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Econ 196 Honors Thesis

Title

Addressing the California Housing Crisis

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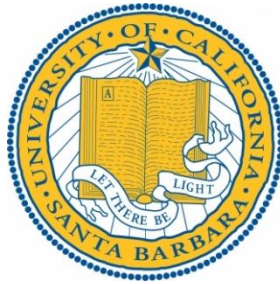
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DEPARTMENT OF ECONOMICS

Addressing the California Housing Crisis

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Abstract

The housing crisis in California has led to the need to find a solution that can provide much needed relief to those suffering from the massive supply shortage in the state. Out of the five housing propositions on the California 2018 midterm election ballot, Proposition 10, the ballot for rent control got the most media attention. This paper will look to quantify the effect of rent control and see if the benefits outweigh the costs. The paper will focus on the 1979 passing of rent control in Santa Monica and utilize a difference in difference method to see how key variables such as quality, public assistance and turnover rates change over time.

Background

As California has become the center for technological development for the world over the last half century, millions of people have flocked to the state to be part of the technology revolution. While the technological revolution has produced impressive results that have increased the quality of life for the world to levels previously unthinkable, it does not come without unintended consequences. The influx of millions of skilled workers has led to a major housing crisis. Low skill workers are getting pushed out of affordable housing as skilled workers are willing to spend more on prime real estate. This has led to over 134,000 homeless people that 'live' in the state. Though rents increase, income has pretty much flat lined as seen in Figure 1 below (Robertson). Figure 2 shows the housing affordability index, which measures the ability of a median income family to buy a median income home. The current value of 20% means only 20% of people in Santa Clara county (Santa Clara was chosen due to available data) can buy a median priced house.

Figure One:

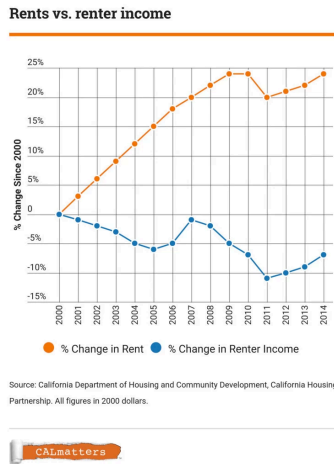
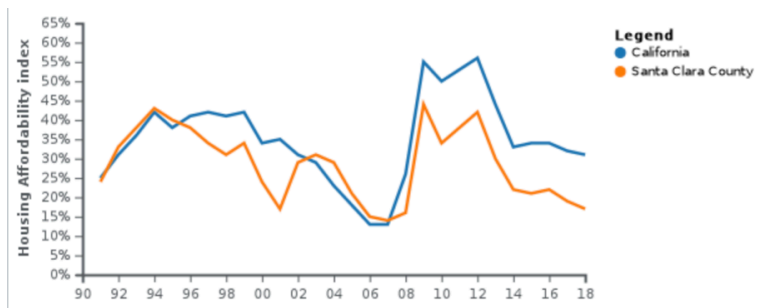


Figure 2



54% of tenants in the state are paying more than 30% of their monthly income towards rent (Levin). California’s housing crisis can be traced back to the *Not in My Backyard Movement* (NIMYBY) which was an environmental initiative from the 1970s that discouraged development of high density housing projects. Only selected areas were zoned for such projects and these areas were initially populated by low income people. Overtime, as people flocked to California, the state was not prepared to handle the influx of people because of the zoning rules and the inadequate supply of housing. This resulted in major displacement of low income folks, gentrification of the area and skyrocketing house prices (Figure 3). The state housing department

says we need 180,000 housing units per year to keep costs stable, but the state’s current supply is way below this goal (Figure 4).

With wealthy people coming to California, the demand for high end housing is lucrative for developers and construction companies so they commit resources to upper middle class communities. Developers know that building high density housing and apartment complexes will not result in a greater return on investment, which creates the incentive to develop high end communities.

