

# **Orange, California**

## *Indicators Report*

by  
The National Economic Education Delegation (NEED)

April 20, 2024

Exploring the economics, demographics, and well-being of Orange and its residents through indicators.

This report was produced by the:

National Economic Education Delegation  
271 Arias St.  
San Rafael, CA 94903  
415-336-5705  
[www.NEEDEcon.org](http://www.NEEDEcon.org)  
Contact: [Jon@NEEDEcon.org](mailto:Jon@NEEDEcon.org)

# Executive Summary

## *Assessing the City with Indicators*

### **About this Report**

This report provides background or summary information for the city of Orange (the City) in the form of indicators.

### **Using this Report**

Indicators are measures of various aspects of a regional economy. They help to provide an indication of the quality of life in a region and progress toward improving conditions in the local economy. This report focuses on indicators

for changing demographics, incomes, housing markets, commute patterns, and employment in Orange. These indicators are compared to Orange County (the County) as a whole, a broader region where one is well defined, California, and the United States.

This report is vital for understanding trends in the underlying economy. It does not provide forecasts, but Rob Eyler and Jon Haveman at Economic Forensics and Analytics are available to provide them if that is of interest.

### **Topics Covered:**

- **Demographics:** A detailed snapshot of Orange demographics is presented. This provides evidence on the size, age and sex, income and poverty status, race and ethnicity, housing status, living arrangements, education, health, and transportation choices of the population. Beyond the current population level, data on trends in local population growth, in comparison with other broader regions is presented, in both tabular and graphical form.
- **Employment Report:** Here, we provide a brief snapshot of employment and unemployment in Orange and how the City's experience differs from broader regions.
- **Income and Earnings:** Vital to understanding the prosperity of a city relative to its surrounding area is information on income and earnings. We provide a ranking of the City's income relative to all cities in California as well as growth relative to local regions. Inequality and poverty status are also important indicators for the level of equity in the community. We provide evidence of trends in both, not only for all residents, but also for children separately.
- **Housing:** This section provides evidence on the cost and availability of housing. Both median home values and rental costs are included, along with detailed information on home ownership, by age and income, in particular. Further, evidence is provided on the housing burden in the City, again, in comparison with other broader regions. We also provide evidence on the rate at which new buildings and units are permitted along with a broader housing picture. Finally, we provide evidence on the age of the housing stock in Orange, along with information on how long the City's residents have been in place.
- **Transportation:** Increasingly important, in the wake of the pandemic, is an understanding of the transportation patterns and choices of local residents. We provide detailed evidence on the proportion of residents who work from home and on the various transportation choices of those who head to the office. This information is also provided for those who work in Orange, but do not necessarily live in Orange.
- **Migration:** Population changes comes primarily through organic causes: births and deaths. Migration between regions also plays a significant role in population growth. A final section of the report provides evidence on migration into and out of the City.

# Contents

<b>Executive Summary</b>	<b>1</b>
Assessing the City with Indicators . . . . .	1
<b>Demographics</b>	<b>3</b>
A Demographic Snapshot . . . . .	3
Current Population . . . . .	5
<b>Employment Report</b>	<b>8</b>
Citywide Employment and Unemployment . . . . .	8
County Employment by Industry . . . . .	9
Some Employee Detail . . . . .	10
<b>Income and Earnings</b>	<b>16</b>
Per Capita Personal Income Growth . . . . .	16
Poverty and Inequality . . . . .	19
<b>Housing</b>	<b>21</b>
Housing Costs and Affordability . . . . .	21
Housing Picture . . . . .	25
Vintage of Residential Housing . . . . .	27
Occupation of Residential Housing . . . . .	29
Residential Permitting . . . . .	31
<b>Commute Patterns</b>	<b>34</b>
Mode of Transportation . . . . .	34
Commute Times for Employed Residents . . . . .	36
Commute Times for Those Employed in the City . . . . .	37
Place of Work . . . . .	38
Commute Mode by Income . . . . .	40
Commute Mode by Poverty Status . . . . .	41
<b>Migration</b>	<b>42</b>
Overall Migration Flows . . . . .	42
Demographics of Migration Flows . . . . .	44
<b>References and Sources</b>	<b>46</b>

# Demographics

**Definition:**

Data on the demographics of a city indicate the nature of the population, with a focus on age, gender, race and ethnicity, as well as household composition.

**Why is it important?**

The characteristics and growth of Orange's population are fundamental indicators of the city's growth potential.

***A Demographic Snapshot***

Statistic	2022	2019
<b>POPULATION</b>		
Population Estimate (#, 5yr)	138,728.0	139,887.0
Veterans (#, 5yr)	4,120.0	4,340.0
Foreign born persons (% , 5yr)	21.6	22.8
Population age 25+ (#, 5yr)	95,294.0	93,161.0
<b>AGE AND SEX</b>		
Persons under 5 years (% , 5yr)	5.6	6.1
Persons under 18 years (% , 5yr)	20.5	21.3
Persons 65 years and over (% , 5yr)	14.5	12.2
Female persons (% , 5yr)	48.9	50.3
<b>INCOME AND POVERTY</b>		
Median household income (\$ , 5yr)	109,335.0	91,793.0
Per capita income in past 12 months (\$ , 5yr)	48,092.0	37,850.0
Persons in poverty (% , 5yr)	9.2	12.1
Children age less than 18 in poverty (#, 5yr)	2,866.0	4,460.0
Children age less than 18 in poverty (% , 5yr)	10.4	15.4
<b>RACE AND ETHNICITY</b>		
White alone (% , 5yr)	58.2	72.0
African American alone (% , 5yr)	1.5	1.7
American Indian or Alaska Native alone (% , 5yr)	0.9	0.4
Asian alone (% , 5yr)	13.3	11.8
Native Hawaiian and Other Pacific Islander alone (% , 5yr)	0.4	0.4
Two or More Races (% , 5yr)	13.6	3.5
Hispanic or Latino (% , 5yr)	39.1	38.9
White alone, not Hispanic or Latino (% , 5yr)	41.0	44.6
<b>HOUSING</b>		
Housing units (#, 5yr)	46,067.0	44,664.0
Owner-occupied housing units (% , 5yr)	58.9	57.9
Median value of owner-occupied housing units (\$ , 5yr)	848,200.0	656,100.0
Median selected monthly owner costs-with a mortgage (\$ , 5yr)	3,180.0	2,724.0
Median selected monthly owner costs-without a mortgage (\$ , 5yr)	712.0	573.0
Median gross rent (\$ , 5yr)	2,148.0	1,806.0
<b>FAMILIES AND LIVING ARRANGEMENTS</b>		
Households (#, 5yr)	44,336.0	43,075.0
Persons per household (#, 5yr)	3.0	3.1
Living in same house 1 year ago, % of persons age 1+ (5yr)	87.7	86.3
<b>EDUCATION</b>		
High school graduate or higher, % of persons age 25+ (5yr)	88.2	85.8
Bachelor's degree or higher, % of persons age 25+ (5yr)	40.3	37.7
<b>HEALTH</b>		
With a disability, under age 65 years (#, 5yr)	6,478.0	5,955.0
Persons without health insurance, under age 65 years (% , 5yr)	6.0	7.4
<b>LABOR FORCE</b>		
In civilian labor force, persons age 16+ (% , 5yr)	66.1	64.9
In civilian labor force, women age 16+ (% , 5yr)	61.7	60.4
Employed, persons age 16+ (% , 5yr)	60.9	59.9
Self employed (% , 5yr)	11.0	10.6
<b>TRANSPORTATION</b>		
Mean travel time to work, workers age 16+ (Mins., 5yr)	23.0	25.7
Drive alone in private vehicle (% , 5yr)	71.4	80.5
Using public transportation (% , 5yr)	2.7	2.5
Worked from home (% , 5yr)	14.2	5.5

Source: American Community Survey, Summary Files

Note: Data are from the 1-year files unless indicated by the notation 5yr.

## Current Population

The data in these two tables and the following two graphs are from the CA Department of Finance (DOF). The DOF produces population estimates for geographies around California twice a year: January and July. As estimates for cities are only available in January, these two tables are based on the January data. The remaining figures are from the American Community Survey (ACS), provided annually by the U.S. Bureau of the Census.

**Table 1. Population Change by Region**  
(Thousands, January to January)

Region	2023 Population	% Change		
		1 Year	3 Year	5 Year
<b>City</b>				
Orange	139,063	0.66	-0.32	-1.45
<b>County and Broader Regions</b>				
Orange County	3,137,164	-0.47	-1.36	-2.37
Southern California	21,794,548	-0.41	-2.24	-2.84
California	38,940,231	-0.35	-1.79	-2.01

Source: CA DOF; Calculations by National Economic Education Delegation

**Table 2. County Population Change by City**  
(Thousands, January to January)

City	2022	2023	% Change		
			Local	Southern California	California
Orange County	3,151.9	3,137.2	-0.47	-0.41	-0.35
Anaheim	335.9	328.6	-2.19		
Irvine	305.7	303.1	-0.86		
Santa Ana	304.3	299.6	-1.52		
Huntington Beach	196.5	195.7	-0.38		
Garden Grove	171.2	171.2	-0.01		
Fullerton	143.0	142.9	-0.10		
Orange	138.2	139.1	0.66		
Costa Mesa	111.6	111.2	-0.42		
Mission Viejo	92.1	91.8	-0.30		
Westminster	90.7	90.5	-0.18		
Lake Forest	86.6	87.1	0.59		
Buena Park	83.4	83.5	0.19		
Newport Beach	83.7	83.4	-0.29		
Tustin	79.7	79.6	-0.17		
Yorba Linda	67.3	67.1	-0.32		
Laguna Niguel	65.0	64.7	-0.47		
San Clemente	63.4	63.2	-0.31		
La Habra	62.0	61.8	-0.33		
Fountain Valley	57.0	57.0	0.02		
Placentia	51.3	52.5	2.30		
Aliso Viejo	51.0	50.8	-0.49		
Cypress	49.9	49.8	-0.12		
Brea	46.9	48.2	2.63		
Rancho Santa Margarita	47.3	47.1	-0.49		
Stanton	39.0	39.1	0.25		
San Juan Capistrano	34.9	35.1	0.63		
Dana Point	33.0	33.2	0.44		
Laguna Hills	30.7	30.5	-0.46		
Seal Beach	24.9	24.6	-0.90		
Laguna Beach	22.5	22.4	-0.27		
Laguna Woods	17.5	17.4	-0.49		
La Palma	15.4	15.3	-0.45		
Los Alamitos	11.9	12.1	1.98		
Villa Park	5.8	5.8	-0.02		

Source: CA DOF; Calculations by National Economic Education Delegation

Figure 1: Population Growth (1)

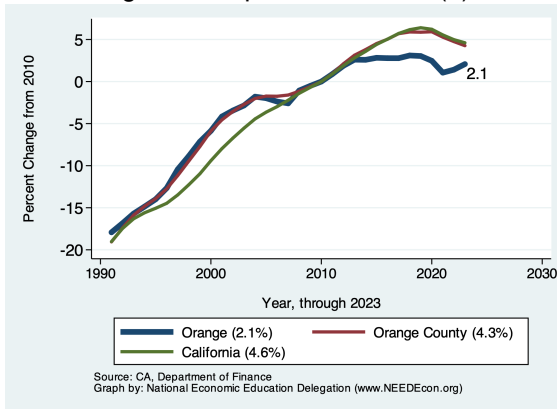


Figure 2: Population Growth (2)

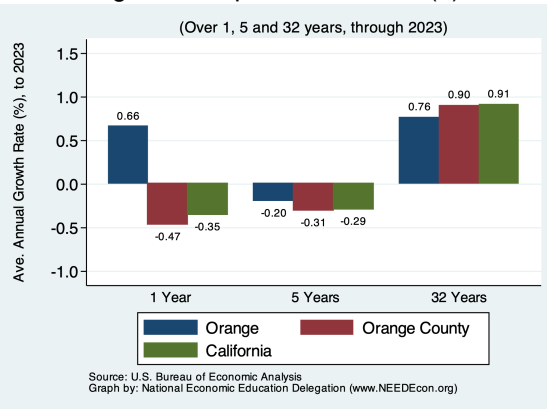


Figure 3: Population by Age - Detailed Age Categories

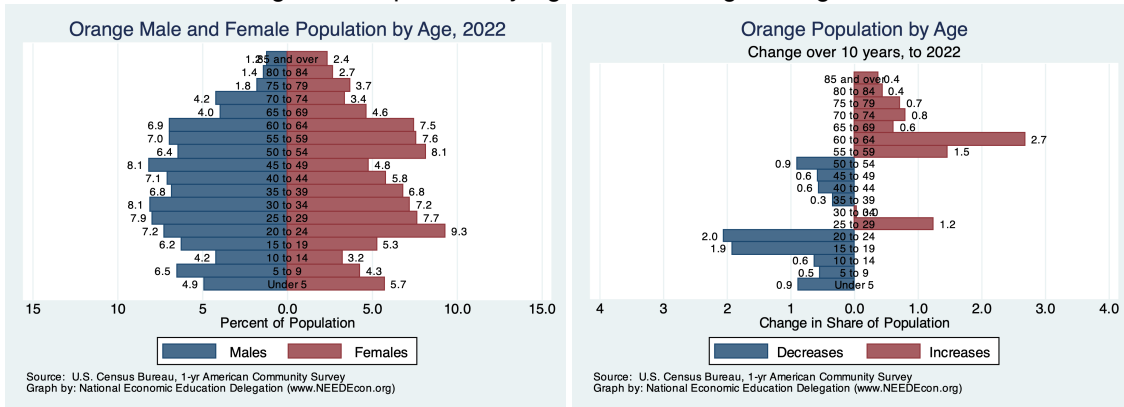


Figure 4: Population by Age - Broad Age Categories

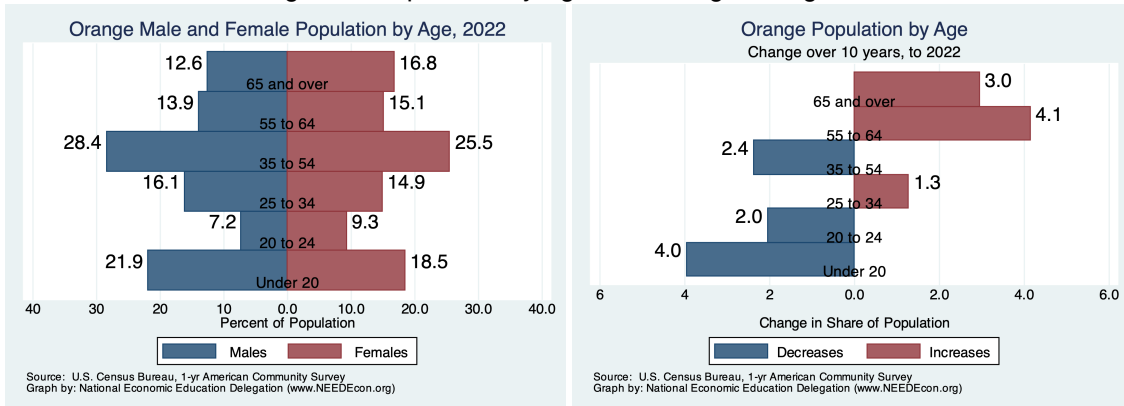


Figure 5: Population by Educational Attainment

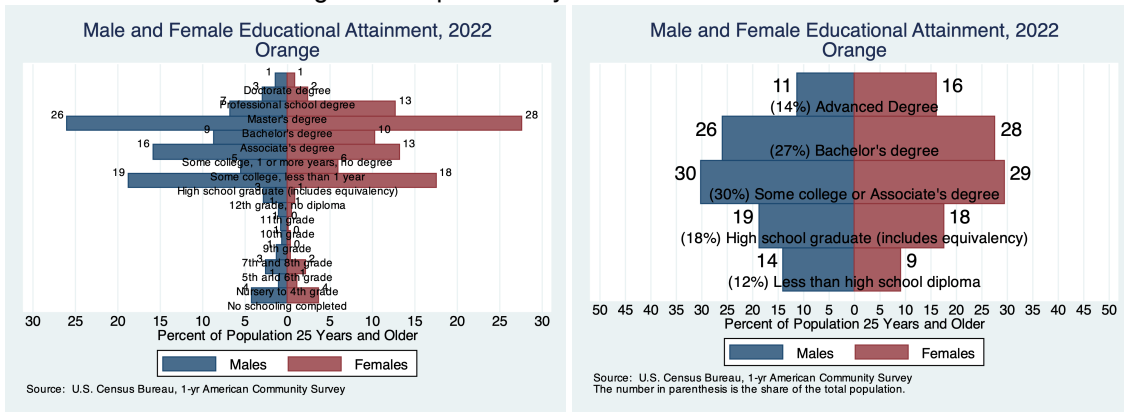


Figure 6: Population by Race/Ethnicity

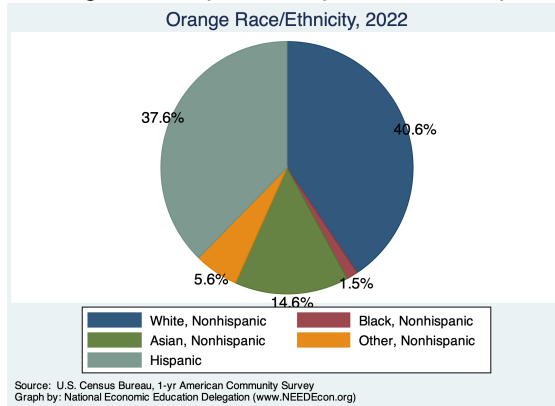
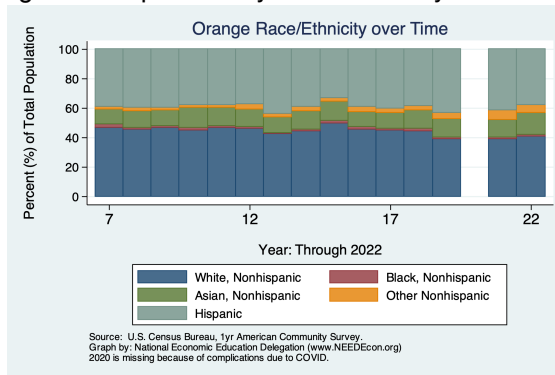


Figure 7: Population by Race/Ethnicity Over Time





# Employment Report

## Citywide Employment and Unemployment

### Definition:

Each month, California's Employment Development Division (EDD) publishes an update on employment in California and in MSAs, counties, and cities all across the state. The report focuses primarily on non-farm employment, providing estimates of changes in em-

ployment by industry as well as unemployment in each region. Data for cities is limited to aggregate employment, labor force, and unemployment data. Those are reported below.

### Why is it important?

Employment growth is a fundamental indicator of the health of an economy.

Table 3. Orange Summary for March, 2024

Category	Current Value	Change From:		
		Last Month	2 Months Ago	Last Year
Employment	8,924	-30	-53	-103
Labor Force	9,644	9	15	96
Number Unemployed	678	-4	21	97
Unemployment Rate	7.0	-0.0	0.2	0.9

Source: EDD, National Economic Education Delegation

Figure 8: Historical Employment and Unemployment - Last 12 Months

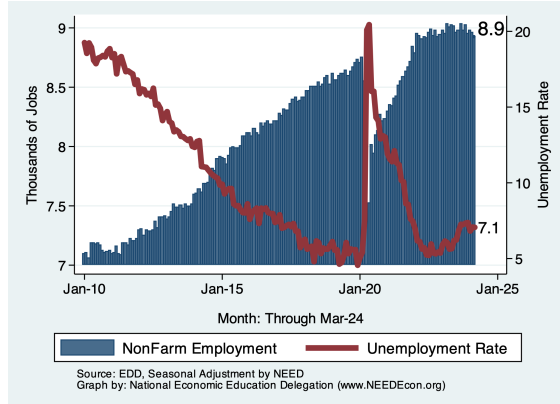


Figure 9: Employment and Unemployment - Last 12 Months

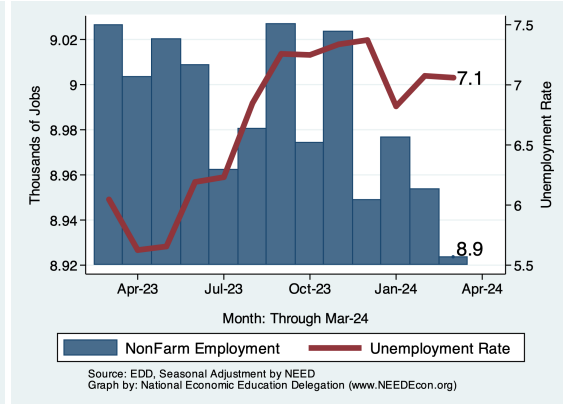


Figure 10: Relative Employment Growth Across Regions - since 2010

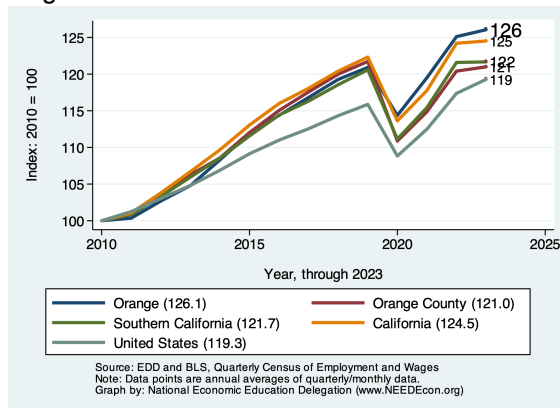
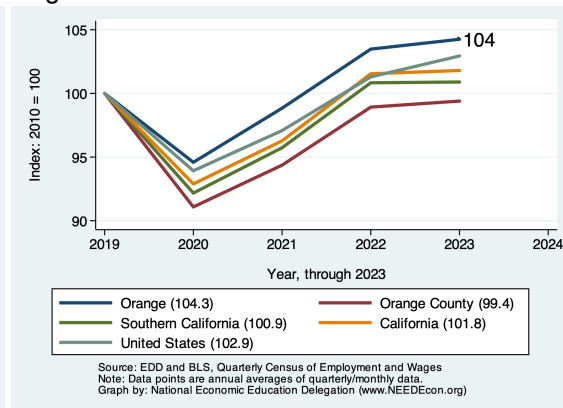


Figure 11: Relative Employment Growth Across Regions - since 2019



## County Employment by Industry

California's Employment Development Division (EDD) does not regularly produce data on employment by industry for cities. However, we are able to report industry-level employment data for Orange County. The following table provides the latest data for the County.

