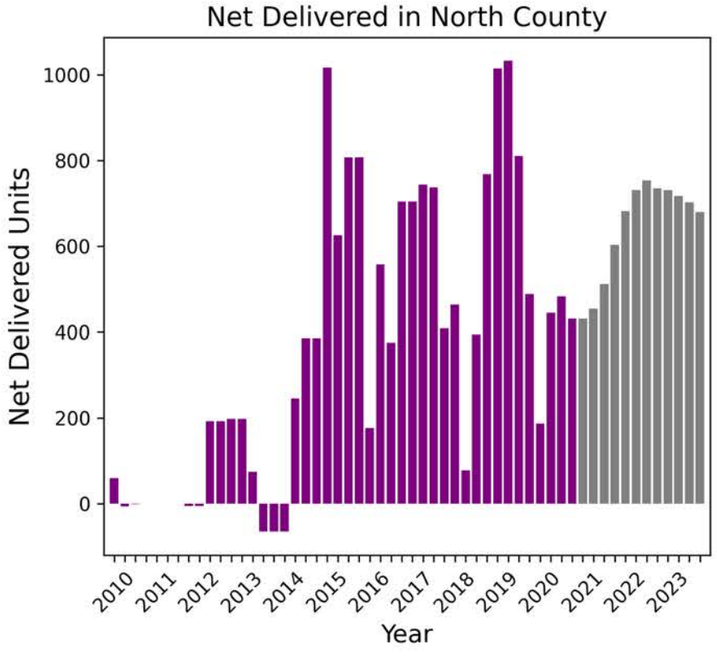


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

North County Market • Orange County, 2010 to 2020







Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Page 30

Anaheim Orange/Santa Ana

Race

White	18%
Black	4%
Asian	13%
Hispanic	62%
All other races	3%

Education

Less than HS	29%
HS Diploma	24%
Bachelor's Degree	15%
Graduate Degree	6%

Housing Type

1 Unit	51%
2-4 units	11%
10 to 19	8%
20+ units	19%

Rental Units By Size of Structure

before 1970	49%
1970-1999	42%
after 2000	9%

Household statistics

Share of Rent Burdened Households	55%
Percent with Children	45%
Median Household Income	$72,709
Average Household Size	3.71

Irvine/Mission Viejo/Foothill Ranch

Race

White	50%
Black	3%
Asian	24%
Hispanic	19%
All other races	3%

Education

Less than HS	5%
HS Diploma	11%
Bachelor's Degree	34%
Graduate Degree	19%

Housing Type

1 Unit	64%
2-4 units	6%
10 to 19	4%
20+ units	18%

Rental Units By Size of Structure

before 1970	11%
1970-1999	52%
after 2000	37%

Household statistics

Share of Rent Burdened Households	46%
Percent with Children	34%
Median Household Income	$113,572
Average Household Size	2.81

La Habra Fullerton Yorba Linda

Race

White	38%
Black	2%
Asian	14%
Hispanic	44%
All other races	3%

Education

Less than HS	10%
HS Diploma	18%
Bachelor's Degree	26%
Graduate Degree	13%

Housing Type

1 Unit	68%
2-4 units	7%
10 to 19	5%
20+ units	11%

Rental Units By Size of Structure

before 1970	40%
1970-1999	50%
after 2000	10%

Household statistics

Share of Rent Burdened Households	52%
Percent with Children	41%
Median Household Income	$97,046
Average Household Size	3.04

Newport Beach Laguna Niguel

Race

White	68%
Black	2%
Asian	9%
Hispanic	18%
All other races	3%

Education

Less than HS	5%
HS Diploma	12%
Bachelor’s Degree	34%
Graduate Degree	17%

Housing Type

1 Unit	66%
2-4 units	9%
10 to 19	5%
20+ units	12%

Rental Units By Size of Structure

before 1970	22%
1970-1999	59%
after 2000	18%

Household statistics

Share of Rent Burdened Households	53%
Percent with Children	28%
Median Household Income	$106,948
Average Household Size	2.47

Seal Beach Huntington

Race

White	51%
Black	3%
Asian	16%
Hispanic	25%
All other races	6%

Education

Less than HS	9%
HS Diploma	18%
Bachelor's Degree	26%
Graduate Degree	12%

Housing Type

1 Unit	64%
2-4 units	11%
10 to 19	5%
20+ units	12%

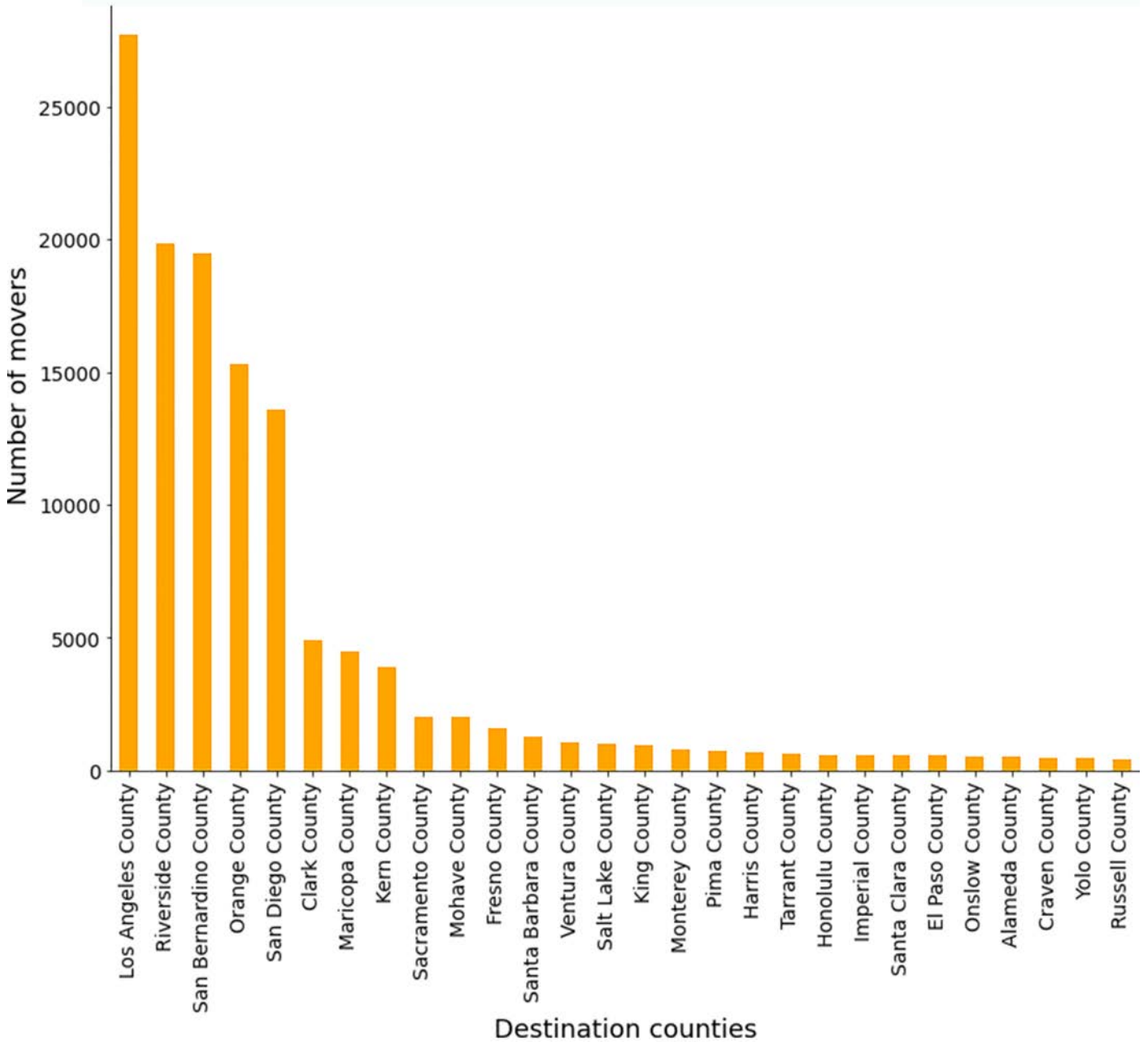
Rental Units By Size of Structure

before 1970	41%
1970-1999	51%
after 2000	8%

Household statistics

Share of Rent Burdened Households	49%
Percent with Children	33%
Median Household Income	$94,909
Average Household Size	2.76

20 Leading Destinations for Movers from Inland Empire 2019



Inland Empire

Race

White	33%
Black	12%
Asian	5%
Hispanic	47%
All other races	3%

Education

Less than HS	18%
HS Diploma	26%
Bachelor's Degree	15%
Graduate Degree	7%

Housing Type

1 Unit	73%
2-4 units	5%
10 to 19	3%
20+ units	6%

Rental Units By Size of Structure

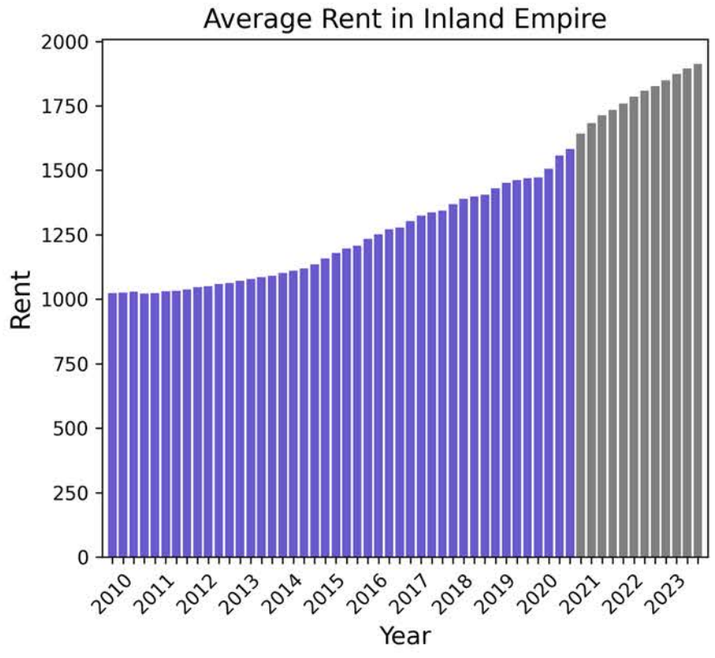
before 1970	23%
1970-1999	55%
after 2000	22%

