

Panel - Housing Affordability Is an Issue Everywhere: Why Are Housing Markets Becoming Less Elastic?

~~1)-Built Out Cities? a New Approach to Measuring Land Use Regulation~~

~~-Paavo Monkkonen, Michael Manville, Michael Lens, UCLA~~

~~2) Monocentricity, Amenitized Land, and the Future of Housing Supply~~

~~Channel Surfing: The Evolving Provision of New
Housing Supply & Declining Elasticity~~

~~-Clemens Pilgram, Christian L. Redfearn, USC~~

~~3) Why Are Housing Markets Becoming Less Elastic? The Rising Barrier to Affordability: The Cost of Re-Development & the Effectiveness of New Supply~~

~~Houston, You Have A Problem:~~

~~How Large Cities Accommodate More Housing~~

~~-Anthony W. Orlando, Christian L. Redfearn, Cal State Pomona, USC~~

Discussant: Chris Cunningham, Federal Reserve Bank of Atlanta*

*All views expressed are my own and do not reflect those of the Federal Reserve Bank of Atlanta or the Federal Reserve System

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Overview of:

~~Monocentricity, Amenitized Land, and the Future of Housing Supply~~
Channel Surfing: The Evolving Provision of New
Housing Supply & Declining Elasticity

- Document where (what types of neighborhoods) are accommodating new housing production over time
 - Create boundary consistent over time block groups
 - Identify employment clusters and specific industrial block group based on industry employment
- Provides a Taxonomy of Neighborhoods
 - 1) Exurban
 - 2) Suburban Residential
 - 3) Urban Residential
 - 4) Postindustrial
- Incorporates access to amenities (non-chain restaurants) beyond usual monocentric (CBD anchored) framework

Was it post-industrial or was the land bid away from industry because we could densify existing residential



- “potentially due to fewer land assemblage issues”? Or... fewer incumbent homeowners to oppose?

Findings:

~~Monocentricity, Amenitized Land, and the Future of Housing Supply~~ Channel Surfing: The Evolving Provision of New Housing Supply & Declining Elasticity

- In major metros, most growth still occurring in exurban locations

Ex: In Atlanta, between 2010-2020, 165K new “exurban” units, only, 12K and 25K new units in “urban residential” and “postindustrial”, respectively