Table 4. Employment Growth by Industry in Orange County for March, 2024

Industry	Employment	Share	Empl Growth	% Growth - Annualized Rate					
				Month	Qtr	6mo	1yr	3yr	5yr
<b>Total Nonfarm</b>	1,704,677	100.0	6,550.8	4.7	3.1	2.4	1.9	3.3	0.4
<b>Total Private</b>	1,541,986	90.5	6,278.0	5.0	3.2	2.5	1.8	3.4	0.5
<b>Goods Producing</b>	261,488	15.3	411.3	1.9	-1.9	-0.0	0.3	1.5	-0.4
Mining, Logging and Construction	106,369	6.2	1,018.8	12.2	-3.2	2.3	2.6	1.4	0.0
Mining and Logging	300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-8.0
Construction	105,995	6.2	919.4	11.0	-3.6	2.1	2.6	1.4	0.0
Manufacturing	155,148	9.1	-444.4	-3.4	-1.1	-1.9	-1.2	1.5	-0.7
Durable Goods	116,767	6.8	-95.6	-1.0	1.2	-1.6	-0.9	1.8	-0.4
Non-Durable Goods	38,408	2.3	-327.6	-9.7	-5.8	-2.8	-1.8	0.6	-1.6
<b>Service Providing</b>	1,443,479	84.7	6,591.2	5.6	4.4	2.5	2.1	3.7	0.6
Trade, Trans & Utilities	262,337	15.4	562.6	2.6	0.5	0.2	0.0	1.5	0.1
Wholesale Trade	80,836	4.7	167.7	2.5	-0.7	-1.0	-0.1	1.5	-0.1
Retail Trade	146,647	8.6	369.0	3.1	0.1	1.1	0.5	0.8	-0.6
Trans & Warehousing	31,588	1.9	171.6	6.8	5.2	-1.8	-1.9	4.8	3.9
Information	21,685	1.3	55.2	3.1	-2.3	-4.7	-5.7	-2.6	-3.5
Financial Activities	103,389	6.1	-89.2	-1.0	0.9	-0.7	-0.8	-4.0	-2.2
Finance & Insurance	61,918	3.6	42.0	0.8	-0.0	-2.3	-2.9	-7.2	-3.9
Real Estate & Rental & Leasing	41,527	2.4	-109.4	-3.1	2.1	2.7	2.5	2.6	0.9
Professional & Business Svcs	324,490	19.0	1,362.8	5.2	5.4	2.5	1.0	0.1	-0.1
Prof, Sci, & Tech	141,484	8.3	78.9	0.7	2.5	2.6	1.5	2.4	1.5
Admin & Support Svcs	139,656	8.2	1,147.2	10.4	10.0	2.6	0.1	-2.3	-1.5
Employment Svcs	63,712	3.7	840.6	17.3	14.1	2.2	-1.8	-7.3	-3.4
Educational & Health Svcs	274,719	16.1	1,424.2	6.4	5.3	5.3	6.0	5.9	3.8
Education Svcs	39,649	2.3	-189.7	-5.6	-1.1	1.9	3.9	11.9	5.4
Health Care & Social Assistance	234,185	13.7	1,519.1	8.1	5.0	4.8	6.4	4.9	3.5
Leisure & Hospitality	234,608	13.8	2,031.9	11.0	4.3	3.1	3.1	18.2	0.7
Arts, Entertainment & Recreation	59,924	3.5	1,760.9	43.0	21.0	14.5	10.3	65.4	2.2
Accommodation & Food Svcs	174,745	10.3	281.9	2.0	-0.7	0.5	0.9	11.1	0.2
Other Svcs	56,860	3.3	193.3	4.2	4.1	3.8	4.0	8.7	2.1
<b>Government</b>	163,068	9.6	280.7	2.1	2.3	1.6	2.7	2.3	0.0
Federal	10,850	0.6	53.4	6.1	7.3	2.8	1.9	-0.9	-0.4
State	33,620	2.0	33.4	1.2	2.3	0.6	2.0	0.1	0.7
Local	118,731	7.0	304.5	3.1	2.6	1.4	3.0	3.3	-0.1
County	18,417	1.1	66.4	4.4	-6.8	-3.0	-1.7	0.7	-0.8
City	16,631	1.0	-49.0	-3.5	6.9	4.5	5.7	6.1	0.6
Local Government Education	75,924	4.5	261.8	4.2	3.5	1.5	3.4	3.5	-0.2

Source: EDD, National Economic Education Delegation (NEED)

## Some Employee Detail

### Employed in Orange

Figure 12: Employment by Occupation

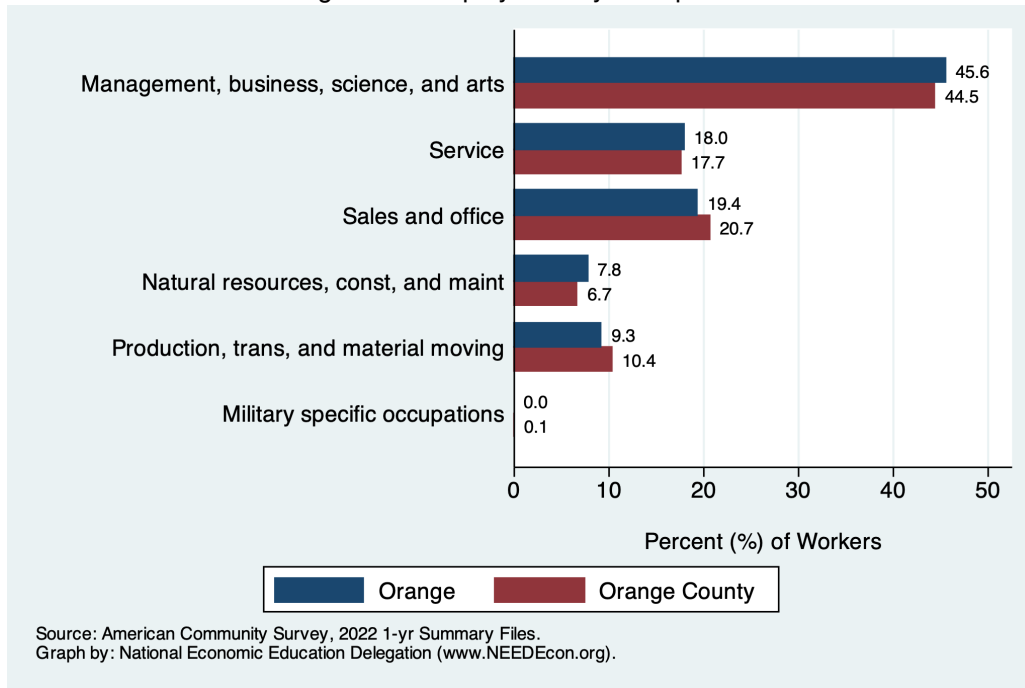


Figure 13: Employment by Industry

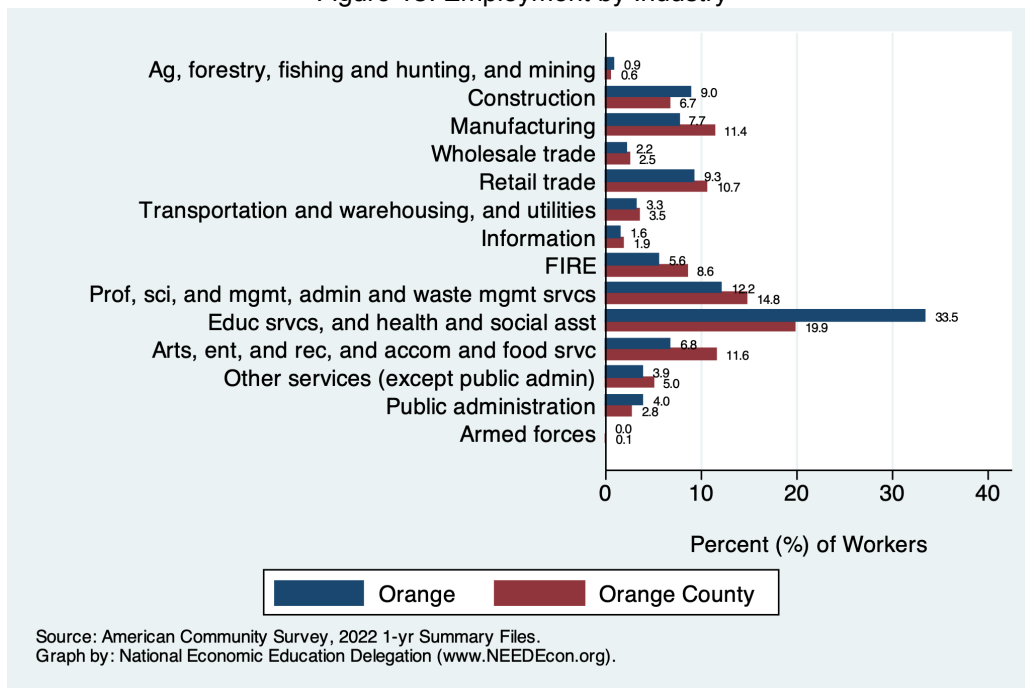
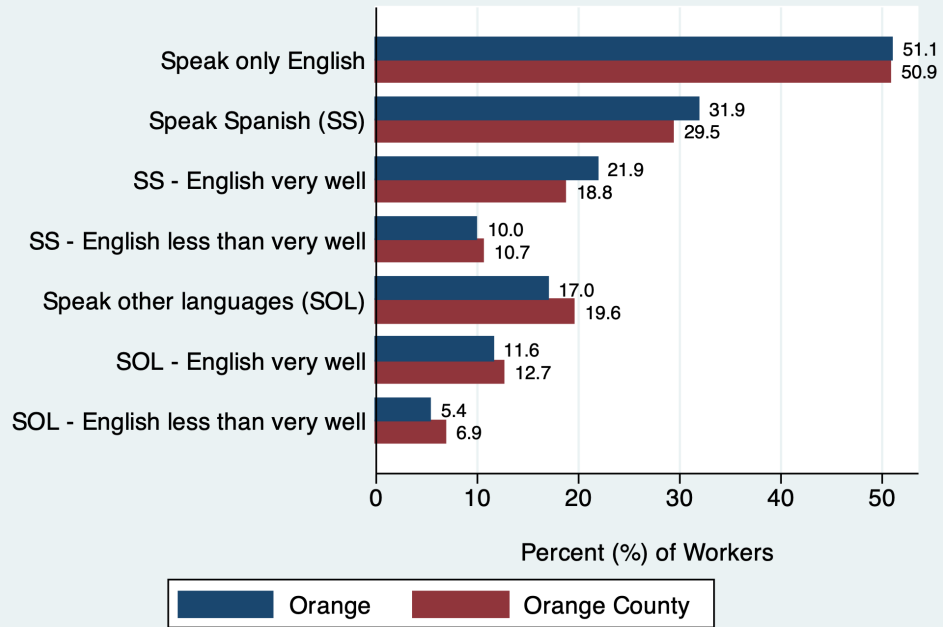
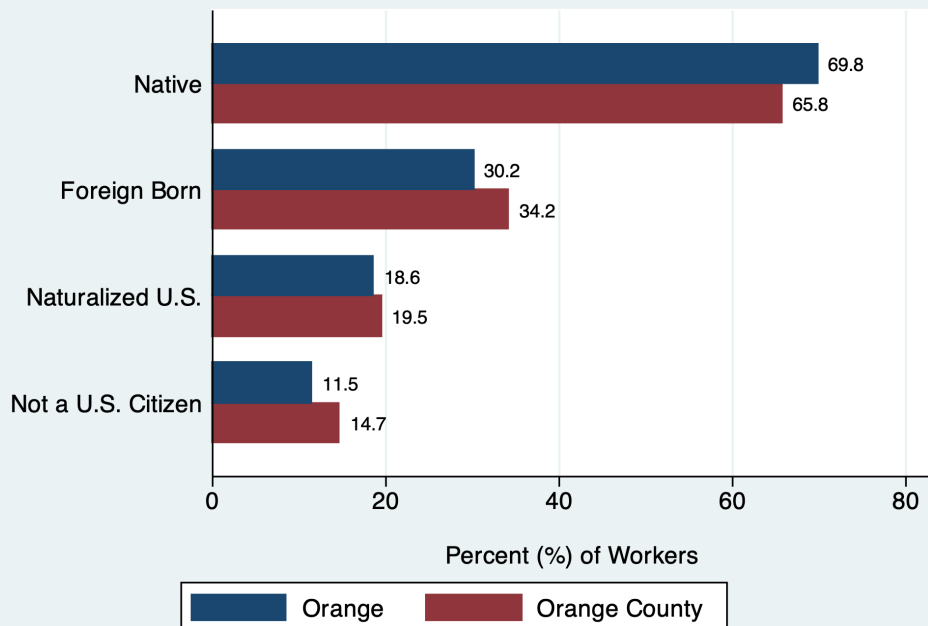


Figure 14: Language Spoken at Home



Source: American Community Survey, 2022 1-yr Summary Files.  
 Graph by: National Economic Education Delegation ([www.NEEDecon.org](http://www.NEEDecon.org)).

Figure 15: Citizenship



Source: American Community Survey, 2022 1-yr Summary Files.  
 Graph by: National Economic Education Delegation ([www.NEEDecon.org](http://www.NEEDecon.org)).

