

The Effects of Rent Control on New Jersey Municipalities

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Abstract

Rents have been increasing faster than the average income and the term “housing shortage” has been prevalent in media for years. Policymakers around the country are looking into using rent control as a solution to this deficiency in the number of affordable housing. In this thesis, I examine the effects of rent control on a municipality in New Jersey using a difference-in-differences model and American Community Survey data. I find that rent control does not have a significant effect on key housing market characteristics.

Introduction

Thirty-two percent of inflation in the US CPI is currently attributed to the increase in rents¹. Many people are being priced out of the communities where they live. For example, in Eagle County, CO, teachers, who are essential to the city cannot afford to live there anymore². The rent-to-income proportion is increasing³ and twenty-four percent of renters spend more than half of their income on rent (Korinth and Irvine, 2019).

One possibility is that there exists an underlying supply driven issue, commonly called a “housing shortage” which means that there are more people seeking housing at a given price than there are available units (Corinth and Dante, 2022).

According to the American Housing Survey in 2019, nearly 43 million housing units in the US were rented, comprising 34% of U.S. households. Cities that experience great population

¹TradingEconomics.com, “United States Rent Inflation”, Updated March 2023, Data from Bureau of Labor Statistics, <https://tradingeconomics.com/united-states/rent-inflation>

² CBSColorado.com Staff. “Eagle County School District Asks Residents to Take in Teachers Due to Rising Housing Prices.” CBS News, 2 Sept. 2022, www.cbsnews.com/colorado/news/eagle-county-school-district-homeowner-teacher-housing-crisis.

³ Bahney, Anna. “Majority of Americans Say They're Worried about Being Able to Pay for Housing | CNN Business.” CNN, Cable News Network, 15 Aug. 2022, <https://www.cnn.com/2022/08/15/homes/rising-rent-wages-housing/index.html>.

growth because of a growing job market for example, see an increase in their rent prices because of upward pressure on the housing market. Because of zoning restrictions, limited resources, and the time needed to build housing, building activity cannot necessarily keep up with demand, keeping prices high and supply limited (Quigley and Rosenthal, 2005).

In the US, rent control is often introduced by individual municipalities as a possible solution to alleviate the cost of living and tackle the housing shortage issue. This measure is implemented in different forms, such as percentage increase restrictions or inflation linked rent increase restrictions. Not every rental unit in generally rent-controlled areas will be regulated.

Rent control ordinances do not only simply curb rental price increases, but they usually come with an intricate set of regulations. Vacancy decontrol is one measure that that landlords can use to increase the rent of a unit to market price when tenants change. While older buildings are often subject to rent control, new buildings are typically not to encourage new building activity. Another set of regulations allows rent increases in updated buildings encourages renovation efforts.

In the United States, only a few states allow rent control: California, Oregon, New York, New Jersey, Maryland, Minnesota, and Washington D.C. However, rent control continues to be publicly debated and is generally considered a measure to ensure “affordable housing” across the US.

The theory of a competitive market would assume that solving an issue that is created by a lack of supply cannot be effectively solved by price ceilings. Any manipulation will lead to an inefficient outcome. The inefficiencies and the loss in total welfare that result from manipulation of the competitive market are called deadweight loss. Producer surplus is the difference between how much an agent would be willing to accept for a quantity and how much the market price is.

This is denoted by the area B+D+E. Similarly, consumer surplus is the difference between what an agent is willing to pay for a given quantity and the market price, denoted by area A+C. By imposing a binding ceiling on rent increases, producer and consumer surplus decrease, and there will be a supply shortage. Thus, the area of C+D will be transferred from producer and consumer surplus to deadweight loss. The transfer could manifest itself in people not being able to find an apartment, or landlords reducing the supply of rental housing by converting units to owner-occupied units.

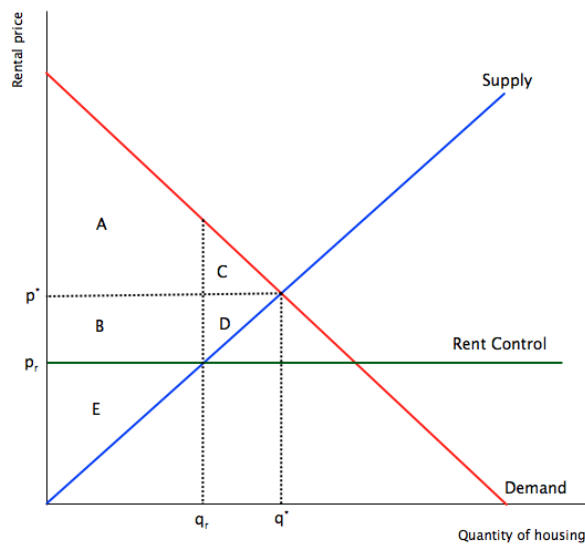


Figure 1: Welfare effects of rent control; Image address: <https://utopiayouarestandinginit.files.wordpress.com/2015/01/8a0f4-rentcontrol.png>

Existing literature has examined the effects of rent control on cities and their tenants, landlords, and the housing market. I set out to investigate the effects of rent control comparing rent-controlled and non-rent-controlled municipalities. What effects does rent control have on the general housing market in a given municipality?