- Exurban growth slowing, denser areas getting more growth

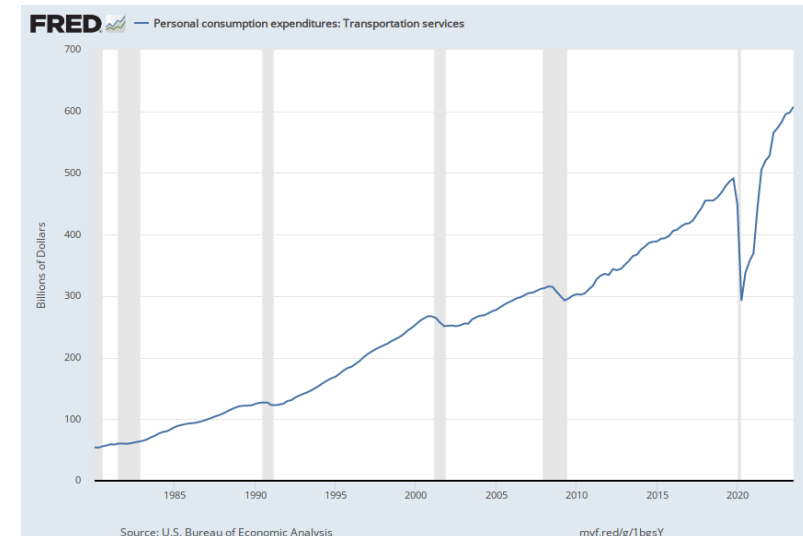
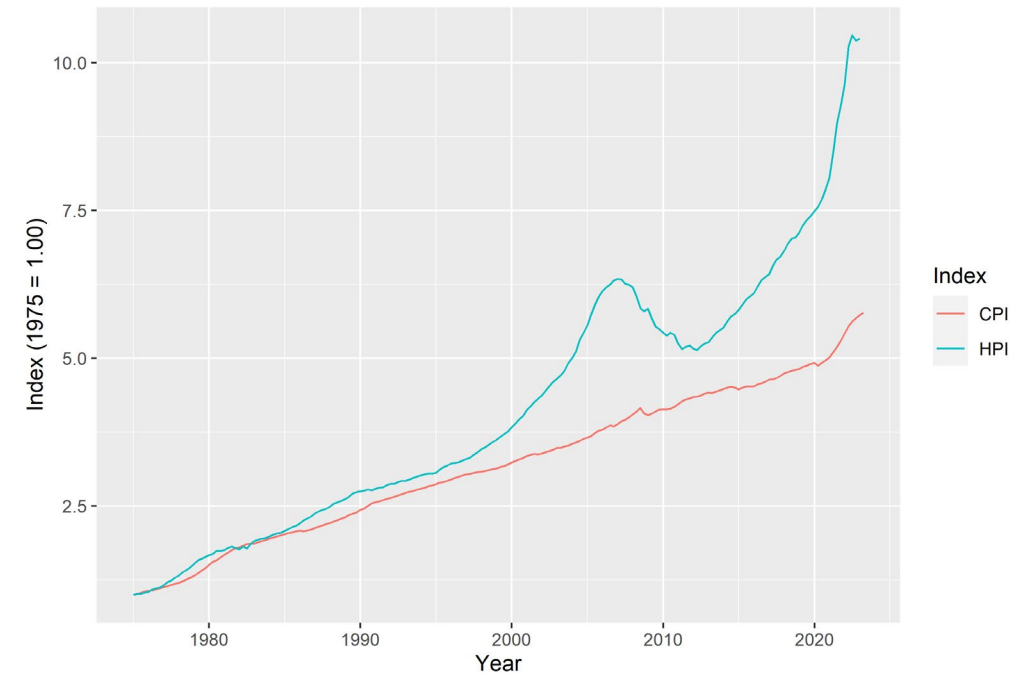
Average of Table 1

	Exurban (<2 units/acre)		Suburban (2-6 units/acre)		Urban (>6 units/acre)		Postindustrial	
	2000-10	2010-20	2000-10	2010-20	2000-10	2010-20	2000-10	2010-20
Avg.	36.7%	16.2%	3.9%	3.4%	0.1%	4.6%	8.3%	20.4%

Next steps:

- Summary table showing share of land within the MSA by typology
- A table to summarize findings across major MSAs
- Share of all unit growth captured by each topology
- You've got the LODES and amenity access isochrones, maybe look at housing+transportation costs?