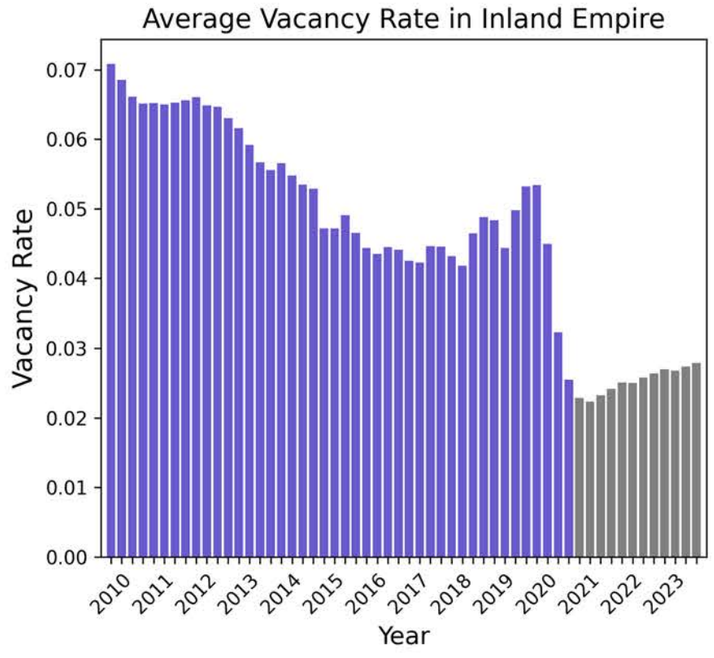
Household statistics

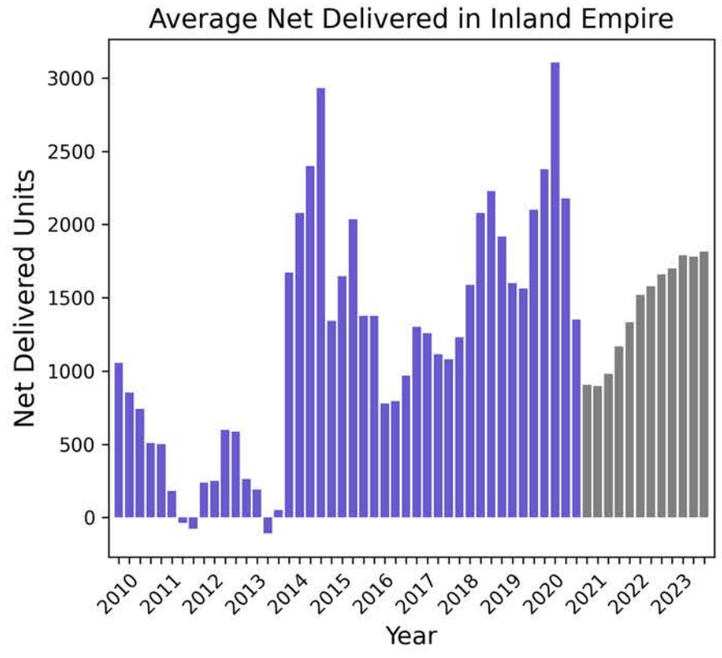
Share of Rent Burdened Households	53%
Percent with Children	43%
Median Household Income	$73,182
Average Household Size	3.38

All Demographic and Migration Data are based on Casden Forecast Tabulations of 2019 Five-year American Community Survey Data.

Inland Empire Rent & Vacancy Rate • Multifamily Permit Activity Inland Empire

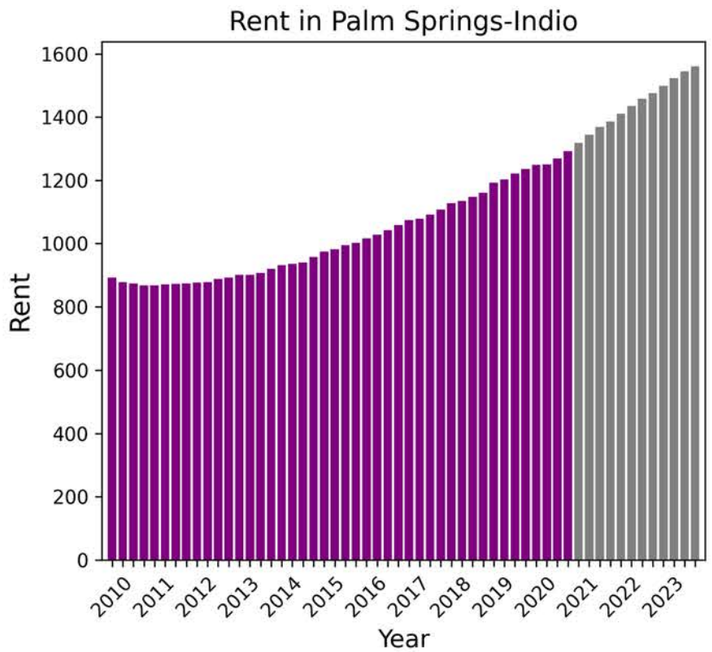


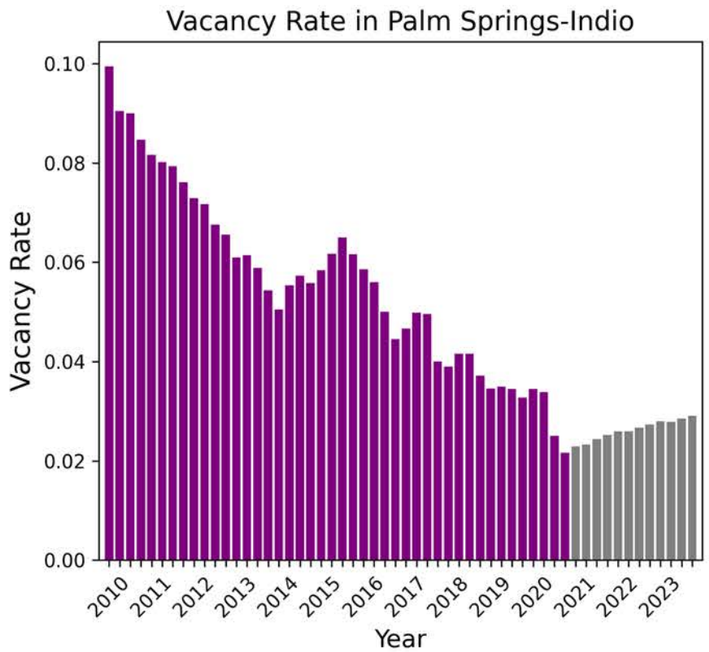


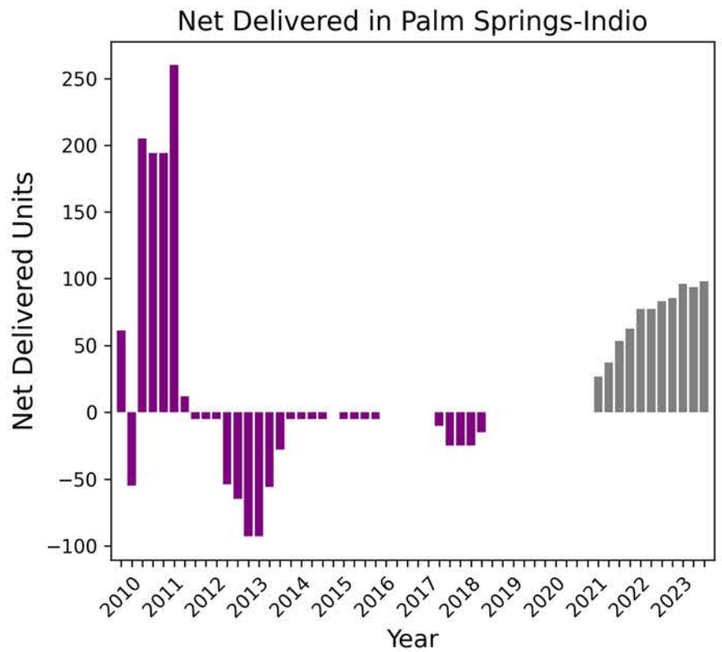


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Palm Springs-Indio Market • Inland Empire, 2010 to 2020

