Variances in US Land Regulation and Impacts on US Housing Supply and Affordability: Results from a National Survey

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Hoyt Fellows Meeting

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Research Team

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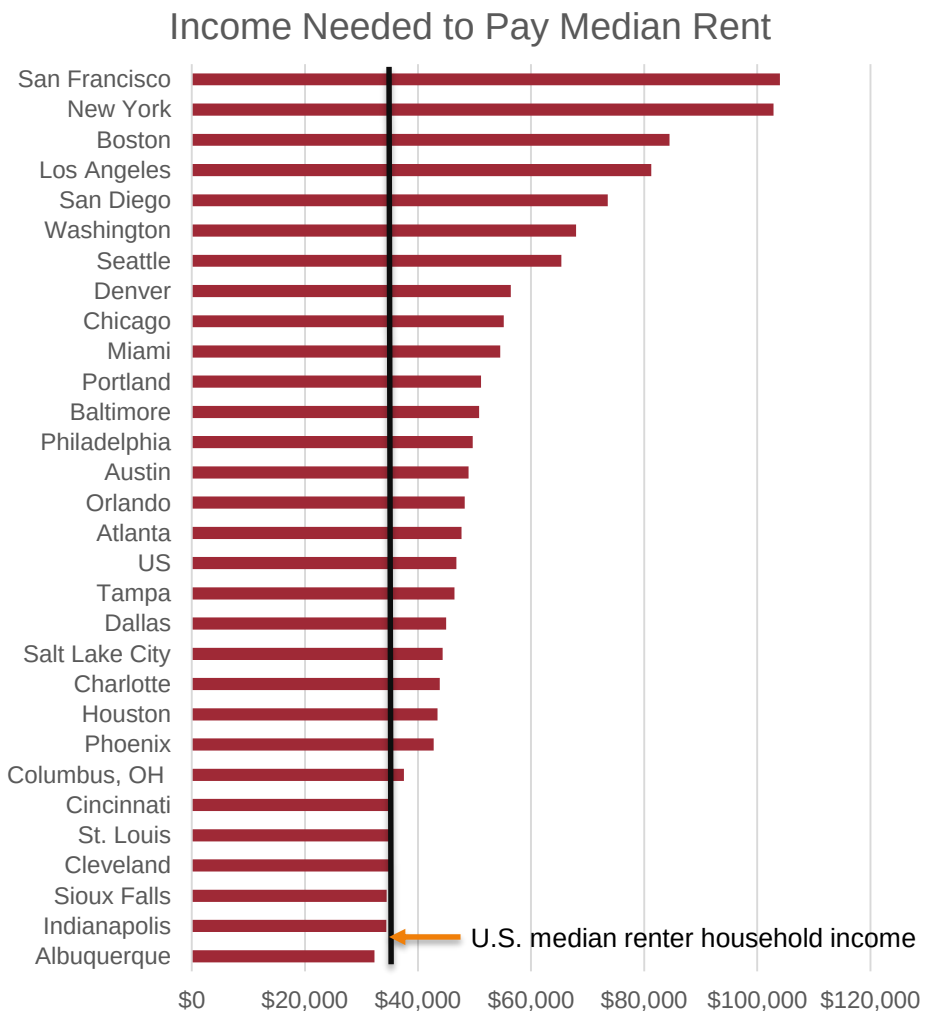
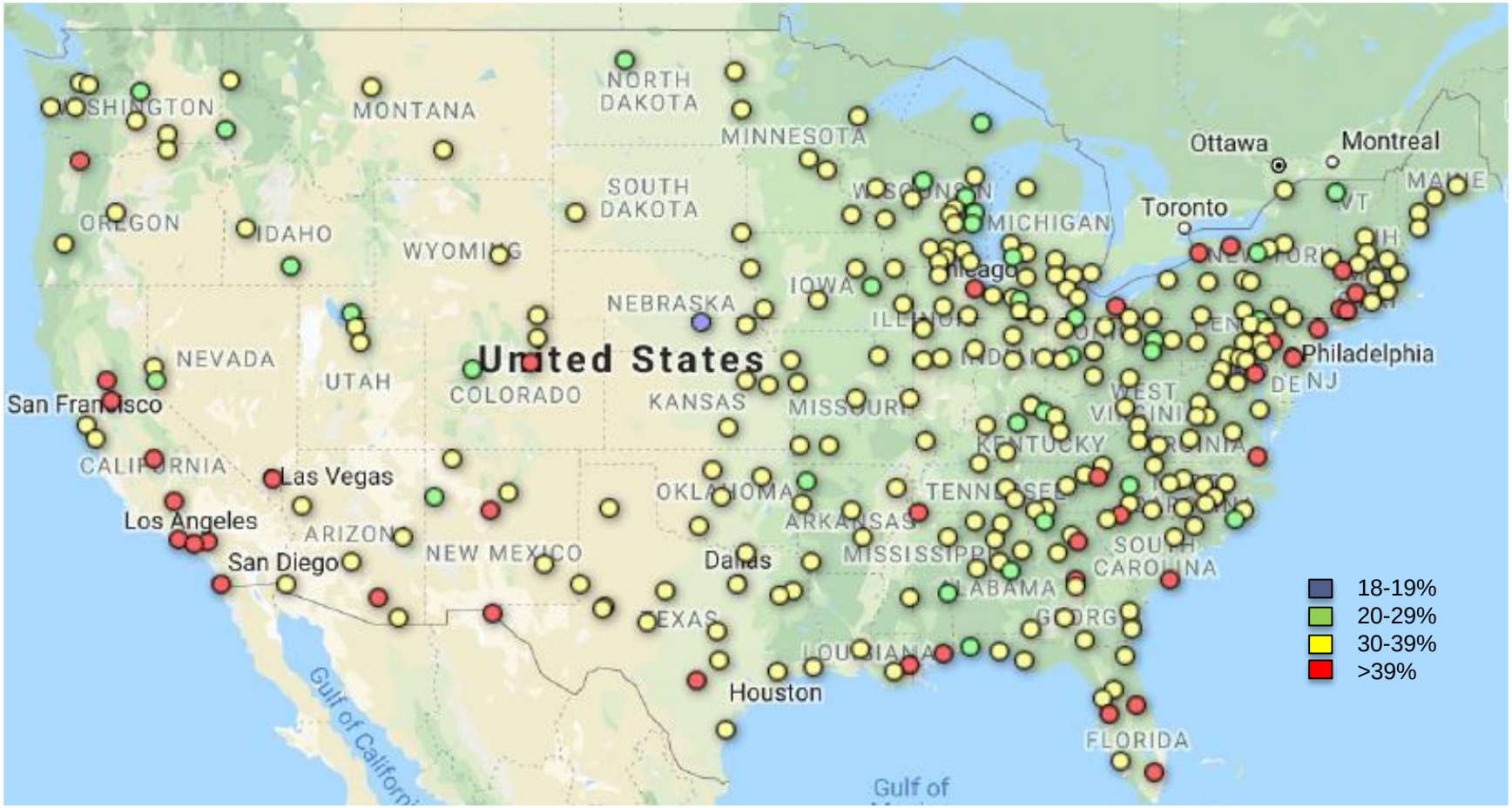
> $100,000 Income Needed for Median Rent in San Francisco and New York