A study by Diamond and McQuade (2019) finds that rents increased overall in San Francisco under rent control and therefore did not achieve the goal of the policy. The paper finds that there was a 15 percent decline in the rental supply of rent controlled units and found that

rental units were converted to owner-occupied units. The results are consistent with economic theory that assumes suppliers switching to a more profitable market.

Gliderbloom and Ye (2007) study the effects of moderate rent control on New Jersey municipalities from 1990 to 2000. The paper finds that moderate rent control has no significant effect on the housing market as measured by median monthly rent, median rooms, the quality of the rental housing stock, and new construction.

My thesis analyzes the effects of rent control on New Jersey municipalities during the period 2000-2020. The analysis contributes to the existing literature by adding the vacancy rate and the proportion of owner-occupied units as dependent variables. My analysis combines methods from papers analyzing California rent controls and research done in New Jersey. The time horizon is expanded by adding 2010 and 2020 data.

Literature Review

George Fallis and Lawrence B. Smith (1984) confirm the economic intuition established. Their research finds that prices of LA uncontrolled rental units rose significantly higher than what they would have without rent control. They created a theoretical model to observe the relationship between rental prices and the equilibrium price without rent control. To prove their model, they used data from LA from 1969-1978 to prove the outcome of the model.

Mense, Michelsen and Kholodilin (2019) examined the effects of rent control on land values in the German state of Bavaria. Governments could enact rent controls to cap rent increases at 10% in areas where there appeared to be a “tight housing market”. To encourage new building activity, any units built after 2014 were not allowed to be subject to rent control.

The paper finds that rents of uncontrolled units increase more under rent control, and land property values also increase by a higher rate.

Breidenbach, Eilers, and Fries (2019) build on the research about rent control in Germany by adding medium-term analysis. The paper finds that rent control measures did, in fact, lower rents by 5-9%. However, this effect was reached after 6 months of implementing rent control and rents returned to their previous average after 10-16 months. In the medium-run, rent control did not achieve its intended effect of lowering rents. The explanation that Breidenbach, Eilers and Fries offer is that rent controls are not well monitored and violating the ordinances have no legal consequences. The authors find that the share of new dwellings does not increase in rent-controlled municipalities, but rather that the quality of rent controlled units is lower over time as landlords stop renovating. The finding agrees with the economic theory that suggests if expected return on a unit is lowered by rent control, landlords will switch to offer higher valued units or reduce renovation efforts until their quality is equal to their worth.

The literature also examines effects of rent control on the population. A study by Diamond and McQuade (2019) examines San Francisco in the 1990s. The population living in rent-controlled areas has, on average, a lower income and lower educational attainment than the population living in other areas. The main findings of this paper are that tenant mobility is lower in rent-controlled areas. However, landlords then try to evict their tenants to substitute the rental units for owner-occupied units. The substitution is shown by a 15% decline in the rental supply of rent-controlled units. Sim's paper (2007) yields a similar result that finds owners switch from rental to owner-occupied units.

Finally, the decrease in rental supply leads to rents increasing in the long-run, drawing higher-income individuals. Chapelle, Guillaume (2019) find that under rent control, rents

increase in the city center of Paris, which leads to lower-income individuals moving out of the center. Hence, rent control only helped incumbent tenants and only for a limited amount of time.

The paper most closely related to my research is a paper examining the state of New Jersey. Gilderbloom and Ye (2007) detail the effects of moderate rent control in New Jersey municipalities in 2000. Specifically, the paper claims that moderate rent control, does not have a significant effect on rents, plumbing deficiency, new units built and the number of rooms. Moderate rent control is characterized by a more intricate set of regulations. They include vacancy decontrol, eviction protection measures, and guarantee landlords to increase rents to cover increasing expenses. This implies a certain non-restrictiveness of rent control measures. The authors use census data and monthly rent, the number of rooms, the number of new units built and plumbing deficiency as dependent variables in their analysis. Control variables include the vacancy rate, the percentage of renter-occupied units, the population change and the household income. The data for the rent control status of a municipality is from the 2003 rent control survey put out by the new Jersey department of Community Affairs – Division of Codes and Standards. The authors use an ordinary least-squared regression to analyze the data at hand. The results show that rents in rent-controlled municipalities do not significantly differ from those that do not have rent controls. This makes sense with the possible non-restrictive nature of these controls in mind.

In this thesis, I answer a similar question to Gilderbloom and Ye's analysis and analyze the effects of rent control on New Jersey municipalities. I expand the time horizon to include 2010 and 2020 data. The data for rent control status is from an updated rent control survey from 2009. I use variables that were controls in Gilderbloom's paper, such as vacancy rate and the percentage of owner-occupied units, as dependent variables. Additionally, I use a difference-in-

difference regression to differentiate between a treatment and a control group and their respective trends.

Data and Methodology

New Jersey is a state that allows each municipality to decide for themselves whether and in what form they would like to impose rent controls. Some municipalities have CPI linked rent controls while others' vary between a maximum increase of 1.6% per year and maximum increase of 7% per year. The most added control is vacancy decontrol which allows landlords to increase the rents to the free-market rate when tenants change.