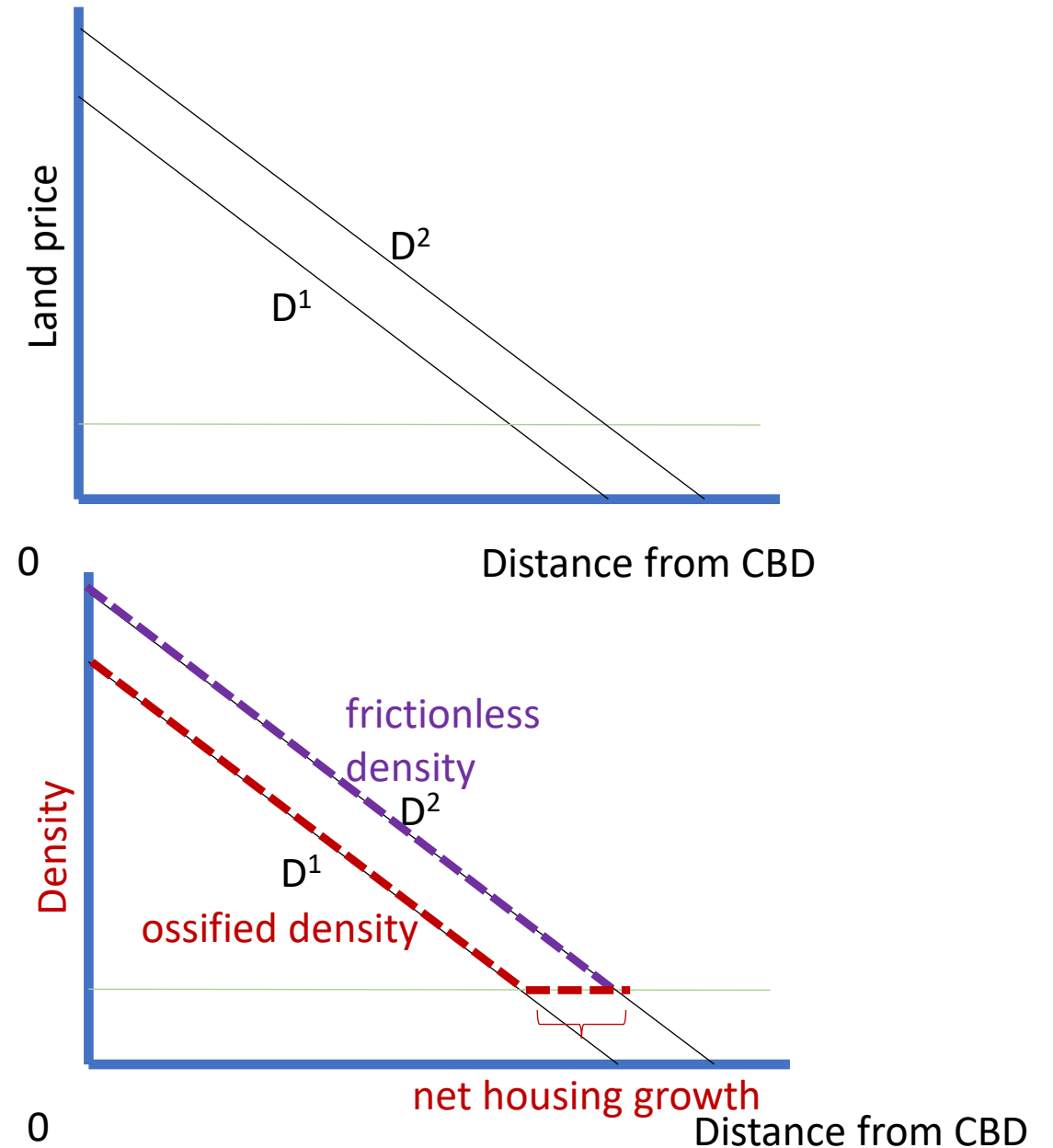
US House Prices & Inflation Indexes



Overview of:

Houston, You Have A Problem: How Large Cities Accommodate More Housing

What if supply elasticity is less
about regulation and mostly just
a function of the remaining
accessible green space?