## Employed Residents of Orange

Figure 16: Employment by Occupation

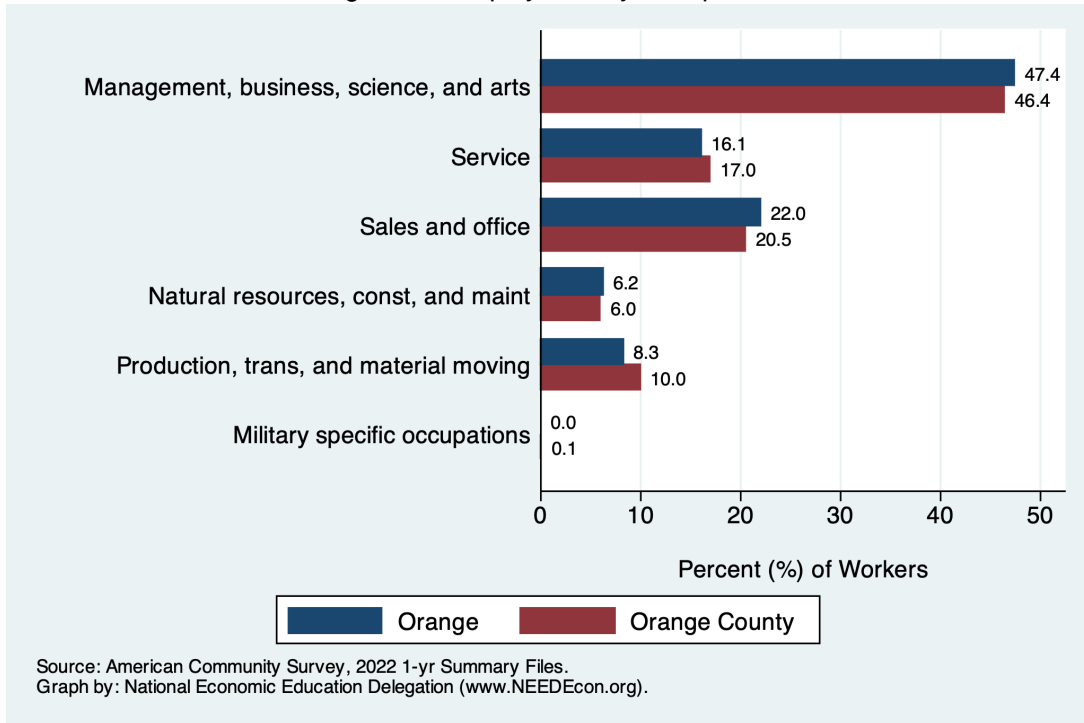


Figure 17: Employment by Industry

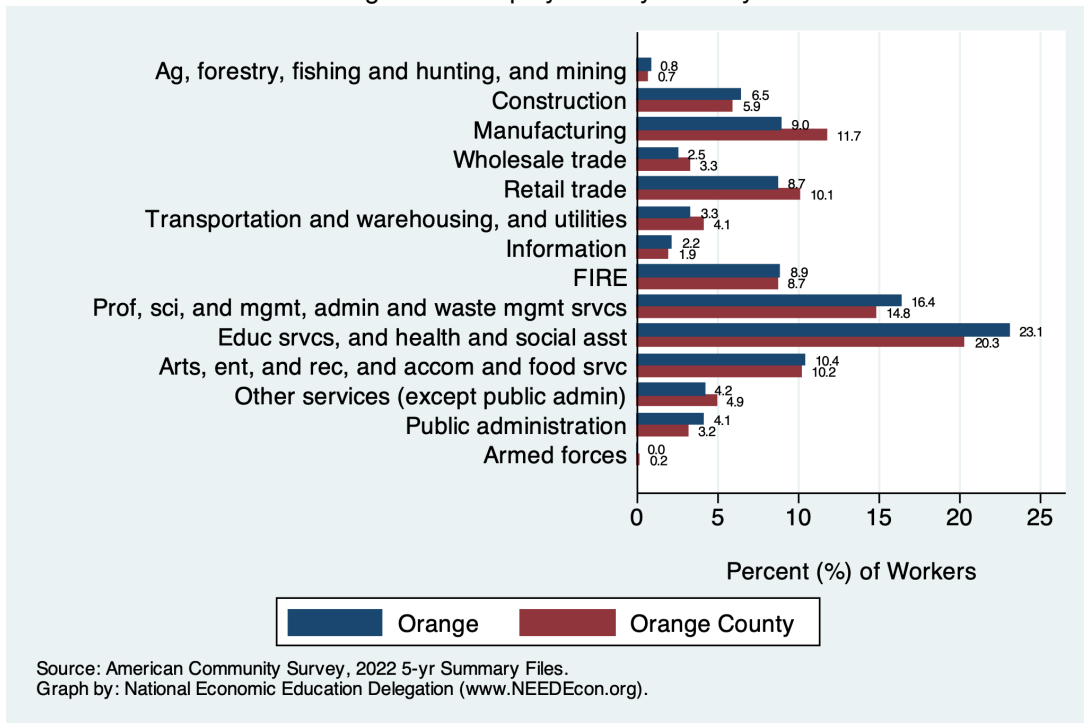
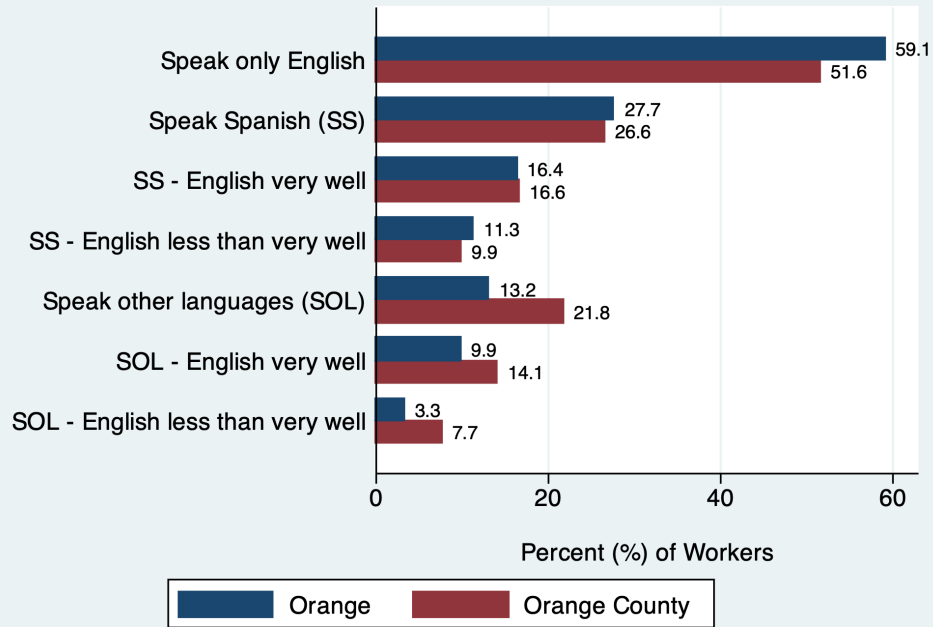
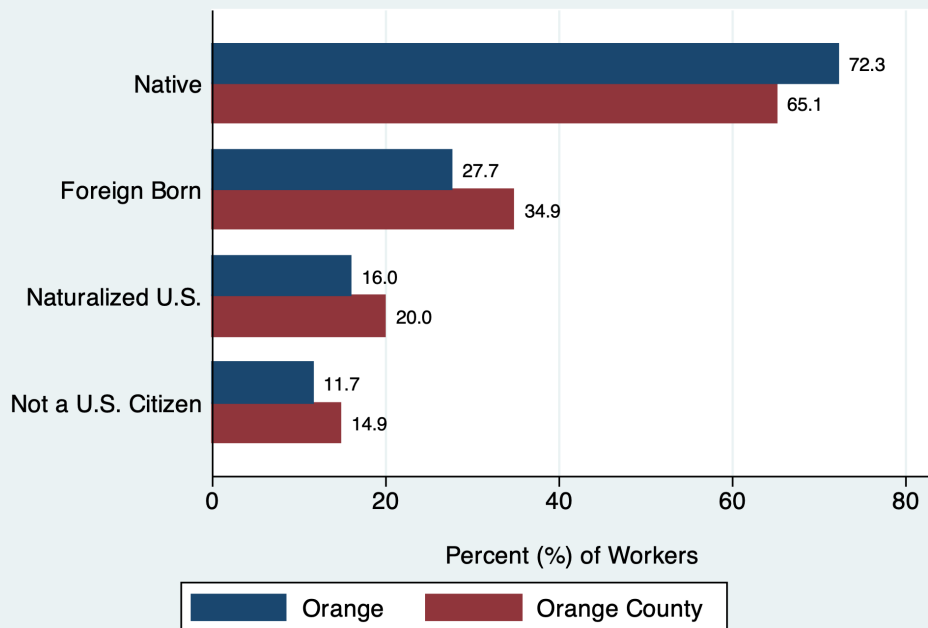


Figure 18: Language Spoken at Home



Source: American Community Survey, 2022 1-yr Summary Files.  
 Graph by: National Economic Education Delegation ([www.NEEDecon.org](http://www.NEEDecon.org)).

Figure 19: Citizenship



Source: American Community Survey, 2022 1-yr Summary Files.  
 Graph by: National Economic Education Delegation ([www.NEEDecon.org](http://www.NEEDecon.org)).

## Employed Residents vs Workers in Orange

Figure 20: Employment by Occupation

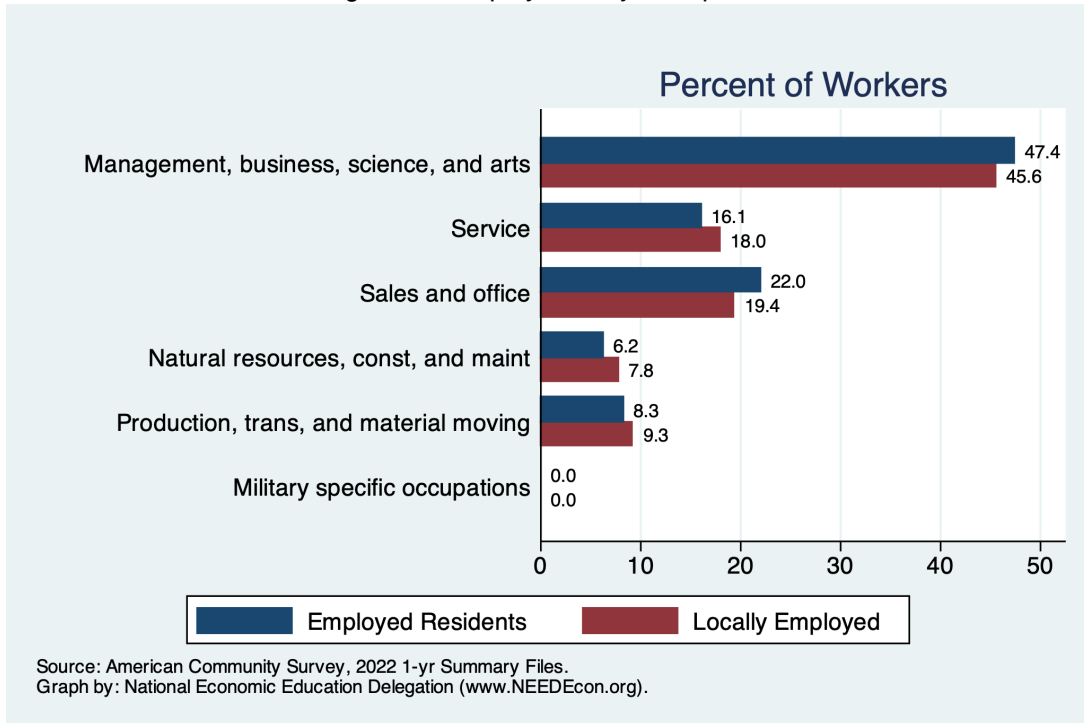


Figure 21: Employment by Industry

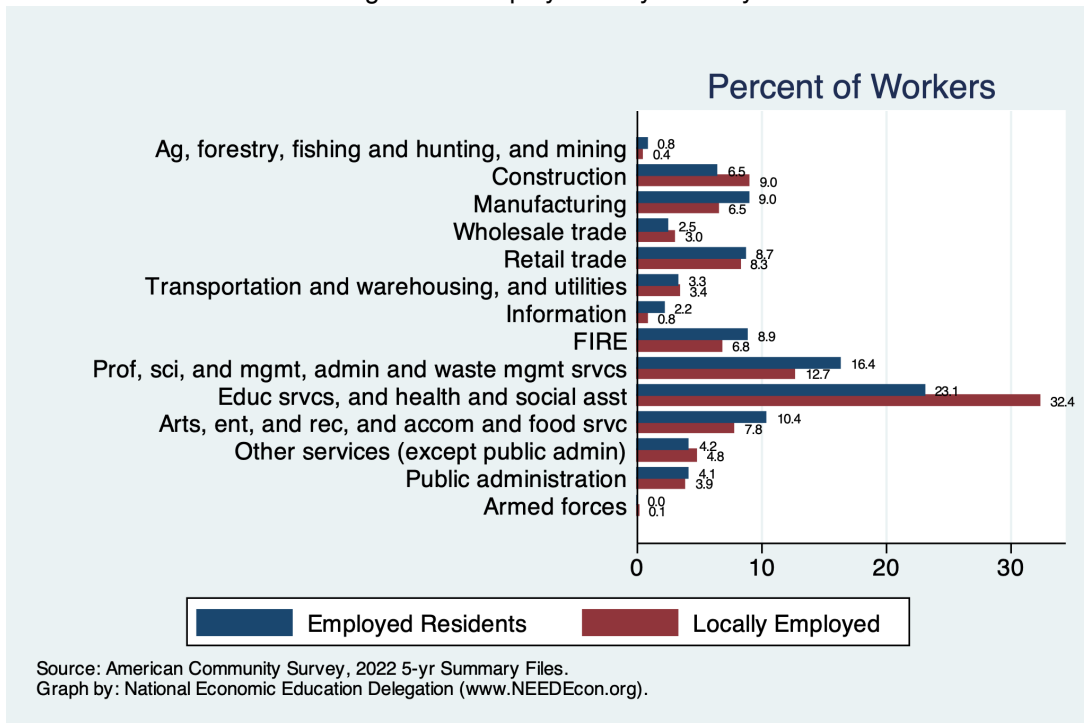


Figure 22: Language Spoken at Home

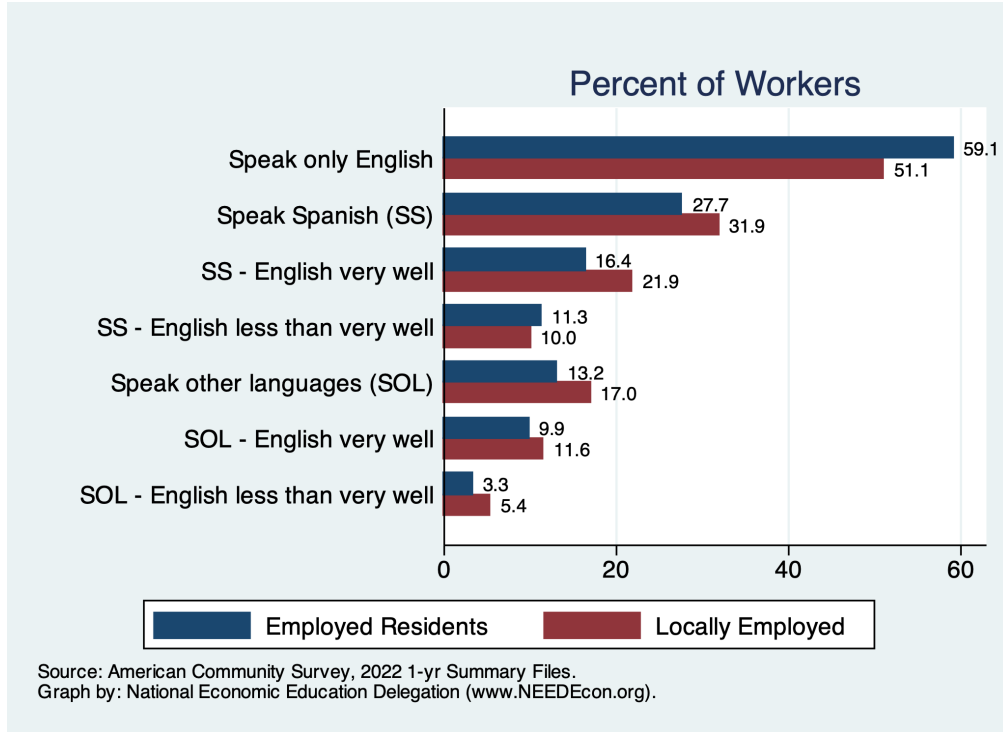
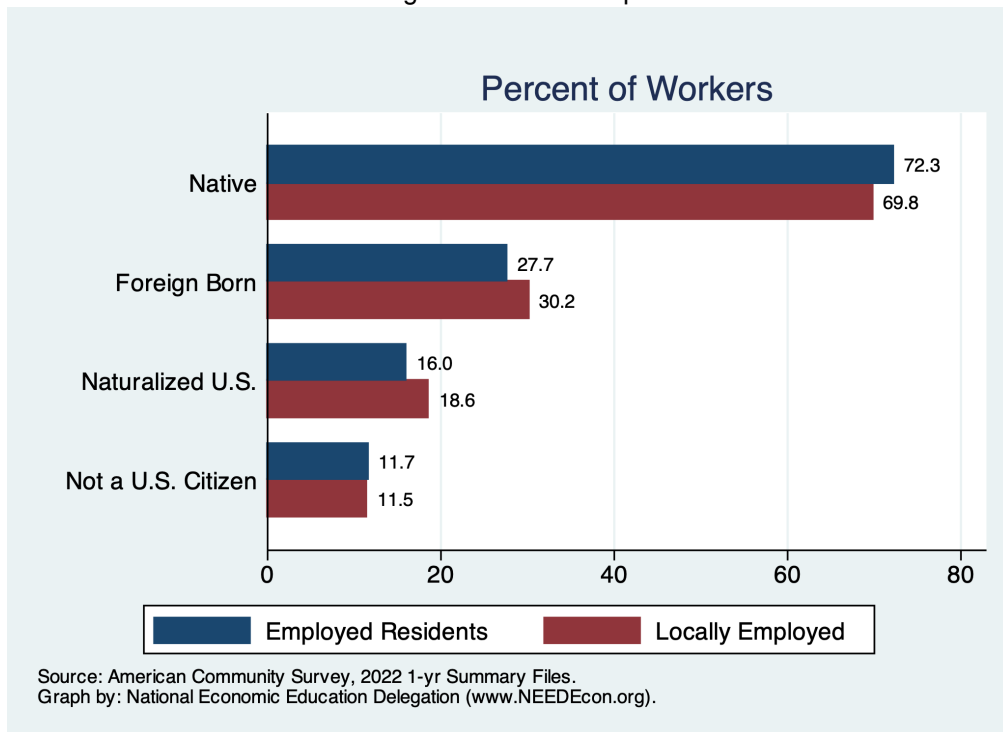


Figure 23: Citizenship





# Income and Earnings

## Per Capita Income Growth

### Definition:

Per capita income is the average income per person in Orange. Personal income is the income received by, or on behalf of, all persons from all sources: from participation as laborers in production, from owning a home or unincorporated business, from the ownership of financial assets, and from government and business

in the form of transfer receipts. Noncash government benefits are not included.

### Why is it important?

Income is the money that is available to persons for consumption expenditures, taxes, interest payments, transfer payments to governments and the rest of the world, or for saving. As such, it is an important indicator of economic well-being in a community.

Figure 24: Real Per Capita Income Ranking Among California Cities

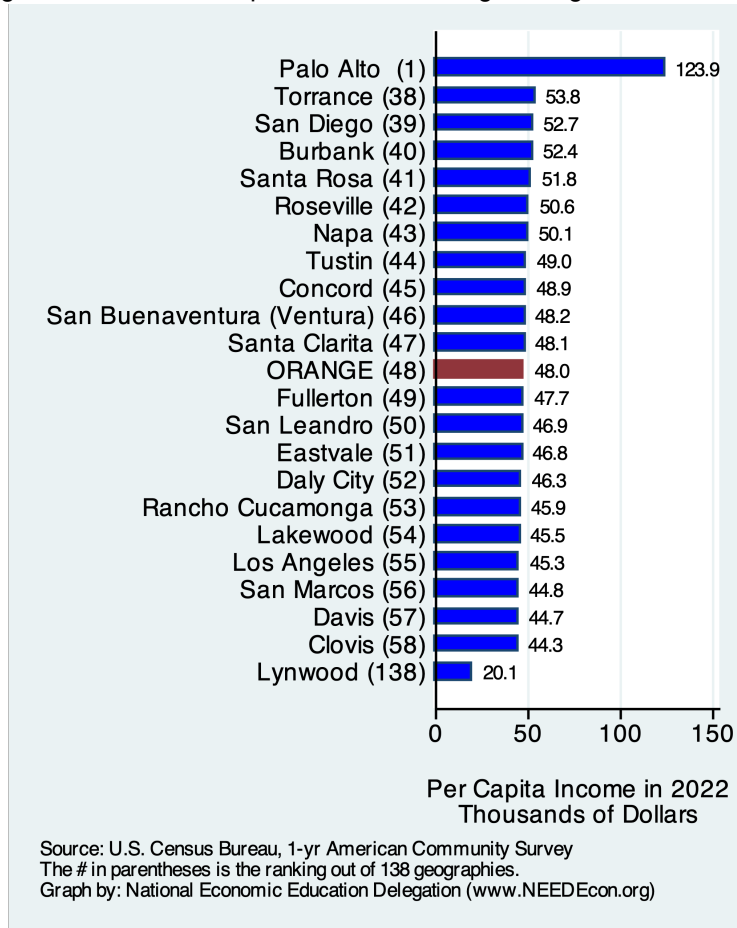
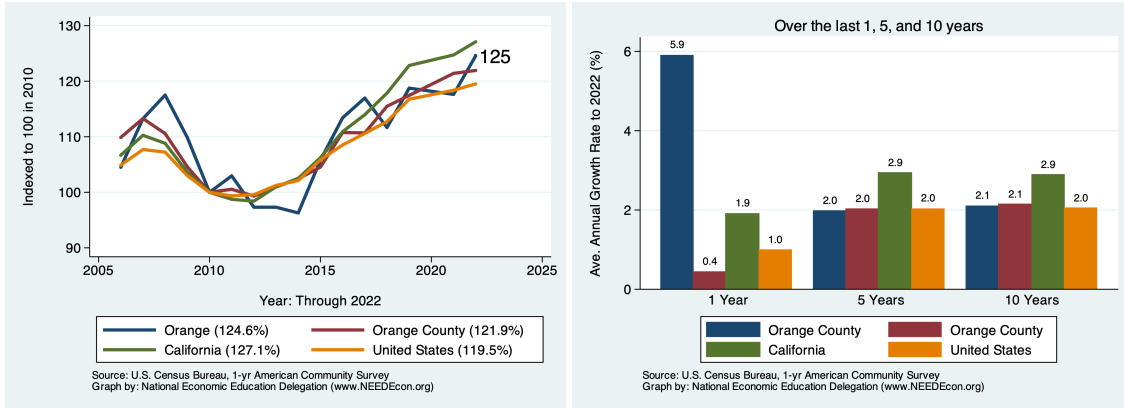


Figure 25: Regional Comparison of Growth over Time



Real Per Capita Income Ranking Among California Cities - w/Comparable Populations

Figure 26: Income Levels

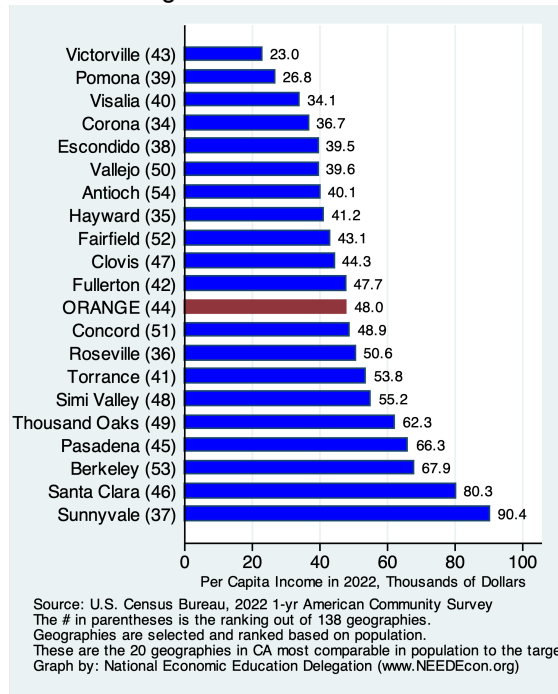
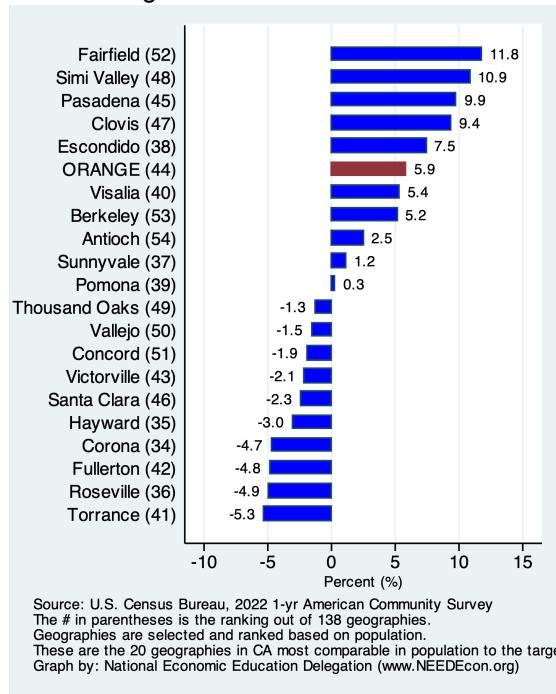