Source: U.S. Census, Hoyt Advisory Services

Rental Stress Felt Throughout the Country

% of Rental Households Spending 35% or More of Income on Rent

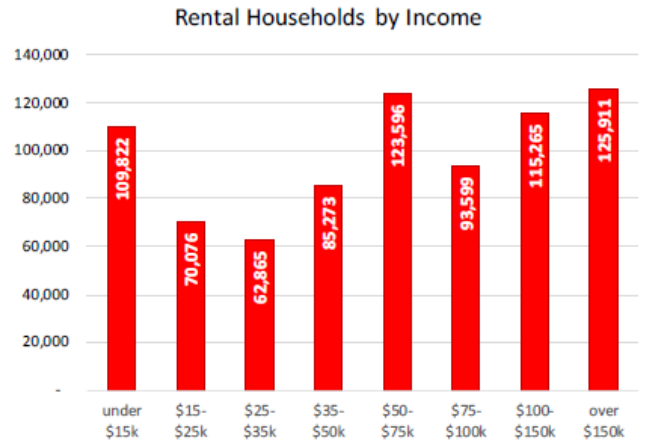


Source: U.S. Census, excludes non-calculated households

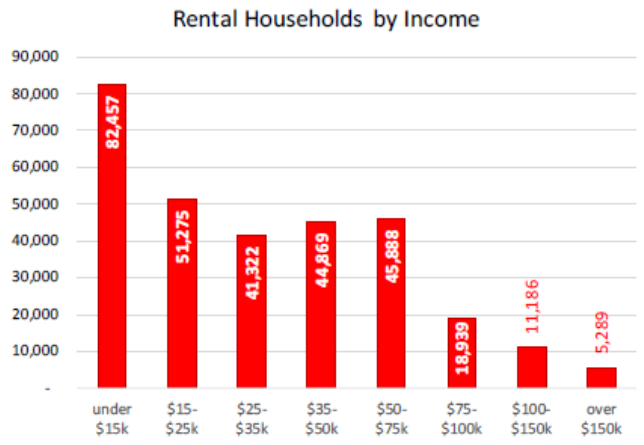
Affordability Issues are Complex

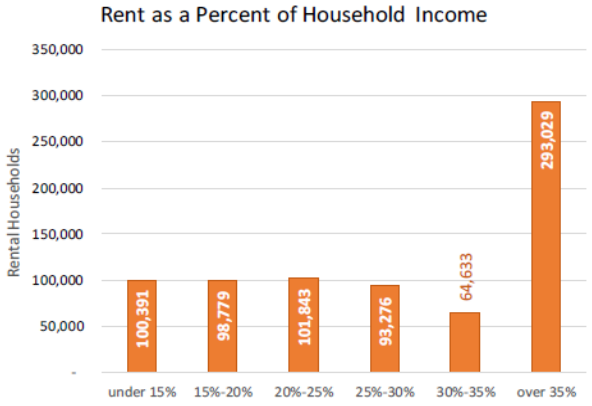
High Incomes and New Construction Do Not Necessarily Alleviate the Affordability Problem