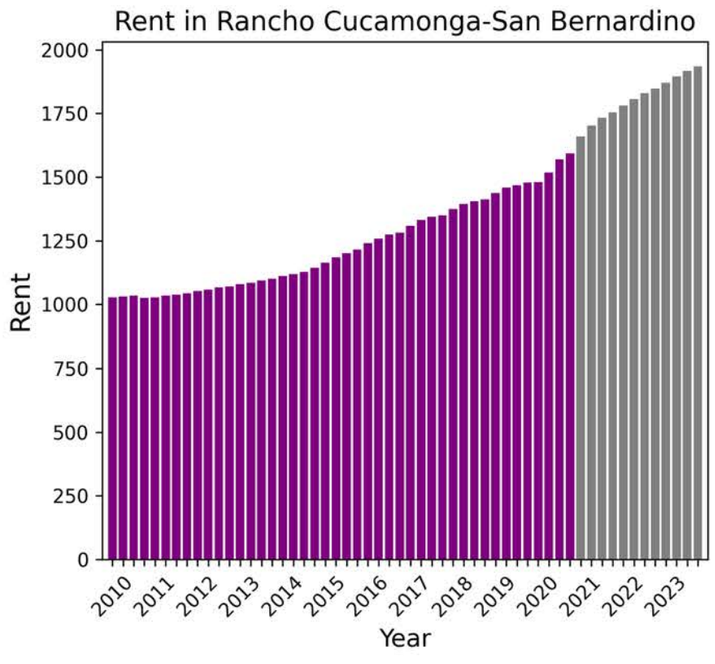


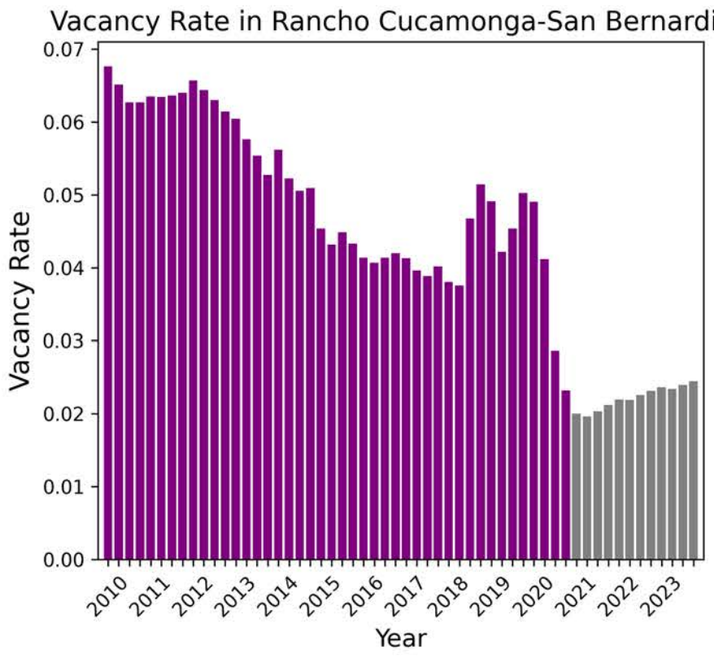


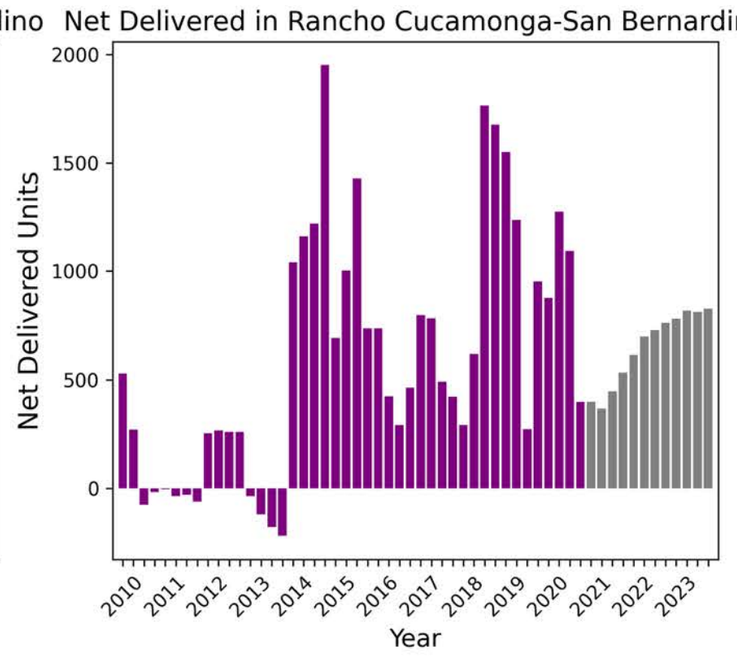


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Rancho Cucamonga-San Bernardino Market • Inland Empire, 2010 to 2020

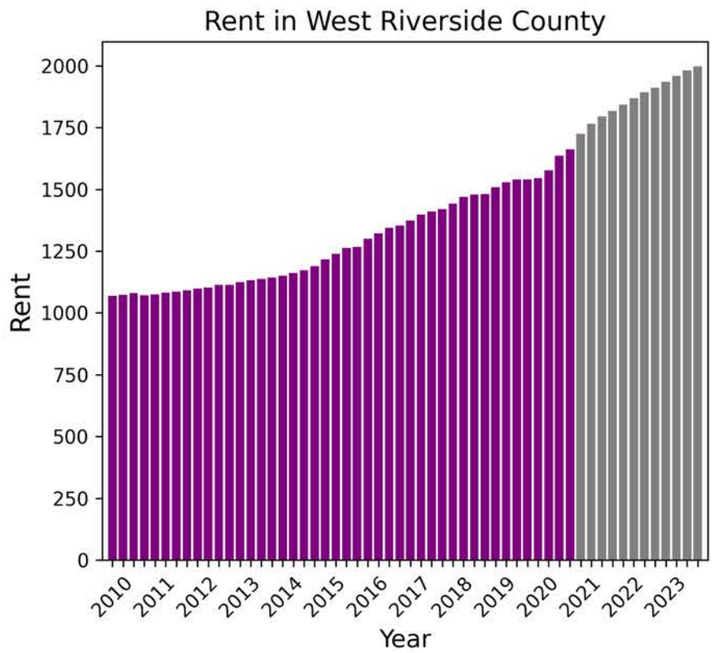


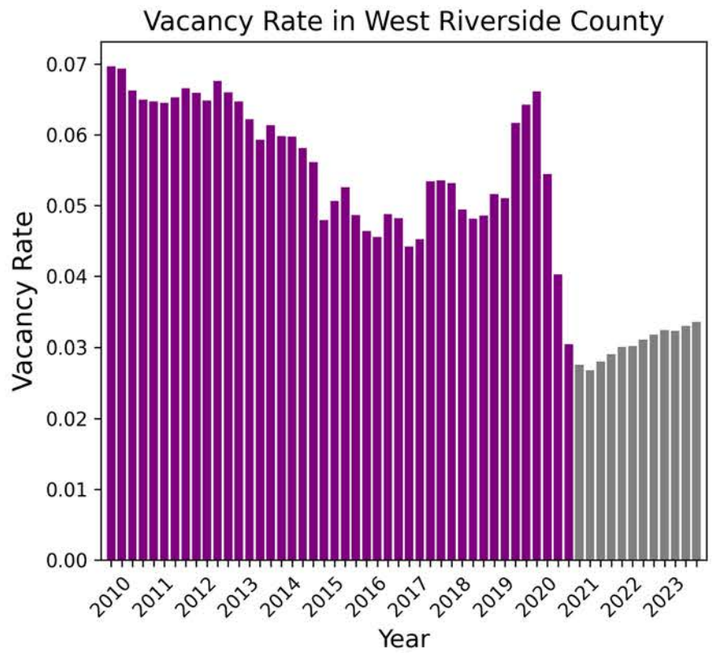


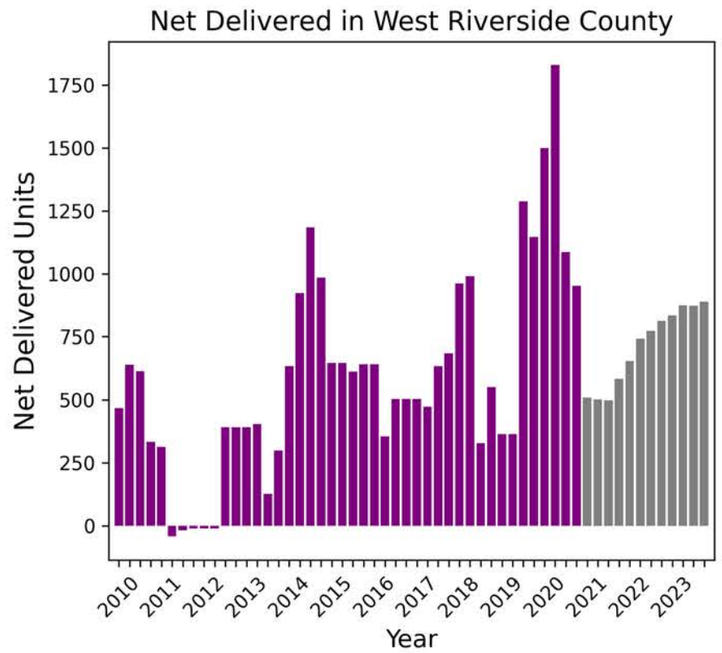


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

West Riverside County Market • Inland Empire, 2010 to 2020







Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Chino-Rancho Cucamonga

Race

White	30%
Black	10%
Asian	15%
Hispanic	41%
All other races	4%

Education

Less than HS	10%
HS Diploma	18%
Bachelor's Degree	24%
Graduate Degree	11%

Housing Type

1 Unit	74%
2-4 units	2%
10 to 19	4%
20+ units	12%

Rental Units By Size of Structure

before 1970	15%
1970-1999	57%
after 2000	28%

Household statistics

Share of Rent Burdened Households	48%
Percent with Children	37%
Median Household Income	$93,969
Average Household Size	3.12

Palm Springs- Indio

Race

White	41%
Black	5%
Asian	3%
Hispanic	50%
All other races	2%

Education

Less than HS	18%
HS Diploma	25%
Bachelor's Degree	16%
Graduate Degree	8%

Housing Type

1 Unit	66%
2-4 units	9%
10 to 19	3%
20+ units	5%

Rental Units By Size of Structure

before 1970	22%
1970-1999	61%
after 2000	17%

Household statistics

Share of Rent Burdened Households	51%
Percent with Children	28%
Median Household Income	$62,988
Average Household Size	2.58

West Riverside County

Race

White	30%
Black	5%
Asian	6%
Hispanic	58%
All other races	0%

Education

Less than HS	18%
HS Diploma	28%
Bachelor's Degree	14%
Graduate Degree	7%

Housing Type

1 Unit	77%
2-4 units	3%
10 to 19	3%
20+ units	4%

Rental Units By Size of Structure

before 1970	19%
1970-1999	57%
after 2000	24%

Household statistics

Share of Rent Burdened Households	54%
Percent with Children	47%
Median Household Income	$89,448
Average Household Size	3.76