Figure Three

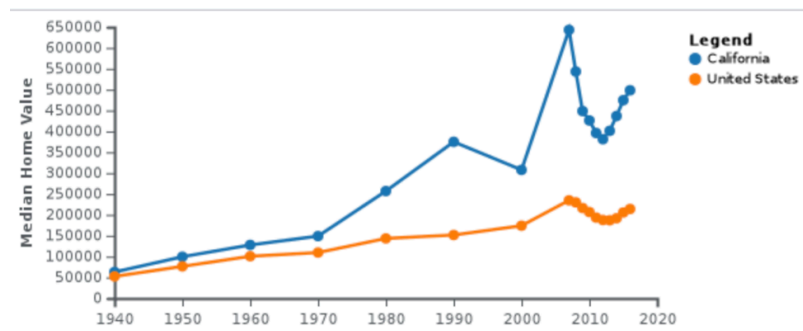
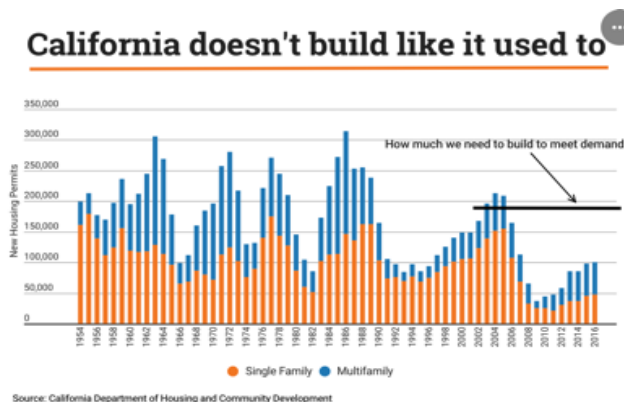


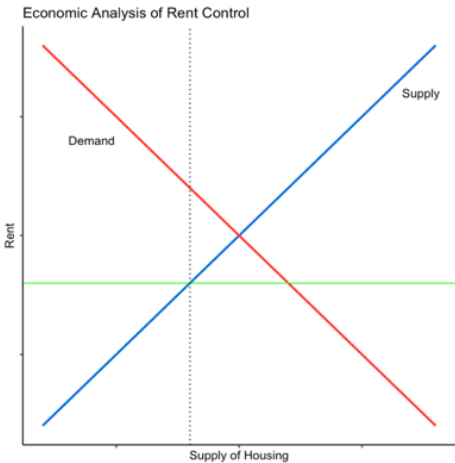
Figure Four



There have been many policy initiatives over the past decades to try to control the housing crisis. At the center of the debate is the discussion of rent control. Currently, California

ia under the Costa-Hawkings law passed in the early 90s which does not allow cities to enact mass rent control measures on their municipalities (Economist). This ruling was brought into question during the 2018 midterm election as Proposition 10 asked voters to consider a repeal of the Costa Hawkins law. The goals of rent control have great valor as it aims to provide tenants with cheaper rental rates and protect access to housing. Rent control could also potentially increase consumer spending as residents have more money to spend after the savings on rent. Rent control is also a convenient political tool because it doesn't involve major government spending when compared to other high cost government housing or subsidy initiatives. However, as with any government regulation, passing of rent control creates a deadweight loss (Figure Five).

Figure Five



With rent control, the supply of rental housing will fall as owners will take their houses off the market and new builders will hesitate to construct new apartment complexes. This will only further compound the already dire problem of the housing shortage. Also, as will be discussed later, rent control policies lead to a decrease in the quality of unit. This is because, most rent control laws allow the landlord to increase rent to market rent only when the previous tenant

vacates the unit. Also tenants in rent control units stay in their units for a significantly longer period of time. Previous studies have shown that, after controlling for income and race, tenants were on average staying in their controlled units for *seven* years longer (Qian). This suggests a misallocation problem, as people are not moving out of their units when they no longer have value for this. Consider a young undergrad just starting their career; they will be inclined to live in a rent controlled apartment unit because it will save them money. However, according to the study mentioned, this person will stay in this unit much longer than his peers in non rent controlled areas do. The consequences of this is there are many people who *need* this cheap housing, but it is not made available to them.

Related Literature

Rent Control has been passed in limited amounts in municipalities across the country. However, these initiatives have been studied in great detail. *The Effects of Rent Control Expansion on Tenants, Landlords and Inequality* by Qian et al is a great paper that focuses on the effect of a minor update in 1994 to the existing rent control law in San Francisco. With access to data about tenants moving behaviors, the researchers were able to determine that people living in rent control units would spend a much longer time compared to similar tenants living in uncontrolled tracts. This study also found that landlords in rent control areas were 15% more likely than landlords in non controlled areas to convert rental apartments to off market condos. Despite the clarity and success of this study, it is this researchers belief that this study exhibits a major flaw in using the control from San Francisco for the difference in difference methodology. Another study published by Fallis G et al., called 'Uncontrolled prices in a controlled market', discusses how rent control in one area affects the behavior of tenants and landlords in the surrounding areas. In order to conduct proper analysis, it is vital for the control group to be untouched by the

affects of the treatment. Fallis's also paper focused on how housing quality deteriorated by conducting a survey of tenants in rent controlled units. Results showed that rent controlled units had significantly less 'standard' amenities and the exterior of these units was also shown to be decreasing in upkeep.