Seattle

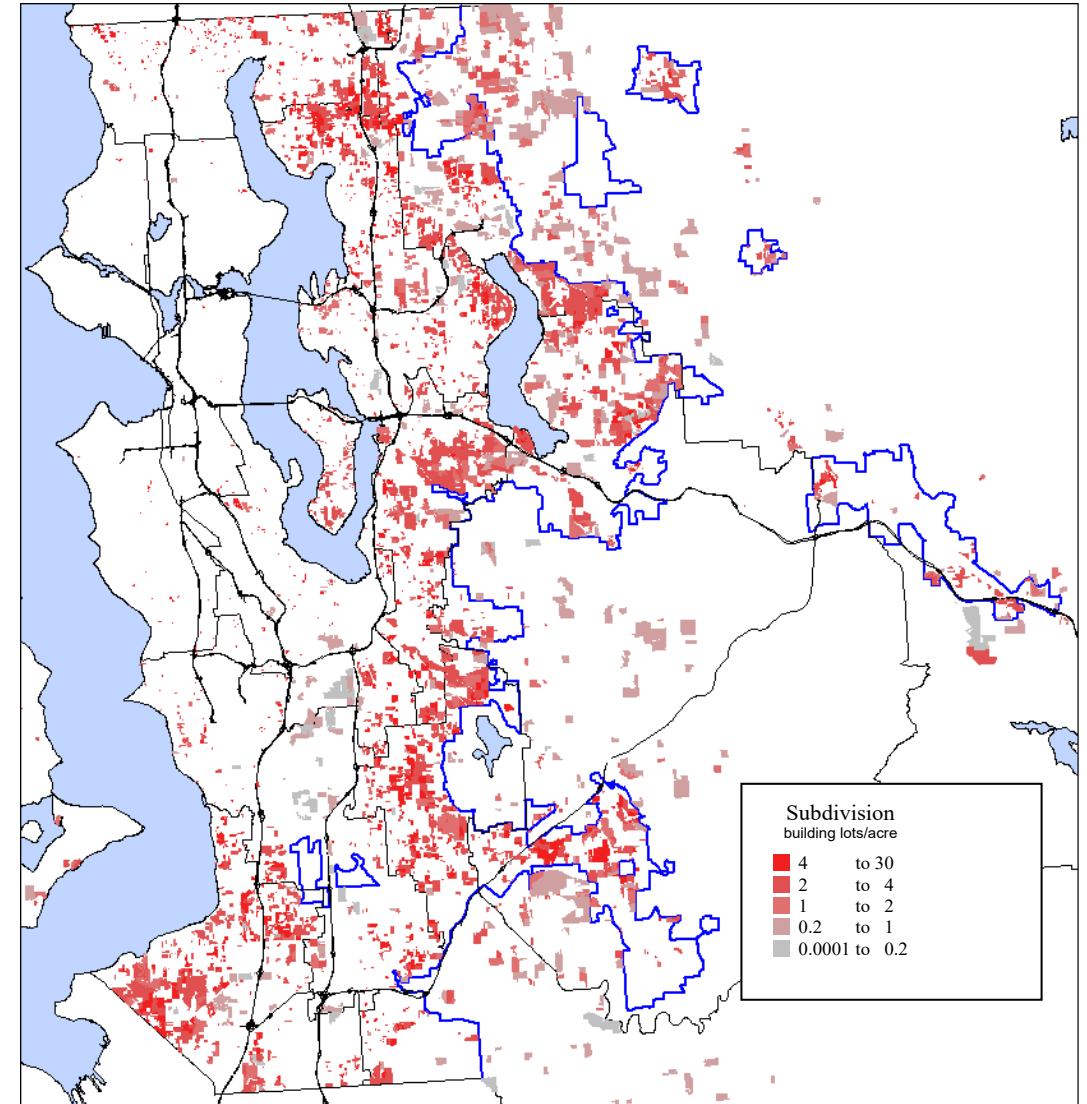
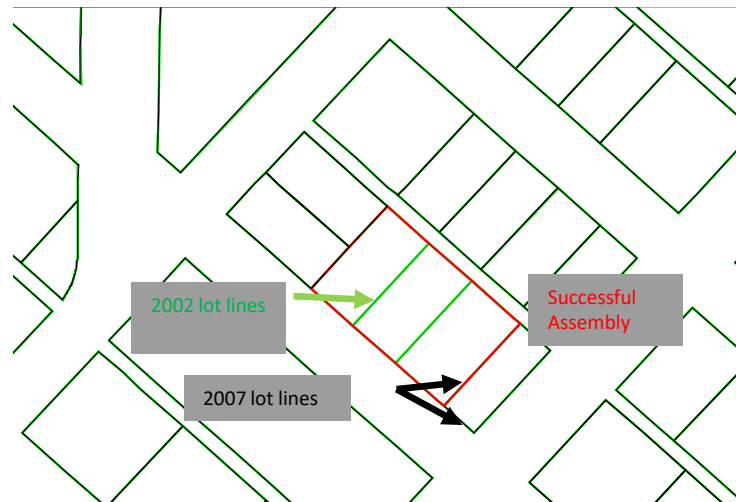
Density of Newly Permitted Subdivisions 1965-2005