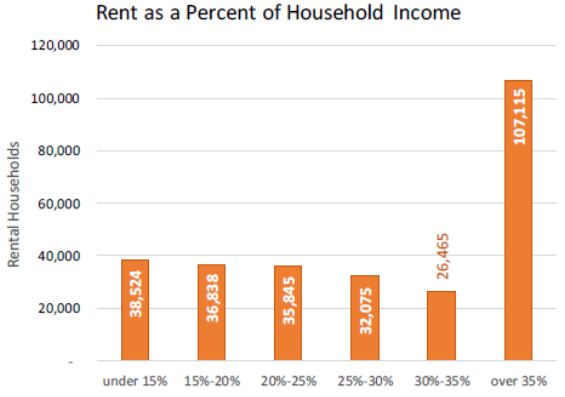
San Francisco



Cleveland



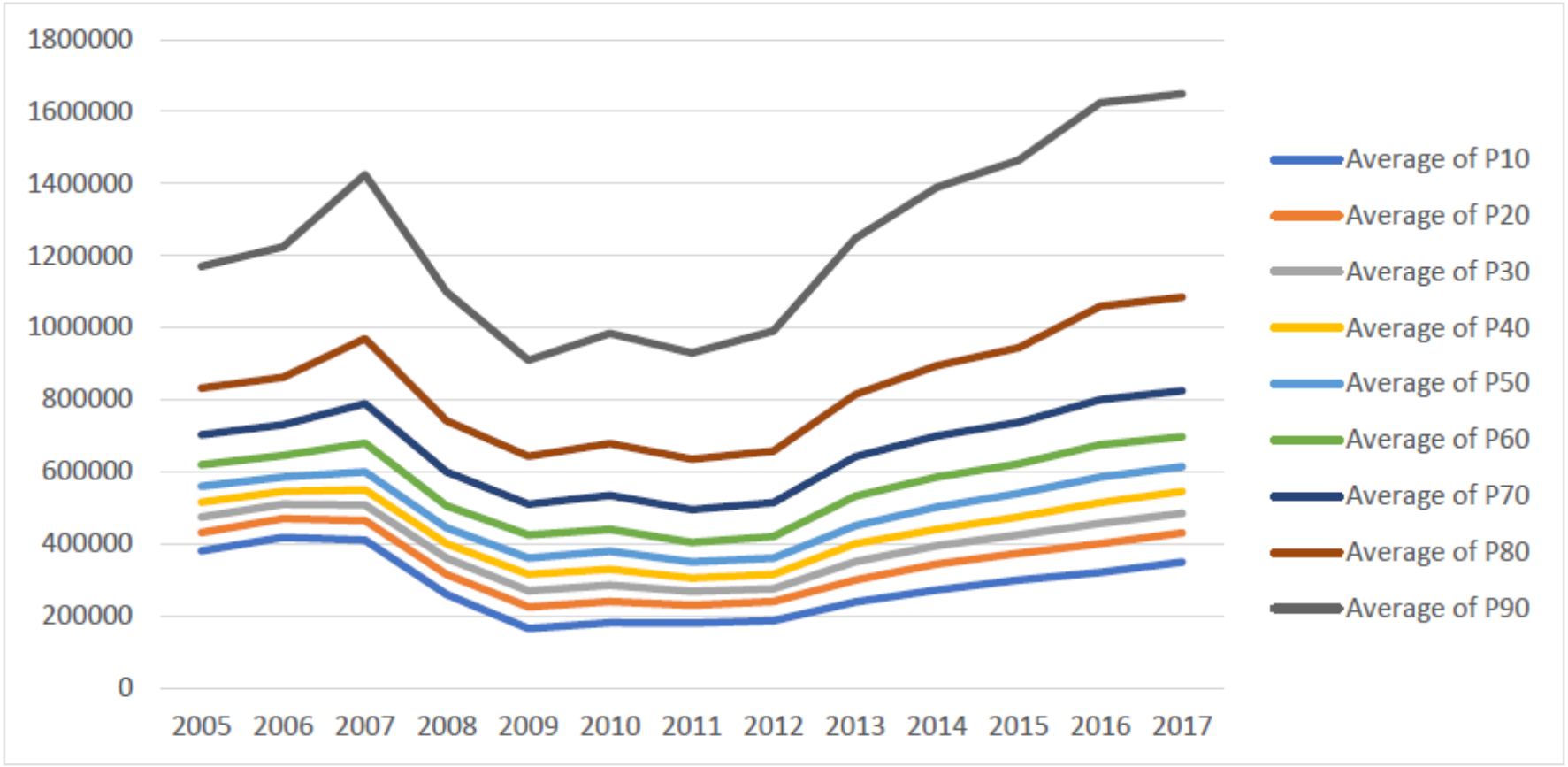




Source: U.S. Census, Hoyt Advisory Services, www.weareapartments.org

Single Family Cost Spread Increased over Time for High Cost Markets

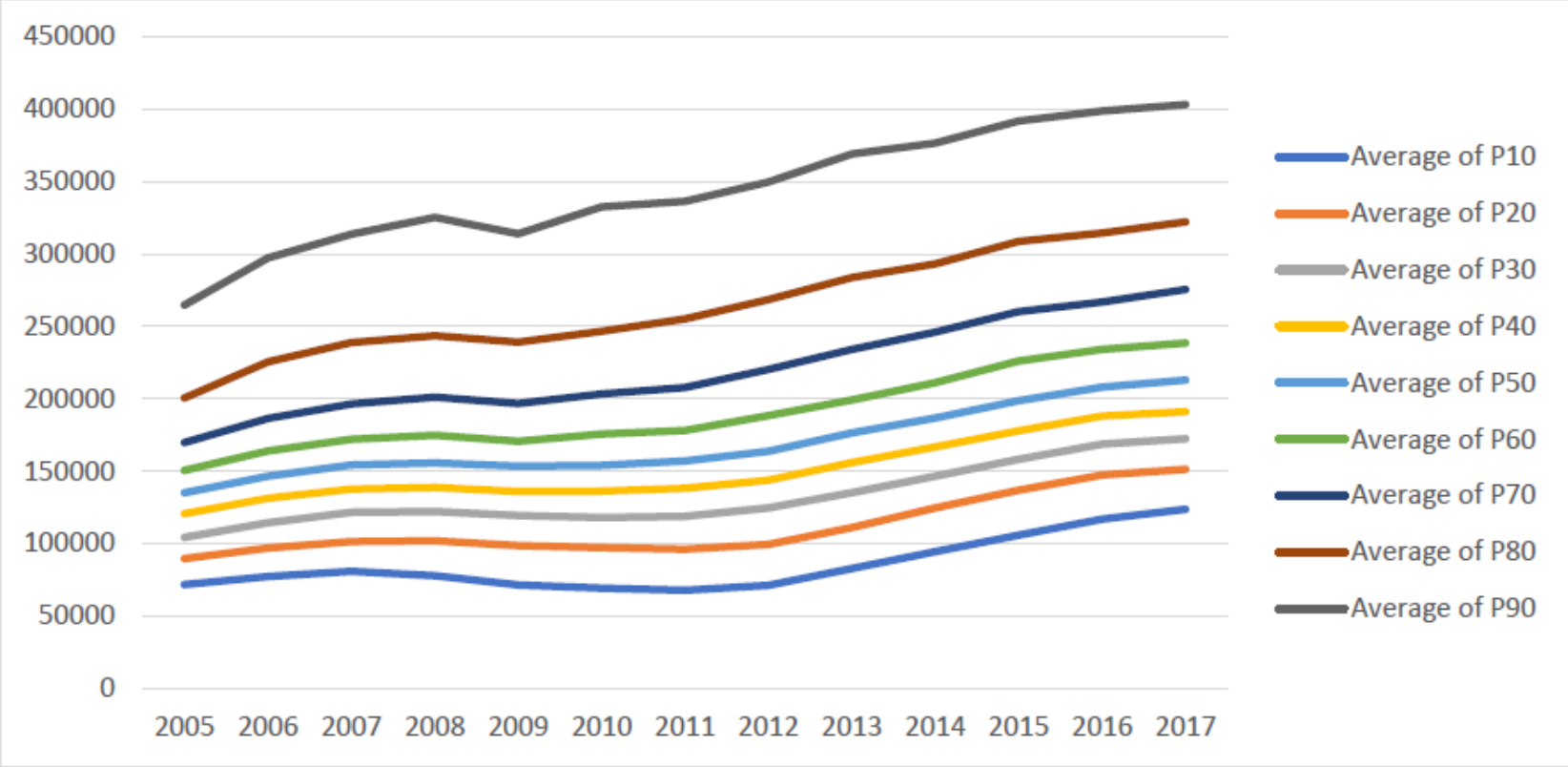
Exhibit 1: Los Angeles Metro Home Price Sales by Decile



Source: The Story of Entry Level Housing Affordability in the USA Considering Price Tiers and Property Taxes, Dr. Norm Miller, 2017

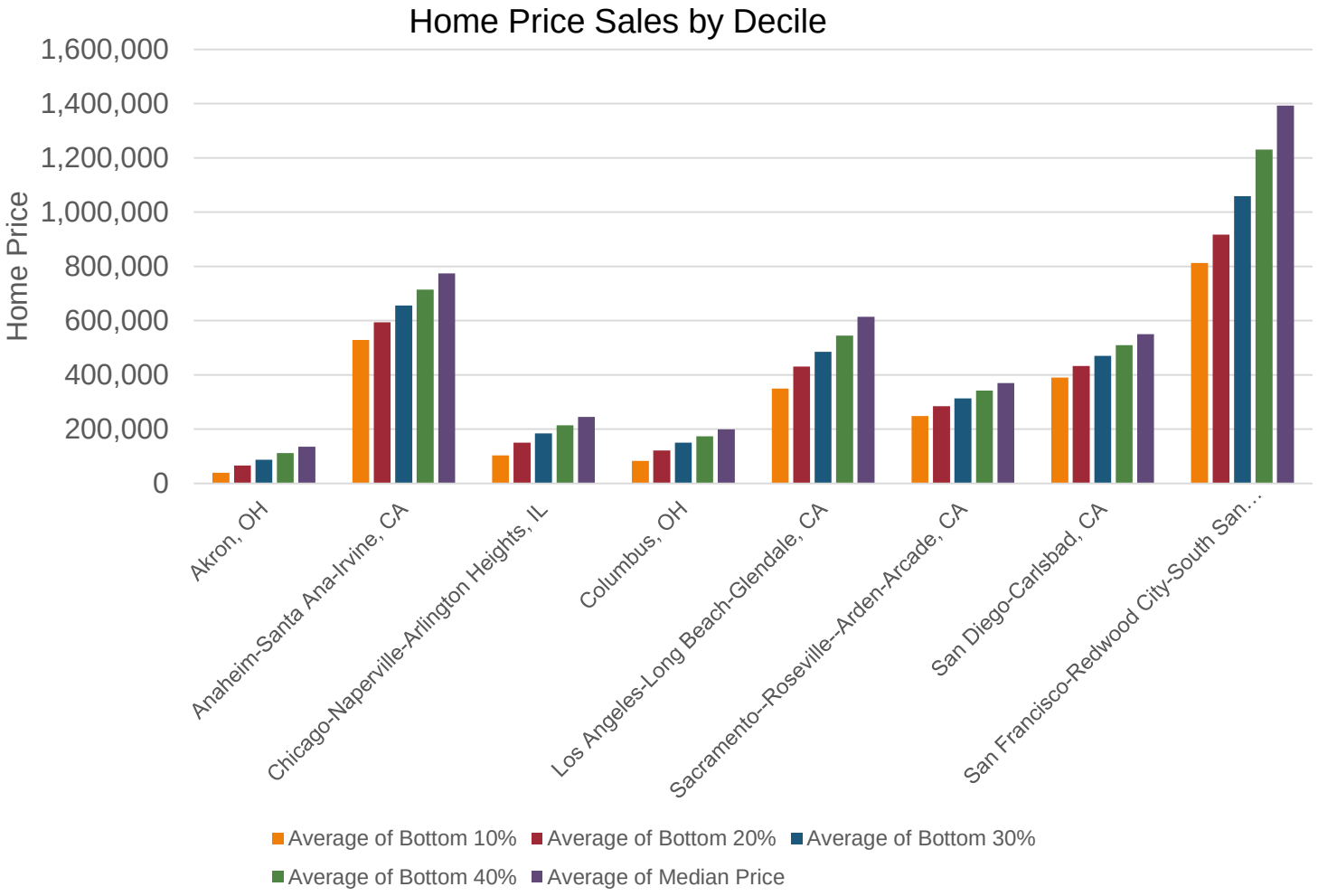
Significant Variance by Market

Exhibit 7: San Antonio Metro Home Price Sales by Decile



Source: The Story of Entry Level Housing Affordability in the USA Considering Price Tiers and Property Taxes, Dr. Norm Miller, 2017

