

The Role of NIMBYism in the Lack of Affordable Housing in California Cities

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Awards

Best Use of Quantitative Data

SSRIC 2025

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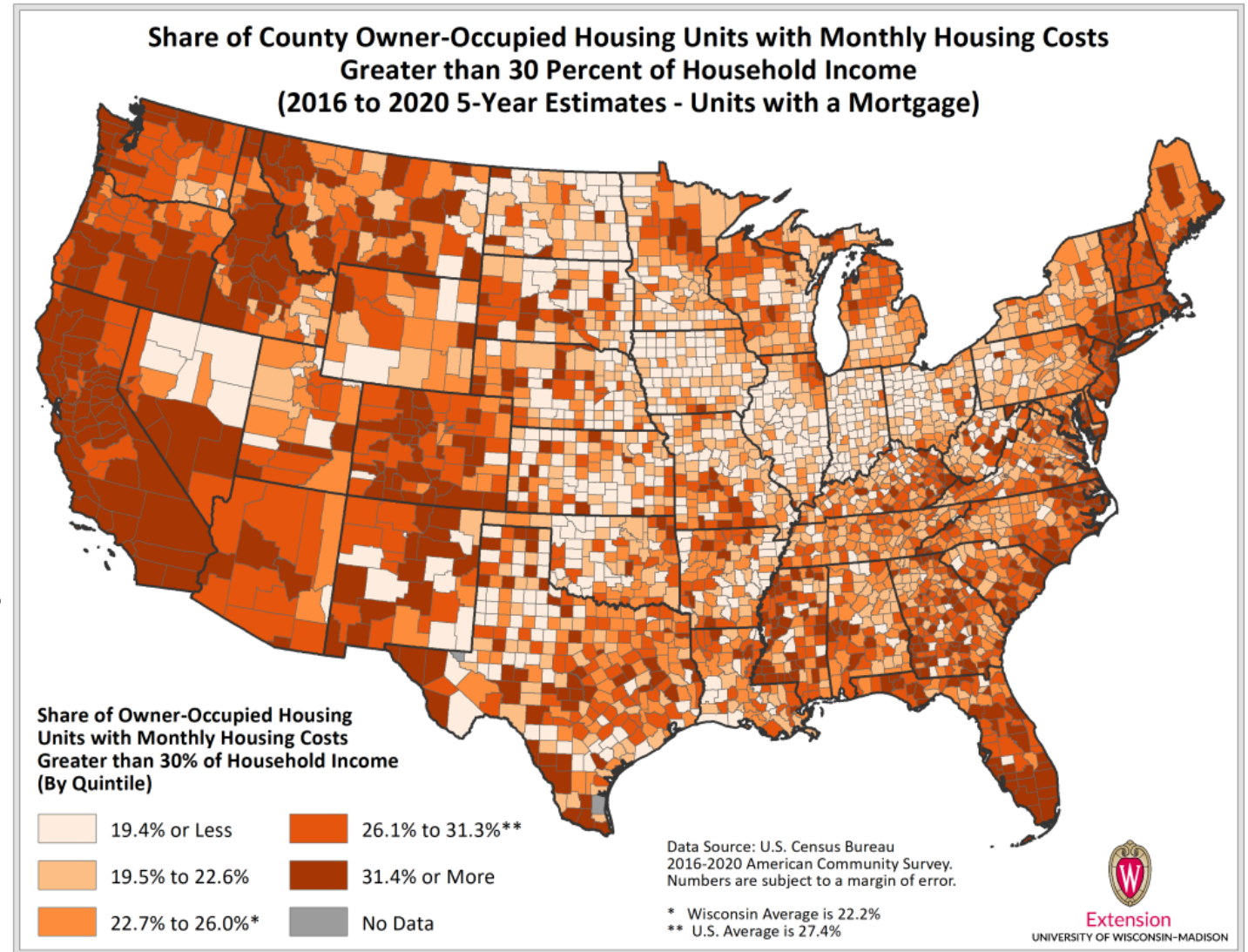
Agenda

