

# The Real Estate Market in California and the United States

## Introduction

Among many people, there is a growing worry in the ever increasing real estate market. According to some, it has become nearly impossible to rent or buy a home in the United States, specifically California. However, are these worries true, or just false misinformation spread by pessimists?

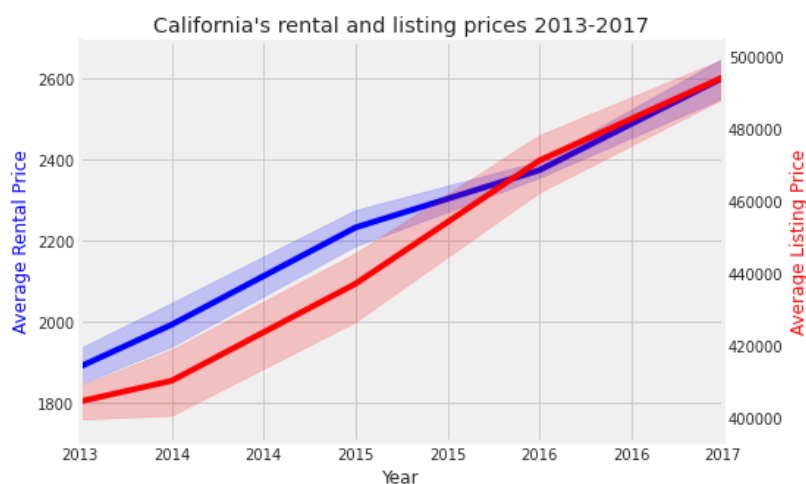
In order to answer this question, this report takes recent Zillow data from state by state, which includes variables such as rental prices, property values, types of houses, and more. The full dataset can be found here:

<https://www.kaggle.com/datasets/zillow/zecon>

This report is divided into two parts: One for California specifically, and one for the United States as a whole. This way, it becomes identifiable how the real estate market is increasing, and if it is isolated to California or not.

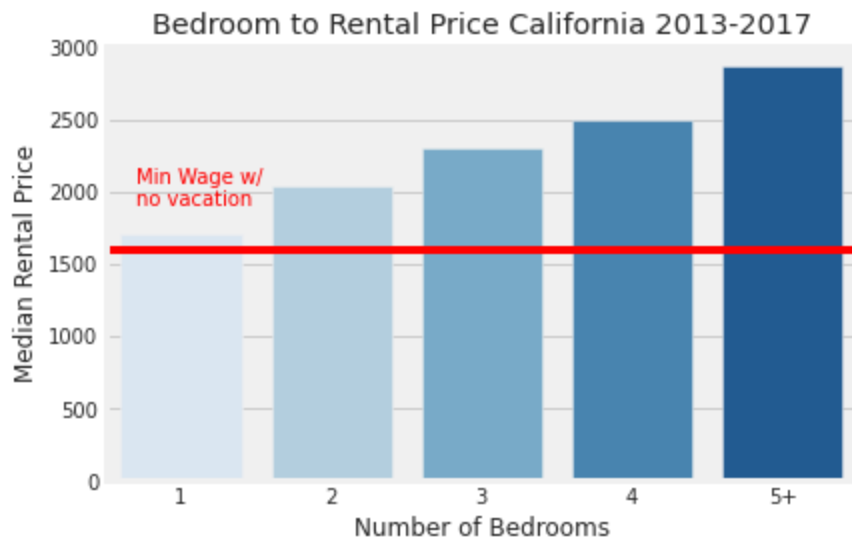
## California

### Correlation between Rental and Listing Prices



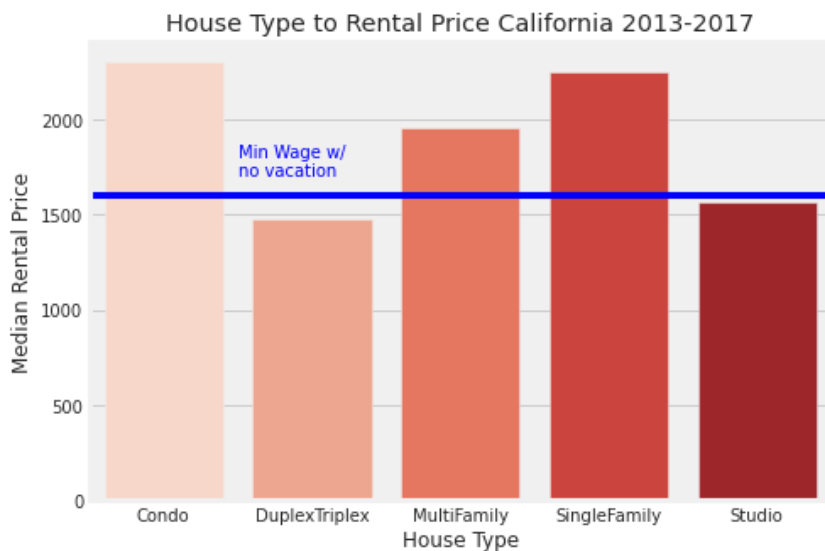
As the graph shows, there is a high correlation between rental and listing prices. From 2013 to 2017, both have grown by a significant amount in California. Therefore, we can conclude that the reasoning for the increased prices of homes is due to the value of homes rising, and nothing independent of mortgage or rent.