Figure 27: Growth over Time



## Real Per Capita Income Ranking Among Cities in Orange County

Figure 28: Income Levels

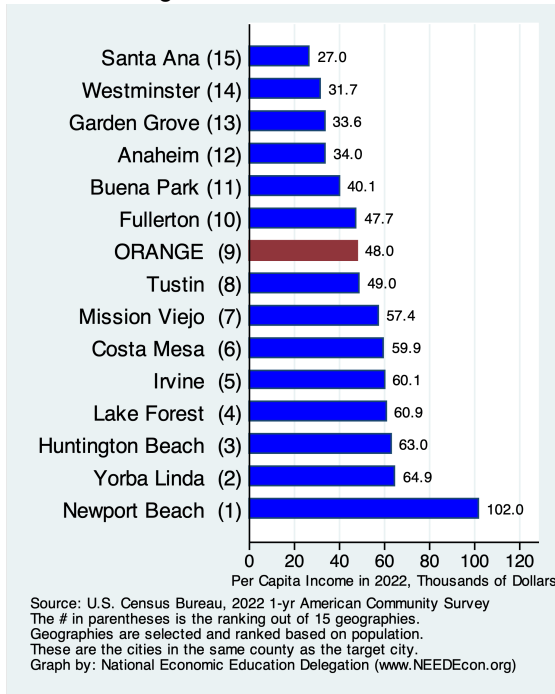


Figure 29: Growth over Time

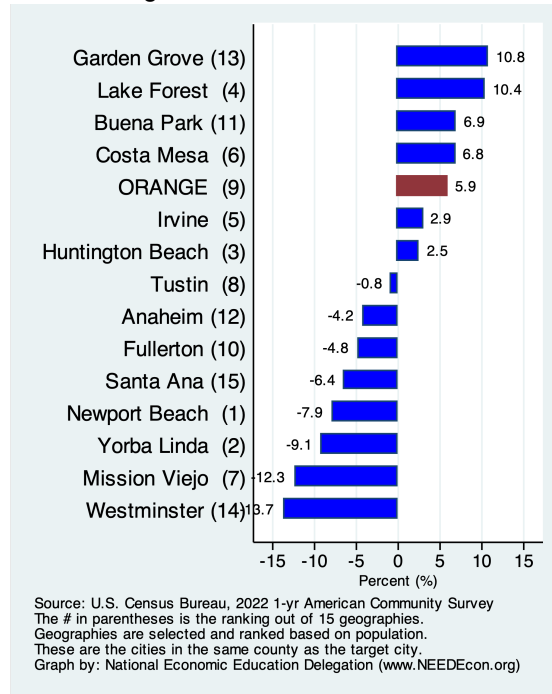
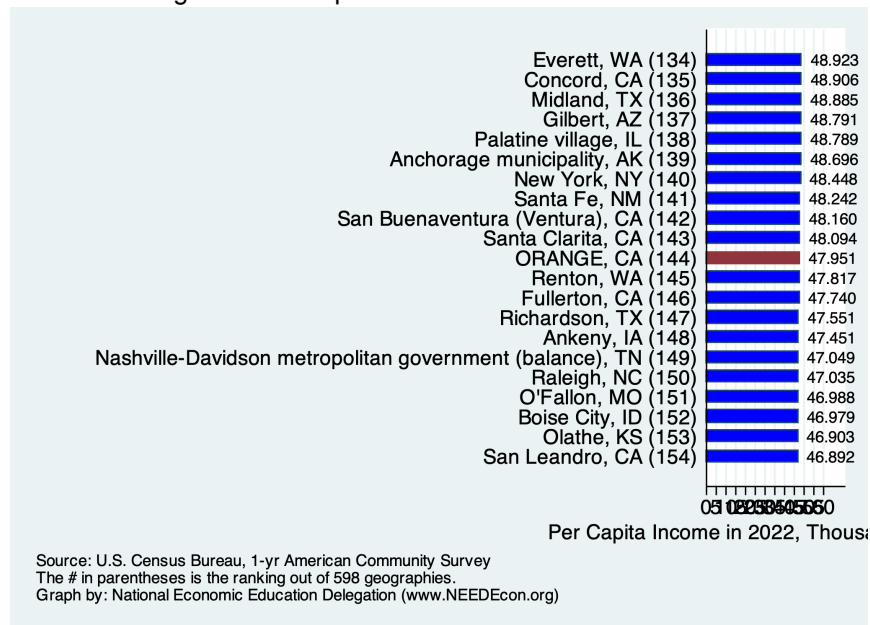


Figure 30: Comparison with All Cities Nationwide



## Poverty and Inequality

### Definition:

The local poverty rate provides an indication of the well-being of those at the bottom of the income distribution. The federal poverty rate measures the proportion of households in the region that are classified as living in poverty. Also included are measures of the extent to which the City's children are impoverished. Measures of the income distribution provide

further evidence on disparities in income in the region and how those disparities have changed over time.

### Why is it important?

It is important to track measures of poverty and inequality to assess the extent of income disparities in the region, with an eye toward understanding how well the local economy is performing for all of its citizens.

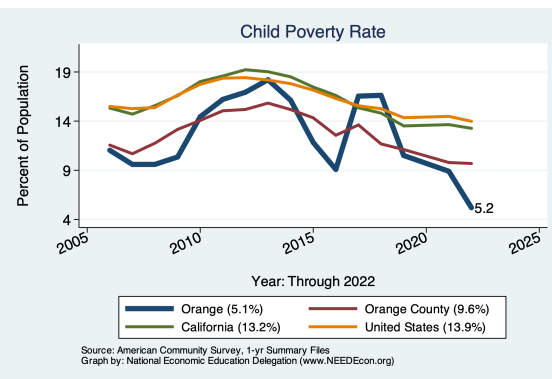
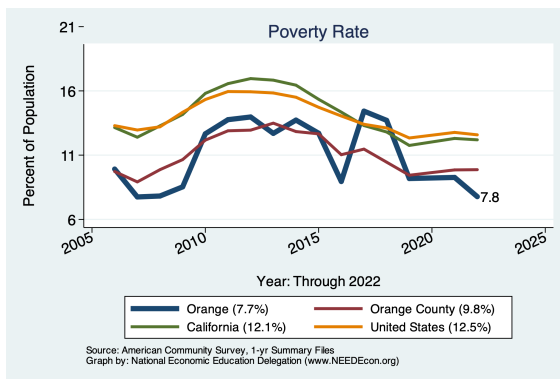


Figure 31: Inequality

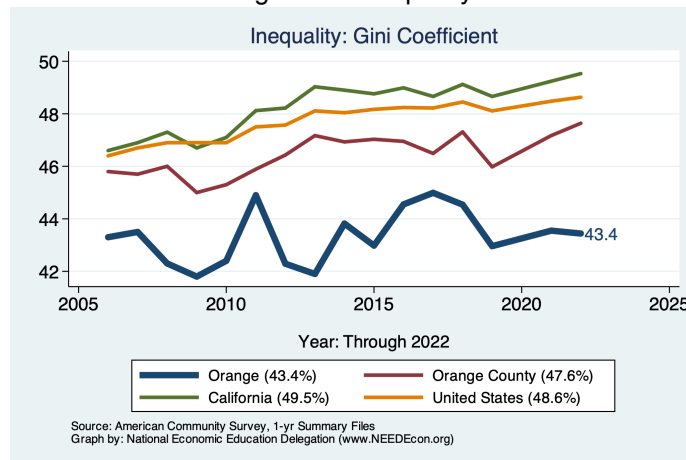


Figure 32: Shares Across the Income Distribution

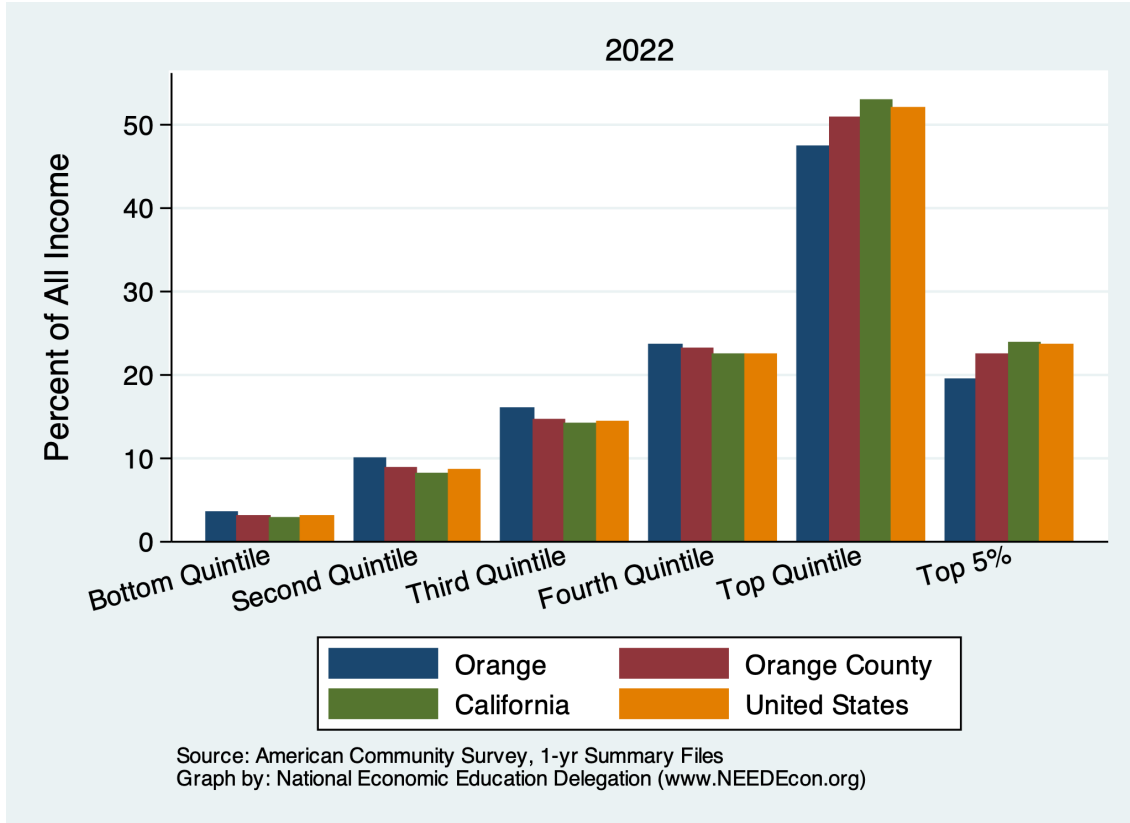
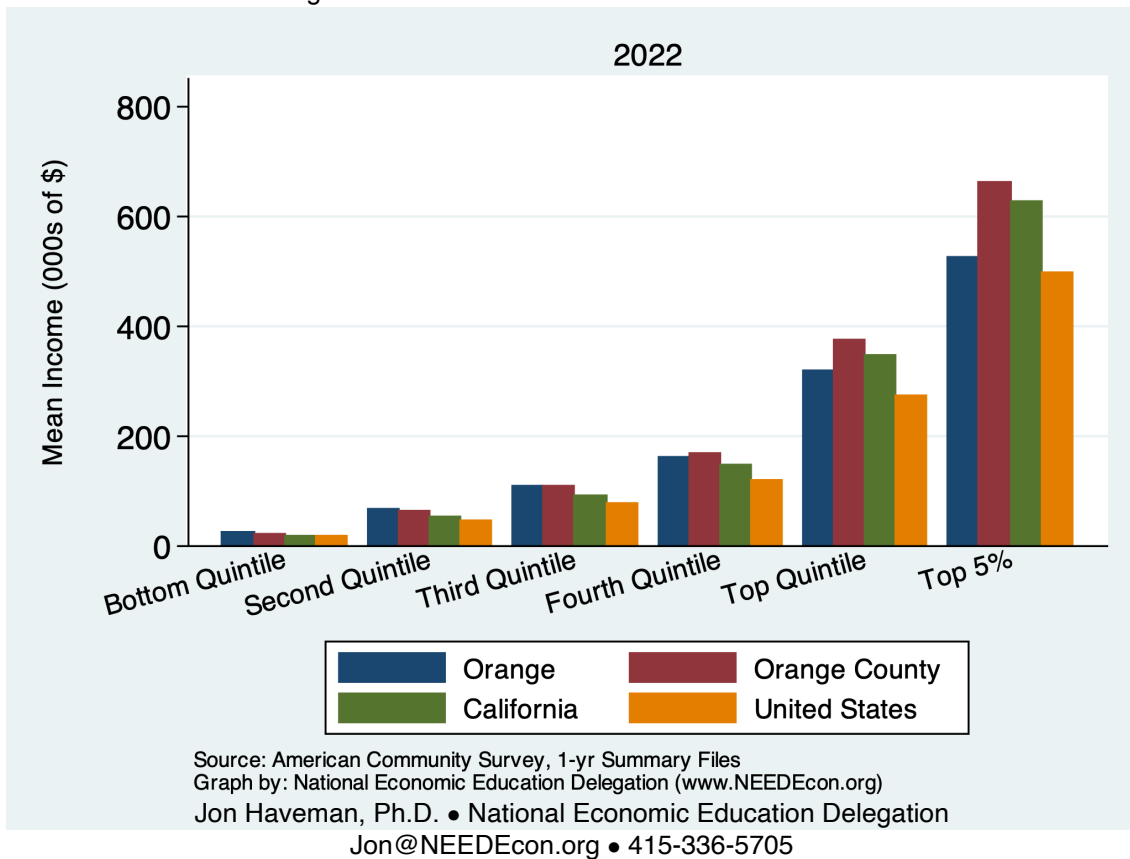


Figure 33: Means Across the Income Distribution



# Housing

## Housing Costs and Affordability

### Definition:

Housing costs are measured in several different ways. First, we provide evidence on the evolution of median home prices, median rental price, and finally through evidence on the housing burden in the city and comparison regions. Housing burden is defined as a household needing to commit more than 30% of their household income toward housing costs. The median value is the amount in the middle. Fifty

percent of units are above the median and 50 percent are below.

### Why is it important?

Housing is one of three fundamental necessities, along with food and clothing. A measure of the cost of housing is an integral part of the measurement of the cost of living in a specific community. This is particularly true in cities and regions throughout the Bay Area, where housing costs are high relative to income.

### Cost of Housing in Orange and Broader Regions

Figure 34: Median Home Prices

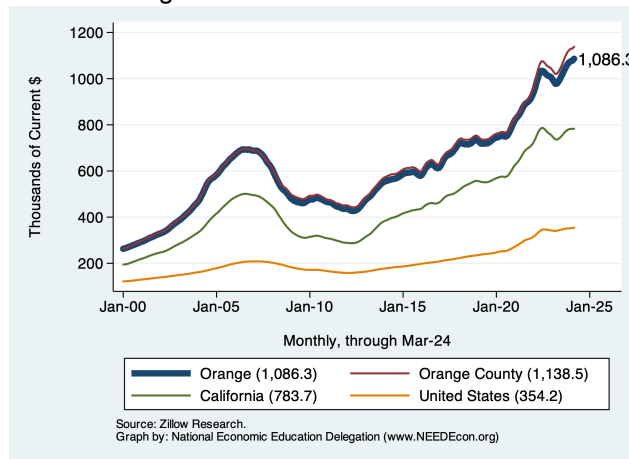
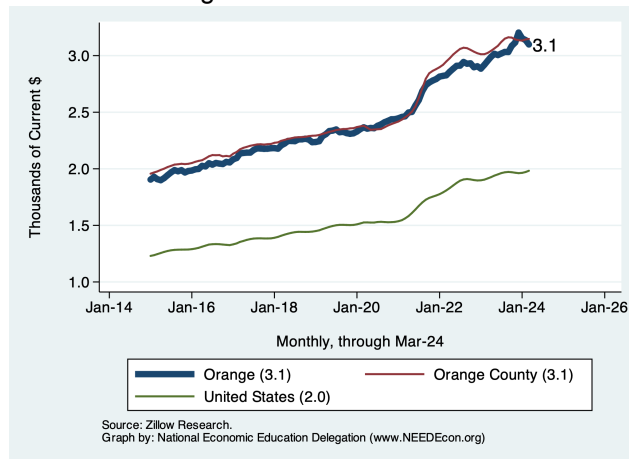