Price Gradients Vary by Market

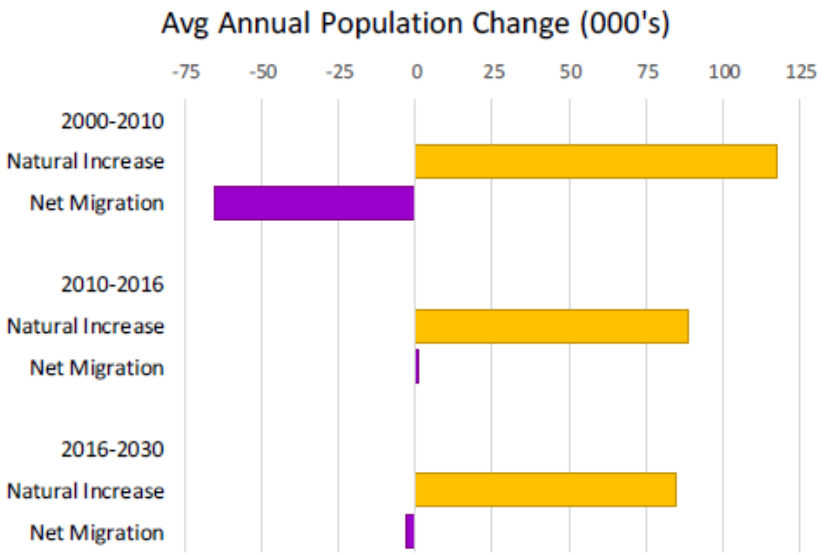


Source: The Story of Entry Level Housing Affordability in the USA Considering Price Tiers and Property Taxes, Dr. Norm Miller, 2017

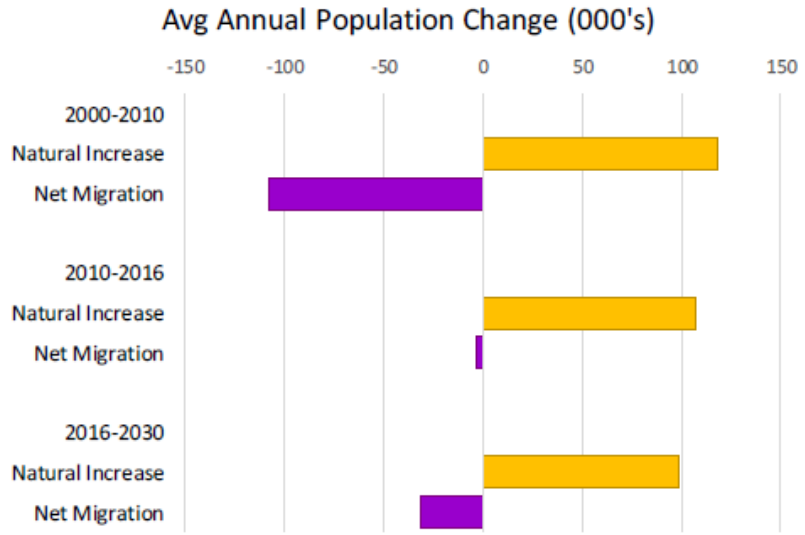
Why Care About Affordability?

Difficult to attract employees to markets with high costs.

Los Angeles

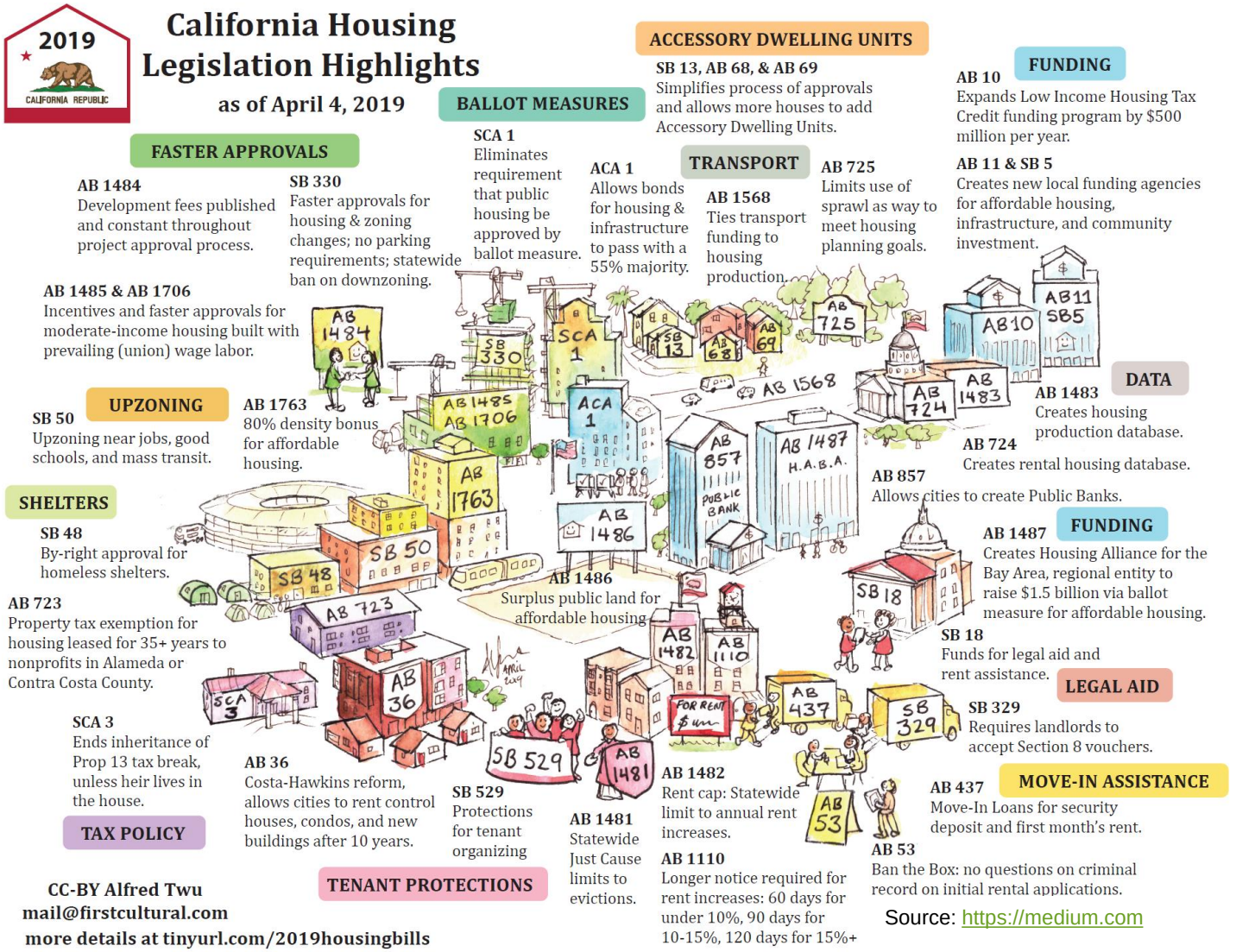


New York



Source: U.S. Census, Hoyt Advisory Services, www.weareapartments.org

Regulatory Changes Underway



Source: https://medium.com

Regulatory Changes Throughout the Country – Will They Help?