### Bedrooms and Rent



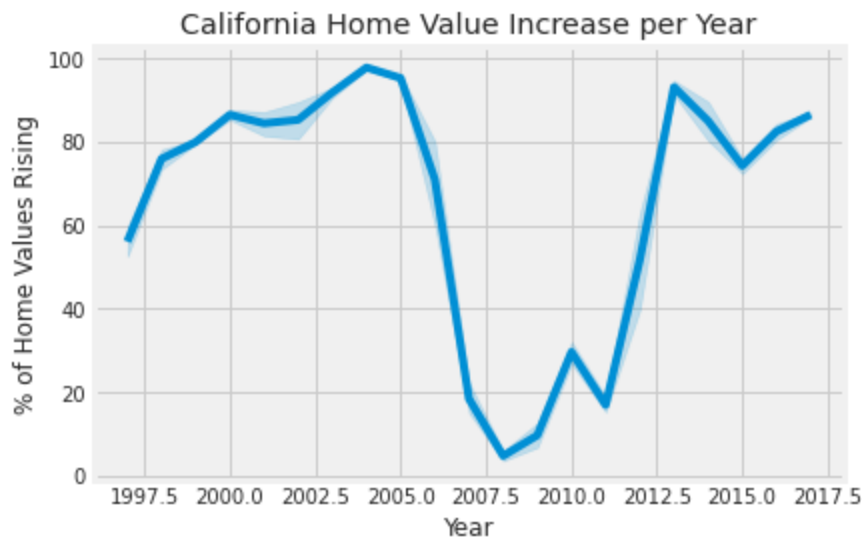
When it comes to homes in California, there is a nearly exponential correlation between the number of bedrooms in a house and the rental price of that house. What’s worrying, however, is the fact that even a one bedroom house would cost more per month than a minimum wage job in California would pay. Simply put, a minimum wage job is just not sufficient to rent any medium quality house in California.

## House Type and Rent



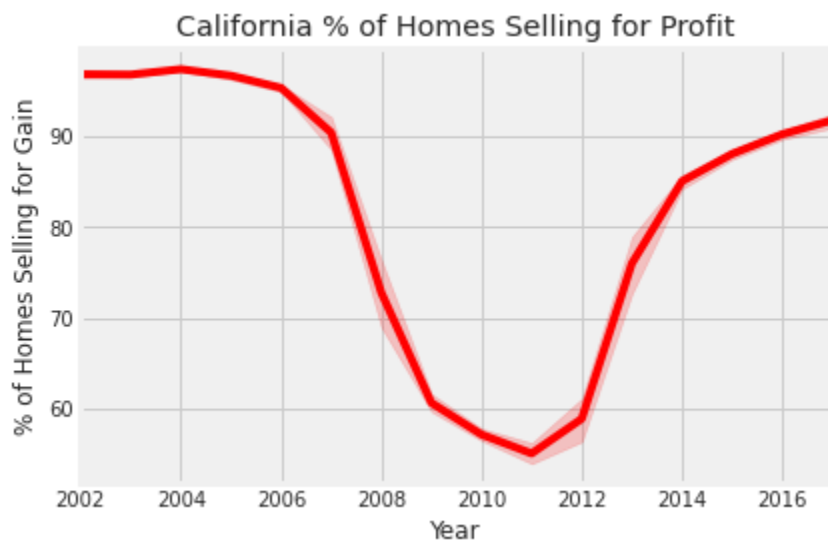
Different kinds of houses clearly have different costs. While a condo, single family, and multi family homes are quite expensive, duplexes/triplexes and studios are less so. But once again, the California minimum wage still proves itself to be insufficient for paying for any of these kinds of houses. While a 30% paycheck to rent ratio is ideal, none of the types of houses come close to that ideal.

## Home Value Increases



In recent times, specifically from 2011 to 2013, there has been a very sharp rise in housing prices in California. The dip seen around the 2008 mark represents the 2008 Financial Crash, but excluding that, California home values have shown little signs of falling.