1. Introduction to the affordable housing shortage
2. Overview of the impacts of NIMBYs on housing development
3. Significance of the study
4. Background on the Housing Element process.
5. Research Question
6. Description of data
7. Major findings
8. Implications and recommendations



The Chronic Shortage of Affordable Housing

- The Department of Housing and Urban Development (HUD, 2024) defines affordable housing to cost no more than 30 percent of the occupant's gross income.
- Every state has households in counties paying more of their income towards housing than what is considered affordable, but **the preponderance occurs in California.**
- The California Department of Housing and Community Development (HCD, 2022) projects a need for 2.5 million homes (315,000 annually) to resolve the housing shortage.



What is Causing the Shortage in California?

- “Opposition to neighborhood change,” sometimes known as “NIMBYism,” can cause housing shortages because opponents are self-interested in protecting their home value (Fischel, 2001; Dougherty, 2002; Record, 2021).
- Einstein et al. (2019) believes that NIMBYs oppose housing development because it could harm the “character” of the community. Ramzanpour et al. (2023) finds NIMBYs fear the new residents’ socio-economic status more than the physical or structural elements of the development.
- NIMBYs are just one potential cause of California’s housing shortage. This study incorporates several of the other causes listed below as other explanatory variables.



Historical patterns of housing segregation and exclusion



Opposition to neighborhood change



Numerous, varied, and opaque regulatory hurdles



Insufficient land zoned and available for housing



Federal support has not kept up with need



Affordable production constrained by financing limitations



High costs continue to constrain new housing production



Expiring subsidies create potential loss of affordable homes

Significance of this Study



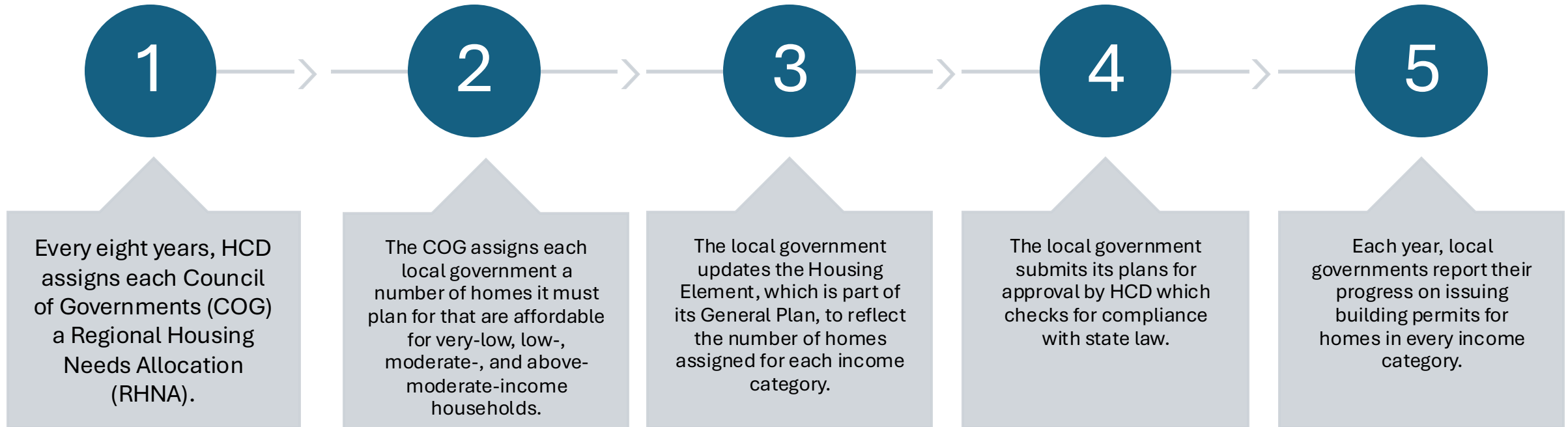
- Existing qualitative research shows that NIMBYs may negatively impact housing development, but few use quantitative data with statistical analysis to determine if NIMBYism is a factor in the housing shortage and, if so, the extent to which it is.