Philadelphia City Council proposes 3 affordable housing fixes March 6, 2019

Program to bring affordable housing to all Austin neighborhoods will come back for final council vote into law in May Feb. 21, 2019

"Lifting the Voices of Georgians for Affordable Housing"
2019 Housing Day at the Capitol February 27, 2019

It's the Year of the Renter at the Colorado statehouse, from rent control to less stringent eviction timelines
Several bills are on Colorado Democrats' agenda to fix what tenants call an imbalance of power, while landlords say too much, too fast could worsen housing crisis Apr 2, 2019

Previous Studies

Year	Author	Study
2004	Richard Green, Stephen Malpezzi, Stephen Mayo	44 MSAs - heavily-regulated metropolitan areas always exhibited low elasticities (high inelasticity), while the elasticities of lightly-regulated areas depended on whether they exhibited slow or high growth demand. While “regulation and density (urban form) work largely as expected in explaining variation in elasticities, other variables like MSA growth rates and city size did not match the predictions of the model.
2007	Joseph Gyourko, Albert Saiz, Anita A. Summers	Wharton Regulatory Index based on survey from over 200 jurisdictions.
2010	Albert Saiz	40 markets - physical limits of developable land within 50 miles of the center of each urban market based primarily on water and slope.
2018	NAHB-NMHC	40 responses; regulation imposed by all levels of government accounts for an average of 32.1% of multifamily development costs.

Survey of Factors that Impact Multifamily Housing Supply

- National survey to provide data to better understand factors that impact the new supply of apartments.
- Fact Based Discussions-Best Practices and Advocacy
- Research – how does land regulation impact risk, costs, supply, and affordability

Sponsored by the National Apartment Association with input from the American Planning Association

Survey Process

- Pilot Study of Four Markets
- 2018 Fall Survey
- Measurement Complexities:
  - Multiple municipalities with individual requirements within a metro area
  - Variations by zoning
  - Variations by market – study only picks up commonly used regulations
  - Changing regulations

National Survey of Barriers to Supply of Multi-family Housing

Subindex Categories	Number of Questions	Number of External Data Points
Community Involvement	5	0
Construction Costs	9	2
Affordable Housing & Tenants	5	0
Infrastructure	7	0
Density / Growth Restrictions	10	0
Land Supply	1	1
Environmental Restrictions	5	1
Process Complexity	12	1
Political Structure	11	0
Time to Develop	26	0
TOTAL	91	5

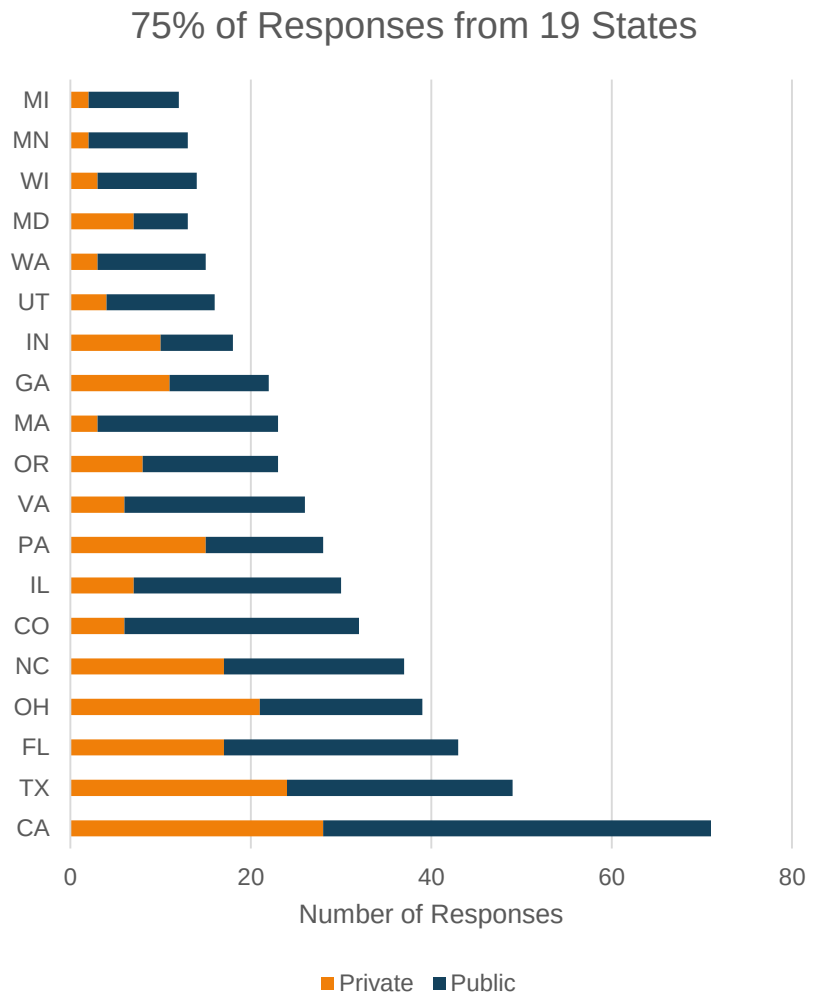
NATIONAL APARTMENT ASSOCIATION

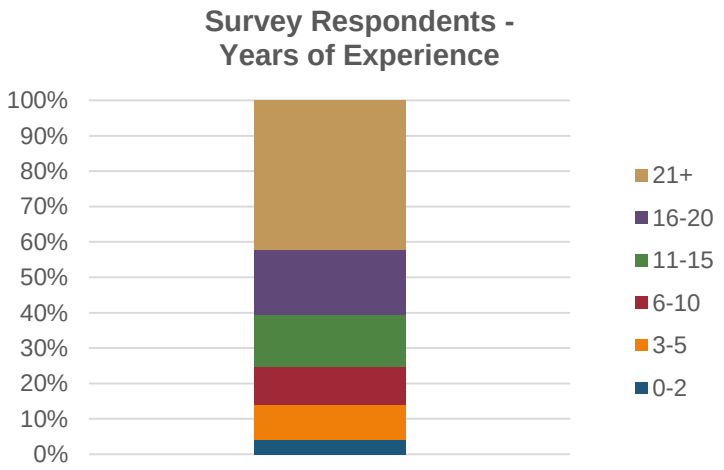
American Planning Association

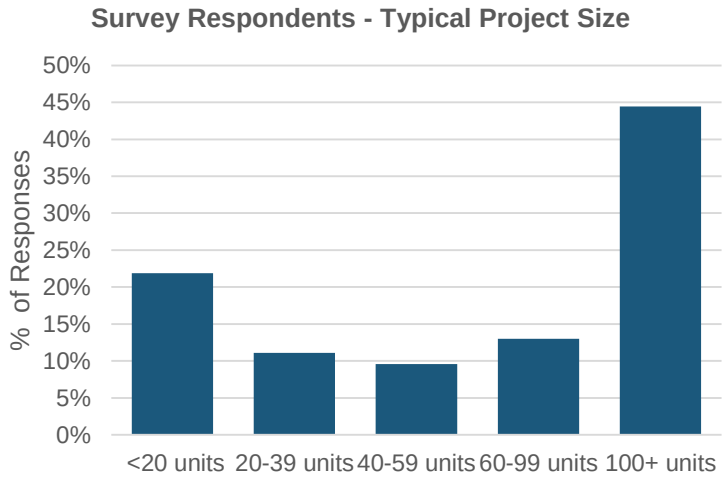
25 Key Markets - External Data

External Data	Subindex	Source
Effective Apartment Tax Rate	Cost	Lincoln Institute of Land Policy
Average Apartment Rent	Cost	CoStar / Marcus & Millichap
Land Developability	Land	Landdevelopability.org
Conservation Bonds Passed	Environment	Trust for Public Land (landvote.org)
Land Use Regulation Index	Process	Cato Institute