## Homes Selling for Profit



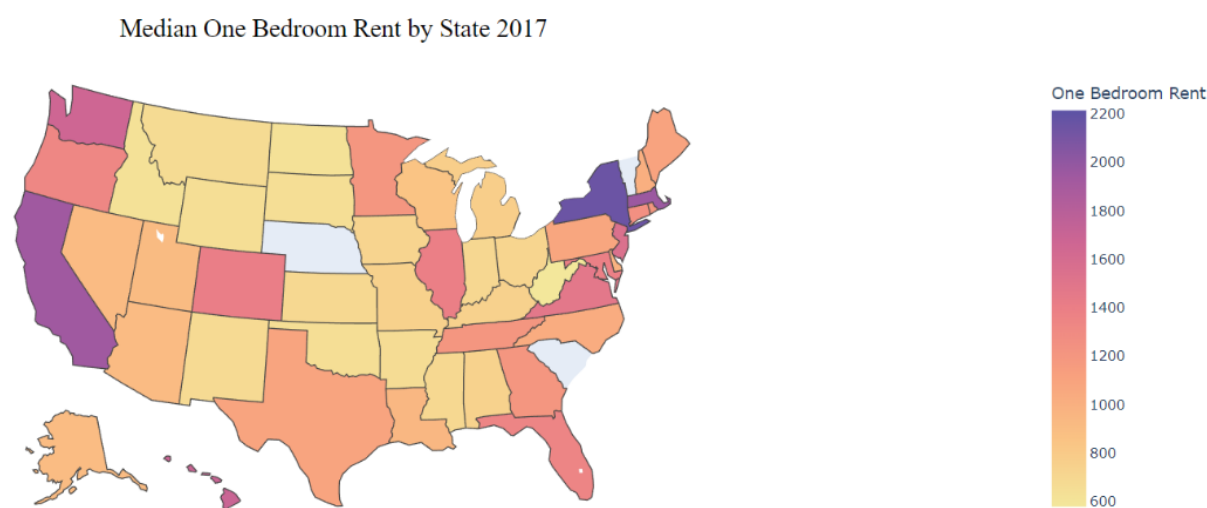
A home selling for profit means that it sold for higher than the original listing price. Strikingly similar to the home value increasing graph, excluding the 2008 financial crash, an overwhelming majority of California homes have sold for a profit.

## California Conclusion

It is extremely evident that in the last few years, the values and costs of homes are increasing at a rapid pace. The super majority of homes are not only increasing in value, but also selling for a profit. It is also simply impossible to rent at least a decent quality home with a minimum wage job. Even a one bedroom house or a duplex/triplex would cost nearly your entire paycheck. This is extremely worrying, as it traps poor people in poverty, furthering wealth inequality in California.