The data on the rent control status for New Jersey municipalities come from the 2009 Rent Control Survey conducted by the New Jersey Department of Community Affairs. This survey provides a comprehensive list of New Jersey municipalities, had rent control in some form in 2009. The survey includes the current maximum increase in rents for some municipalities and information on vacancy decontrol implementation. The survey lists 121 municipalities. In total New Jersey has 564 municipalities, of which 121 have rent control and 443 do not.

As the survey does not list the year of first adoption, I researched the year of first adoption in the municipal codes of each municipality. Not every municipality has information on first adoption retrievable in their municipality codes or municipality websites. In further research, it would be effective to contact each municipality to determine the date of first adoption and any changes. Merged, these two data sets create a list that includes which municipalities have rent control, when they first adopted the measure and what their form was in 2009.

These data form the basis for my main explanatory variable, which is a dummy variable that indicates whether a municipality has adopted rent control.

The other variables necessary for the analysis come from US Census and the 5-year American Community Survey. The unit of observation for this analysis is the municipality level; therefore, I aggregated data to this level. The US Census does not group data at the incorporated municipality level. The closest level is “place” which is a list of both incorporated places and so-called Census Designated Places (CDPs). Many municipalities are not an exact match for CDPs. Therefore, I consulted New Jersey geocode data to find the best possible matches. Through this process, some municipalities that have rent control were omitted from the sample because there was no match between the geocodes and the 2010 Census data.

To retrieve data from the Census at the place level, I used the API function and imported the data in Excel. Then, I was able to merge the Census data with my data set on municipality rent control information. Finally, I imported this dataset into Stata, which is the program used for the analyses in this paper.

My sample from this dataset consists of 1 municipality that adopted rent control in 2010 as the treatment group and 3 municipalities that have never implemented rent control as the control group. The merged dataset across all years only yielded few municipalities that adopted rent control in the 2000s and specifically only one that adopted rent control in 2010, which is why my sample ended up being so constrained. Dumont, the municipality that adopted rent control in 2010, is in the vicinity of New York City and allows increases of either 1.5% or the percentage increase of the CPI over a year. Two of the three control municipalities lay in this vicinity while the other control municipality is in the periphery of Philadelphia (Figure 5).

Dumont and the three control municipalities are similar in population size, average rent, and number of total units in 2000 (Table 6).

To analyze the effect of rent control on the housing market, the dependent variables will include the proportion of owner-occupied units, the vacancy rate, and the median gross rent. The proportion of owner-occupied units is constructed by dividing the number of owner-occupied units in a municipality by the total number of units available. The vacancy rate is the number of vacant units divided by the number of total units available. Both variables will be on a scale between 0 and 1.

Explanatory variables will include rent control status, median income, population, and population age.

First, I will examine trends in the pre-treatment period by comparing slopes of the explanatory variables in the time of 2000-2010 to determine whether there might be underlying differences in municipalities that adopt rent control and those that do not.

For the analysis, I will use a difference in difference model with fixed effects from the year 2010 to 2020. For each of my dependent variables, I will run a separate regression.

The regression specification is:

$$y_{it} = \alpha + \beta_1 RC_i + \beta_2 after_t + \beta_3 (RC_i \times after_t) + \beta_4 X_{it} + \epsilon_{it}$$

Y is one of the dependent variables. The dependent variables are the average monthly rent, the proportion of owner-occupied units and the vacancy rate. RC is the variable for whether a municipality is in the treatment group that implements rent control or not. “After” indicates the time period, with a value of 0 representing the pre-treatment year of 2010 and a value of 1

representing the post-treatment year of 2020. The coefficient on the interaction term will indicate how much more the dependent variable increased/decreased in rent-controlled municipalities than in non-rent-controlled municipalities. X represents the control vector.

As the year 2010 is the year of policy adoption in the rent-controlled municipality, I assume that the year 2010 is in the pre-treatment period. The policy would not have an effect on 2010 because the first year in which rent increases would be controlled is 2011.

Descriptive Statistics

First, I examined the pre-treatment period of 2000 to 2010. In my sample, the municipality that implemented rent control in 2010 has a higher median rent in 2000 than the non-rent-controlled municipalities with \$882 compared to \$752 (Table 5). However, rents increased by \$160 more in non-rent-controlled municipalities than in the treatment municipality. Thus, the non-rent-controlled municipalities had a higher median rent in 2010 than the treatment municipality. Additionally, this shows that there was no parallel movement in the treatment and control municipalities in the pre-treatment period.

The treatment municipality started with a lower vacancy rate than the non-rent-controlled municipalities with 1.47% compared to 3.67% (Table 4). The vacancy rate increased to 2.43% and 6.50% in 2010. For this y-variable as well, the slopes for the treatment and non-treatment municipalities in the pre-treatment period were not the same.

The proportion of owner-occupied units in 2000 is 67.98% for the treatment municipality and 52.25% for the control municipalities (Table 3). The proportion of owner-occupied units increased by 11.7 percentage points in the control municipalities while the proportion decreased by 3.33 percentage points in the treatment municipality over the 2000-2010 time span. Thus, in 2010, the treatment municipality had a proportion of owner-occupied units of 64.65% which is

similar to the 2010 proportion in the control municipalities of 63.96%. Once again, the movement is not parallel in the pre-treatment period.