Redlands - Fontana - High Desert

Race

White	35%
Black	14%
Asian	3%
Hispanic	44%
All other races	5%

Education

Less than HS	19%
HS Diploma	28%
Bachelor's Degree	13%
Graduate Degree	6%

Housing Type

1 Unit	74%
2-4 units	8%
10 to 19	2%
20+ units	5%

Rental Units By Size of Structure

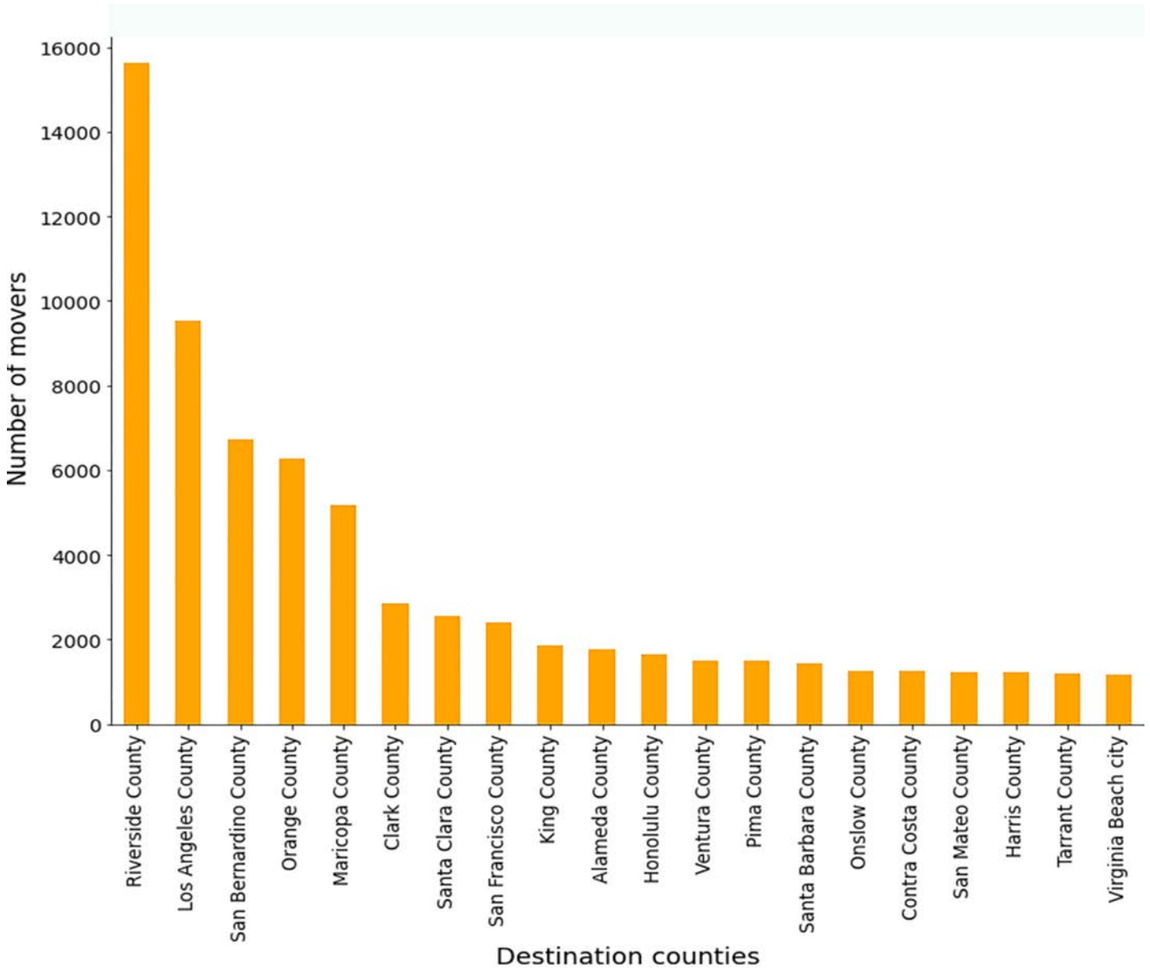
before 1970	20%
1970-1999	56%
after 2000	24%

Household statistics

Share of Rent Burdened Households	51%
Percent with Children	44%
Median Household Income	$63,807
Average Household Size	3.36

San Diego

20 Leading Destinations for Movers from San Diego County 2019



San Diego County

Race

White	45%
Black	7%
Asian	10%
Hispanic	34%
All other races	3%

Education

Less than HS	12%
HS Diploma	18%
Bachelor's Degree	24%
Graduate Degree	12%

Housing Type

1 Unit	61%
2-4 units	6%
10 to 19	7%
20+ units	16%

Rental Units By Size of Structure

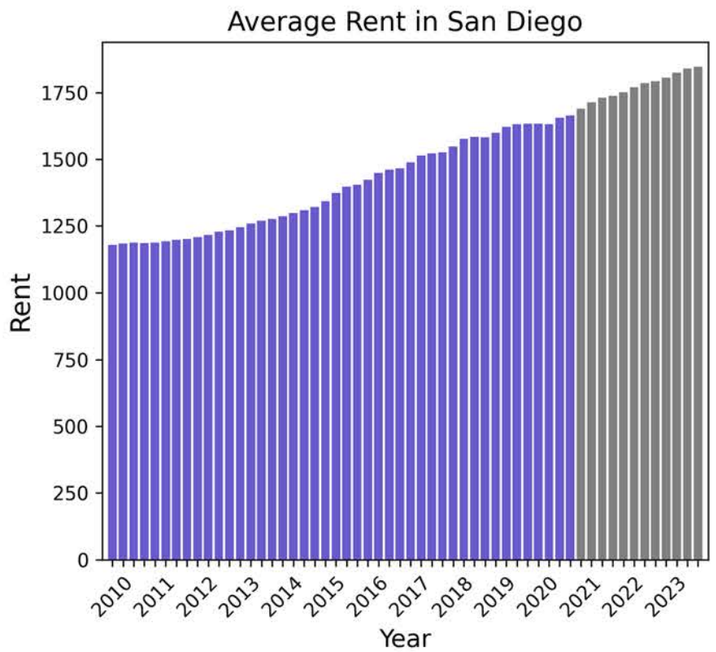
before 1970	30%
1970-1999	54%
after 2000	16%

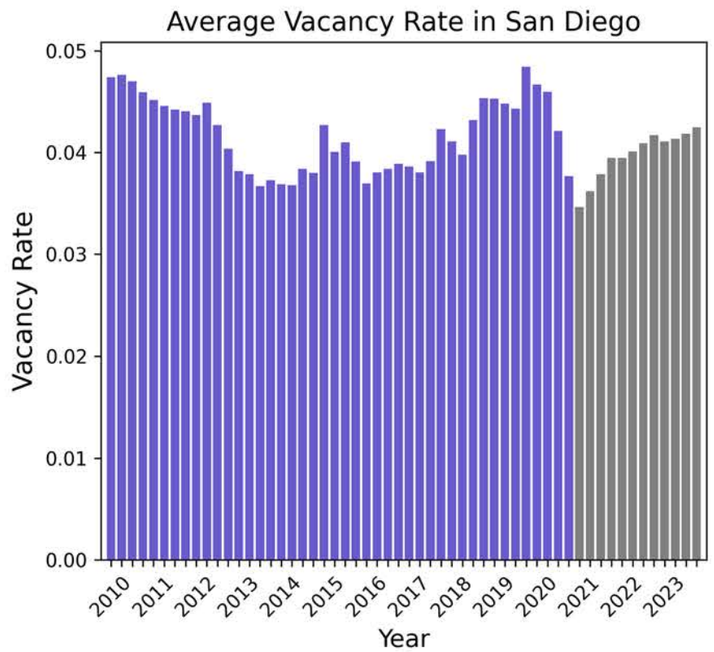
Household statistics

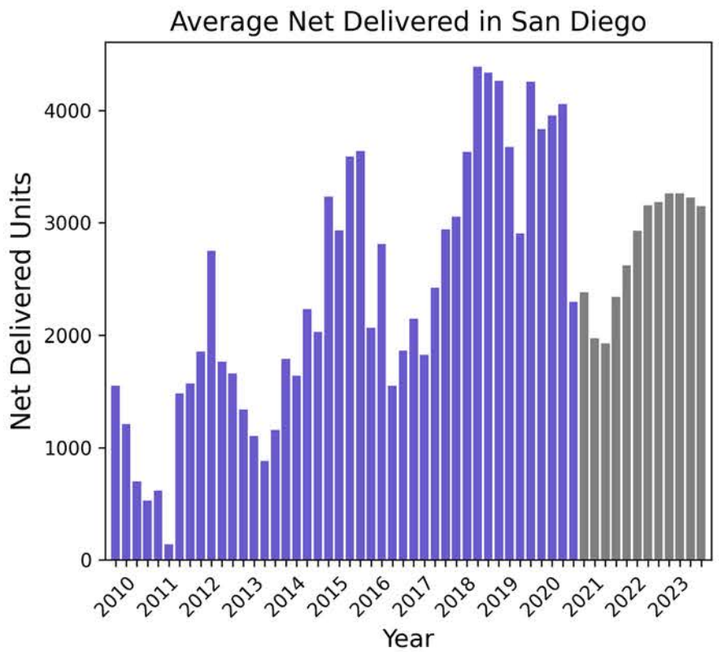
Share of Rent Burdened Households	54%
Percent with Children	34%
Median Household Income	$86,960
Average Household Size	2.93

All Demographic and Migration Data are based on Casden Forecast Tabulations of 2019 Five-year American Community Survey Data.