Zoning Constraints on Density

- 1) Minimum lot size
- 2) FAR
- 3) Number of multifamily units on a lot

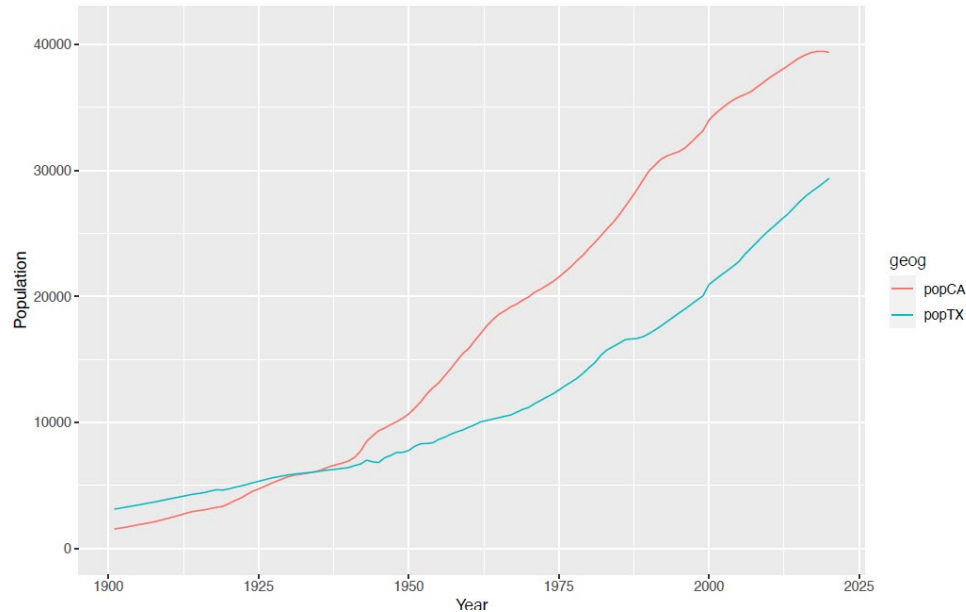
Non-Zoning Constraints on Density

- 1) Demolition existing structures and re-construction
- 2) Land Assembly
- 3) Rising construction cost with density