I examined the pre-treatment-period to determine whether there may be underlying differences in the municipalities that adopt rent control and those that do not. As the pre-treatment period slopes were different between the treatment and control municipalities for all variables, there might be underlying differences. This has the consequence that the conclusions about the effect of rent control might not be as strong.

Further, I ran a rudimentary regression, with all New Jersey municipalities and only the binary variable for rent control as an explanatory variable (Table 2). This regression shows that there is a statistically significant difference between municipalities that have rent control concerning population, vacancy rate and the proportion of owner-occupied units in 2000. Municipalities that have rent control have, on average, a population that is 20,000 people larger. The vacancy rate is 5.5 percentage points lower in rent-controlled municipalities and the proportion of owner-occupied units is 12 percentage points lower.

Results

I ran separate regressions for each of the dependent variables (Table 1).

The average rent in the municipality that adopted rent control decreased by \$48.67 more than the municipalities that did not adopt rent control. When adding controls to the regression, average rent decreased by \$116.50 more in the municipality with rent control. Therefore, controlling for population size, median income, and population age, positive bias was corrected. Neither of these results are significant. There is a significant difference between the median rent

in 2010 and median rent in 2020 among the control group. Rents increased by \$207.67 over the ten years observed.

The vacancy rate is lower for the treatment municipality in all examined years. However, the vacancy rate increased by 0.35 percentage points more without controls and 1.45 percentage points more with controls in the rent-controlled municipality than in the control municipalities. As the coefficient on the interaction term is positively correlated with the vacancy rate and the controls are all negatively correlated with the vacancy rate, the controls eliminated some negative bias. Once again, the results are not significant.

The proportion of owner-occupied units stays relatively stable over the examined time period. With controls the increase in the proportion of owner-occupied units is 4.93 percentage points. The coefficient on the interaction term is positively correlated with the proportion of owner-occupied units and the controls are negatively correlated with the proportion of owner-occupied units. This means that some negative bias was eliminated. The non-rent-controlled municipalities' proportion of owner-occupied units decreases slightly by 1.93 percentage points with controls. Overall, the proportion of owner-occupied units increases by 6.86 percentage points more in the rent-controlled municipality than in the control municipalities.

Discussion

While the small sample size limited the statistical power of the analysis, the regressions give insight into possible trends for rent-controlled and non-rent-controlled municipalities.

Rent in the treated municipality decreased by \$116.5 more than those that were not treated. This could indicate that the policy had a negative effect on rents, meaning that the measure might have accomplished what it was designed to do. However, the pre-period shows

that rents were already increasing at a slower rate in the municipality that adopted rent control than in the non-rent-controlled municipalities.

In the municipality that adopted rent control, the vacancy rate in 2000 and 2010 was lower and continued to stay below the vacancy rate of the control municipalities through 2020. Nonetheless, the vacancy rate increased more in the rent-controlled municipality than the non-rent-controlled municipalities. From the literature, economic intuition, and Table 2, we expect municipalities that are considering implementing rent control to have a lower vacancy rate. This is because there might be higher pressure on the housing market which the local governments could attempt to solve by implementing rent control.

In addition to the higher increase in vacancy rate in the rent-controlled municipality, the proportion of owner-occupied units increased as well. The absolute number of rental units decreases over the 10-year-period while the number of owner-occupied units increases (Table 7). This indicates that landlords possibly transform their rental units into owner-occupied units, which is what previous literature has found. This substitution would in turn reduce the effectiveness of the rent control measure because the number of rental units that are controlled might decrease. The results were not significant, a strong statement cannot be made based on these data.

The small sample decreased the statistical power of this analysis. A larger sample would increase the statistical power, adding confidence to a determination on whether rent control policies have an effect on the housing market.

Further, there may be omitted variable bias that is not yet controlled for in the regression. The quality of the housing stock could influence the housing market. If rent control is imposed, landlords might stop improving the quality of the rental units as their future value has decreased.

If the quality of the housing stock is poor, rents are lower⁴. Thus, adding the quality of the housing stock as a control variable would presumably decrease the change in rents between non-rent-controlled and rent-controlled municipalities.

Another variable that is currently not accounted for is the size of units. Perhaps a municipality with a higher increase in median rents has an increase in average unit size. Therefore, the higher increase in rents could be explained by the increase in unit size, and not necessarily due to rent control measures or the absence thereof. If municipalities that do not have rent control experience an increase in the size of their units, there would be positive bias.

Moreover, municipalities that adopt rent control may be different to those that do not. As Table 2 shows, municipalities that have rent control have lower vacancy rates and a lower proportion of owner-occupied units. A reason for these differences could be stricter zoning laws. Stricter zoning laws make it more difficult for higher-density units to be constructed, which could be the true root cause of the affordable housing supply issue. In further research, it would be paramount to evaluate zoning law strictness. A regression could be set up using a binary variable for rent control adoption as the dependent variable and zoning strictness as an explanatory variable.