San Diego Rents/Vacancy • Multifamily Permit Activity San Diego

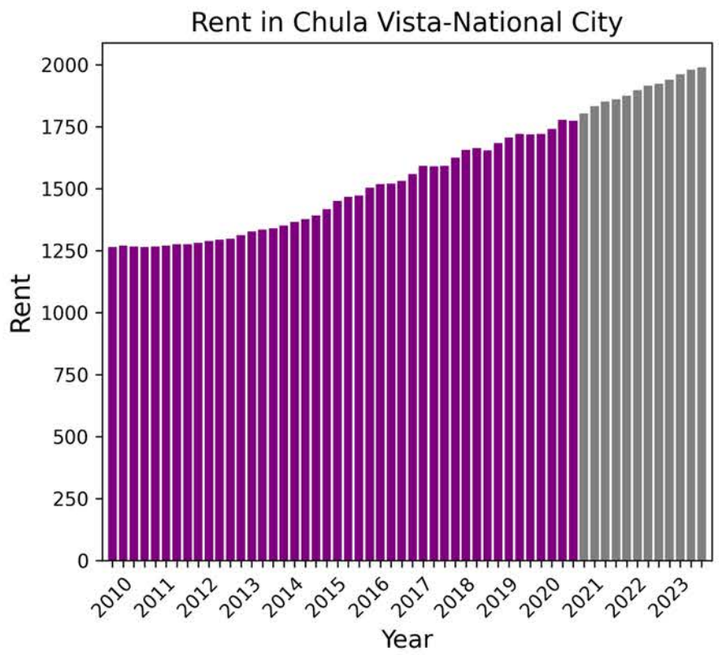


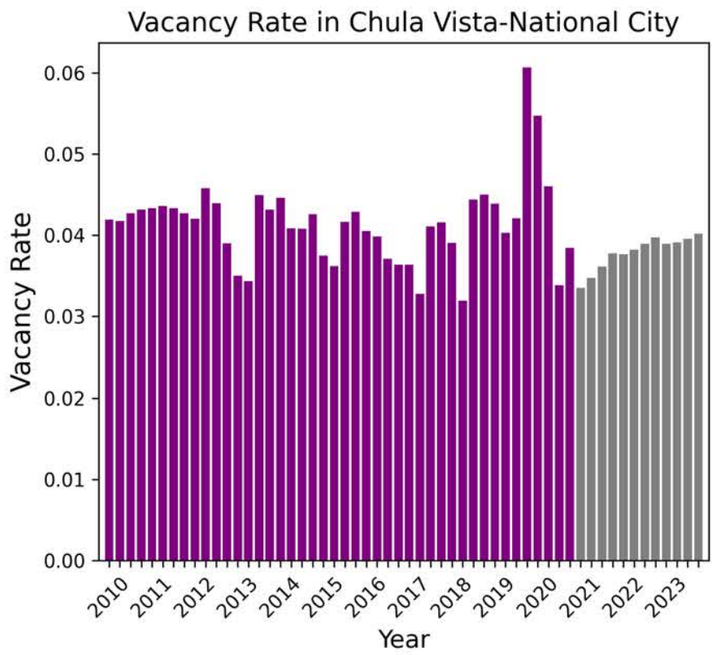


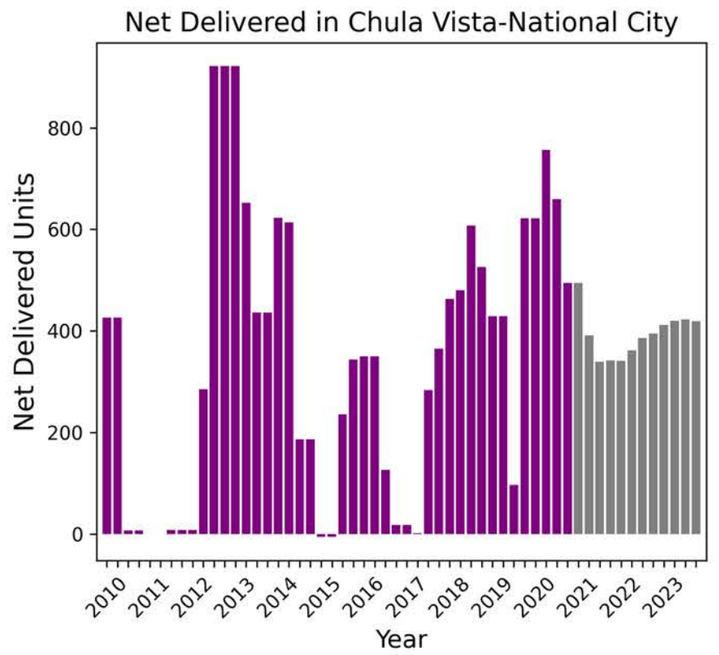


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Chula Vista-National City Market • San Diego County, 2010 to 2020