- Most of California's counties are struggling with an affordability crisis. Understanding potential causes of the housing shortage is critical.

The Housing Element Process

- California's State Legislature enacted a Housing Element Law in 1969 that requires local governments to plan for enough housing affordable at all income levels (Housing Elements, 1969).
- This process offers annual data for the state to understand local governments' progress towards approving housing projects it is estimated to need.
- As of the recently completed Fifth Cycle, HCD data shows that 20.7% of the RHNA was satisfied for very low-income housing, 30.8% for low-income, and 56.1% for moderate. Overachievement only occurred for above-moderate-income housing at 144%.



Research Question

Do cities with more people who exhibit a larger percentage of the characteristics of a “NIMBY” as described in the literature have less housing development as measured by the housing permits they issue?

Description of Data

Dependent variables provided by the Department of Housing and Community Development:

- Housing permits issued for very-low-income, low-income, moderate-income, and above-moderate-income housing in each city.
- Total housing permits issued in each city.

Independent/Explanatory variables:

- Percentage of NIMBY demographics and characteristics in each California City measured by the **American Community Survey**
- Measures of housing approval institutions in each city provided by the **League of California Cities** and **National Center for Education Statistics**.
- Measures of previous housing segregation through HOLC redlining in each city provided by **Redlining in New Deal America**.
- Measures of housing demand and scale in each city provided by the **Pacific Northwest Regional Economic Analysis Project**.

Explanatory Variables in Detail

NIMBY Demographics

% White

% College Educated

% Age 55+

NIMBY Motivations

% Households Owner-Occupied

% Households Reside Prior to 2000

Median Home Value

Local Expenditure Per Capita

Housing Approval Institutions

Charter City Dummy

Strong Mayor Dummy,

Council Mayor Equal Dummy

Days Housing Element Not
Approved

Housing Element Never Approved

Housing Segregation History

HOLC Redline Map Dummy

Years Since Incorporation

Housing Demand

Suburb Dummy

Town Dummy

Central City Dummy

Large City Dummy

County GDP Per Capita

Scale

Population

Square Miles

Existing Housing Supply

Housing Units

Percent of Occupied Housing Units



Historical patterns of housing
segregation and exclusion



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housing production



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Major Findings—NIMBYs

NIMBY Characteristics with Negative Impacts:

- 1 percentage-point increase in residents ages 55+ decreases housing permits issued for very-low, low-, moderate-, and above-moderate income housing, and all housing respectively by 6.1%, 5.6%, 5.3%, 4.7%, and 5%.
- A 1 percentage point increase in long-term residents decreases building permits for moderate-income, above-moderate-income, and total housing by 3.2%, 4.2%, and 3.3% respectively.
- A \$100,000 increase in median home value decreases building permits issued for moderate-income housing by 7.8%

NIMBY Characteristics with Positive Impacts:

- 1 percentage-point increase in college graduates increases building permits issued for moderate-income housing by 1%.
- A 1 percentage-point increase in homeowners increases building permits for very-low, low-, moderate-, and above-moderate-income housing and total housing by 1.9%, 1.2%, 2.4%, 3.2%, and 2.9% respectively.

Major Findings—Control Variables

Housing Approval Institutions:

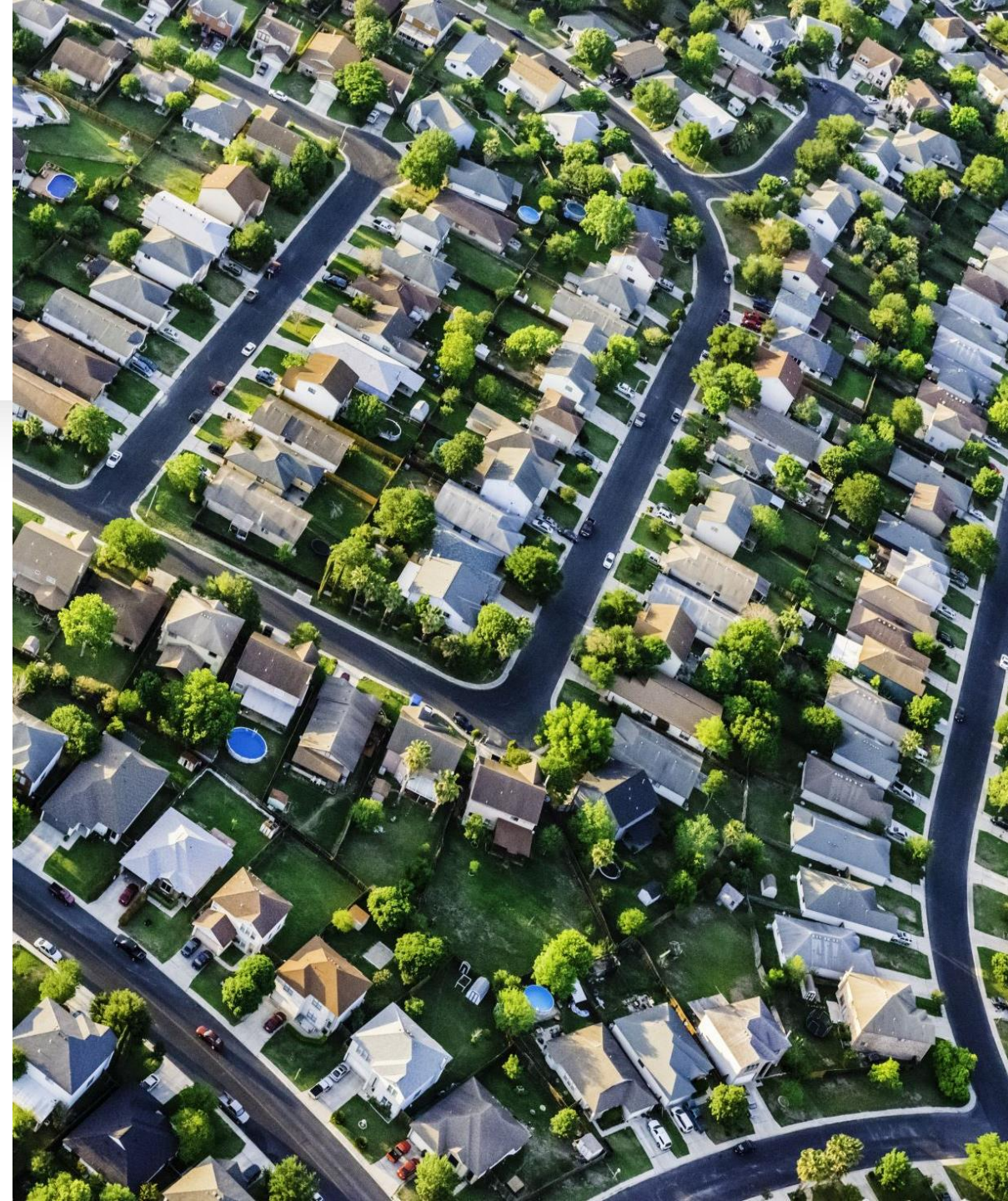
- For every 100 days a city's Housing Element remains unapproved, there is a decrease in building permits for very-low-income, low-income, above-moderate-income, and all housing by 2.3%, 3.1%, 2.2%, and 2.4%.
- If a city operates under a charter, building permits increase for very-low-income housing by 240%, low-income housing by 143%, above-moderate-income housing by 321%, and all housing by 206%.

Unexpected Findings:

- If a city has a Strong Mayor, their building permits decrease for above-moderate-income housing by 85% and all housing by 80%.