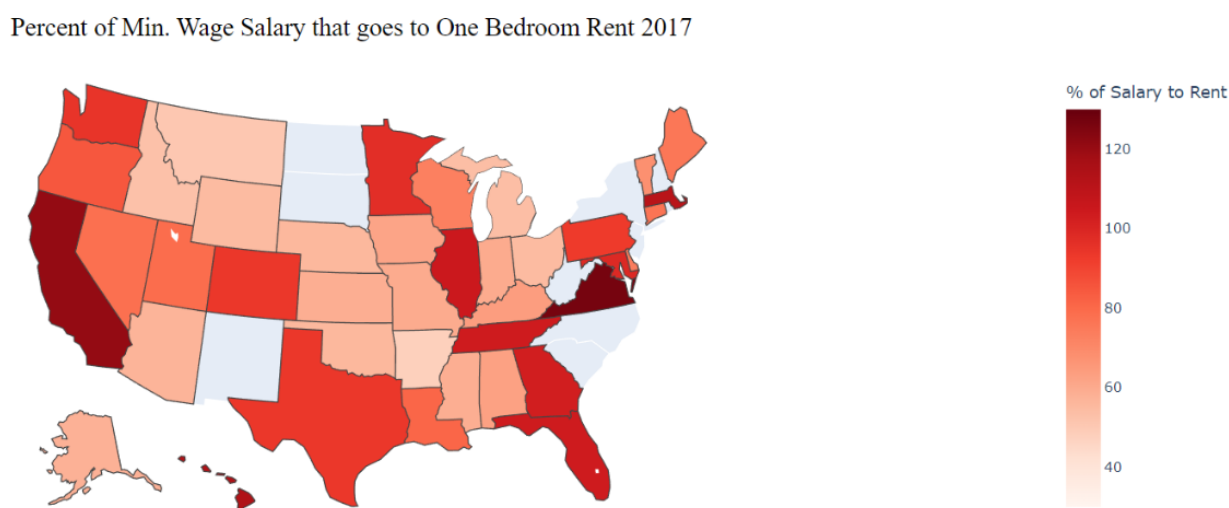
# United States

## Map of One Bedroom House Rent per State



This map details the median rent for one bedroom homes per US State. For most states, the rent lies around \$1200 - \$1400(Which is \$14,400 - \$16,800 per year). However, for some states such as New York and California, the cost of one bedroom rent is a lot higher. The lowest one bedroom rent in the nation is West Virginia, with a rent around \$600. Essentially, the cost of rent largely depends on the state which one resides in.

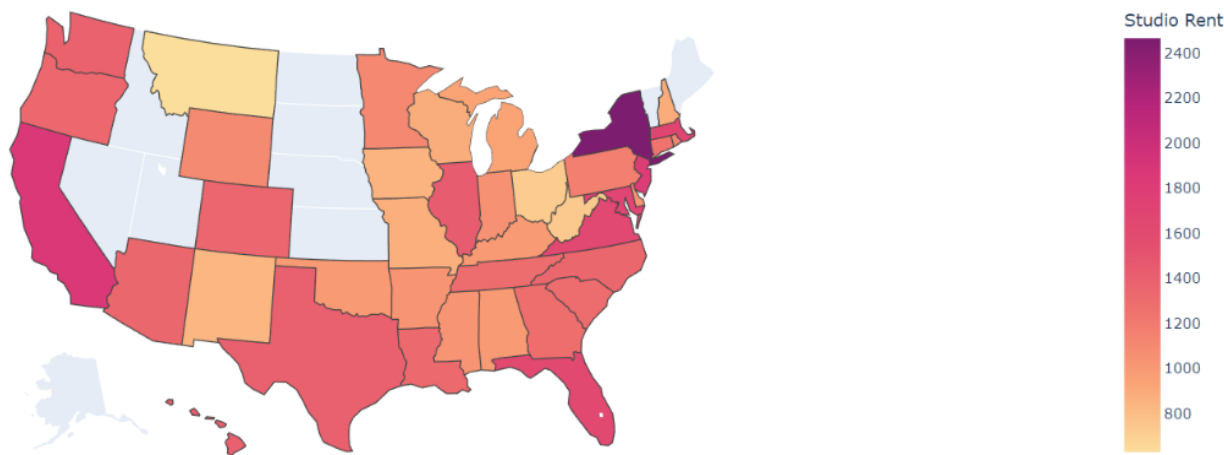
## Percent of Min. Wage for One Bedroom Rent



It is generally accepted that rent should take up around 30% of your income. However, for someone with a minimum wage salary and for a house of only one bedroom, not a single U.S state has a 30% or below salary to rent. The simple truth is even a relatively small house cannot be afforded with minimum wage.

## Map of Studio Rent per State

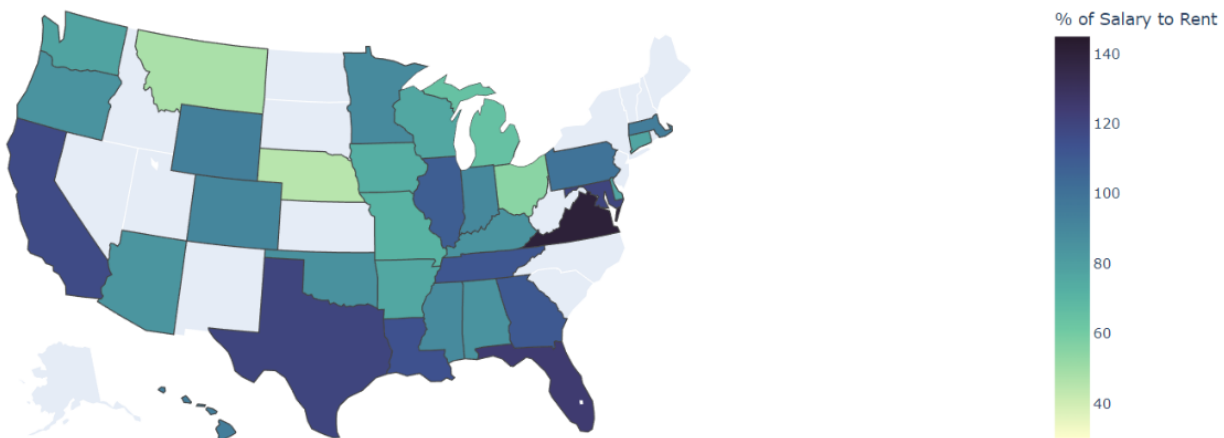
Median Studio Rent by State 2017



A studio is an apartment designed in a way which makes it compact and small. However, studio rents around the U.S are still shockingly expensive, with most states falling around the \$1200 region. Clearly, in most U.S states, there is a serious house pricing problem.