Rent control ordinances may not be binding in certain municipalities. Perhaps the free-market rent increase is less than the maximum allowable increase that the rent control requires. In that case, the municipality that has adopted non-binding rent control would be no different from a municipality that had not adopted rent control because it would have no effects on rents

4 "America's Rental Housing 2022." Joint Center for Housing Studies of Harvard University., www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_Americas_Rental_Housing_2022.pdf. Accessed 7 Apr. 2023.

and the future value of units. Also, if the ordinances are not well-enforced, we would not expect the ordinances to have an effect.

Conclusion

This paper examines the effect of rent control on a New Jersey municipality in the time span from 2000-2020. The contribution to previous literature is the inclusion of vacancy rate and the proportion of owner-occupied units as dependent variables as well as using a difference in differences model to investigate the effects of rent control in New Jersey.

The small sample limited the statistical power and, accordingly, none of the results were significant. The trends found in the data are in accordance with previous findings drawn from research on rent control in San Francisco and Germany: the number of owner-occupied units increase while the number of rental units decrease, leading to a higher proportion of owner-occupied units. One could explore whether this is a result of new construction or the conversion of rental units to owner-occupied units.

The results agree with previous research done on New Jersey, which has determined that rent control did not have a significant effect on the housing market (Gilderbloom and Ye, 2007). This could be the case because of additional omitted variable bias, underlying differences in municipalities, lack of proper enforcement or non-binding rent controls.

The examination of the pre-treatment period of 2000-2010 shows that there is no parallel movement between the municipality that adopts rent control and those that do not in terms of median rent, vacancy rates and the proportion of owner-occupied units, even though they are in similar geographic areas with similar starting rents and population sizes. Additionally, the analysis shows that there are statistically significant differences between rent-controlled

municipalities in their vacancy rates, proportion of owner-occupied units and their population. Zoning laws could be one of these differences.

Future research could increase the sample size and expand the analysis to include a comparison of municipalities with binding and non-binding rent controls and zoning law strictness.

If rent control does not have a significant impact on the housing market, as this paper and previous research conducted on New Jersey suggests, then the question arises why municipalities should spend time and money on the implementation and enforcement of rent control. An underlying supply issue, indicated by low vacancy rates, might be the root cause of the affordable housing issue. Rent control measures will not be able to solve this issue and as found in other research, exacerbate rent increases and demographic displacement in the long run.

Cities and states across the country should not implement rent control as a solution to the lack of affordable housing as there is currently no research that has shown positive long-term effects of rent control measures. At best, as seen in this study and previous research on New Jersey, rent control has no significant impact on the housing market.

Table 1: Effects of Rent Control on Median Rent, Vacancy Rate and Proportion of Owner-Occupied Units

	Median Rent		Vacancy Rate		Proportion of Owner-Occupied Units	
Rent Control	-31	-99.90168	-0.04069	-0.03655	0.05257	0.05361
St. Error	(134.819)	(237.708)	(0.01985)	(0.01623)	(0.05591)	(0.06539)
P-Value	0.095	0.747	0.11	0.266	0.4	0.563
After	207.6667	103.7213	0.00156	0.02102	-0.02938	-0.01929
St. Error	(95.331)	(246.912)	(0.01404)	(0.01686)	(0.03953)	(0.06792)
P-Value	0.829	0.747	0.917	0.43	0.499	0.824
After*RC	-48.667	-116.496	0.00347	0.0145	0.04833	0.0685978
St. Error	(190.663)	(287.374)	(0.02807)	(0.01962)	(0.07907)	(0.07905)
P-Value	0.811	0.755	0.907	0.596	0.57	0.545
Controls	N	Y	N	Y	N	Y

Table 2: Regression of Total Population, Vacancy Rate and Proportion of Owner-Occupied Units on Rent Control in 2000 for All Rent-Controlled Municipalities in New Jersey

	Total Population	Vacancy Rate	Proportion of Owner-Occupied Units	Rent
Rent Control	19773.46	-0.0548	-0.1217	-45.035
St. Error	(2423.21)	0.0284	0.0276	29.878
P-value	0.000	0.009	0.000	0.132

Table 3:

Proportion of owner-occupied 2000-2010

	2000	2010	diff
treatment	0.67981	0.64653	-0.03328
control	0.52253	0.63956	0.11703
diff	0.15729	0.00698	-0.15030

Table 4:

Vacancy rate 2000-2010

	2000	2010	diff
treatment	0.01469	0.02427	0.00958
control	0.03672	0.06496	0.02824
diff	-0.02203	-0.04068	-0.01866

Table 5:

Median rent 2000-2010

	2000	2010	diff
treatment	882	1194	312
control	752.33	1225	472.67
diff	129.67	-31	-160.67

Table 6: Sample of Municipalities in 2000

Municipality	Rent	Proportion of Owner-Occupied Units	Vacancy Rate	Total Population
Dumont	882	0.679814385	0.01469451	17503
Hawthorne	949	0.474592263	0.02143146	18218
Carteret	741	0.531893735	0.03838798	20709
Glassboro	567	0.561098398	0.05034325	19068

Table 7: Number of Units in Dumont

	Rental Units 2010	Rental Units 2020	Owner-Occupied 2010	Owner-Occupied 2020
Dumont	1779	1754	4368	4804