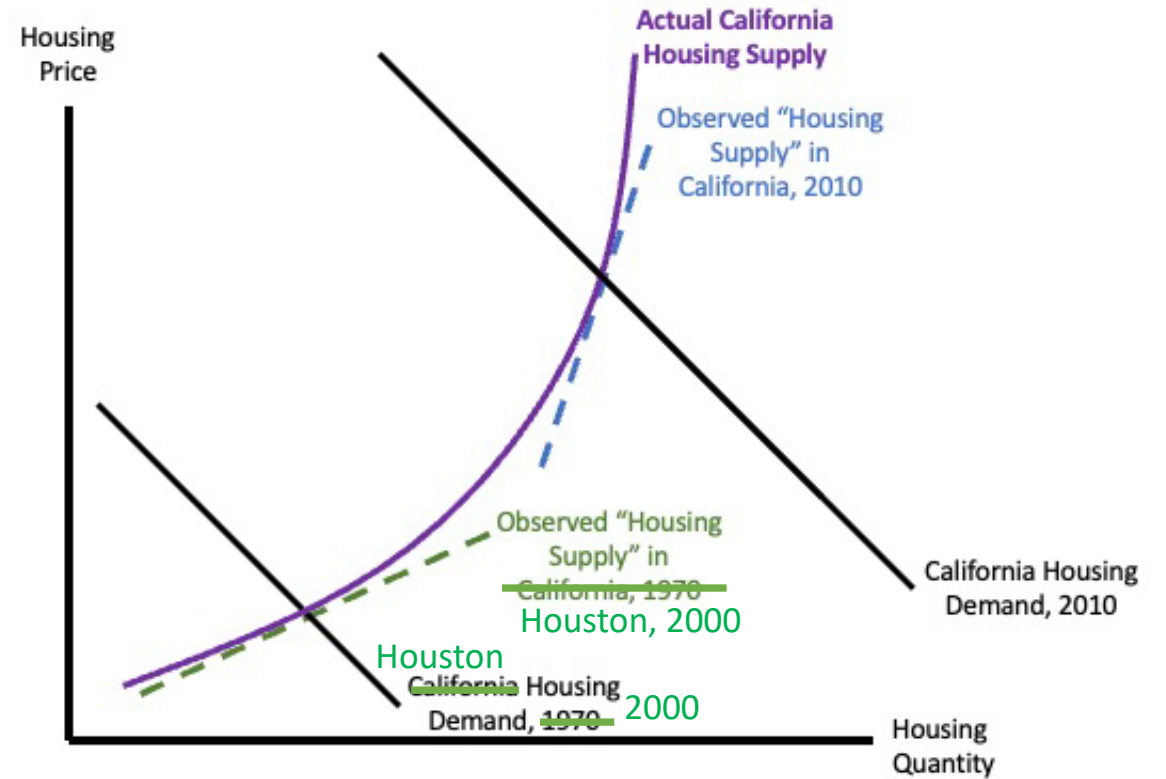
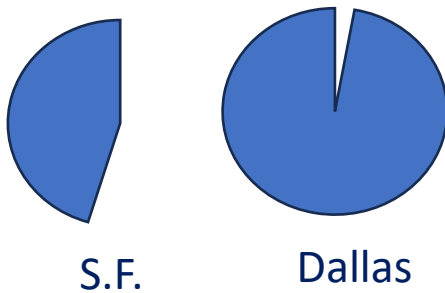


What if CA is just got built out first?

Figure 1: California vs. Texas Population, 1900-2020



Land Supply Elasticities



Findings

- Transitions to more dense urban forms?
- Not really, but less rural to exurban/suburban

Table 2: California: Transition Frequencies by Decade

Type	Share	Rural	Exurb	Low-Sub	Hi-Sub	Urban
<i>1970-2010</i>						
Rural	20.3	29.7	35.0	22.1	10.6	2.6
Exurb	19.5	1.5	28.0	37.4	23.8	9.4
Low Suburb	16.9	0.1	1.0	35.3	51.0	12.6
High Suburb	19.7	0.0	0.1	2.5	61.0	36.4
Urban	23.5	0.0	0.0	0.0	2.5	97.5

Table 3: Texas: Transition Frequencies by Decade

Type	Share	Rural	Exurb	Low-Sub	Hi-Sub	Urban
<i>1970-2010</i>						
Rural	56.0	25.1	36.2	25.8	9.4	3.4
Exurb	21.2	0.5	36.5	39.7	15.1	8.3
Low Suburb	14.4	0.0	6.2	57.7	27.8	8.4
High Suburb	6.2	0.0	2.8	22.7	51.4	23.2
Urban	2.1	0.0	0.0	8.2	26.2	65.6

Findings

- Transitions to more dense urban forms?
- Not really, but less rural to exurban/suburban

California

2000-10

Rural	9	70.59	20.36	4.98	2.94	1.13
Exurb	14.7	2.87	72.5	16.14	4.51	3.97
Low Suburb	18.4	0	1.96	80.7	14.29	3.05
High Suburb	27.3	0.07	0.15	2.93	86.81	10.04
Urban	30.7	0.07	0	0	2.74	97.2

Texas

2000-10

Rural	24.6	71.5	23.9	4.5	0.1	0.0
Exurb	31.5	2.6	72.4	21.4	3.4	0.2
Low Suburb	26.7	0.0	3.4	81.1	14.3	1.2
High Suburb	11.5	0.0	0.8	8.5	79.3	11.4
Urban	5.7	0.0	0.6	1.1	9.9	88.4

Overview of:

~~Built Out Cities? A New Approach to Measuring Land Use Regulation~~

Why Are Housing Markets Becoming Less Elastic? - Built out Cities? a New Approach to Measuring Land Use Regulation

-Paavo Monkkonen, Michael Manville, [Michael Lens](#), UCLA

- Use an existing planning/coordination tool that requires cities to document their “buildable land capacity” as another measure of the supply restriction.
- Compare to other measures of zoning restriction or veto-points in the development process.
- Merits include mandate and the universal participation in CA, and less likely to have erroneous answers.