Implications

- Some of the first empirical evidence that if a jurisdiction has a larger percentage of its residents displaying NIMBY characteristics as shown in the literature, permits for low-income and moderate-income housing go down.
- Recommendations:
 - Reduce opportunities for local opponents to stop housing development by requiring public review only if a change in zoning is required (Einstein et al., 2019).
 - Reform of the California Environmental Quality Act (CEQA).
 - Continue building on recent HCD policy for quick submission, oversight, and technical assistance to allow cities to more quickly adopt a compliant housing element.



The background of the slide is a light blue surface covered with numerous small, square wooden blocks. Each block has a black question mark printed on its top face. The blocks are scattered across the entire frame, creating a textured, repetitive pattern. In the center of the image, there is a white rectangular box with a thin black border. Inside this box, the word "Questions?" is written in a large, black, sans-serif font.

Questions?

Selection from Regression Results

	Very-Low Income	Low-Income	Moderate- Income	Above Moderate- Income	All Housing
% White	0.999	1.009	1.007	0.998	1.001
% College Educated	1.003	0.997	1.009*	0.993	0.996
% Age 55+	0.939***	0.944***	0.947***	0.953***	0.950***
% Houses Owner-Occupied	1.019**	1.012***	1.024***	1.032***	1.029***
% Households Reside Before Year 2000	0.992	1.003	0.968***	0.958***	0.967***
Real Median Home Value 100k	0.998	0.990	0.922***	1.007	0.990

Regression model

$$\text{Building Permits}_i, \text{Income Category} = f(\text{NIMBY Demographics}_i, \text{NIMBY Motivations}_i, \\ \text{Housing Approval Institutions}_i, \text{Housing Segregation History}_i, \text{Housing Demand}_i, \\ \text{Existing Housing Supply}_i, \text{Existing Land Use}_i), \quad (1)$$

where;

$$\text{Income Category} = \text{Very Low (0-50\% of Area Median Income), Low (50-80\%),} \\ \text{Moderate (80-120\%), Above Moderate (120\%+), or Total}, \quad (2)$$

$$\text{NIMBY Characteristics} = f(\% \text{ White}, \% \text{ College Educated}, \% \text{ Age55+}, \% \text{ Households} \\ \text{Owner-Occupied}, \% \text{ Reside Prior 1980}, \text{Median Household Income}, \text{Median} \\ \text{Home Value}, \text{Local Expenditure Per Capita}) \quad (3)$$

$$\text{Housing Approval Institutions} = f(\text{Charter City Dummy}, \text{Strong Mayor Dummy}, \\ \text{Council Mayor Equal Dummy}, [\text{Council Manger Dummy Excluded}], \text{Days} \\ \text{Housing Element Not Approved}, \text{Housing Element Never Approved (0 or 47.48)}), \quad (4)$$

$$\text{Housing Segregation History} = f(\text{HOLC Redline Map Dummy}, \text{Years Since} \\ \text{Incorporation}), \quad (5)$$

$$\text{Housing Demand} = f(\text{Suburb Dummy}, \text{Town Dummy}, \text{Central City Dummy}, \text{Large City} \\ \text{Dummy}, [\text{Rural Dummy Excluded}], \text{County GDP Per Capita}), \quad (6)$$

$$\text{Existing Housing Supply} = f(\text{Housing Units 1k}, \% \text{ Housing Units Occupied}) \quad (7)$$

$$\text{Existing Land Use} = f(\text{Population Density}). \quad (8)$$

What About the Impact of Segregation?

- The regression model included a dummy variable to indicate if a city was formerly redlined.
 - I found no significant results.
- The model also included a measure of years since incorporation which can capture historical segregation.
 - The longer a city was incorporated, the greater its permitting of very-low-income, low-income, and total housing.

What About Economic Factors?

- The regression model included county GDP as a measure of economic activity.
 - I did not find any significant impact of economic activity of a city's surrounding county on building permits issued.
 - It is likely other explanatory variables in the model correlated with and captured this intended effect.