Figure 2: Vacancy rate from 2000 to 2020

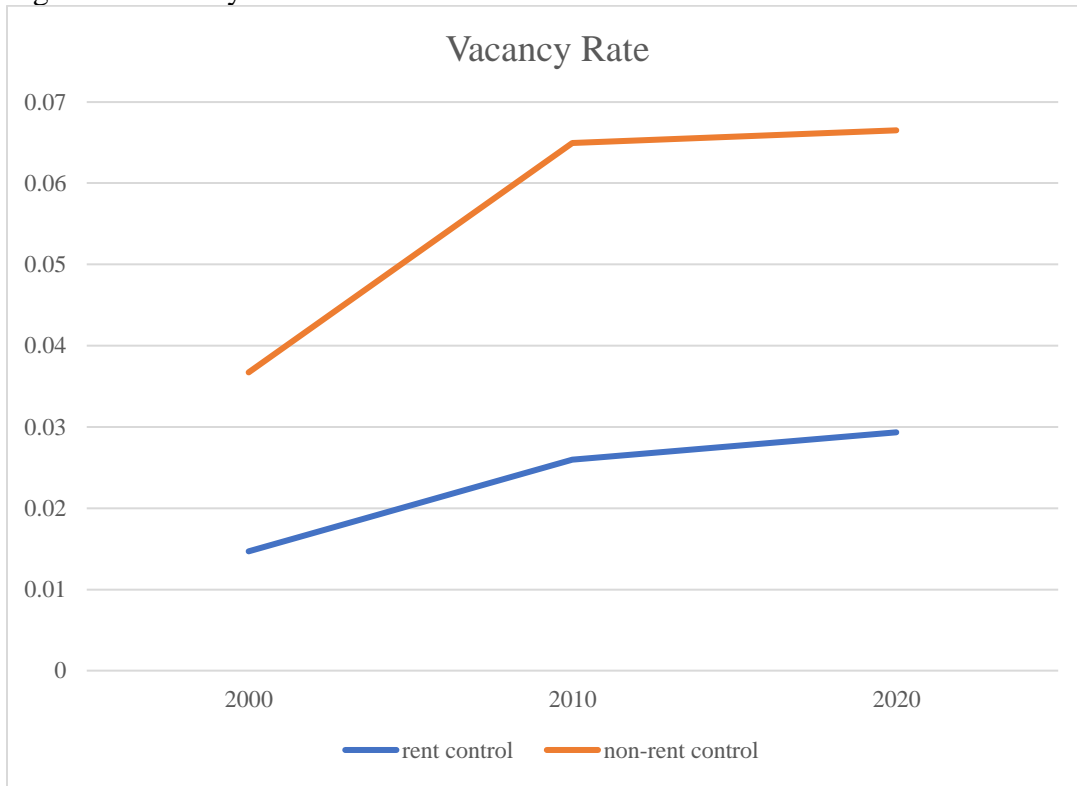


Figure 3: Median Rent from 2000 to 2020

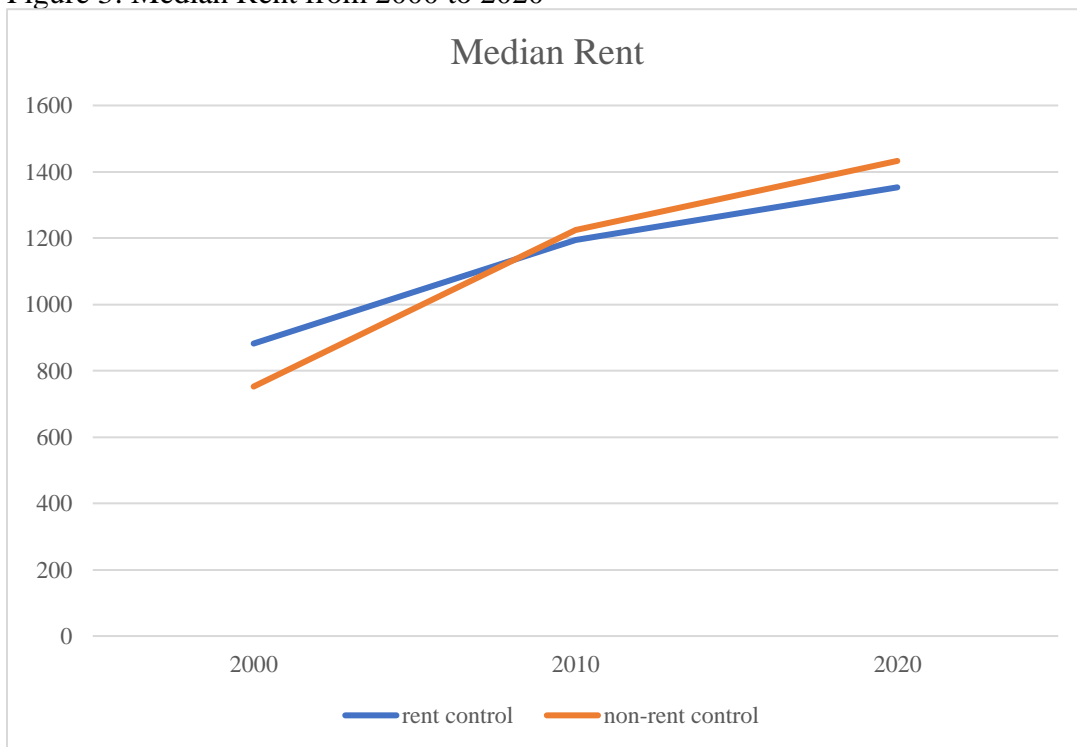