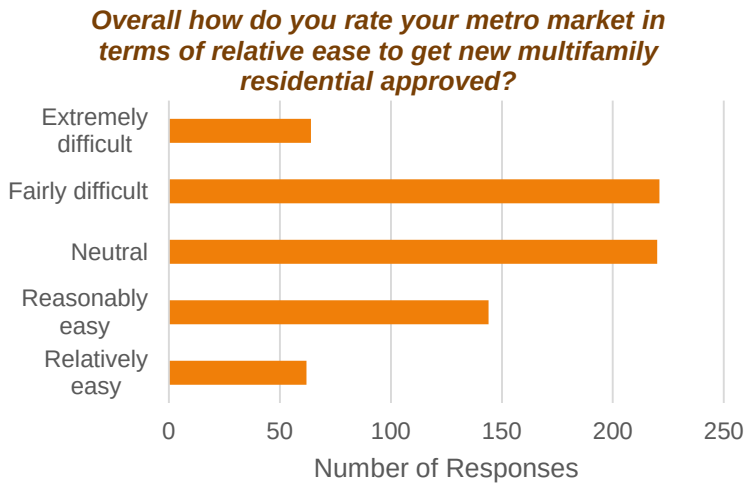
731 Responses from Public & Private Sectors

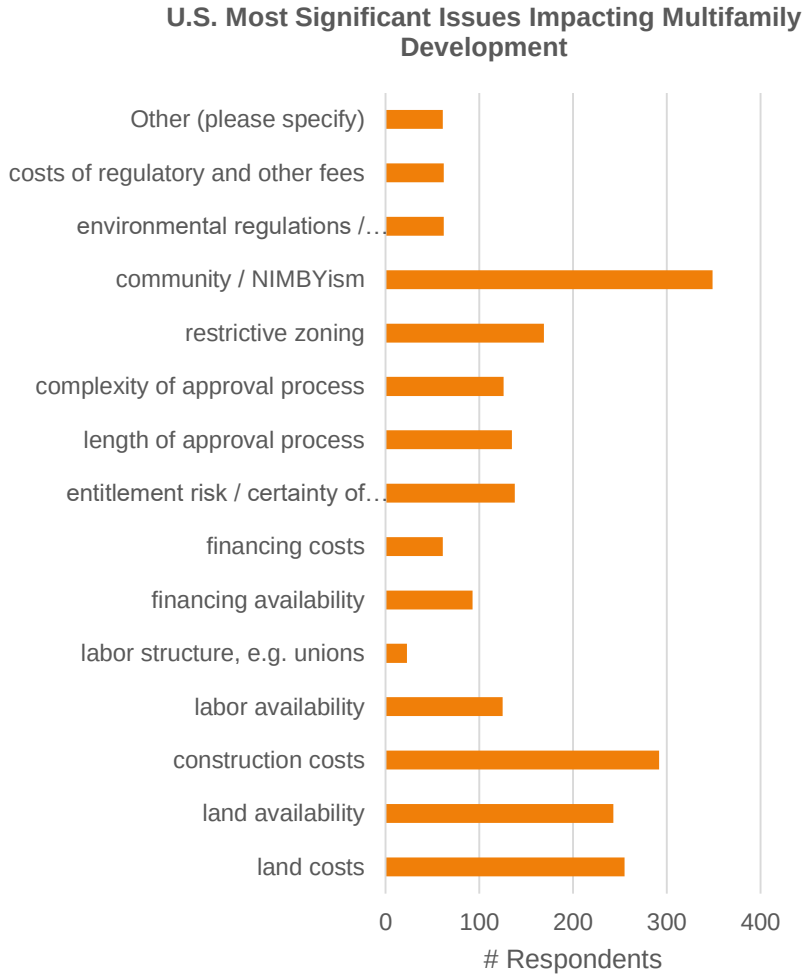




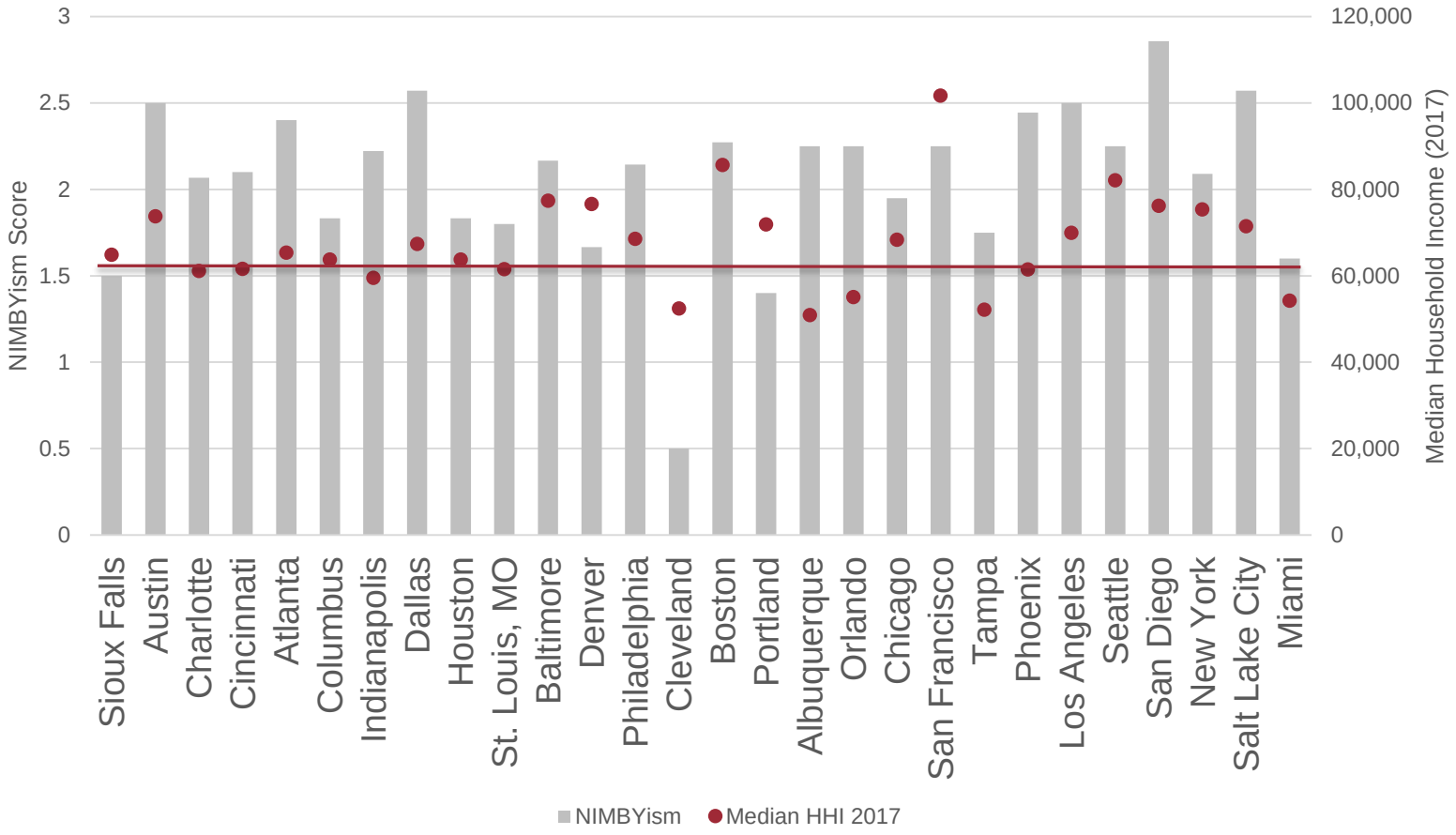


Costs & NIMBYism Most Significant Issues