Event (cite Santa Monica Housing board)

This paper will focus on the rent control policy that was passed in Santa Monica in April of 1979. This policy stated that landlords could only raise yearly rents only up to percentage set by the city housing department (6.5%). Landlords can charge market rents only when the previous tenant vacates. It is important to note that this policy is only on buildings built before 1979 in order to not discourage new building projects (Rent Control Board). This policy also makes it harder for landlords to evict tenants as well as discouraging removal of units from the markets. The policy applies to all rental housing in the city, from apartments to single family homes.

Data

Data was collected using the IPUMS NGHIS database. Data was available only at the decade level, so data was collected from the decade census at the census tract level of 1970, 1980 and 1990. The benefit of IPUMS data was all the data comes in clean and well labeled. However, the quality of data is not consistent across the three time period as some periods had very granular levels of information that were not included in other years. In order to overcome this, much time was spent on appropriately consolidating the right information. This paper will measure the effect of rent control on four different variables of interest: Condo Conversion Rates, Housing Quality, Low Income Immigrant population, and Public Assistance

Condo Conversion Rates

As mentioned before, landlords have an incentive to take their rental units off the markets once rent control is passed by converting the unit into a condo. Usually the landlord will move back in or sell the unit to capture their desired rate of return for their investment. This behavior compounds the existing housing shortage and it is important to quantify just how significant this action is. Data about the number of condos and condo conversion was collected from IPUMS to measure this effect.

Housing Quality

Landlords are allowed to raise rents to market rent only when the previous tenant vacates the unit. In order to get the tenant to vacate, the landlord is incentivized to provide poor housing quality and not properly upkeep the unit. Examples of this include; not maintaining the exterior of the unit, not supplying essential amenities in the household or not fixing damaged facilities in an appropriate time. It is important to quantify how housing quality changes because such behavior can lead to the creation of slum like living conditions for people living in rent control tracts. It can also be used to quantify the 'social' cost of rent control. Rent control is a 'costless' government initiative which makes citizens more likely to vote for it. However, the social cost is the deteriorating quality of the housing units in the communities will lower the quality of life for everyone in the area regardless of income. To study this social cost, data was collected on the number of kitchen facilities per housing unit.

Low Income Immigrant Population

Gentrification is a very controversial subject as countless debates are held to see if how much is necessary. Rent control is thought to protect housing access to people who need it the most. These would be low income immigrants who work necessary hard labor jobs in the local

communities. Rising house prices and rents drive these low income folks out of their city and make it really difficult to adapt. Protecting this group's access to housing is a major goal of rent control and it is important to study how effective it is at achieving it. Data on people of Hispanic origin by income level was collected.

Public Assistance

As mentioned before, compared to other forms of housing initiatives, rent control is virtually costless. In fact, it can be argued that rent control saves even more money because as people have money saved from cheaper rents, public assistance should be much lower. If this were proven to be true, this would be a major side benefit of rent control and lead to its passing in more cities. Data was collected on the dollars of public assistance paid out by the government.

Methodology

It is tempting to conduct a first difference of key metrics before and after rent control, but the flaw with that method is that it does not account for macro trends that could be going on at that time. For example, if we take the first difference of poverty percentage and see that poverty rates had gone up in Santa Monica and blame it on rent control this will be a flawed analysis because we have ignored macro trend effects. There were major inflation problems in the late seventies and early eighties which led to recession and increased poverty rates across the country. It is important to correctly isolate the treatment effect instead of incorrectly attributing results of other phenoms to rent control. The way this will be handled is by using a difference in difference regression model. I will select control cities and census tracts and take the second difference. While doing this it is important to consider the appropriate control cities as they have to be comparable. It is difficult to come up with the perfect control group no two cities are alike, so I expect some error in my final analysis. Santa Barbara was ultimately chosen as a control city

for my regression for a variety of reasons. The two cities have a similar make up as it low income immigrant class supports a wealthy upper class in the area. The cities pre treatment trends show that they are changing at the same rates. Table 1 shows how Income has changed in the cities over time.