Figure 4: Proportion of Owner-Occupied Units from 2000 to 2020

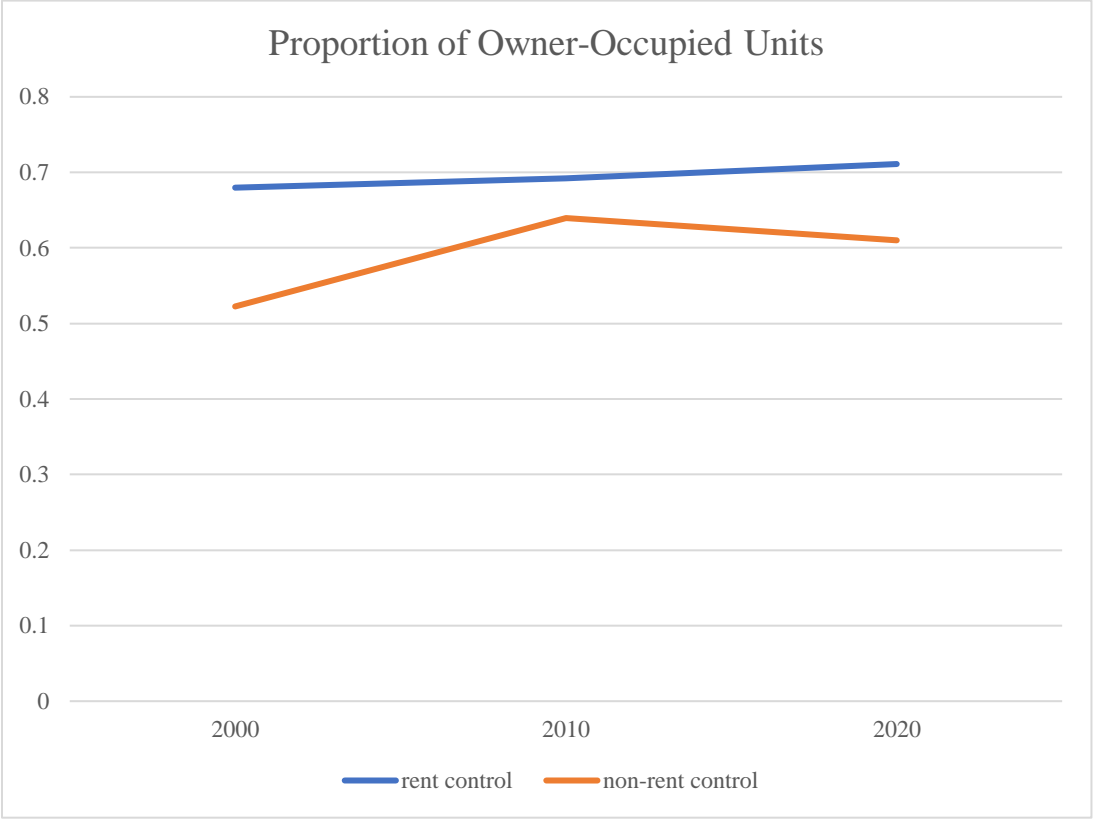
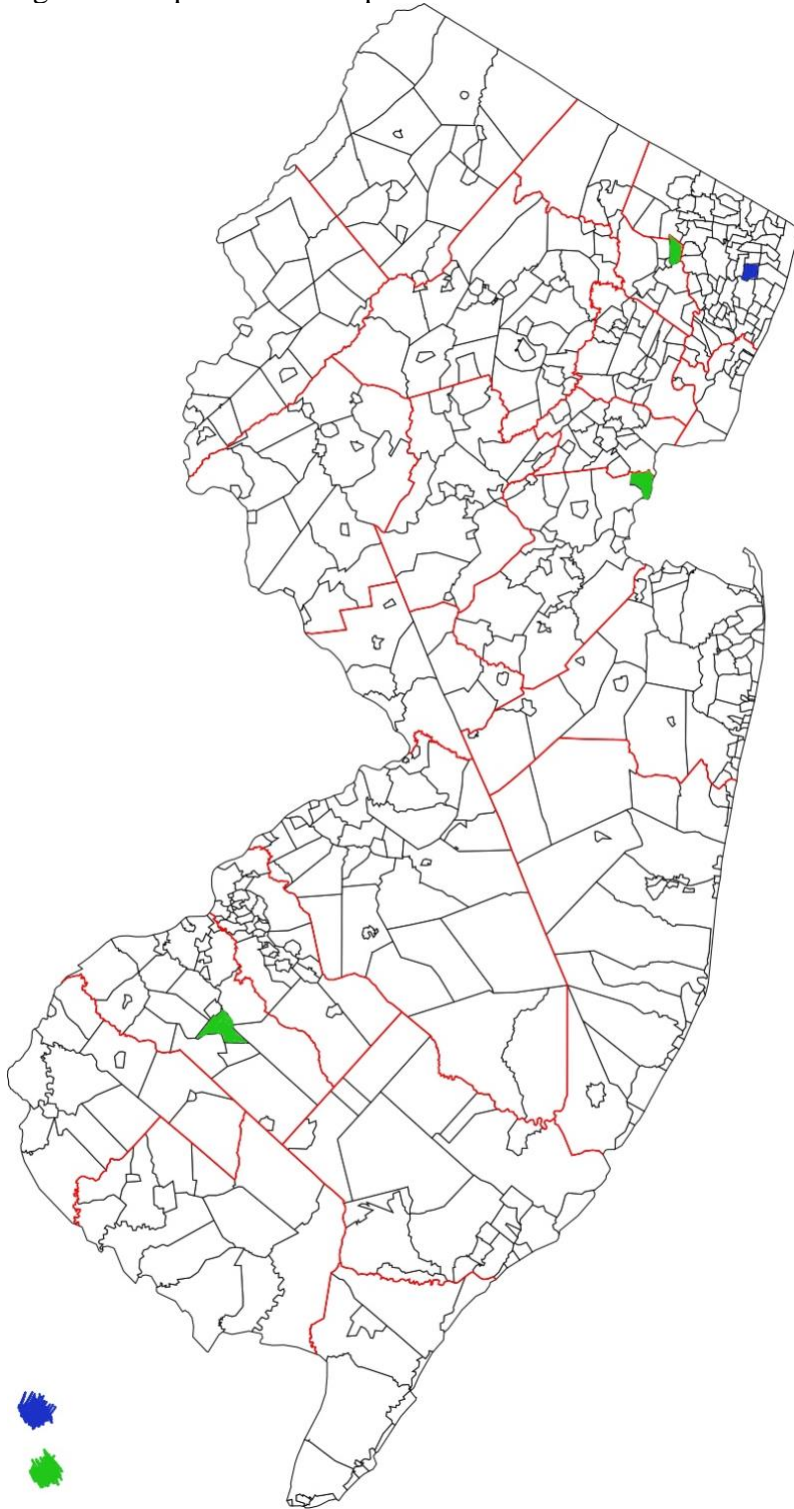