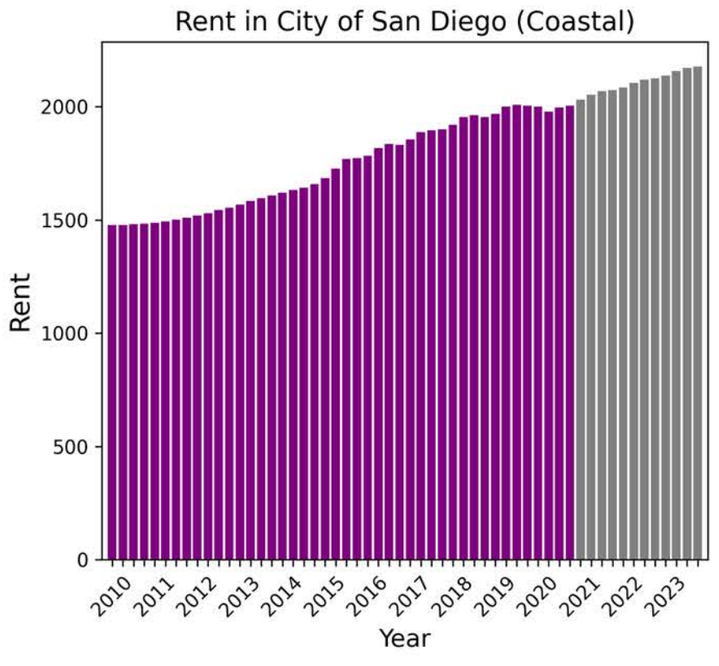


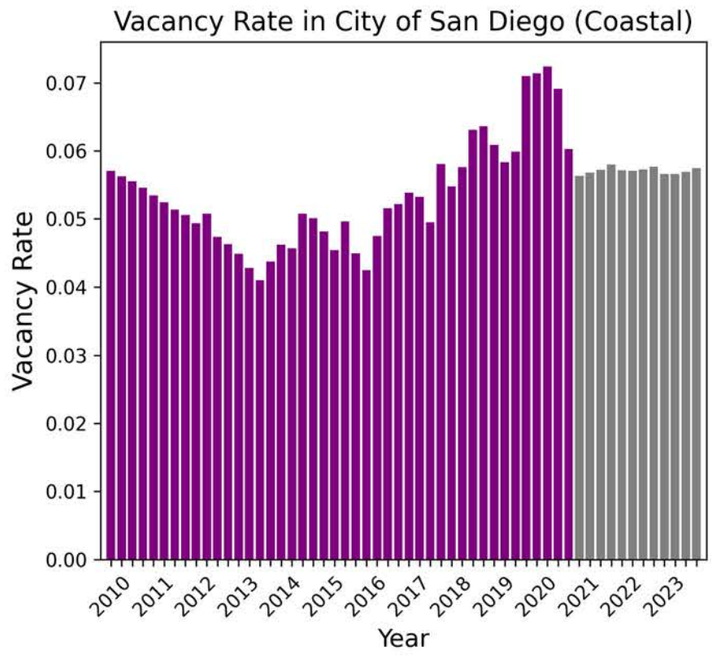


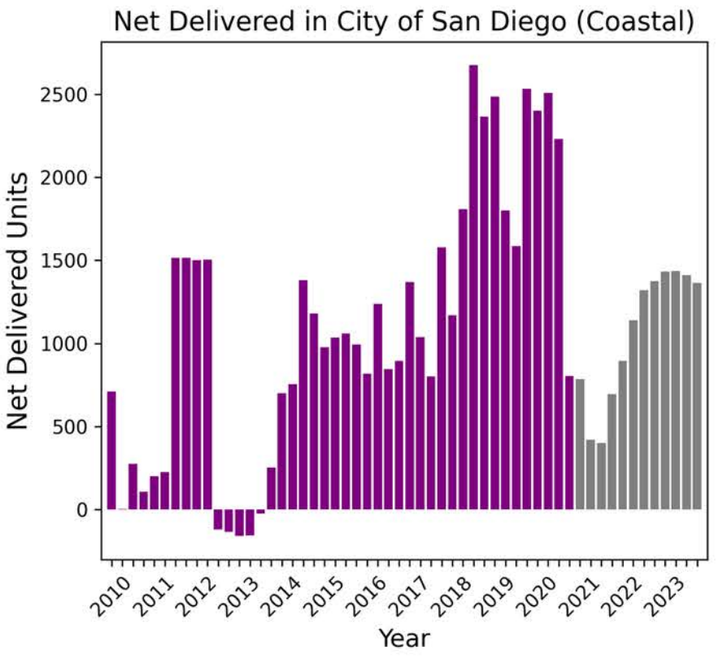


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

City of San Diego - Coastal Market • San Diego County, 2010 to 2020

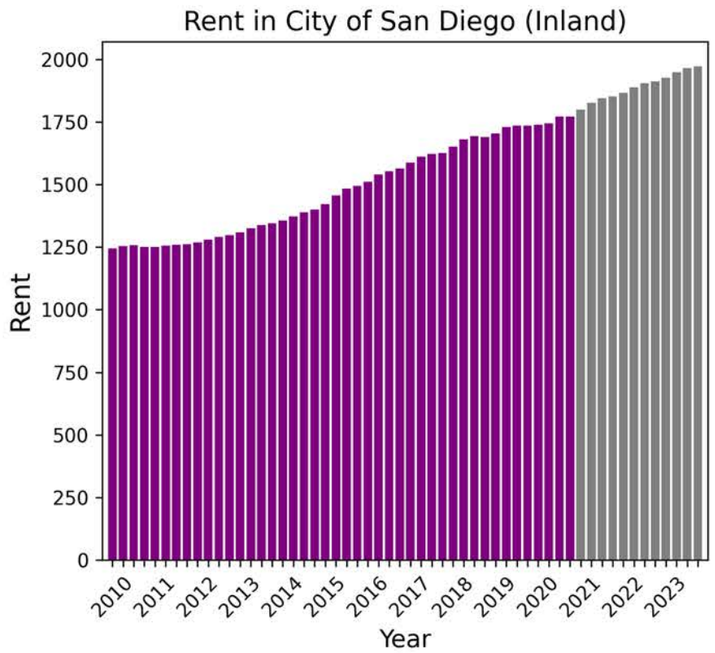


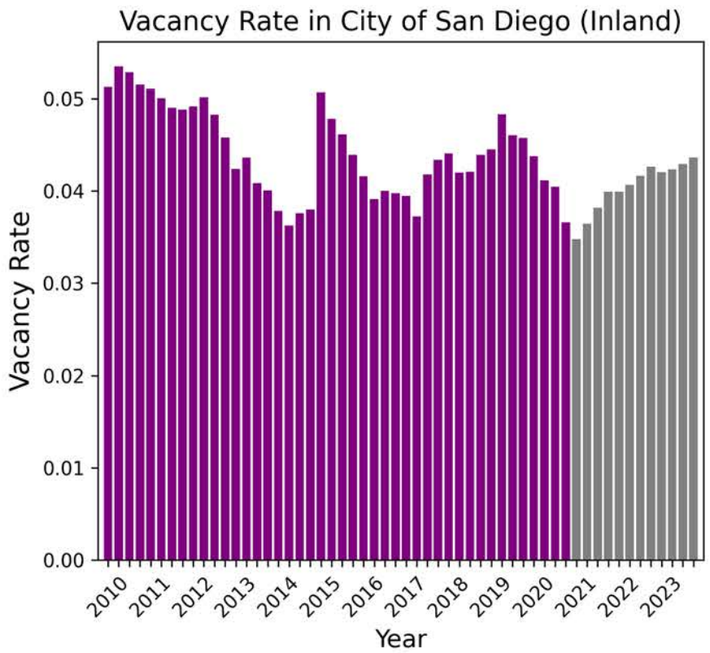


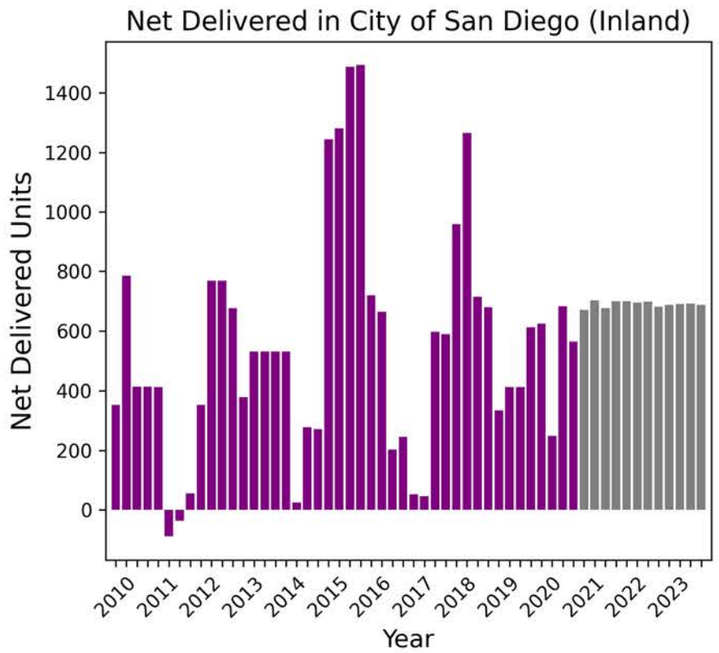


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

City of San Diego – Inland Market • San Diego County, 2010 to 2020







Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Chula Vista - National City

Race

White	15%
Black	8%
Asian	13%
Hispanic	62%
All other races	1%

Education

Less than HS	18%
HS Diploma	22%
Bachelor's Degree	18%
Graduate Degree	7%

Housing Type

1 Unit	65%
2-4 units	3%
10 to 19	6%
20+ units	16%

Rental Units By Size of Structure

before 1970	38%
1970-1999	46%
after 2000	17%

Household statistics

Share of Rent Burdened Households	55%
Percent with Children	41%
Median Household Income	$84,461
Average Household Size	3.31

City of San Diego (coastal)

Race

White	64%
Black	6%
Asian	5%
Hispanic	21%
All other races	3%

Education

Less than HS	6%
HS Diploma	13%
Bachelor's Degree	33%
Graduate Degree	18%

Housing Type

1 Unit	43%
2-4 units	8%
10 to 19	9%
20+ units	29%

Rental Units By Size of Structure

before 1970	43%
1970-1999	40%
after 2000	18%

Household statistics

Share of Rent Burdened Households	47%
Percent with Children	18%
Median Household Income	$86,596
Average Household Size	2.13

City of San Diego (inland)

Race

White	44%
Black	9%
Asian	14%
Hispanic	28%
All other races	4%

Education

Less than HS	11%
HS Diploma	17%
Bachelor's Degree	27%
Graduate Degree	14%

Housing Type

1 Unit	52%
2-4 units	6%
10 to 19	9%
20+ units	23%

Rental Units By Size of Structure

before 1970	33%
1970-1999	47%
after 2000	19%

Household statistics

Share of Rent Burdened Households	53%
Percent with Children	28%
Median Household Income	$87,723
Average Household Size	2.78

North County

Race

White	54%
Black	4%
Asian	7%
Hispanic	32%
All other races	4%

Education

Less than HS	10%
HS Diploma	15%
Bachelor's Degree	27%
Graduate Degree	15%

Housing Type

1 Unit	70%
2-4 units	5%
10 to 19	5%
20+ units	9%

Rental Units By Size of Structure

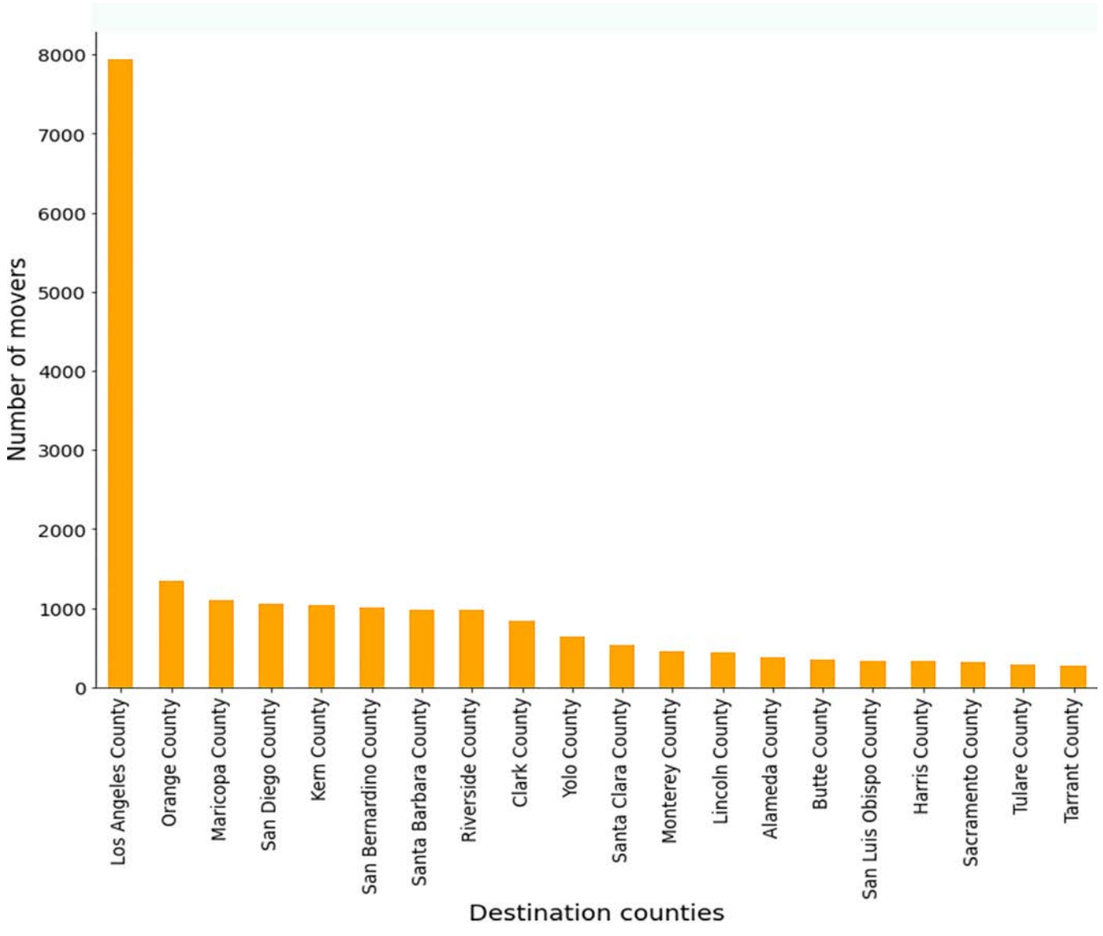
before 1970	19%
1970-1999	64%
after 2000	17%

Household statistics

Share of Rent Burdened Households	52%
Percent with Children	39%
Median Household Income	$96,637
Average Household Size	2.89