Table 1

County	Year	Median Income
Santa Monica	1970	\$3000-4000
Santa Barbara	1970	\$3000-4000
Santa Monica	1980	\$8000-9000
Santa Barbara	1980	\$7000-8000

Equation 1 is the general form regression that will be run. It will control on tract, year effects and Income Effects. Tract and Year effects are simple binary variables. A binary variable for income was created to see if the median income a tract was above the median income level for the entire city. I am ultimately in the coefficient δ on rent control which is the difference in difference parameter. The estimate of δ is the difference in means of the variable of interest.

Regression One

$$\text{Variable of Interest} = \beta + \alpha * \text{tract} + \omega * \text{year} + \delta * \text{rent control} + \mu * \text{Income Effects}$$

Results

Condo Conversion

Equation 2 was the exact regression to measure the condo conversion rates. Table 2 displays the results of δ and its significance.

Regression Two

$$\text{Condos} = \beta + \alpha * \text{tract} + \omega * \text{year} + \delta * \text{rent control}$$

Table Two

Variable	δ	T Value	P(> t)
Condo Conversion	-60	-0.785	0.43390

A coefficient of -60 means that on average we expect 60 less apartment units in rent control tracts. However, this value is not significant at the 95% level as $P(T > |t|) > .05$. This leads to a failure to reject the null hypothesis that rent control leads to more apartments converted to condos. As mentioned before, a big fear of rent control policies is that landlords will compound the shortage by taking their units off the market. After running the regression, we see that this is not happening at a significant level. Close reading of the Santa Monica rent control makes it very difficult, yet not illegal for landlords to convert apartments to condos (CITE).

Quality

Equation 3 is the exact regression to measure housing quality. Table 3 displays the result of δ and its significance.

Regression 3

$$\text{Number of Household Amenities} = \beta + \alpha * \text{tract} + \omega * \text{year} + \mu * \text{Income Effects} + \delta * \text{rent control}$$

Table Three

Variable	δ	T Value	P(> t)
Household Amenities	-1.5	1.734E+16	-2E-16

Rent control is expected to bring the quality of the housing units and neighborhood down due to landlords having incentives to get the tenant to vacate. The δ for the quality regression is -1.5, which means, on average, units in rent controlled tracts had 1.5 fewer kitchen amenities in their residence. This is shown to be significant at the 95% as $P(T > |t|) < .05$. It is shown that rent control does significantly decrease the quality of interior housing quality. As there was no consistent data on exterior housing quality, it is safe to assume that landlords who were not providing proper amenities are probably not taking proper care of the property as a whole. As there was no consistent data on exterior housing quality, it is safe to assume that landlords who were not providing property amenities are probably not taking proper care of the property as a whole.

Gentrification

Regression Four

$$\% \text{ of Low Income Immigrants} = \beta + \alpha * \text{tract} + \omega * \text{year} + \mu * \text{Income Effects} + \delta * \text{rent control}$$

Table Four

Variable	δ	T Value	P(> t)
% of Low Income Immigrants	1%	-7.615	-2E-14

The regression shows that there is an average increase of 1% on the amount of low income immigrants, a result which is significant at the 95% level. This is one of the major goals rent control sets out to accomplish as it hopes to protect access to housing. We should expect to see significantly higher percentage of low income immigrants in areas with rent controlled tracts but the fact that there is basically no change leads to serious questions about the effectiveness of rent control. However, it is important to understand the make up of both Santa Monica and Santa Barbara have strong Hispanic populations so this result could also be from the fact that there are simply a lot of immigrants who live in these areas regardless of cheaper housing.

Public Assistance

Regression Five

$$\text{Public Assistance} = \beta + \alpha * \text{tract} + \omega * \text{year} + \mu * \text{Income Effects} + \delta * \text{rent control}$$

Table Five

Variable	δ	T Value	P(> t)
Public Assistance	-105	-0.005	0.9655

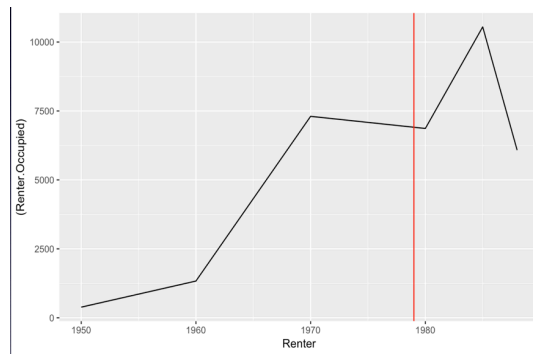
Regression Five measures the effect of rent control on dollars handed out in public assistance to people in the age range of 15-64. The δ of -105 is not significant at the 95% level leading to the failure to reject the null that Rent Control decreases the amount of public assistance paid by the

government. Recall, that it was expected that public assistance was expected to go down as citizens in rent controlled units have a little bit more money, so they need less form the government.