Figure 35: Median Rents



## Housing Ownership in Orange and Broader Regions

Figure 36: Home Ownership Rates

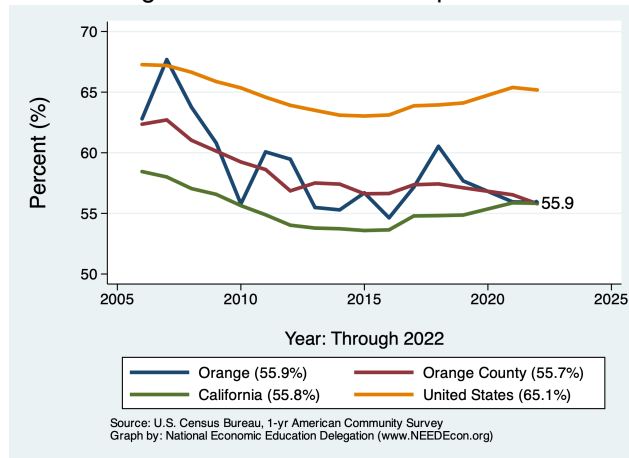


Figure 37: Home Ownership by Age

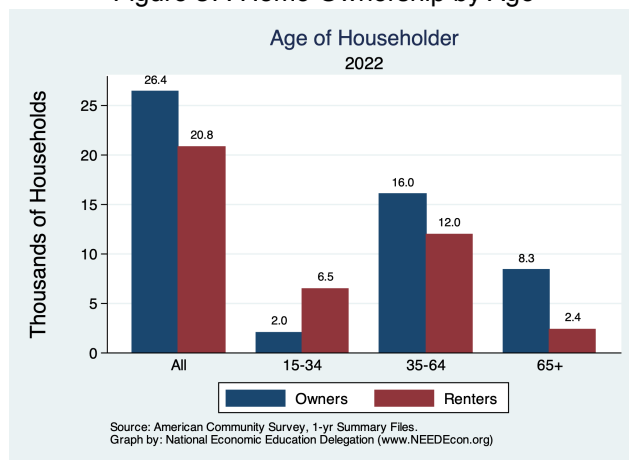


Figure 38: Income by Tenure

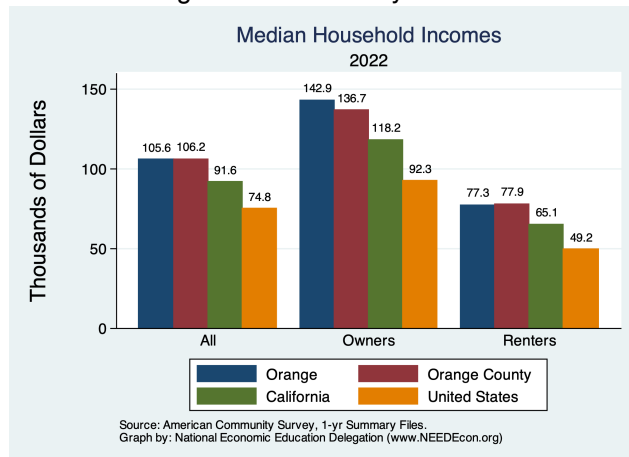


Figure 39: Income Distribution by Tenure

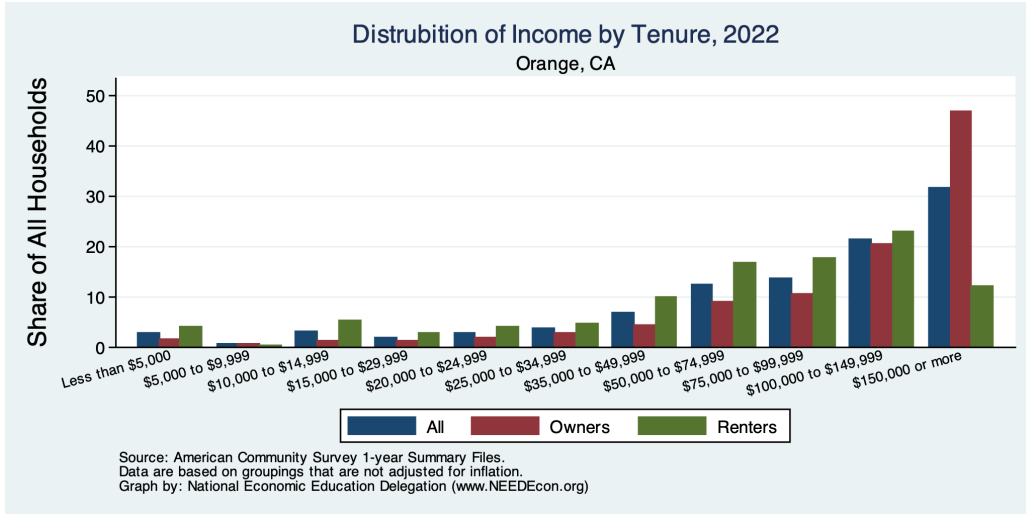


Figure 40: Income Distribution of Home Owners

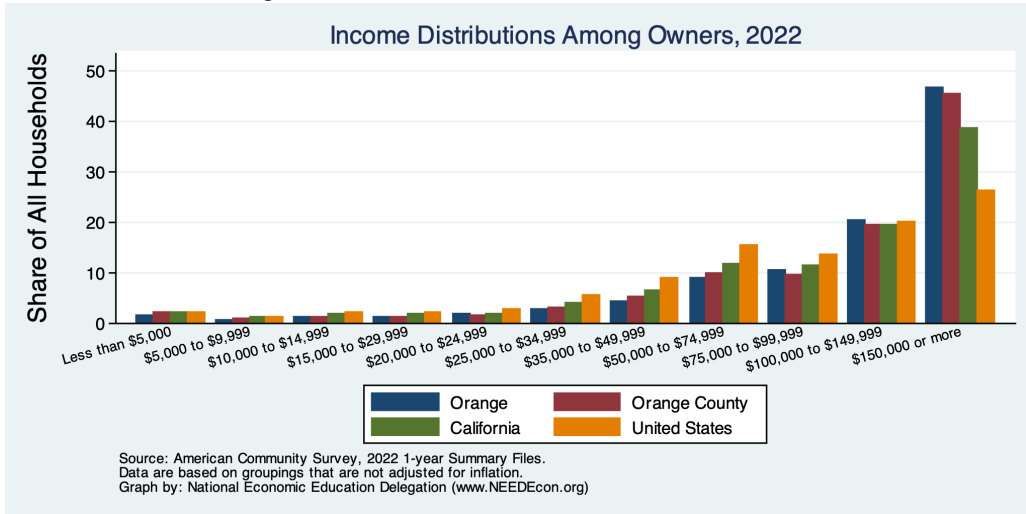
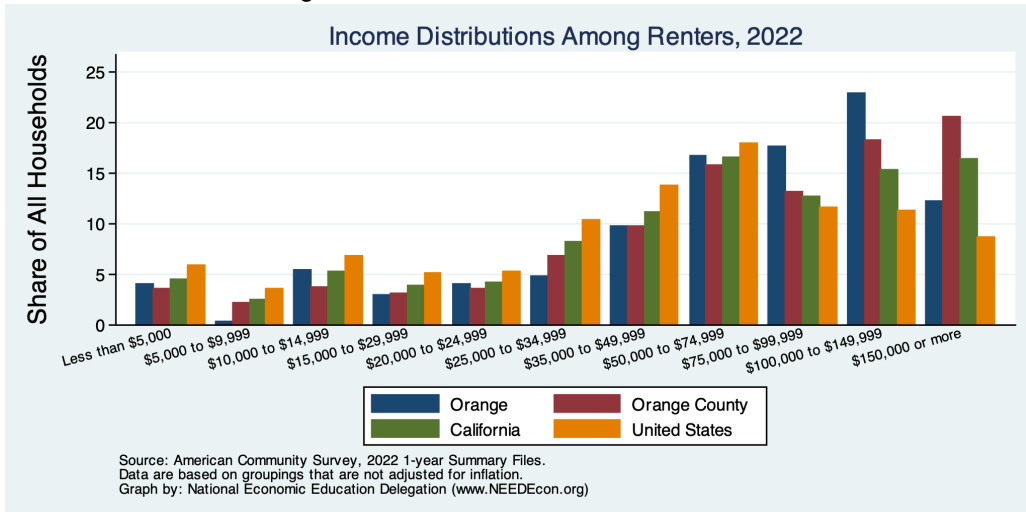


Figure 41: Income Distribution of Renters





## Housing Burden in Orange and Broader Regions

Figure 42: Home Owners w/ A Mortgage

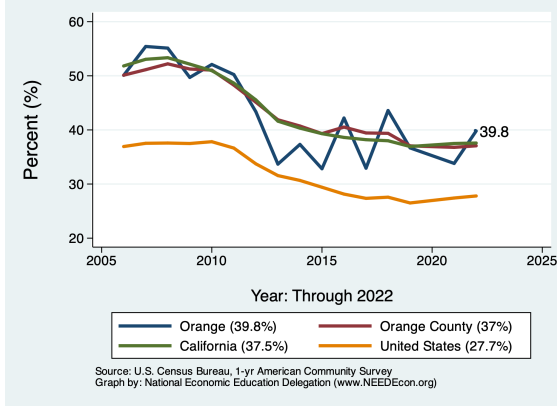


Figure 43: Home Owners w/o A Mortgage

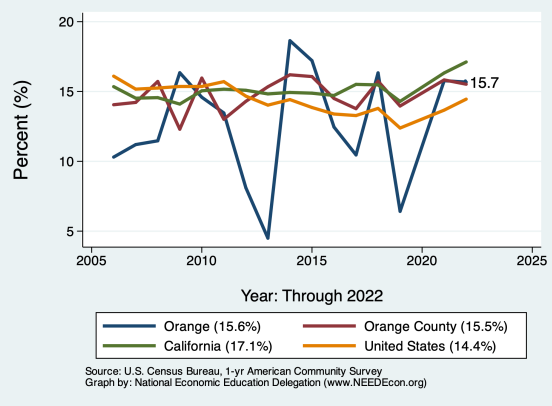


Figure 44: Renters

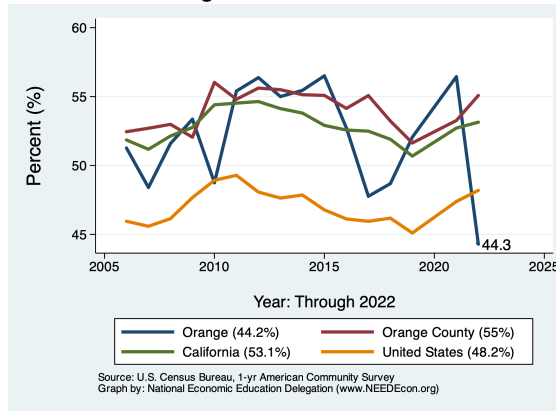
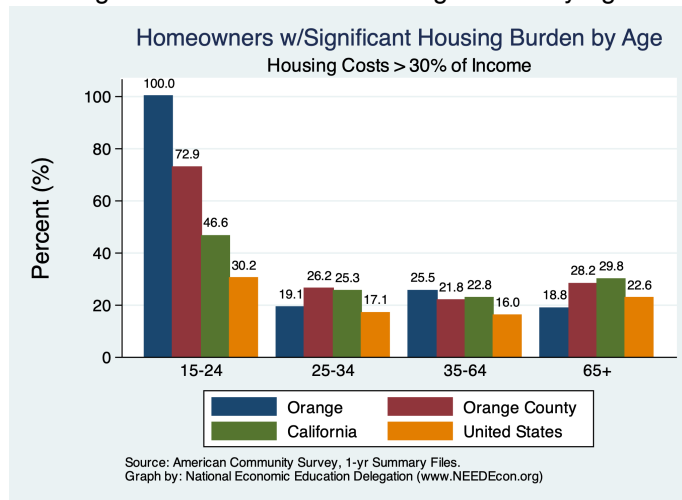


Figure 45: Homeowner Housing Burden by Age



# Housing Picture

## Definition:

Housing costs are measured in several different ways. First, we provide evidence on the evolution of median home prices, median rental price, and finally through evidence on the housing burden in the city and comparison regions. The median value is the amount in the middle. Fifty percent of units are above the median and 50 percent are below.

## Why is it important?

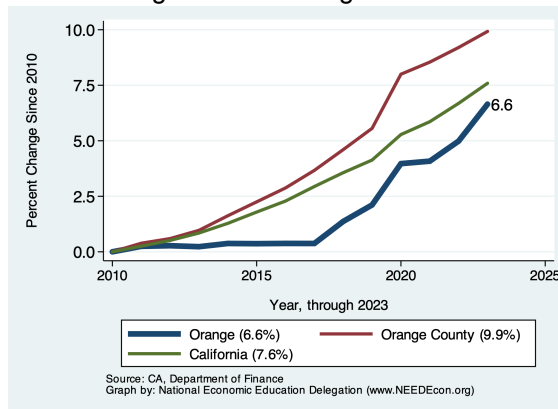
In areas where the rate of population growth exceeds the rate of housing growth, this is likely to reflect a tightening housing market. A tightening housing market will also likely be reflected in lower vacancy rates and higher occupancy rates. It may also be reflected in higher numbers of people per household.

**Table 5. Housing Market Indicators**

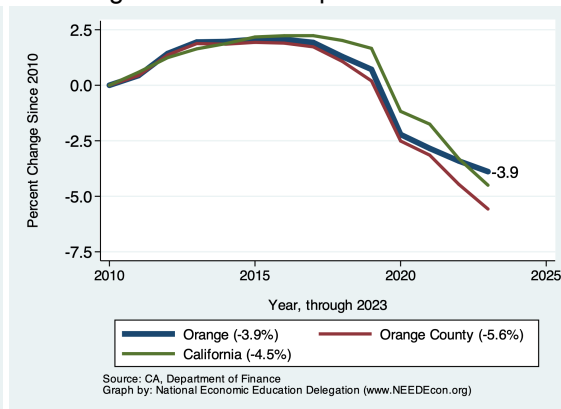
Indicator	2023	2019	2010	% Change from	
				2019	2010
Total Population	139,063.0	140,410.0	136,386.0	-1.0	2.0
Total # of Homes	48,100.0	46,054.0	45,102.0	4.4	6.6
# Occupied Units	46,424.0	44,340.0	43,358.0	4.7	7.1
Persons per Household	2.9	3.0	3.0	-4.6	-3.9
Vacancy Rate (%)	3.5	3.7	3.9	-6.4	-9.9

Source: CA DOF; Calculations by the National Economic Education Delegation

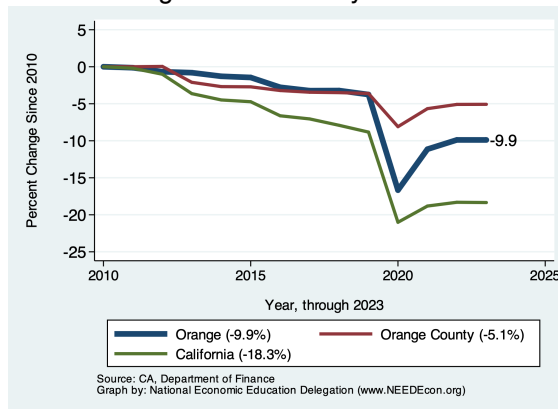
**Figure 46: Housing Growth**



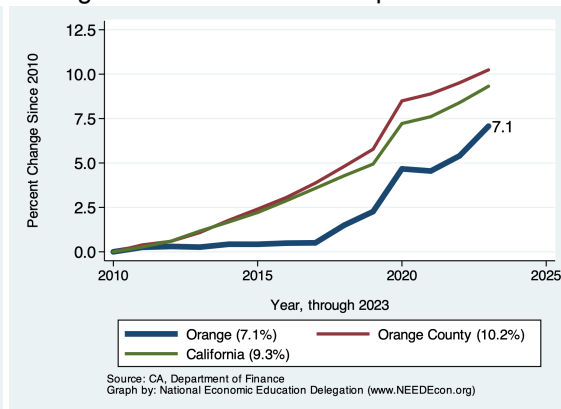
**Figure 47: Persons per Household**



**Figure 48: Vacancy Rates**



**Figure 49: Number of Occupanied Units**



## Trends in the Growth of Housing by Housing Type

Figure 50: Single Detached Homes

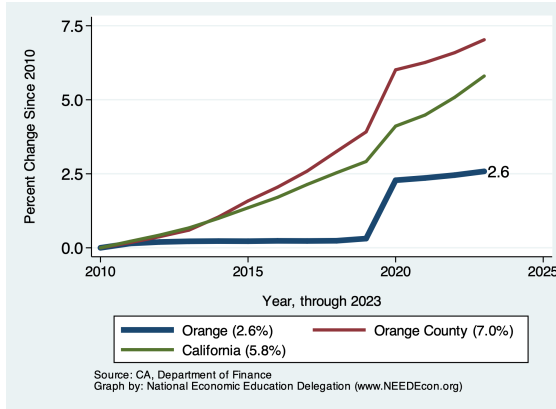


Figure 51: Single Attached Homes

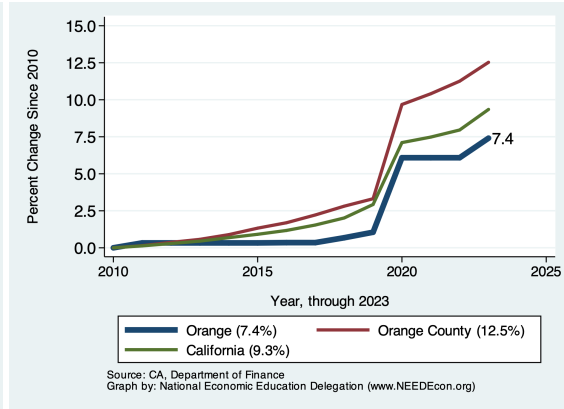


Figure 52: Housing in Buildings with Two to Four Units

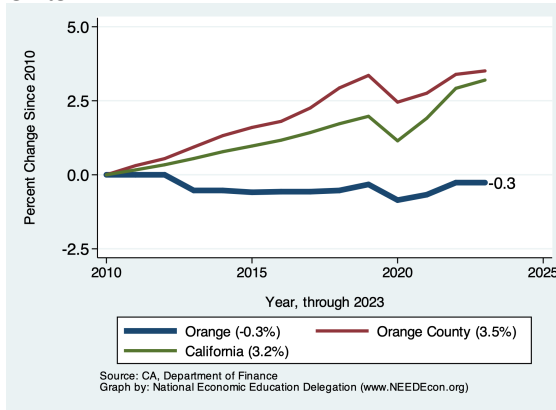
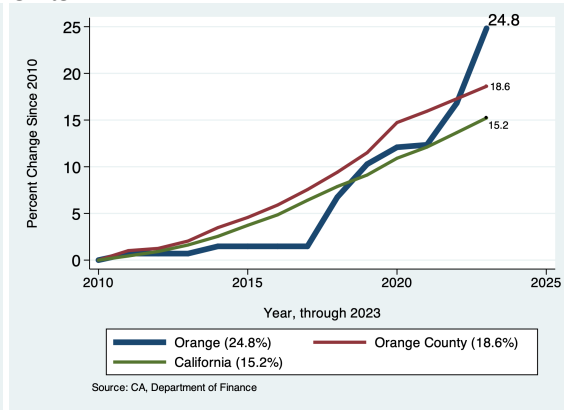


Figure 53: Housing in Buildings with Five or More Units



## Vintage of Residential Housing

### Why is it important?

This section provides evidence on the year in which residential housing in Orange was built. We break it down into owned versus rented residences and provide a comparison across Orange County and broader regions. A sense of the age of housing in a region provides an indication of the urgency with which a region might pursue additional housing. As the hous-

ing stock ages, an urgency with which renovations and rebuilds are permitted might result. All things equal, more recently constructed housing will be more likely to meet current codes and standards. Remodeling of existing units will be more desirable when existing units are, on average, older.

Figure 54: Distribution of Housing Construction

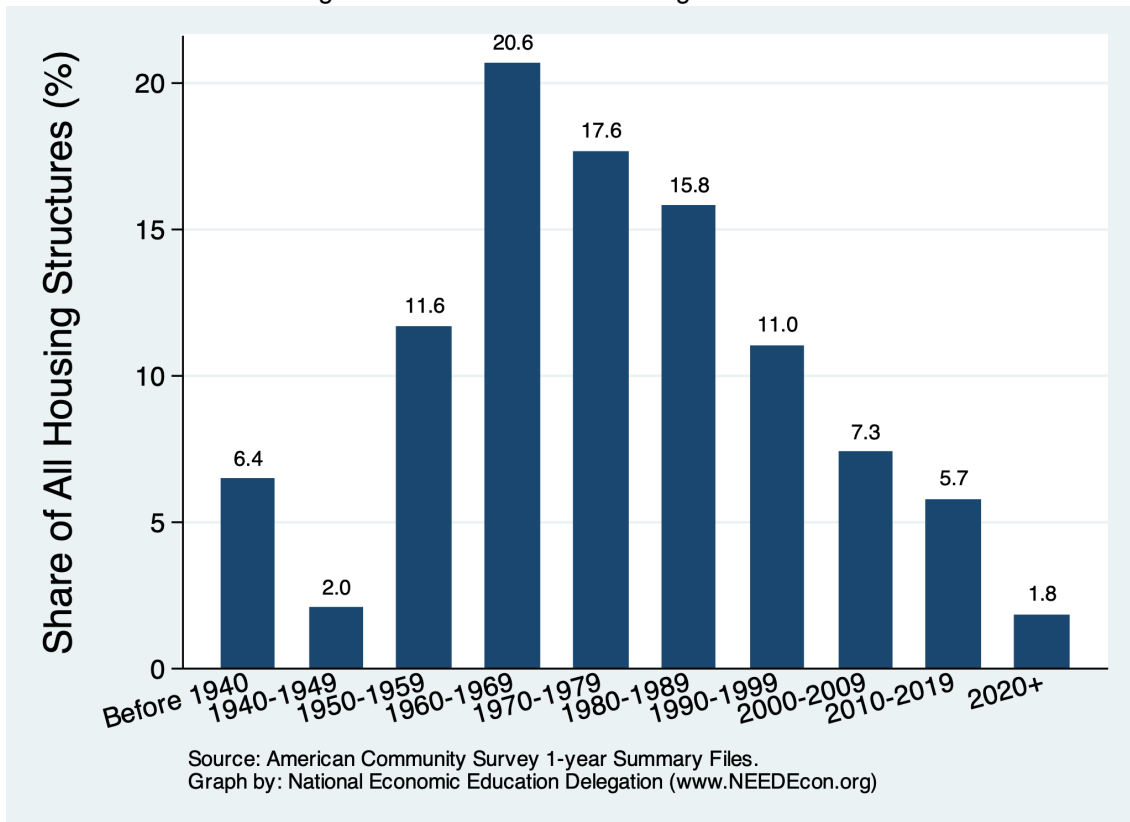


Figure 55: Housing Vintage across Regions

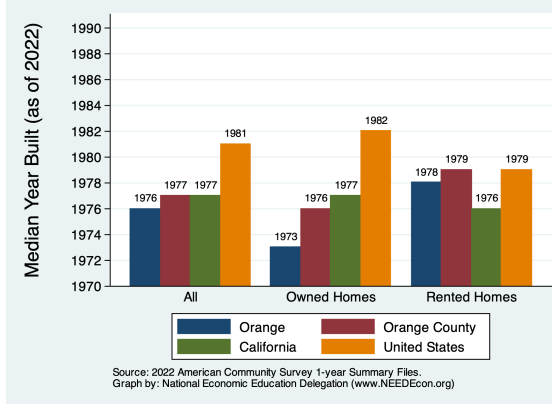


Figure 56: Housing Vintage by Tenure

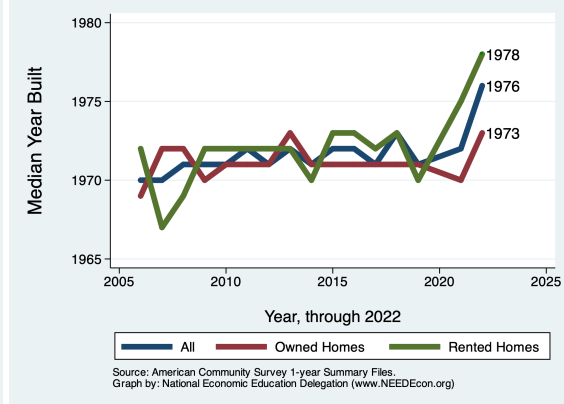


Figure 57: Vintage of Owned Residences

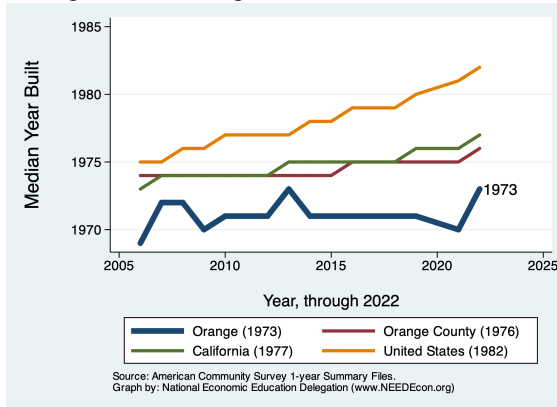


Figure 58: Vintage of Rented Residences

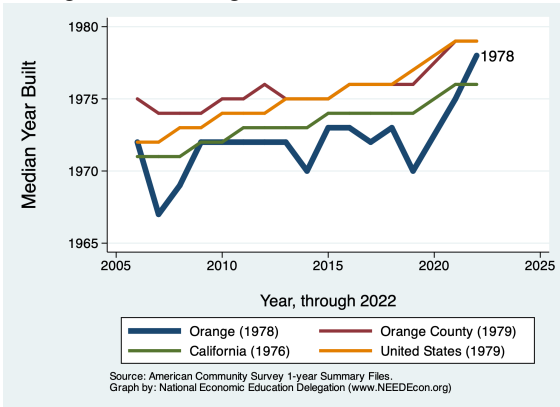
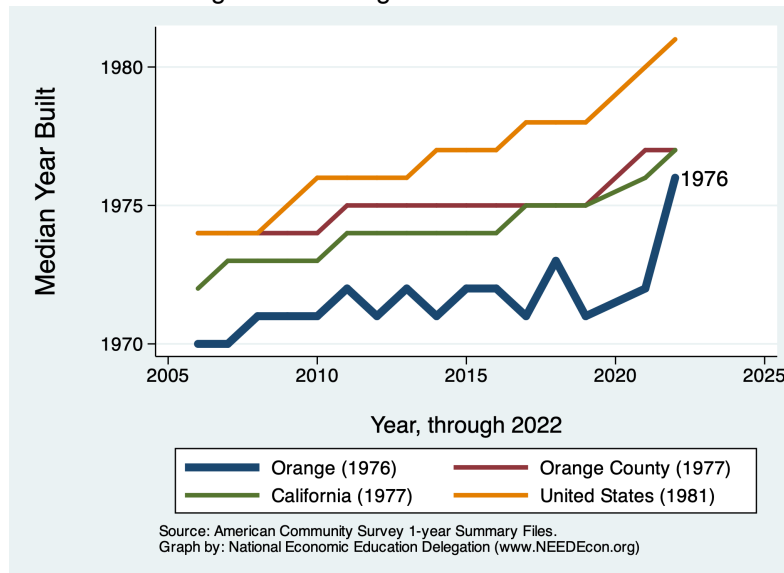


Figure 59: Vintage of All Residences



## Occupation of Residential Housing

### Why is it important?

The duration of residence in a city is important for developing future policies regarding growing the local population. If a region is highly mobile, evidenced by most residences having

been recently occupied, a city might propose policies to reduce that mobility, or ask why the mobility happens. Policies could be put in place to either reduce or increase migration.