Ventura

20 Leading Destinations for Movers from Ventura County 2019



Ventura County

Race

White	45%
Black	3%
Asian	4%
Hispanic	45%
All other races	3%

Education

Less than HS	14%
HS Diploma	21%
Bachelor's Degree	22%
Graduate Degree	10%

Housing Type

1 Unit	75%
2-4 units	6%
10 to 19	4%
20+ units	6%

Rental Units By Size of Structure

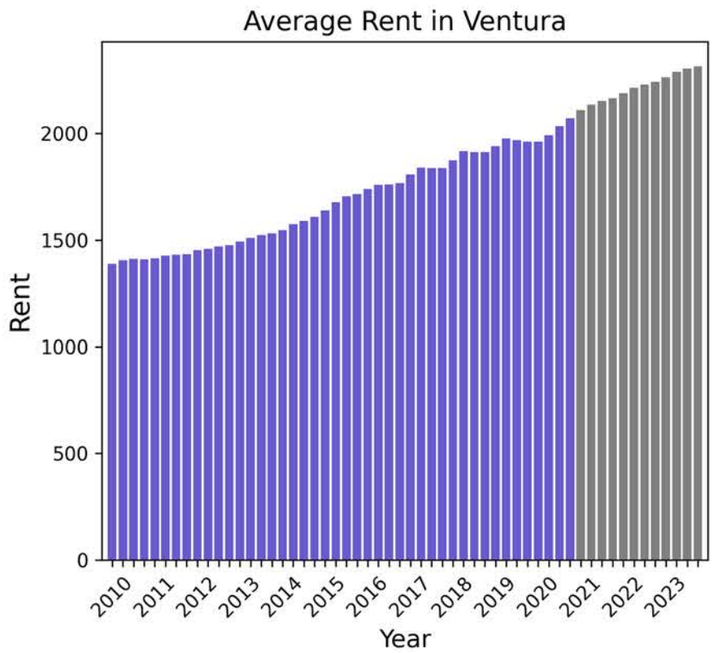
before 1970	38%
1970-1999	49%
after 2000	13%

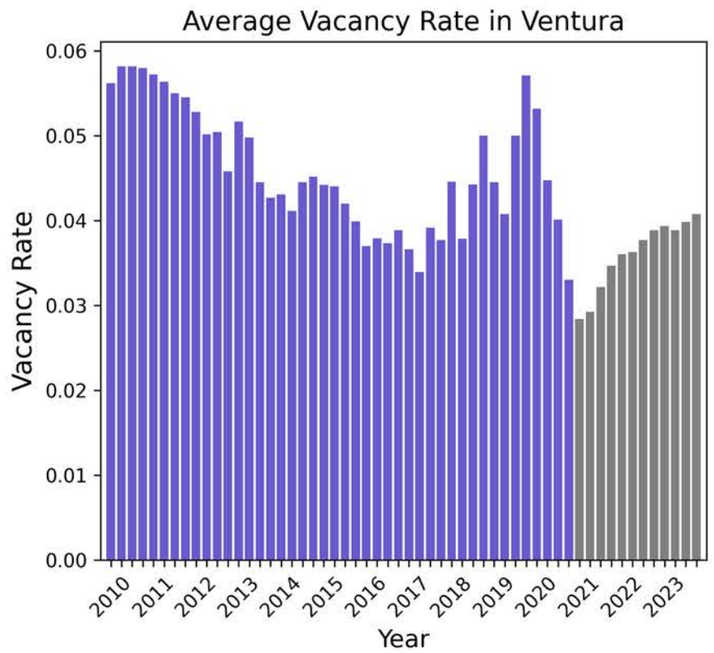
Household statistics

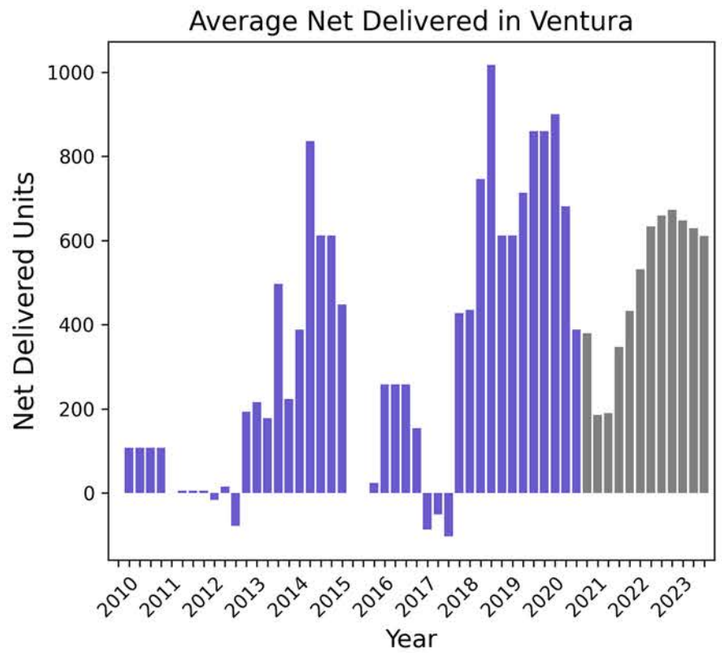
Share of Rent Burdened Households	55%
Percent with Children	39%
Median Household Income	$94,284
Average Household Size	3.1

All Demographic and Migration Data are based on Casden Forecast Tabulations of 2019 Five-year American Community Survey Data.

Ventura Rents/Vacancy • Multifamily Permit Activity Ventura

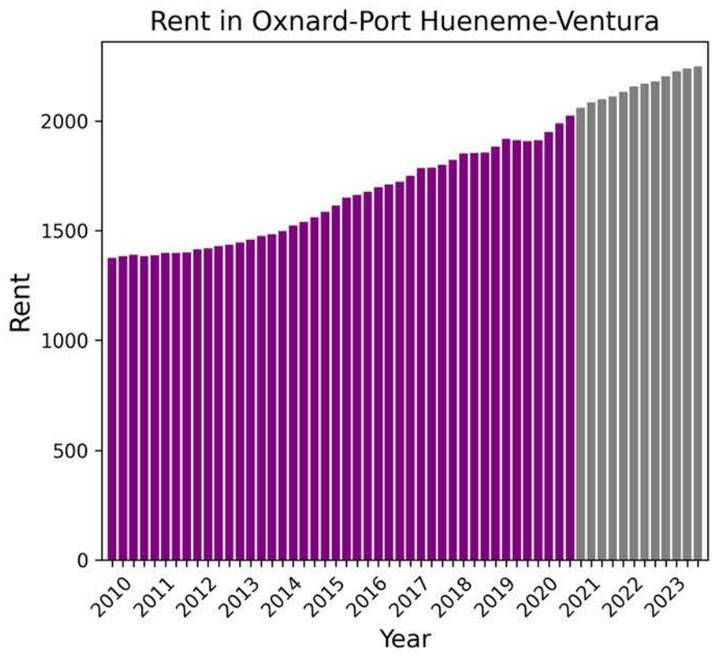


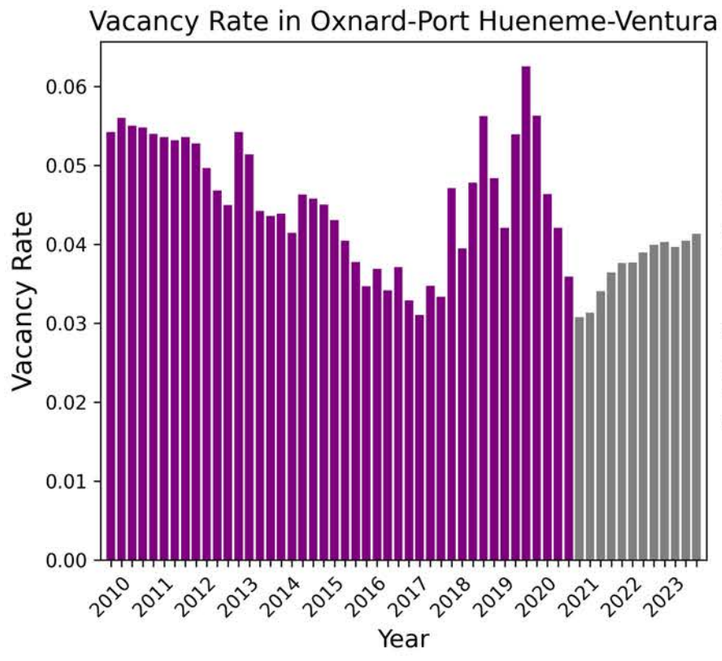


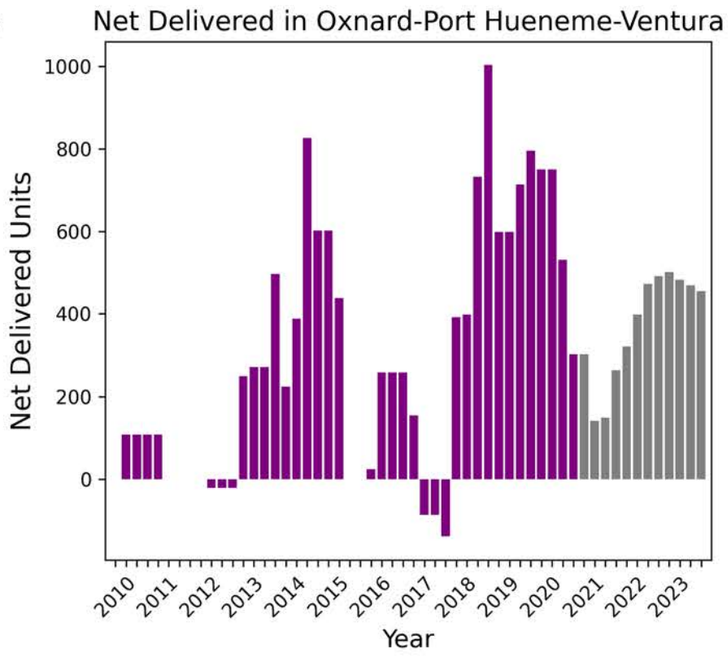


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Oxnard-Port Hueneme-Ventura Market • Ventura County, 2010 to 2020