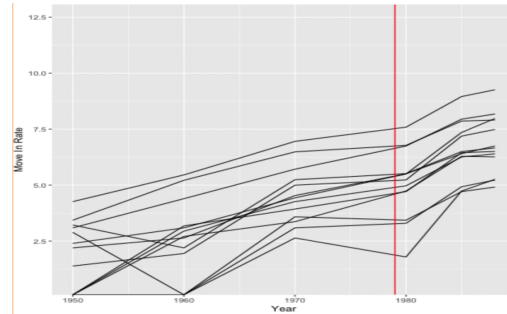
Tenure

There was additional data about tenant tenure, but the dataset was not complete enough to run a regression. The potential issue here is that people stay in their rent controlled units way longer than they have value for (Glaser). The below graphs show move in rates for Santa Monica, and move in rates for other major counties (Alameda, Santa Barbara and Santa Clara) after the 1979 policy passed. What can be seen in these graphs is that move in rates into Santa Monica declined heavily in the period afterwards. While there are many reasons as to why this may have occurred, this is one of the effects one can expect from rent control.

Move in Rates for Santa Barbara



Move in Rate for Cities in Alameda, Santa Barbara and Santa Clara County



Discussion

This paper's goal is ultimately to quantify the effects of rent control and to see if the benefits outweigh the costs. Rent control aims to protect access to housing and provide much needed alleviation for families suffering from the cost of living rapidly rising. However, rent control comes at a cost, which arises from the market inefficiency. If the benefits outweigh the costs, it makes sense for rent control to be more widely adopted across the country as a valid solution to the country wide housing problem. The biggest worry about rent control is that it significantly reduces the level of housing supplied. However, results from regression 1 showed that there was no significant decrease in the amount of rental units. From the data, rent control is significantly changing the quality of housing units in rent controlled tracts. Since data was only available for interior amenities, regressions could not be run for rent control's effect on the exterior condition of the house. However, based on the significant results constructed, it can be extrapolated that landlords in rent controlled tracts are not taking proper care of the exterior as well. This leads to creation of slum like conditions for the area which is a high hidden social cost of rent control. The data also shows that there is very small change in the amount of low income immigrants in this tract. This could be the result of strong influx of immigrant populations into the area outweighing the signal. Recall that the data is only measured for 3 time periods 10 years apart, so there is a strong possibility that the signal is diminished. It is this researcher's belief that

rent control does is probably slowing down gentrification and protecting access to housing, but not enough to the extent it is worth it. Rent control is pushed as a policy change that is costless to the citizens. As an added benefit, the municipality should expect to see decreased amount of government handouts due to the fact that people have more money. From the data, there is no significant change in the amount of public handouts expected. Lastly, we see that move in rates significantly drop after the policy passed. A big issue of rent control is that people who no longer have value for the place remain in the unit because of the cheap rents which is leading to further shortage. This occurs because rent control is a general policy and does not specifically target the people who need it the most. Once someone moves into a rent controlled place, they can stay for as long as they like, even if their financial status changes.

Another hypothesis for rent control is that consumer expenditure is increased in the controlled tracts, especially in the 'luxury' spending category. Perhaps families go out to eat more, or spend more time at the bowling alley, behaviors which positively affect the local economy. For this study, data was not available about consumer expenditure at the census tract level. However, if it can be shown that consumer expenditure goes up significantly in the local areas, then this would prove a huge benefit of rent control.

Conclusion

The contrast to rent control policies is resource intense subsidies or housing projects. While further research should be conducted, it can be seen that rent control does not effectively solve or alleviate the housing crisis in the state. Housing voucher could be seen as a viable alternative because it will be provided to those who directly need it and landlords would not have to change their behavior as they will receive market rent. Government supplied housing is also a viable alternative that is able to directly impact the affected groups. By acting as the landlords, the

government will provide the proper amenities and provide housing for cheap rents to people who need it. When people no longer need government supported housing, they will no longer be in the program. The difficulty with these alternative solutions is that they cost a lot of money and policymakers have a hard time convincing citizens that the money being spent will be appropriately used and effective (Glasser). However, if citizens figure out the social cost of rent control and how its not too effective, perhaps the state can finally end the California Housing Crisis.

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