Figure 60: Year Current Occupant Moved In

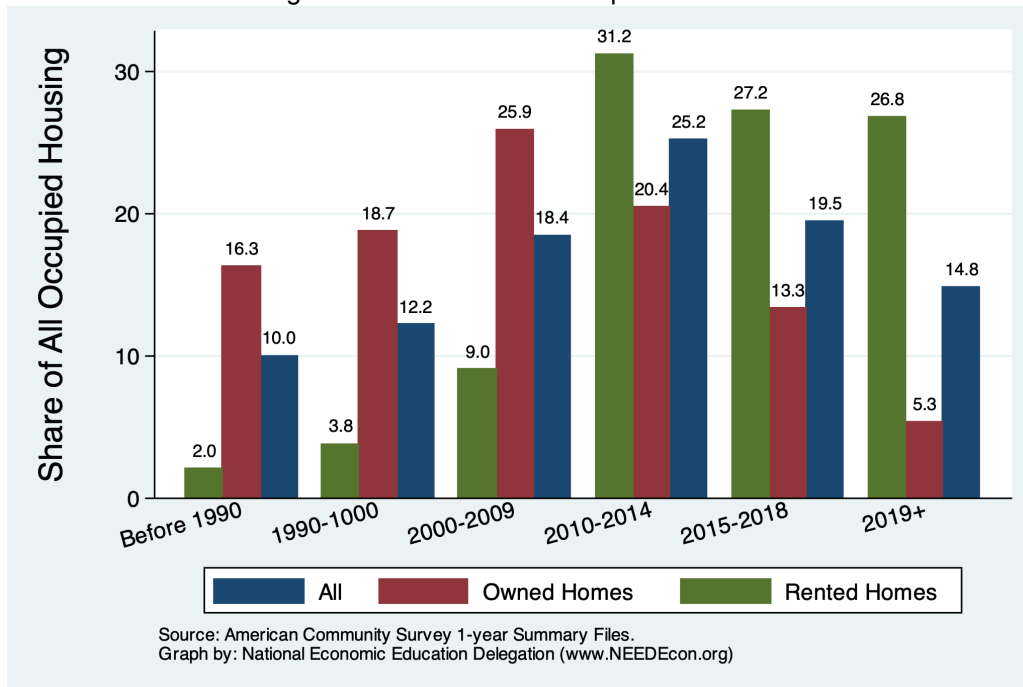


Figure 61: Year Occupied by Current Residents across Regions

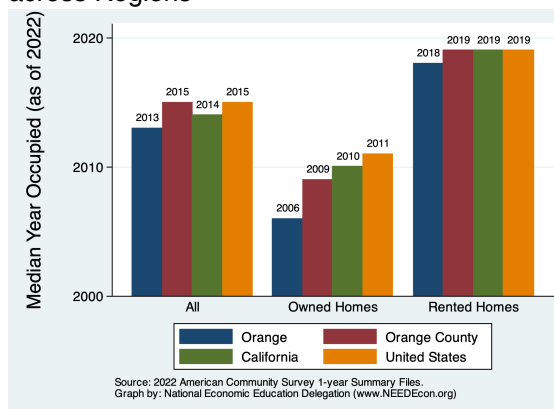


Figure 62: Year Occupied by Current Residents by Tenure

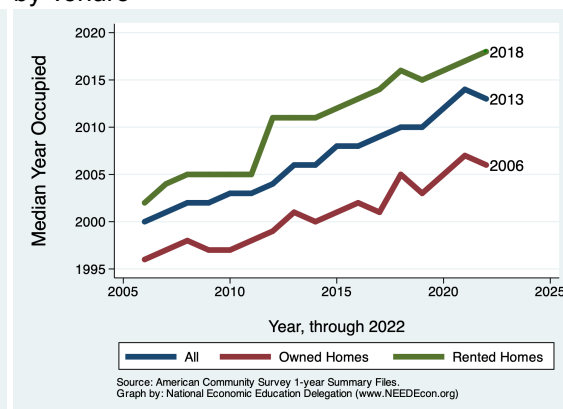


Figure 63: Year Occupied by Current Residents for Owned Housing

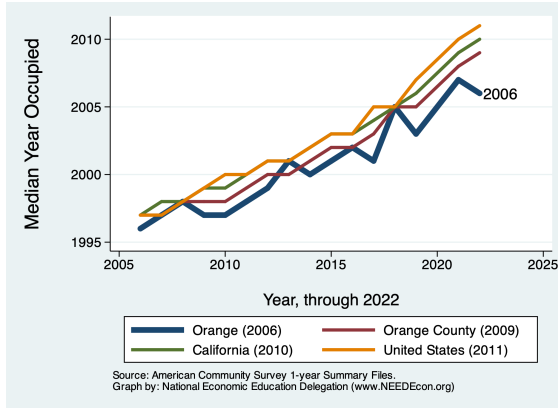


Figure 64: Year Occupied by Current Residents for Rented Housing

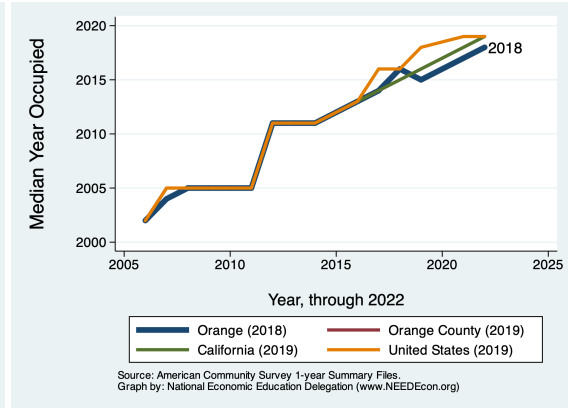
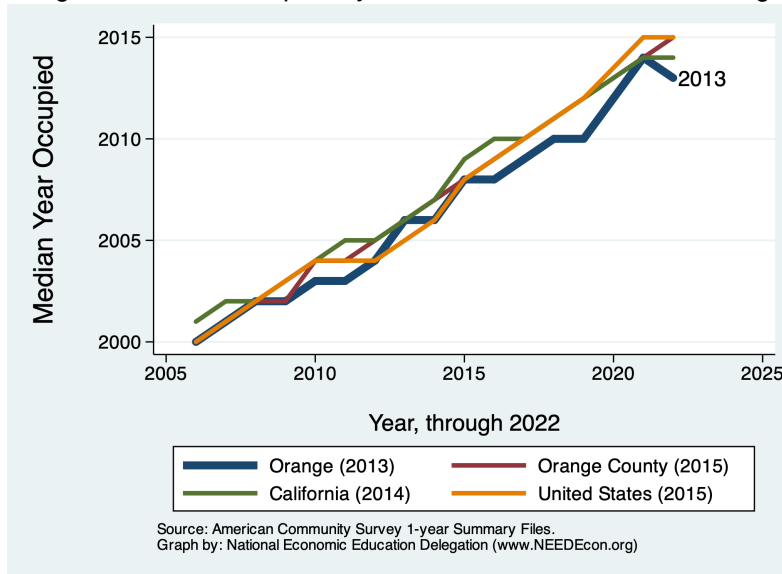


Figure 65: Year Occupied by Current Residents for All Housing



## Residential Permitting

### Definition:

This indicator provides evidence on the number of residential buildings that are permitted for construction each year. Permit data for Orange is compared with data from Orange County as a whole and broader regions. The statistic provided scales the number of permits by population. This is done to facilitate comparisons across regions.

### Why is it important?

Building permits are the best indicator available of new units coming on the market. In order for a region's population to grow and flourish, new residential properties must be added to the existing stock. Building, both in the City and in the County more generally, is an indication of the extent to which new residences accommodate new residents or are affecting prices through increased supply.

### Orange - Ranking Among Comparables

Figure 66: Number of Units Permitted - Nationwide Comparables (Rank)

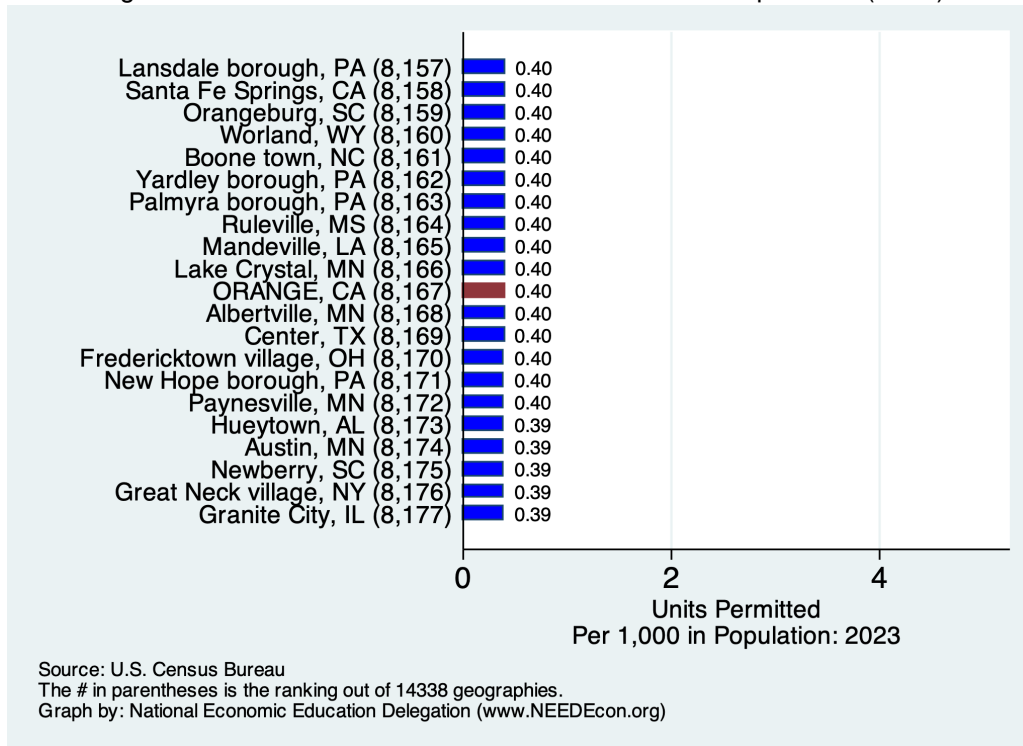
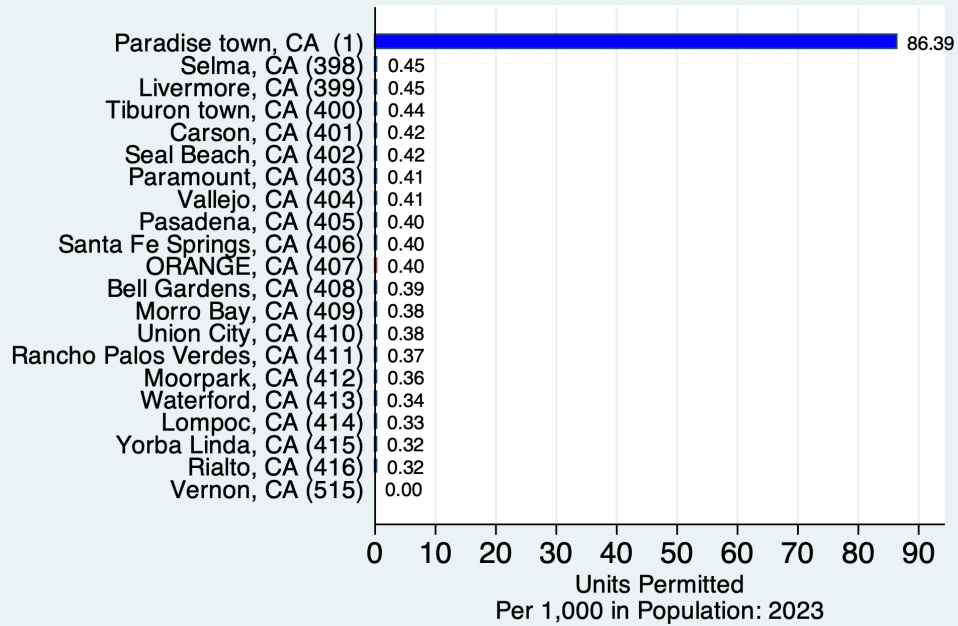


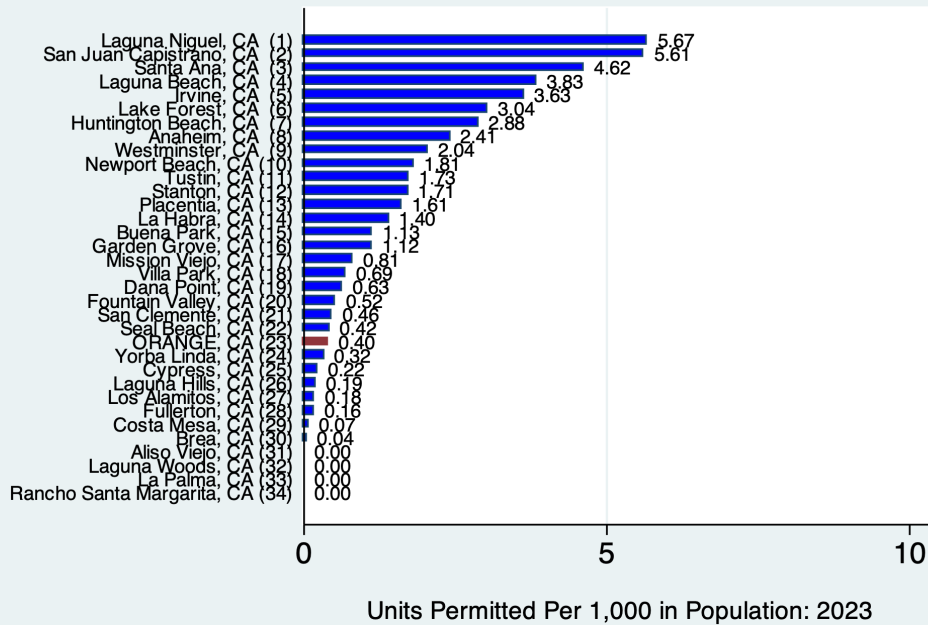


Figure 67: Number of Units Permitted - California Comparables (Rank)



Source: U.S. Census Bureau.  
 The # in parentheses is the ranking out of 515 geographies.  
 Graph by: National Economic Education Delegation (www.NEEDecon.org)

Figure 68: Number of Units Permitted - Cities in Orange County (Rank)



Source: U.S. Census Bureau,  
 The # in parentheses is the ranking out of 34 geographies.  
 Graph by: National Economic Education Delegation (www.NEEDecon.org)

## Orange - Permitting Activity

### Annual Units Permitted - Per Capita in Orange

Figure 69: Units Permitted Each Year

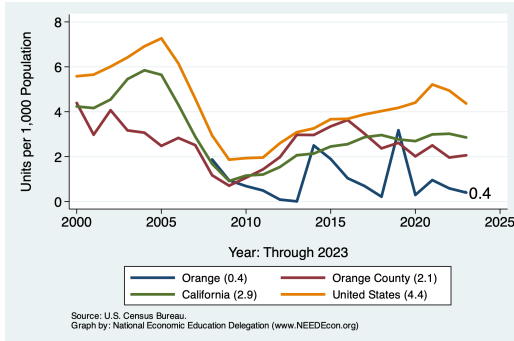
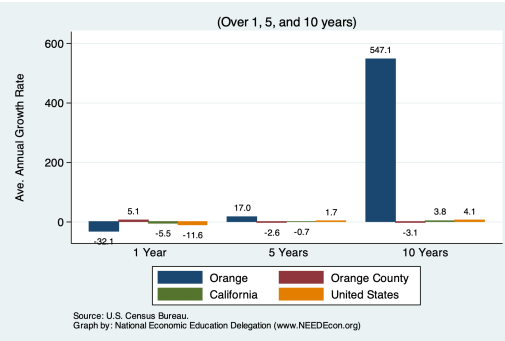


Figure 70: Average Annual Growth in Units Permitted



### Annual Number of Buildings Permitted - Per Capita in Orange

Figure 71: Units Permitted Each Year

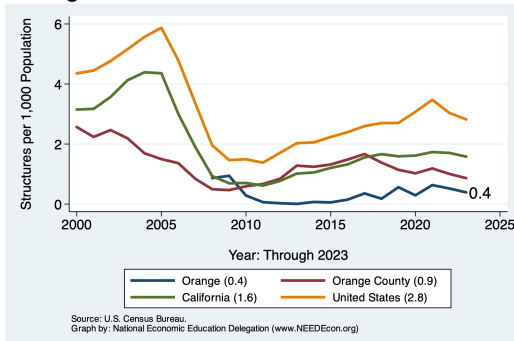
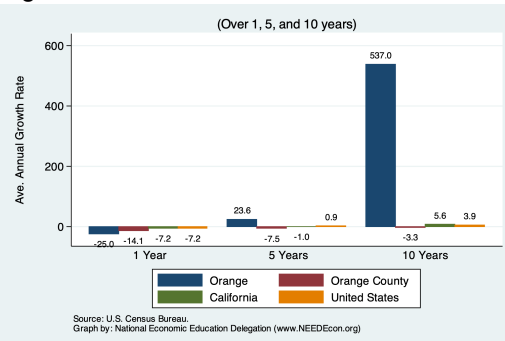


Figure 72: Average Annual Growth in Buildings Permitted



### Annual Value of Property Permitted - Per Capita in Orange

Figure 73: Value Permitted Each Year

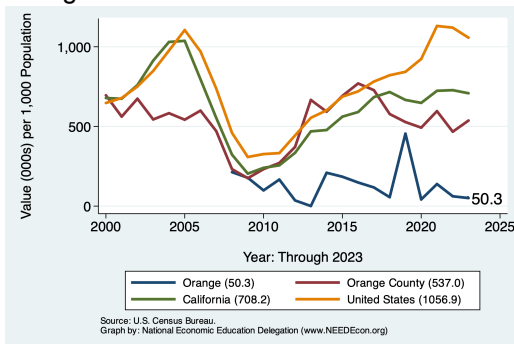
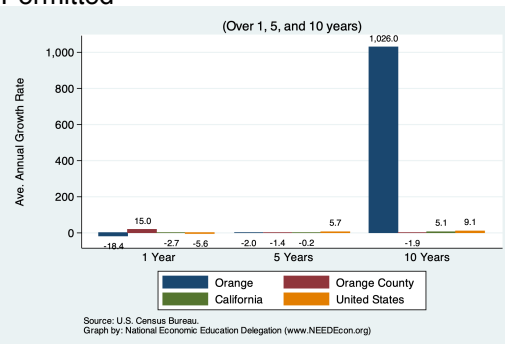


Figure 74: Average Annual Growth in Value Permitted



## Commute Patterns

During the recovery from the Great Recession, the period from 2010 to 2019, the Bay Area economy, and Silicon Valley in particular, has been growing at a pace roughly double that of the state as a whole and triple that of the nation. This growth has precipitated a tight hous-

ing market and also brought about some significant changes in commute patterns, many of which have been reversed by the pandemic. Recent years have seen significant changes in both the mode of transportation and commute times.