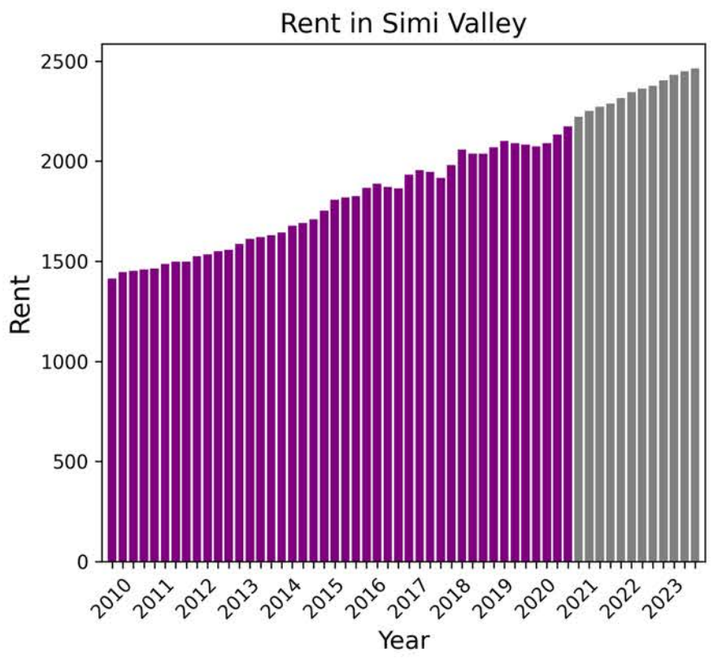


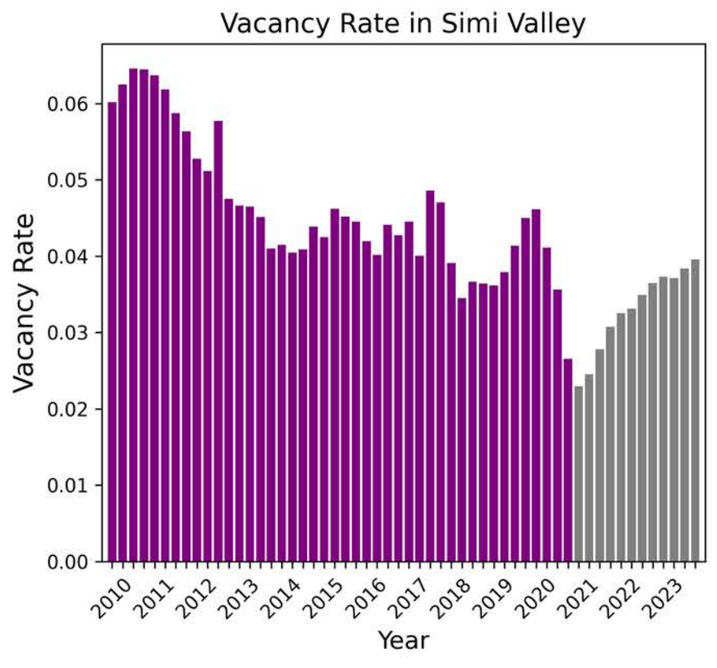


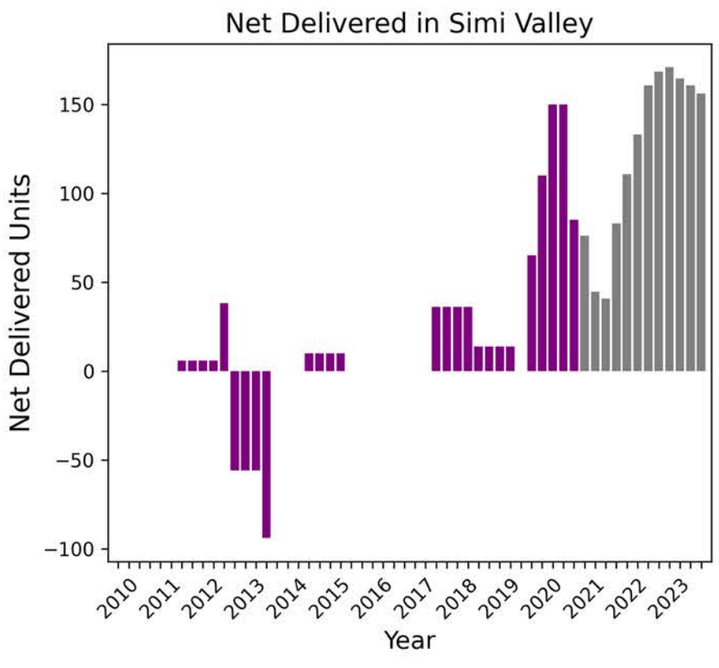


Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Simi Valley Market • Ventura County, 2010 to 2020







Source: USC Casden forecast tabulations and forecasts based on CoStar data and 2019 Five-year American Community Survey Data.

Simi Valley-Moorpark-Thousand Oaks

Race

White	58%
Black	4%
Asian	7%
Hispanic	28%
All other races	0.03

Education

Less than HS	8%
HS Diploma	16%
Bachelor's Degree	27%
Graduate Degree	14%

Housing Type

1 Unit	78%
2-4 units	5%
10 to 19	4%
20+ units	6%

Rental Units By Size of Structure

before 1970	24%
1970-1999	61%
after 2000	15%

Household statistics

Share of Rent Burdened Households	60%
Percent with Children	34%
Median Household Income	$106,035
Average Household Size	2.88

Oxnard-San Buenaventura

Race

White	36%
Black	2%
Asian	3%
Hispanic	57%
All other races	2%

Education

Less than HS	18%
HS Diploma	27%
Bachelor's Degree	18%
Graduate Degree	7%

Housing Type

1 Unit	70%
2-4 units	7%
10 to 19	7%
20+ units	8%

Rental Units By Size of Structure

before 1970	47%
1970-1999	41%
after 2000	11%

Household statistics

Share of Rent Burdened Households	55%
Percent with Children	41%
Median Household Income	$80,880
Average Household Size	3.3

Overall Disclaimer

Some of the data in this report was gathered from third party sources and was not independently verified. The Casden Forecast does not make any warranties or representations as to the completeness or accuracy thereof.

Methodology

Statistics reported in this year's USC Casden Report are based on data provided by CoStar Realty Information Inc and the U.S. Census Bureau.

Quarterly data on rents, vacancies, and net deliveries for rental housing with 2 or more units come from CoStar at the CoStar sub-market level for 2000-2021 Q1. Sub-markets were aggregated manually by the researchers to geographies that were made as similar as possible to the PUMA-based geographies used for reporting demographic data.

County-to-County migrations flows come from the U.S. Census Bureau that use 5-year ACS data. The latest figures are only available for 2014-2018.

County-level employment quotients come from the U.S. Bureau of Labor Statistics for year 2020.

Metro-level building permit data come from the U.S. Census Bureau.

All household, demographic, and housing statistics reported in the tables are obtained from the 2019 1-year American Community Survey at the PUMA level. PUMAs were then aggregated to match the sub-market geographies of prior Casden reports.

Forecasts presented in this report use standard time-series econometric techniques based on historical correlations of key housing variables including rents, vacancy rates, absorption rates, and unit construction at the quarterly level.

USC Lusk
Center for Real Estate

Technical Appendix

This appendix contains the model and forecasting details used to make predictions for the 2021 Casden Multi-Family Forecasting report using CoStar data.

Models

We estimated forecasting models using Ordinary Least Squares with the equations below. Let i and t index CoStar sub-markets and year-quarters, respectively. Let rent in year t in sub-market i is r_{it}, vacancy rates are vr_{it}, net delivery in the past 12 months is dl_{it}, absorption rates are abs_{it}, Q_t is a categorical variable for the quarter in the year t, and M_i is a categorical variable for the CoStar sub-market.

Rents for sub-markets were trained and forecasted using the following model:

$$r_{it} = \theta_0 + \theta_1 r_{it-1} + \theta_2 r_{it-2} + \theta_3 vr_{it-1} + \theta_4 vr_{it-2} + \theta_5 abs_{it-1} + Q_i + M_i + \varepsilon_{it}$$

Vacancy rates for most sub-markets were trained and forecasted using the following model:

$$vr_{it} = \alpha_0 + \alpha_1 vr_{it-1} + \alpha_2 vr_{it-2} + \alpha_3 abs_{it-1} + \alpha_4 dl_{it-1} + \alpha_5 dl_{it-2} + \alpha_6 dl_{it-3} + Q_i + M_i + \varepsilon_{it}$$

Net deliveries for most sub-markets were trained and forecasted using the following model:

$$dl_{it} = \beta_0 + \beta_1 r_{it-1} + \beta_2 r_{it-2} + \beta_3 r_{it-3} + \beta_4 vr_{it-1} + \beta_5 vr_{it-2} + \beta_6 vr_{it-3} + \beta_5 abs_{it-1} + \beta_6 dl_{it-1} + \beta_7 dl_{it-2} + \beta_8 dl_{it-3} + \beta_9 dl_{it-4} + Q_i + M_i + \varepsilon_{it}$$

Forecasted absorption rates are the historical mean of past absorption rates as this outperformed autoregressive and moving average models.

The models above are extensions of Rosen and Smith (1983). We performed cross-validation using 2000-2017 data to train the models and 2018-2019 to perform out-of-sample predictions. In certain instances, mostly in Ventura County and the Inland Empire, the training models differ slightly from the ones above with the addition or subtraction of lagged variables.

Future modeling efforts may incorporate economic and demographic data such as job and firm creation rates along with demographic variables such as household growth and education variables.

Forecasting

Using models trained on quarterly data from 2000-2021 Q1, quarterly predictions were made for 2021 Q2 - 2023 Q4. The predictions were made using the standard procedure of predicting one period ahead and then using the predicted and past values for predictors for the next period. Namely, rent, vacancy rate, and net delivery were predicted for period t+1 and these predicted values were used to predict t+2 values. This procedure was repeated until 2023 Q4.

CoStar sub-market observations and predictions were aggregated to market and Casden sub-market levels as the weighted average of CoStar sub-market rent, vacancy rate, and net delivery values. The weights are the share of units that are contained within each CoStar sub-market relative to either the total units in the market or Casden sub-market. For observed values, the weights were computed using observed unit counts. For predicted values, 2021 Q1 weights were used.

Reference

Rosen, Kenneth T., and Lawrence B. Smith. “The price-adjustment process for rental housing and the natural vacancy rate.” The American Economic Review 73.4 (1983): 779-786.