Figure 5: Map of NJ municipalities



Blue: Dumont Borough, treatment municipality
Green: Cartaret Borough, Glassboro, Hawthorne, control municipalities

Works Cited

- "America's Rental Housing 2022." *Joint Center for Housing Studies of Harvard University*,
www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_Americas_Rental_Housing_2022.pdf. Accessed 7 Apr. 2023.
- Breidenbach, Philipp, et al. "Temporal Dynamics of Rent Regulations – the Case of the German Rent Control." *Regional Science and Urban Economics*, vol. 92, 1 Jan. 2022.
<https://doi.org/10.1016/j.regsciurbeco.2021.103737>.
- Bahney, Anna. "Majority of Americans Say They're Worried about Being Able to Pay for Housing | CNN Business." CNN, Cable News Network, 15 Aug. 2022,
<https://www.cnn.com/2022/08/15/homes/rising-rent-wages-housing/index.html>.
- CBSColorado.com Staff. "Eagle County School District Asks Residents to Take in Teachers Due to Rising Housing Prices." CBS News, 2 Sept. 2022,
www.cbsnews.com/colorado/news/eagle-county-school-district-homeowner-teacher-housing-crisis.
- Chapelle, Guillaume, et al. "Spatial Misallocation and Rent Controls." *AEA Papers & Proceedings*, vol. 109, 1 May 2019, pp. 389-92. <https://doi.org/10.1257/pandp.20191024>.
- Diamond, Rebecca, et al. "Who Pays for Rent Control? Heterogeneous Landlord Response to San Francisco's Rent Control Expansion." *AEA Papers & Proceedings*, vol. 109, 1 May 2019, pp. 377-80. <https://doi.org/10.1257/pandp.20191021>.
- Fallis, George, and Lawrence B. Smith. "Uncontrolled Prices in a Controlled Market: The Case of Rent Controls." *American Economic Review*, vol. 74, no. 1, 1 Mar. 1984, p. 193.
- Gilderbloom, John & Ye, Lin. (2007). Thirty Years of Rent Control: A Survey of New Jersey Cities. *Journal of Urban Affairs*. 29. 207 - 220. [10.1111/j.1467-9906.2007.00334.x](https://doi.org/10.1111/j.1467-9906.2007.00334.x).

Keating, W. Dennis. "Rent Control: Regulation and the Rental Housing Market / W. Dennis Keating, Michael B. Teitz, Andrejs Skaburskis.", EBSCOhost, 1 Jan. 2019.

Mense, Andreas, et al. "The Effects of Second-Generation Rent Control on Land Values." *AEA Papers and Proceedings*, vol. 109, 1 May 2019, pp. 385-88,
<https://doi.org/10.1257/pandp.20191023>.

Sims, David P. "Out of Control: What Can We Learn from the End of Massachusetts Rent Control?" *Journal of Urban Economics*, vol. 61, no. 1, Jan. 2007, pp. 129-51,
<https://doi.org/10.1016/j.jue.2006.06.004>.

Quigley, John M, and Larry A Rosenthal. "The Effects of Land Use Regulation on the Price of Housing: What Do We Know? What Can We Learn?" *A Journal of Policy Development and Research*, 2005.