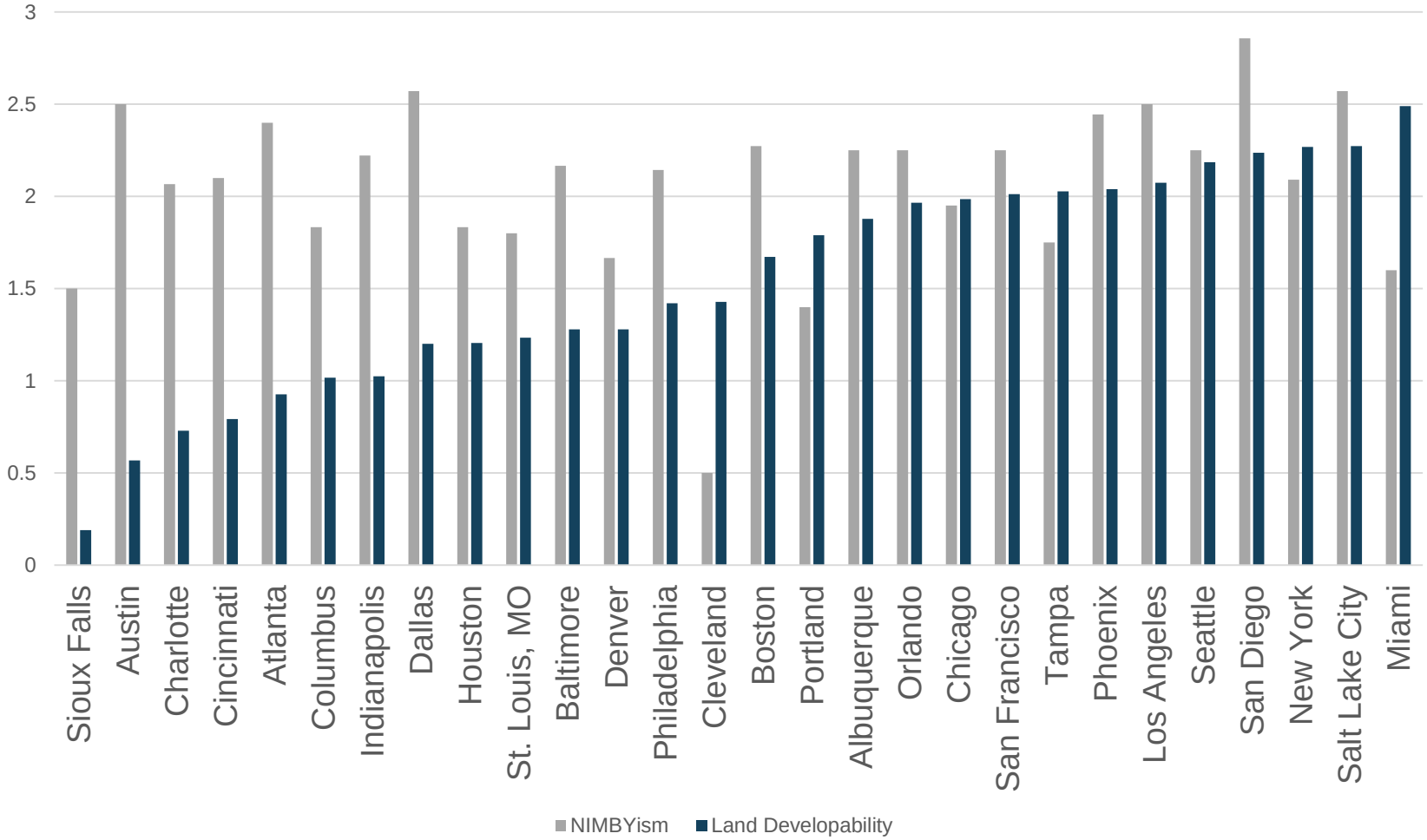


NIMBYism and Household Incomes



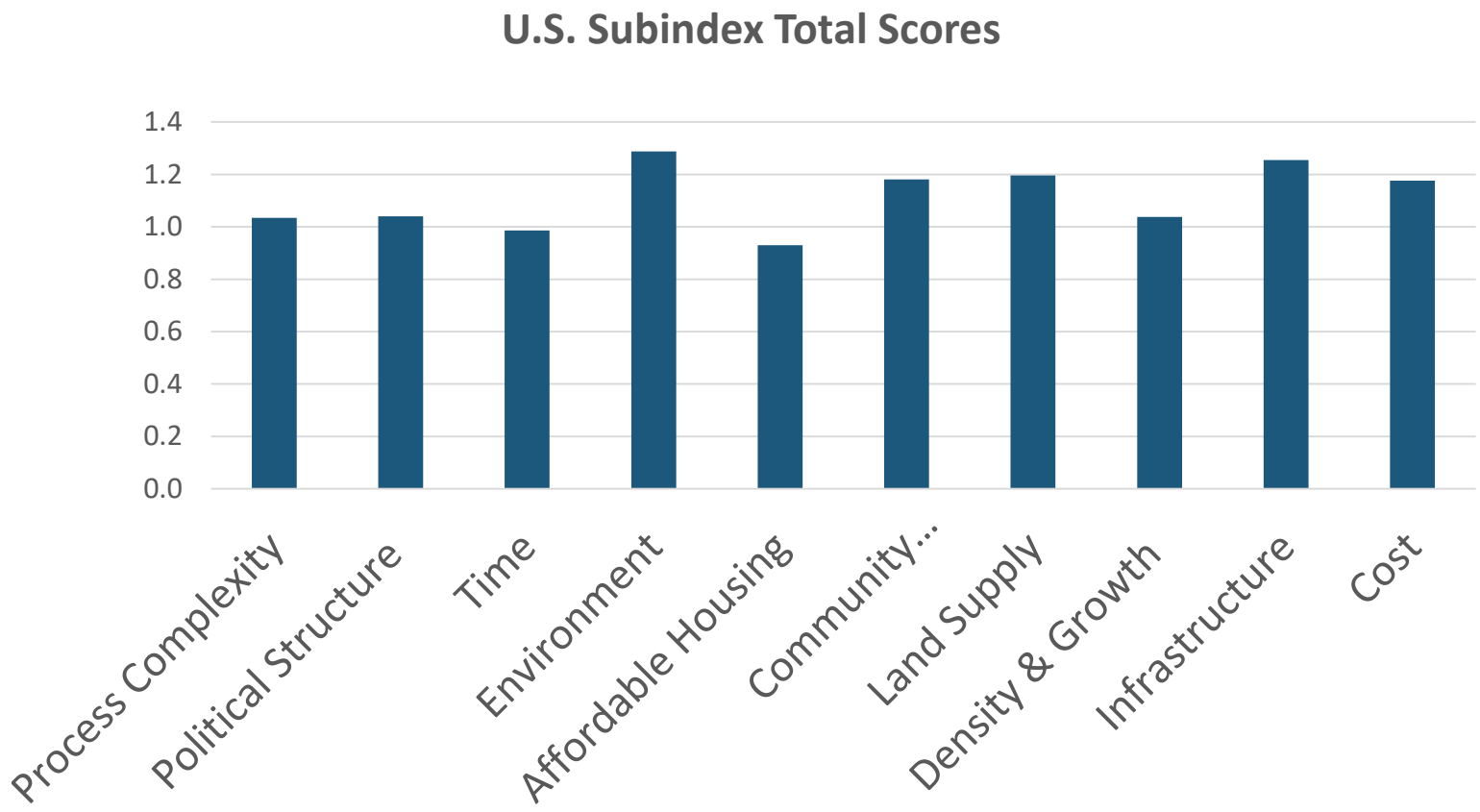
Source for Median HHI: US Census; red line indicates US Median HHI