### Mode of Transportation

Figure 75: Percent of Workers Commuting by Car Alone

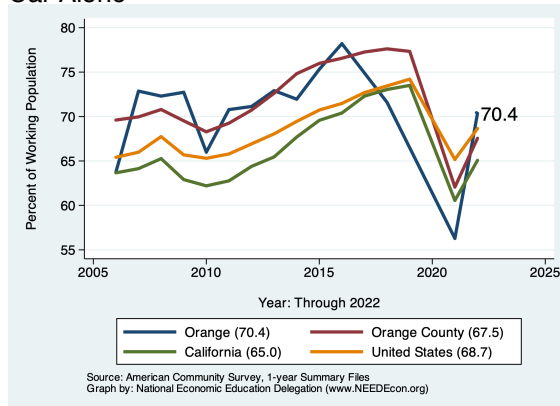


Figure 76: Percent of Workers Commuting by Carpool

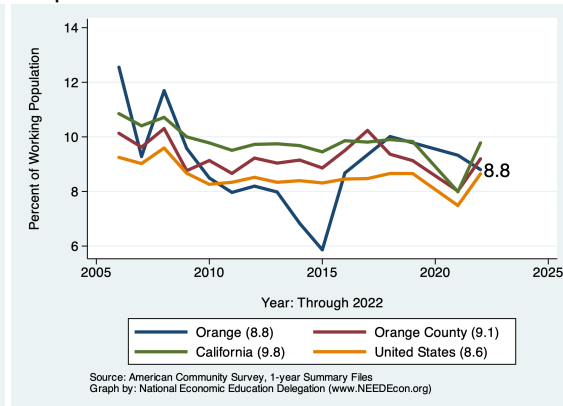


Figure 77: Percent of Workers using Public Transportation

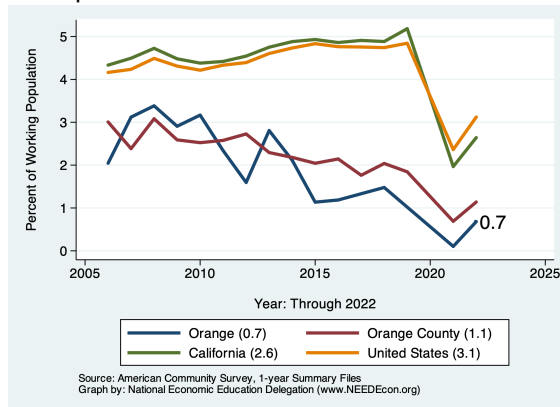
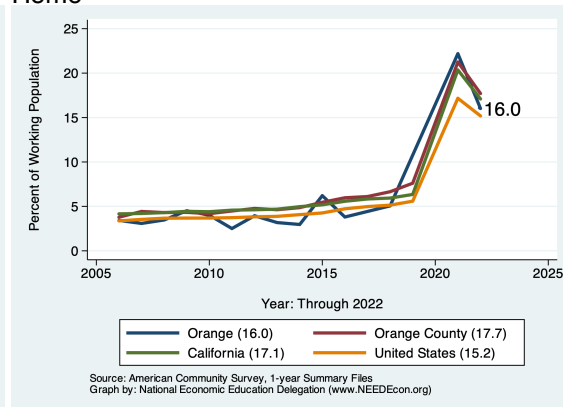


Figure 78: Percent of Workers Who Work From Home



The first table on this page presents data for those who LIVE in Orange. The second provides data on those who work, but do not necessarily live in Orange. The final two columns provide for a comparison of commute mode choices of people locally with those in California more broadly.

**Table 6. SEX OF WORKERS BY MODE OF TRANSPORTATION TO WORK**

Mode of Transit	Male		Female		All Workers		All of CA (%)
	#	(%)	#	(%)	#	(%)	
Car, Truck, or Van:	33,024	81.3	25,439	73.7	58,463	79.2	75.3
Drove Alone	29,340	72.2	22,624	65.5	51,964	70.4	65.5
Carpooled:	3,684	9.1	2,815	8.2	6,499	8.8	9.8
In 2-person carpool	2,492	6.1	2,020	5.9	4,512	6.1	7.0
In 3-person carpool	469	1.2	303	0.9	772	1.0	1.7
In 4-or-more-person carpool	723	1.8	492	1.4	1,215	1.6	1.2
Public Transportation (excl Taxi):	255	0.6	248	0.7	503	0.7	2.7
Bus or Trolley Bus	202	0.5	201	0.6	403	0.5	1.8
Streetcar or Trolley Car	0	0.0	47	0.1	47	0.1	0.5
Subway or Elevated	53	0.1	0	0.0	53	0.1	0.2
Railroad	0	0.0	0	0.0	0	0.0	0.1
Ferryboat	0	0.0	0	0.0	0	0.0	0.1
Bicycle	349	0.9	153	0.4	502	0.7	0.7
Walked	844	2.1	963	2.8	1,807	2.4	2.4
Taxicab, Motorcycle, or other	297	0.7	458	1.3	755	1.0	1.7
Worked at Home	5,666	13.9	6,166	17.9	11,832	16.0	17.2
<b>Total:</b>	40,435	99.5	33,427	96.8	73,862	100.0	

Source: 2022 1-year American Community Survey, Summary File

**Table 7. SEX OF WORKERS BY MODE OF TRANSPORTATION TO WORK FOR WORKPLACE GEOGRAPHY**

Mode of Transit	Male		Female		All Workers		All of CA (%)
	#	(%)	#	(%)	#	(%)	
Car, Truck, or Van:	41,392	70.4	41,116	79.5	82,508	75.1	75.3
Drove Alone	37,164	63.2	36,627	70.8	73,791	67.1	65.5
Carpooled:	4,228	7.2	4,489	8.7	8,717	7.9	9.8
In 2-person carpool	2,709	4.6	2,820	5.4	5,529	5.0	7.0
In 3-person carpool	696	1.2	1,327	2.6	2,023	1.8	1.7
In 4-or-more-person carpool	823	1.4	342	0.7	1,165	1.1	1.2
Public Transportation (excl Taxi):	1,477	2.5	1,051	2.0	2,528	2.3	2.6
Bus or Trolley Bus	1,317	2.2	686	1.3	2,003	1.8	1.8
Streetcar or Trolley Car	0	0.0	0	0.0	0	0.0	0.5
Subway or Elevated	160	0.3	312	0.6	472	0.4	0.2
Railroad	0	0.0	53	0.1	53	0.0	0.1
Ferryboat	0	0.0	0	0.0	0	0.0	0.1
Bicycle	241	0.4	136	0.3	377	0.3	0.7
Walked	1,131	1.9	1,419	2.7	2,550	2.3	2.4
Taxicab, Motorcycle, or other	866	1.5	483	0.9	1,349	1.2	1.7
Worked at Home	5,666	9.6	6,166	11.9	11,832	10.8	17.2
<b>Total:</b>	50,773	86.3	50,371	97.3	101,144	92.0	

Source: 2022 1-year American Community Survey, Summary File

The results in this table are for those who work in the region, regardless of the location of their residence.

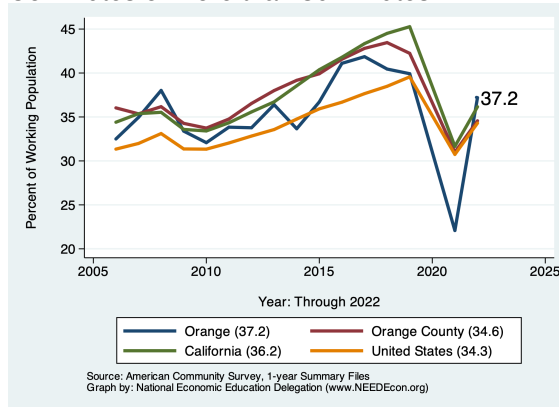
# Commute Times for Employed Residents

**Table 8. SEX OF WORKERS BY TRAVEL TIME TO WORK**

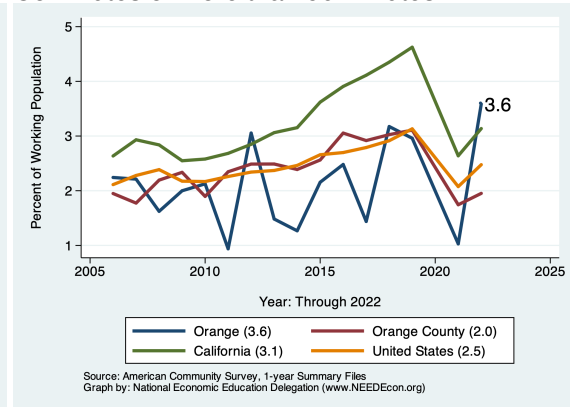
Mode of Transit	Male		Female		All Workers		All of CA
	#	(%)	#	(%)	#	(%)	(%)
Less than 5 minutes	302	0.8	366	1.1	668	1.0	2.1
5 to 9 minutes	2,031	5.1	1,221	3.7	3,252	4.7	7.8
10 to 14 minutes	5,573	14.1	3,022	9.2	8,595	12.5	12.4
15 to 19 minutes	5,359	13.6	4,098	12.4	9,457	13.8	15.4
20 to 24 minutes	4,196	10.6	5,047	15.3	9,243	13.5	14.8
25 to 29 minutes	2,600	6.6	2,704	8.2	5,304	7.7	6.4
30 to 34 minutes	5,572	14.1	4,700	14.3	10,272	15.0	15.2
35 to 39 minutes	1,610	4.1	428	1.3	2,038	3.0	2.9
40 to 44 minutes	1,363	3.5	1,737	5.3	3,100	4.5	4.1
45 to 59 minutes	2,873	7.3	1,688	5.1	4,561	6.7	8.2
60 to 89 minutes	1,648	4.2	1,433	4.3	3,081	4.5	7.2
90 or more minutes	1,642	4.2	817	2.5	2,459	3.6	3.6
<b>Total:</b>	<b>34,769</b>	<b>88.1</b>	<b>27,261</b>	<b>82.7</b>	<b>62,030</b>	<b>90.4</b>	

Source: 2022 1-year American Community Survey, Summary File

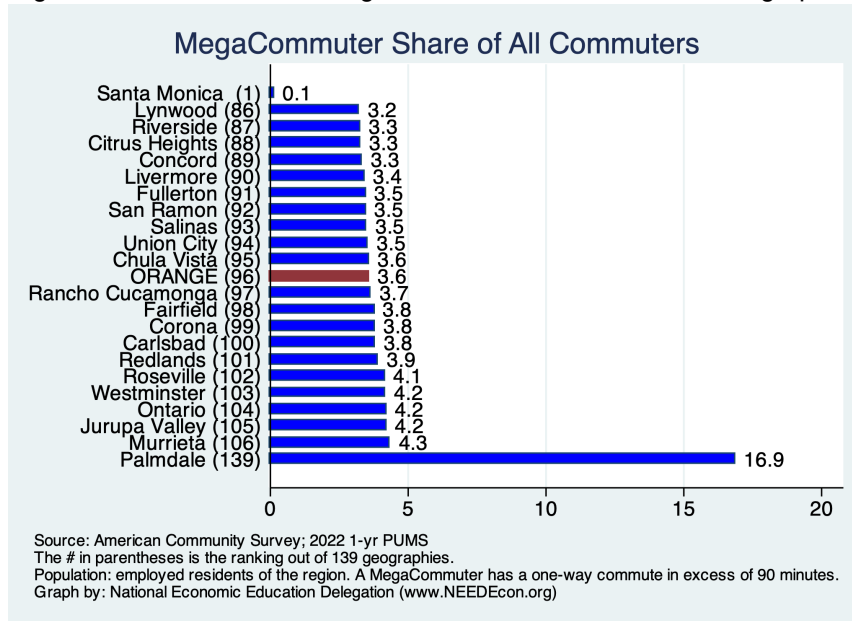
**Figure 79: Percent of Employed Population With Commutes of More than 30 Minutes**



**Figure 80: Percent of Employed Population With Commutes of More than 90 Minutes**



**Figure 81: Rank: Share of MegaCommuters Across Similar Geographies**



## Commute Times for Those Employed in the City

**Table 9. SEX OF WORKERS BY TRAVEL TIME TO WORK FOR WORKPLACE GEOGRAPHY**

Mode of Transit	Male		Female		All Workers		All of CA (%)
	#	(%)	#	(%)	#	(%)	
Less than 5 minutes	753	1.3	631	1.3	1,384	1.3	2.1
5 to 9 minutes	2,219	3.9	2,506	5.0	4,725	4.4	7.8
10 to 14 minutes	4,164	7.3	4,076	8.1	8,240	7.7	12.4
15 to 19 minutes	6,008	10.5	7,109	14.2	13,117	12.2	15.3
20 to 24 minutes	5,647	9.9	7,852	15.7	13,499	12.6	14.8
25 to 29 minutes	2,377	4.2	2,809	5.6	5,186	4.8	6.4
30 to 34 minutes	10,261	18.0	8,345	16.6	18,606	17.4	15.2
35 to 39 minutes	1,119	2.0	1,510	3.0	2,629	2.5	2.9
40 to 44 minutes	2,229	3.9	1,338	2.7	3,567	3.3	4.1
45 to 59 minutes	4,055	7.1	3,074	6.1	7,129	6.7	8.2
60 to 89 minutes	4,824	8.4	3,810	7.6	8,634	8.1	7.2
90 or more minutes	1,451	2.5	1,145	2.3	2,596	2.4	3.6
<b>Total:</b>	<b>45,107</b>	<b>79.0</b>	<b>44,205</b>	<b>88.1</b>	<b>89,312</b>	<b>83.4</b>	

Source: 2022 1-year American Community Survey, Summary File  
The results in this table are for those who work in the region, regardless of the location of their residence.

Figure 82: Percent of Local Employees With Commutes of More than 30 Minutes

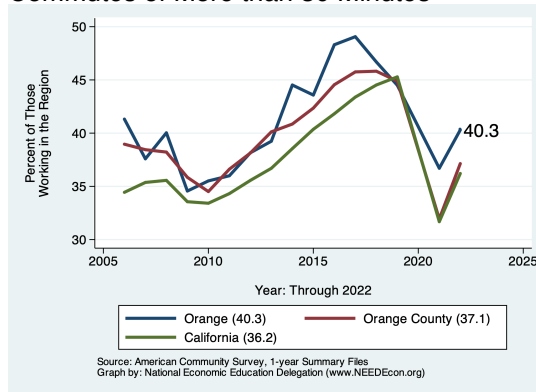


Figure 83: Percent of Local Employees With Commutes of More than 90 Minutes

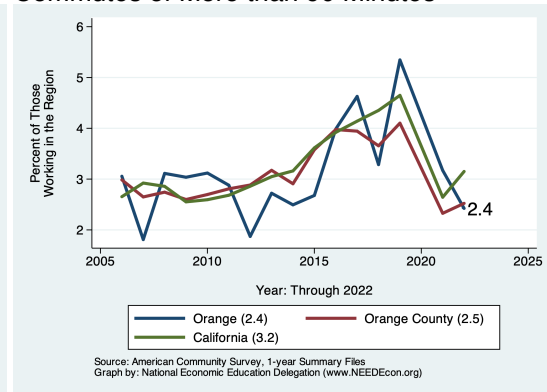
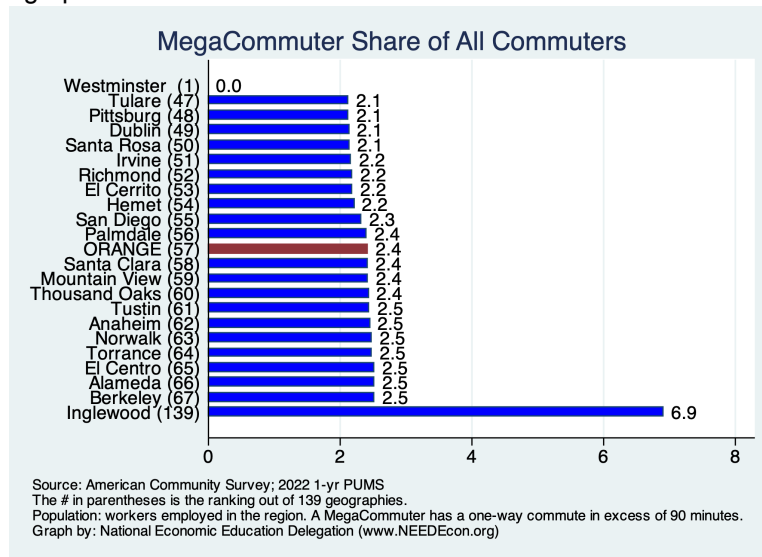


Figure 84: Rank: Share of MegaCommuters Across Similar Geographies



## Place of Work

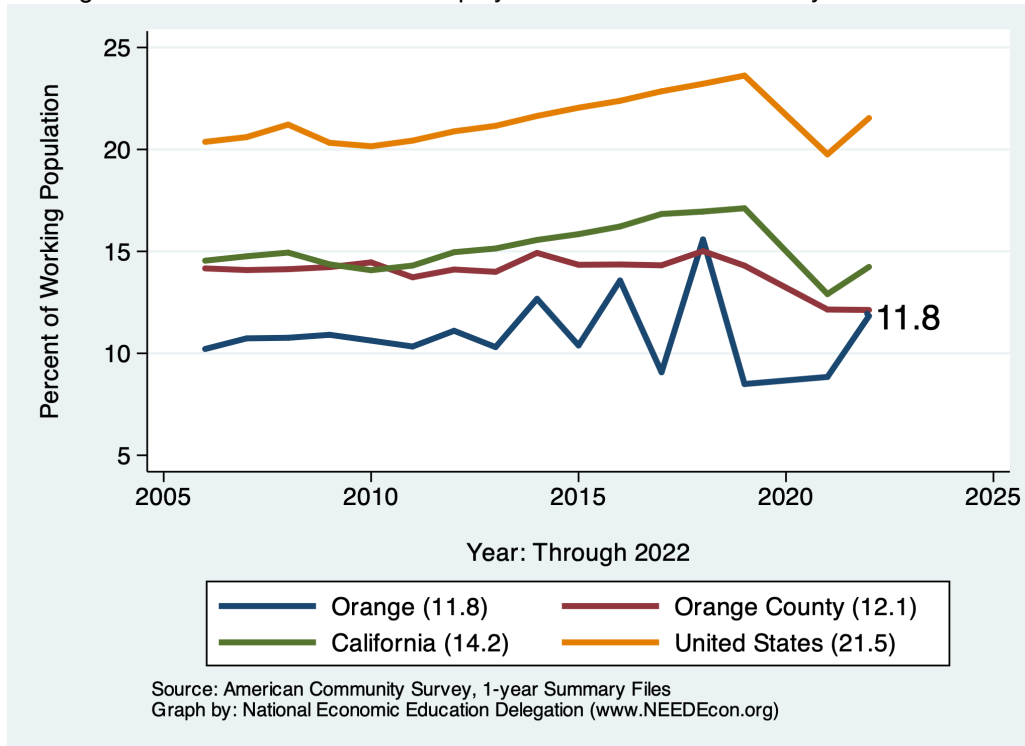
This section provides evidence on where workers living in Orange work. As evidenced in the first table, some of Orange’s employed workers work in the City, but many do not. The first table and graph pair provide evidence at the county level while the second provide evidence with regard to working outside of the Orange city boundary.