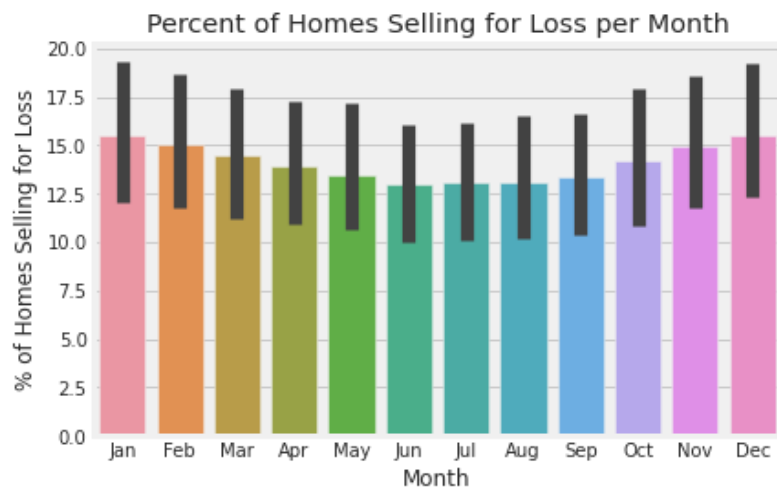
## Percent of Min. Wage for a Studio

Percent of Min. Wage Salary that goes to Studio Rent 2017



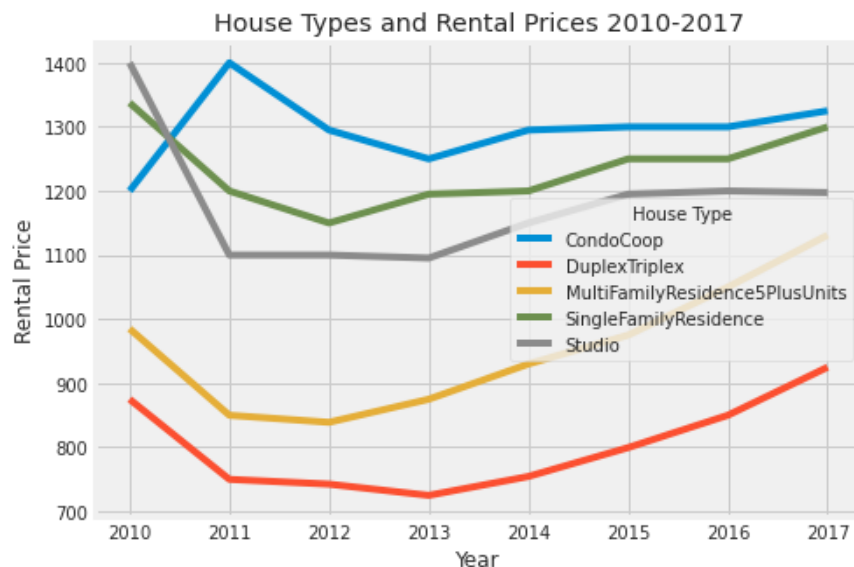
The results for the percentage of a minimum wage salary to studio rent is very similar for one bedroom houses. No U.S state manages to fall into the golden 30%, in fact, the majority of states have more than double that. This is extremely worrying, as it proves that across nearly all U.S states, even the most compact apartments are too expensive for minimum wage.

## Homes Selling for a Loss Every Month



Surprisingly, there is a visible correlation between the time of the year and the amount of homes that sell for a loss. Generally, around the winter season, homes are less in value and as a result sell for a loss more than in the summer season. Ideally, homes should be bought during the Summer.

## House Types and Rental Prices



Although houses of all types are mostly unaffordable in the U.S, different types of houses cost different amounts, and have seen different amounts of growth over the last decade. While houses such as condos have quite a high rent, houses such as duplexes have less. The majority of house types have seen an increased rent from 2010-17, however studios and single family's have slightly fallen.

## Conclusion

There is one clear message to get from this report: Housing prices in the United States have skyrocketed. It is not purely a California problem, rather the super majority of states have seen an increase in housing rent that is not adequate for minimum wage salaries.

Rent and buying homes are both similar in that they have become increasingly more expensive over the last decade. Although variables such as time of the month and type of house all are largely influential to housing costs, there is clearly a very big issue with the real estate market that desperately needs action.