What does “unbuilt capacity” really capture?

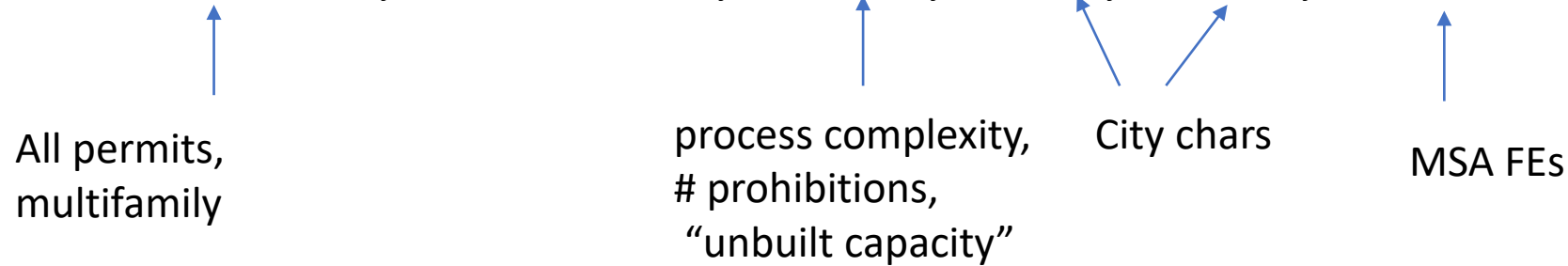
- It doesn't seem to account for land area, vacant land or viability of development
- Ratio of unbuilt capacity to allocated minimum?
- Perhaps create a synthetic allocation rule and then compare a city's unbuilt capacity number to this baseline?



Just because you're captured by NIMBYs doesn't mean you can (profitably) build more housing

Econometric Specification:

$$\text{Permits 2014-2019}_j = \alpha + \beta_1(\ln(\text{Rent}_j)) + \beta_2\text{Reg}_j + \beta_3\text{City}_j + \beta_4\text{Dem}_j + \text{Metro}_m + e$$



- We're running this regression because we think small changes in units (y) are the cause of high rent
- What is the appropriate denominator for unbuilt capacity? Is it the existing stock?

Findings

- Unbuilt capacity more predictive of new construction than more conventional measures
- Also just for MF
- Not sure how to interpret the interaction specs.

Table 3. Negative Binomial Models; DV: All Permits 2014-2019

Variables	1	2	3	4	5
Unbuilt Capacity (log)	0.405*** (0.065)			0.340*** (0.095)	0.388*** (0.071)
Prohibition Index		-0.263*** (0.087)		-0.349*** (0.135)	-0.160** (0.081)
Process Index			0.056 (0.041)	-0.014 (0.047)	
Median Rent, 2013 (log)	0.801* (0.436)	0.0854 (0.525)	0.073 (0.663)	0.384 (0.763)	0.490 (0.464)
Population (log)	0.773*** (0.089)	1.171*** (0.061)	1.059*** (0.094)	0.881*** (0.118)	0.818*** (0.088)
Population density (log)	-0.184** (0.092)	-0.499*** (0.142)	-0.478*** (0.182)	-0.465*** (0.154)	-0.334*** (0.125)
Job Accessibility (log)	-0.009 (0.101)	-0.159 (0.136)	-0.111 (0.175)	-0.237* (0.132)	-0.072 (0.123)
Multifamily Housing (%)	0.713 (0.495)	1.355* (0.720)	1.521** (0.706)	1.051 (0.692)	1.063 (0.649)