**Table 10. SEX OF WORKERS BY PLACE OF WORK—STATE AND COUNTY LEVEL**

Place of Work	Male		Female		All Workers		All of CA (%)
	#	(%)	#	(%)	#	(%)	
Worked in state of residence:	40,435	99.5	33,365	96.7	73,800	99.9	99.6
Worked in county of residence	35,318	86.9	29,741	86.2	65,059	88.1	85.3
worked outside of county of residence	5,117	12.6	3,624	10.5	8,741	11.8	14.3
Worked outside state of residence	0	0.0	62	0.2	62	0.1	0.4
<b>Total:</b>	40,435	99.5	33,427	96.8	73,862	100.0	

Source: 2022 1-year American Community Survey, Summary File

**Figure 85: Percent of Workers Employed Outside of Their County of Residence**

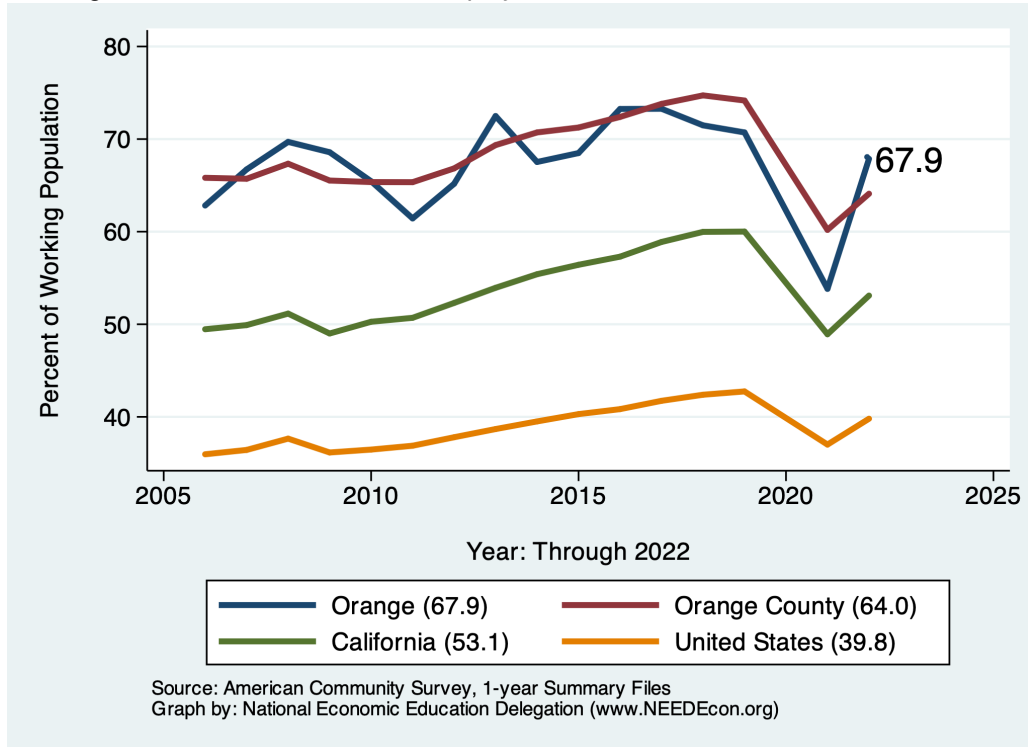


**Table 11. SEX OF WORKERS BY PLACE OF WORK—PLACE LEVEL**

Place of Work	Male		Female		All Workers		All of CA (%)
	#	(%)	#	(%)	#	(%)	
Living in a place:	40,435	99.5	33,427	96.8	73,862	100.0	95.8
Worked in place of residence	12,236	30.1	11,500	33.3	23,736	32.1	42.3
Worked outside place of residence	28,199	69.4	21,927	63.5	50,126	67.9	53.4
Not living in a place	0	0.0	0	0.0	0	0.0	4.2
<b>Total:</b>	40,435	99.5	33,427	96.8	73,862	100.0	

Source: 2022 1-year American Community Survey, Summary File

**Figure 86: Percent of Workers Employed Outside of Their Place of Residence**





## Commute Mode by Income

**Table 12. MEDIAN EARNINGS IN THE PAST 12 MONTHS  
BY MEANS OF TRANSPORTATION TO WORK**

	City	California	Ratio	United States	
	Median	Median		Median	Ratio
Car, truck, or van - drove alone	54,254	48,335	104.2	45,677	102.6
Car, truck, or van - carpooled	37,403	35,926	96.7	34,518	93.6
Public transportation (excluding taxicab)	32,646	34,625	87.5	41,443	68.1
Walked	15,791	30,552	48.0	27,247	50.1
Taxicab, motorcycle, bicycle, or other means	42,974	40,631	98.2	36,218	102.5
Worked from home	69,697	79,738	81.1	69,180	87.0
<b>Total:</b>	53,663	49,818	107.7	46,365	115.7

Source: 2022 1-year American Community Survey, Summary File

Notes: 1) Ratio = the ratio of the regional median to either the CA or US median, relative to the Total ratio.

Values above 100 imply a high local median. Values below 100 imply a low local median.

For example, a value of 200 means that the local mean is 2x higher than would be expected.

For "Total:", ratio is simply the ratio of the medians.

2) For regions with more than one geography, the medians are averages weighted by working population.

**Table 13. MODE OF TRANSPORTATION TO WORK BY WORKERS' EARNINGS**

Mode of Transit	< \$25,000		\$25,000-\$74,999		\$75,000+		All		All of CA
	#	(%)	#	(%)	#	(%)	#	(%)	(%)
Car, Truck, or Van: Drove Alone	11,133	45.5	15,368	65.1	17,967	67.2	49,551	67.1	68.4
Car, Truck, or Van: Carpooled	2,128	8.7	1,806	7.6	1,555	5.8	6,449	8.7	9.5
Public Transportation (excl Taxi)	527	2.2	308	1.3	93	0.3	1,074	1.5	3.6
Walked	1,027	4.2	663	2.8	228	0.9	2,117	2.9	2.4
Taxicab, Motorcycle, or other	418	1.7	344	1.5	216	0.8	1,098	1.5	2.4
Worked at Home	1,685	6.9	2,663	11.3	4,821	18.0	9,868	13.4	13.6
<b>Total:</b>	16,918	69.1	21,152	89.6	24,880	93.1	70,157	95.0	100.0

Source: 2022 5-year American Community Survey, Summary File

**Table 14. MODE OF TRANSPORTATION TO WORK BY WORKERS' EARNINGS FOR  
WORKPLACE GEOGRAPHY**

Mode of Transit	< \$25,000		\$25,000-\$74,999		\$75,000+		All		All of CA
	#	(%)	#	(%)	#	(%)	#	(%)	(%)
Car, Truck, or Van: Drove Alone	16,815	49.1	24,483	64.9	27,349	76.6	77,983	71.0	68.5
Car, Truck, or Van: Carpooled	2,879	8.4	3,697	9.8	2,629	7.4	10,501	9.6	9.5
Public Transportation (excl Taxi)	697	2.0	566	1.5	343	1.0	1,804	1.6	3.6
Walked	1,338	3.9	647	1.7	304	0.9	2,560	2.3	2.4
Taxicab, Motorcycle, or other	640	1.9	479	1.3	257	0.7	1,605	1.5	2.4
Worked at Home	1,685	4.9	2,663	7.1	4,821	13.5	9,868	9.0	13.6
<b>Total:</b>	24,054	70.3	32,535	86.2	35,703		104,321	94.9	

Source: 2022 5-year American Community Survey, Summary File

The results in this table are for those who work in the region, regardless of the location of their residence.

## Commute Mode by Poverty Status

**Table 15. MODE OF TRANSPORTATION TO WORK BY POVERTY STATUS**

Mode of Transit	In Poverty		100-149% of Pov		>150% of Pov		All		All of CA (%)
	#	(%)	#	(%)	#	(%)	#	(%)	
Car, Truck, or Van: Drove Alone	2,849	52.1	2,613	50.2	46,502	70.2	51,964	71.0	65.8
Car, Truck, or Van: Carpooled	194	3.5	365	7.0	5,940	9.0	6,499	8.9	9.8
Public Transportation (excl Taxi)	0	0.0	47	0.9	456	0.7	503	0.7	2.6
Walked	0	0.0	69	1.3	1,251	1.9	1,320	1.8	2.1
Taxicab, Motorcycle, or other	0	0.0	0	0.0	1,217	1.8	1,217	1.7	2.4
Worked at Home	511	9.3	312	6.0	10,850	16.4	11,673	16.0	17.2
<b>Total:</b>	<b>3,554</b>	<b>64.9</b>	<b>3,406</b>	<b>65.5</b>	<b>66,216</b>		<b>73,176</b>		

Source: 2022 1-year American Community Survey, Summary File

**Table 16. MODE OF TRANSPORTATION TO WORK BY POVERTY STATUS FOR WORKPLACE GEOGRAPHY**

Mode of Transit	In Poverty		100-149% of Pov		>150% of Pov		All		All of CA (%)
	#	(%)	#	(%)	#	(%)	#	(%)	
Car, Truck, or Van: Drove Alone	2,296	32.8	4,305	56.1	67,046	67.4	73,647	67.4	65.8
Car, Truck, or Van: Carpooled	413	5.9	735	9.6	7,569	7.6	8,717	8.0	9.8
Public Transportation (excl Taxi)	144	2.1	37	0.5	2,347	2.4	2,528	2.3	2.6
Walked	0	0.0	226	2.9	1,450	1.5	1,676	1.5	2.1
Taxicab, Motorcycle, or other	139	2.0	39	0.5	1,407	1.4	1,585	1.5	2.4
Worked at Home	511	7.3	312	4.1	10,850	10.9	11,673	10.7	17.2
<b>Total:</b>	<b>3,503</b>	<b>50.0</b>	<b>5,654</b>	<b>73.7</b>	<b>90,669</b>	<b>91.2</b>	<b>99,826</b>	<b>91.4</b>	<b>100.0</b>

Source: 2022 1-year American Community Survey, Summary File

The results in this table are for those who work in the region, regardless of the location of their residence.

# Migration

## Overall Migration Flows

### Definition:

The United States is a country with an increasingly mobile population. People move, migrate, from one place to another with increasing frequency.

### Why is it important?

Having a handle on whether or not Orange is a net recipient (migration inflows) or donor (mi-

gration outflows) of population is very important for understanding trends in the City's development. This section outlines migration patterns by age, education, income, marital status, and housing tenure. Understanding recent trends is very important for making policy, investment, and other decisions about the future. Also, understanding the extent to which the population is stable, or experiences significant turnover each year is helpful for planning purposes.

Figure 87: Overall Movements of Residents

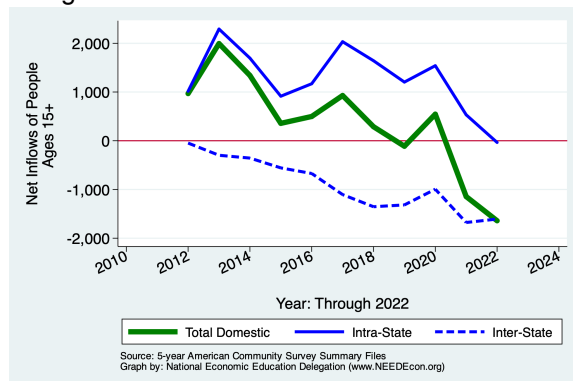


Table 17: Migration by Income

Category	Population	Net Inflows				
		All Migration	Same State		Across States	From Abroad
			W/in County	Between Counties		
No income	17,034	-165	269	-780	168	178
With income	99,415	-294	467	-199	-1,336	774
\$1 to \$9,999 or less	12,396	268	49	-114	289	44
\$10,000 to \$14,999	7,249	157	-111	96	172	0
\$15,000 to \$24,999	12,162	858	276	442	0	140
\$25,000 to \$34,999	9,165	-1,195	166	-350	-1,071	60
\$35,000 to \$49,999	12,841	-741	-653	-86	-176	174
\$50,000 to \$64,999	8,892	143	150	52	-108	49
\$65,000 to \$74,999	5,663	-494	56	-111	-591	152
\$75,000 or more	31,047	710	534	-128	149	155
<b>All:</b>	116,449	-459	736	-979	-1,168	952

Source: 2022 1-year American Community Survey, Summary File

Note: The data in this and other tables in this section are limited in that there is no information on the City's population that has moved abroad.

The "From Abroad" column is gross movements into the City from abroad.

Figure 88: Overall Movements of Low Income Residents

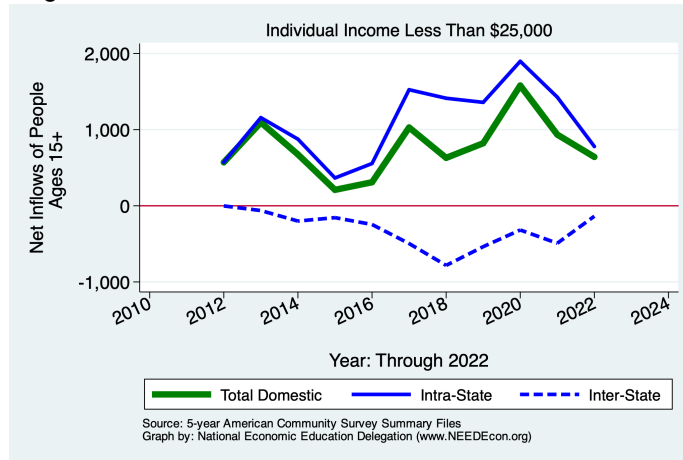


Figure 89: Overall Movements of Middle Income Residents

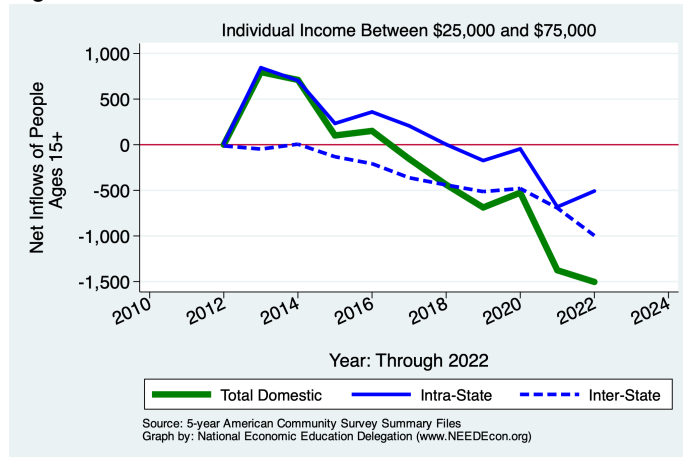
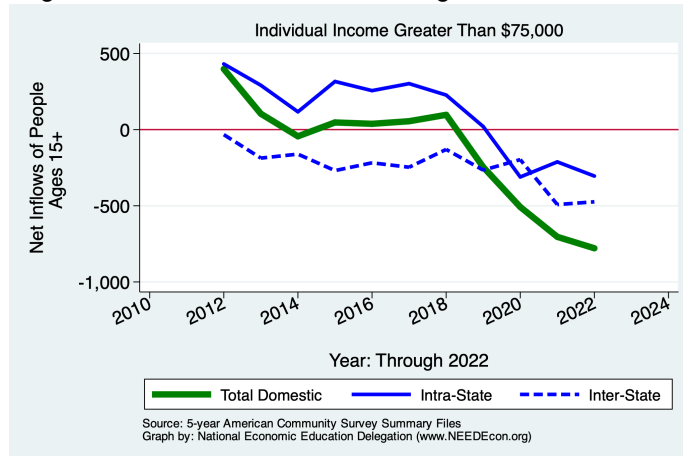


Figure 90: Overall Movements of High Income Residents



## Demographics of Migration Flows

**Table 18: Migration by Marital Status**

Category	Population	All Migration	Net Inflows			
			Same State			From Abroad
			W/in County	Between Counties	Across States	
Never married	44,640	212	452	60	-609	309
Now married, except separated	54,092	0	630	-886	-196	452
Divorced	10,864	-339	-52	-279	-148	140
Separated	2,178	-206	-153	8	-61	0
Widowed	4,675	-126	-141	118	-154	51
<b>Total:</b>	116,449	-459	736	-979	-1,168	952

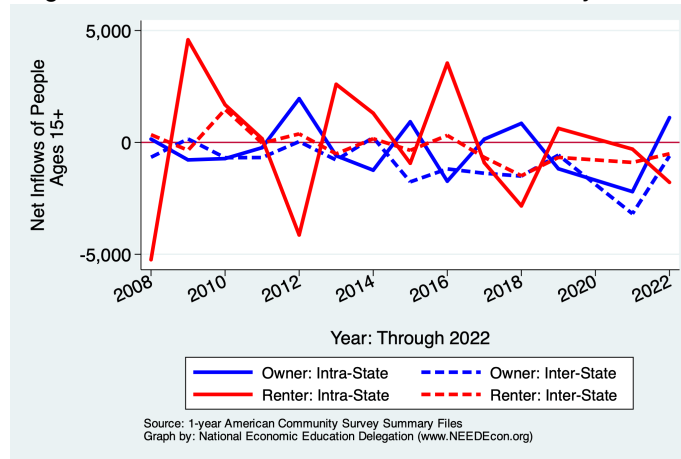
Source: 2022 1-year American Community Survey, Summary File

**Table 19: Migration by Tenure**

Category	Population	All Migration	Net Inflows			
			Same State			From Abroad
			W/in County	Between Counties	Across States	
Householder lived in owner-occupied housing units	72,782	1,210	1,814	-707	-606	709
Householder lived in renter-occupied housing units	56,021	-1,828	-1,609	-177	-509	467
<b>Total:</b>	128,803	-618	205	-884	-1,115	1,176

Source: 2022 1-year American Community Survey, Summary File

**Figure 91: Domestic Movements of Residents by Tenure**



**Table 20: Migration by Age**

Category	Population	Net Inflows				
		All Migration	Same State		Across States	From Abroad
			W/in County	Between Counties		
1 to 4 years	6,462	83	210	-12	-174	59
5 to 17 years	20,631	-26	214	-129	-152	41
18 and 19 years	4,188	94	32	114	-81	29
20 to 24 years	10,846	53	371	-338	-49	69
25 to 29 years	10,903	-55	257	-242	-127	57
30 to 34 years	11,585	-572	143	-432	-408	125
35 to 39 years	10,218	-293	-187	-31	-96	21
40 to 44 years	8,006	-98	19	54	-171	0
45 to 49 years	9,097	303	145	117	-50	91
50 to 54 years	8,660	-182	-138	-5	-47	8
55 to 59 years	8,705	-137	102	-120	-138	19
60 to 64 years	8,068	-411	-157	-30	-244	20
65 to 69 years	6,662	-185	-51	-8	-148	22
70 to 74 years	5,159	-27	-73	39	-1	8
75 years and over	8,231	143	141	0	2	0
<b>Total Population:</b>	137,421	-1,310	1,028	-1,023	-1,884	569

Source: 2022 5-year American Community Survey, Summary File

**Table 21: Migration by Educational Attainment**

Category	Population	Net Inflows				
		All Migration	Same State		Across States	From Abroad
			W/in County	Between Counties		
Less than high school graduate	11,456	1,085	611	300	0	174
High school graduate (includes equiv)	17,698	-1,005	-515	72	-562	0
Some college or assoc. degree	28,996	-207	218	-640	75	140
Bachelor's degree	26,086	907	623	-313	60	537
Graduate or professional degree	13,160	-963	-452	-355	-213	57
<b>Total:</b>	97,396	-183	485	-936	-640	908

Source: 2022 1-year American Community Survey, Summary File

**Table 22: Median Income of Migration Flows**

Flow	In-Migration	Out-Migration
Same House 1 Year Ago	43,995	43,995
Moved Within Same County	50,757	47,767
Moved to Different County, Same State	37,564	41,484
Moved Between States	13,321	33,197
Moved from Abroad	37,055	
<b>Total Population:</b>	43,831	43,560

Source: 2022 1-year American Community Survey, Summary File

**Table 23: Median Age of Migration Flows**

Flow	In-Migration	Out-Migration
Same House 1 Year Ago	41.4	41.4
Moved Within Same County	31.4	32.7
Moved to Different County, Same State	29.0	28.7
Moved Between States	26.1	25.8
Moved from Abroad	32.3	
<b>Total Population:</b>	39.8	40.0

Source: 2022 1-year American Community Survey, Summary File

## References and Sources

The majority of the data presented in this report are from the American Community Survey (ACS). For larger geographies, the 1-year Summary Files provide the data. For smaller communities, roughly those with less than 65,000 in population in 2021, the 5-year Summary Files provide the data.

The ACS data are supplemented by building permit data from the U.S. Census Bureau, population and housing data from the California Department of Finance, and home price and rental rates from Zillow.

U.S. Census Bureau. American Community Survey 1-year and 5-year Summary Files. <https://www.census.gov/programs-surveys/acs/data/data-via-ftp.html>. The 1-year data are released in September each year and the 5-year data are released in January.

Zillow Research Data <https://www.zillow.com/research/data/>

U.S. Census Bureau. Building Permits Data, updated annually in February. <https://www.census.gov/construction/bps/current.html>

State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State — January 1. Sacramento, California, May. <https://dof.ca.gov/forecasting/demographics/estimates/>

State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year, July 1, 2010-2021. Sacramento, California, December. <https://dof.ca.gov/forecasting/demographics/>

State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1. Sacramento, California, May. <https://dof.ca.gov/forecasting/demographics/>