NIMBYism Not Correlated to Land Developability

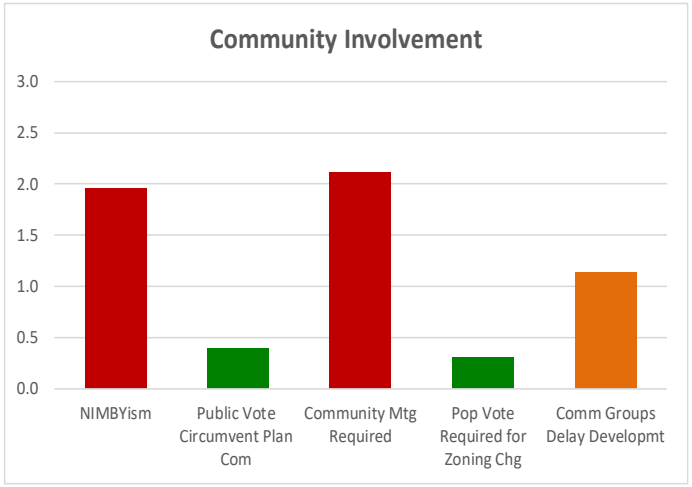


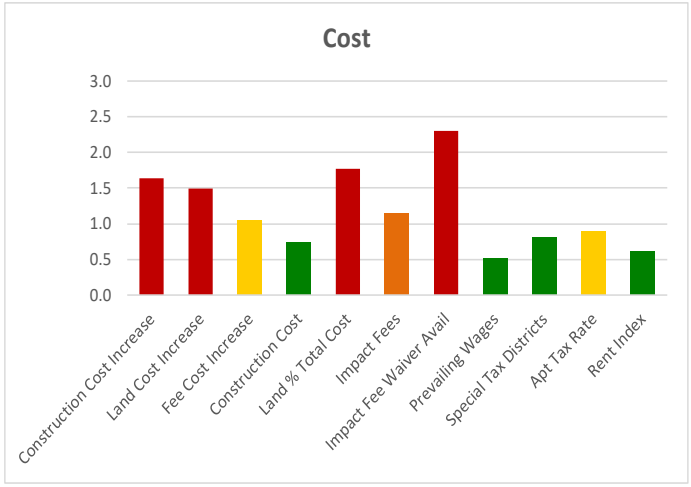
Source for Land Developability: landdevelopability.org

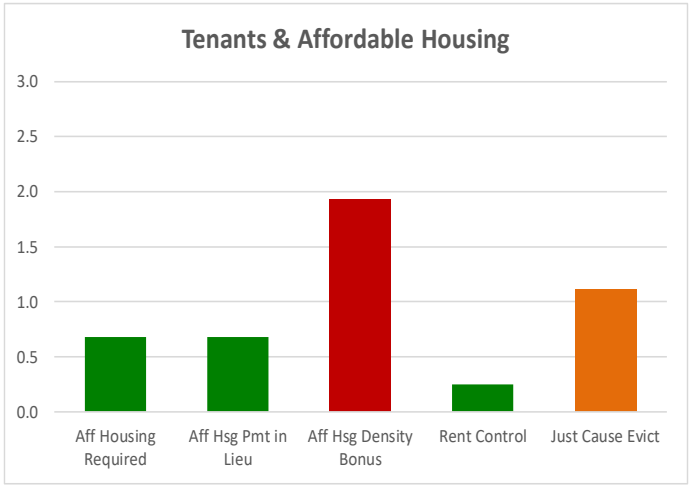
National Subindices Hide Regional and Micro Issues

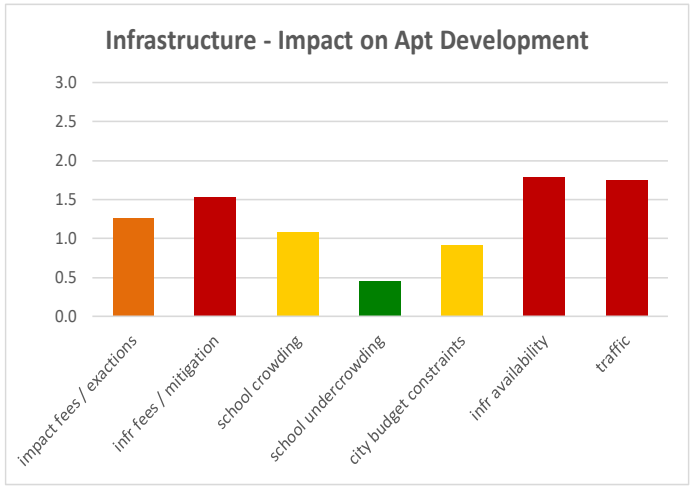


National Barriers To Supply

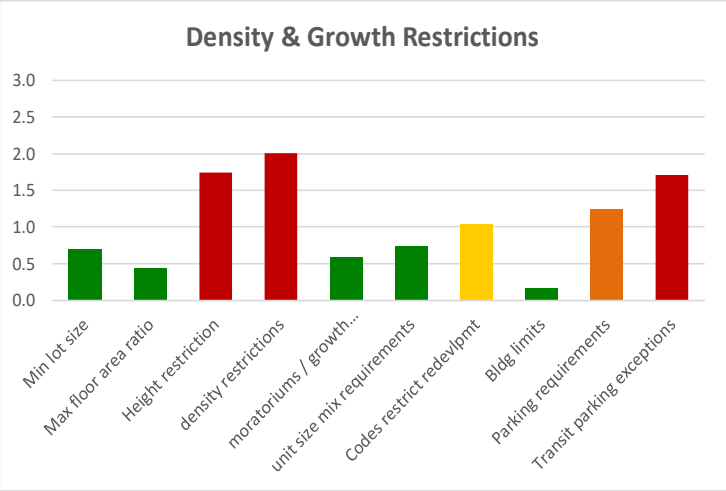


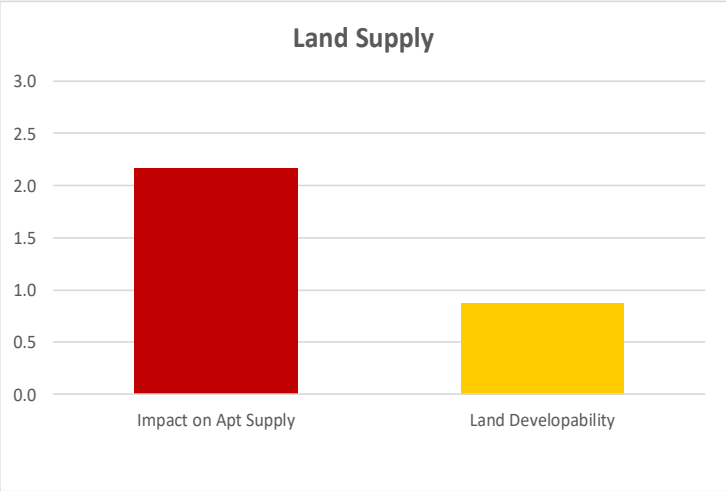


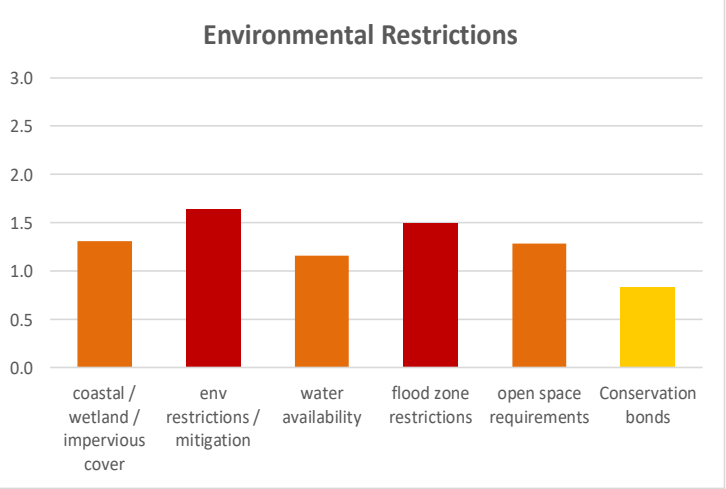


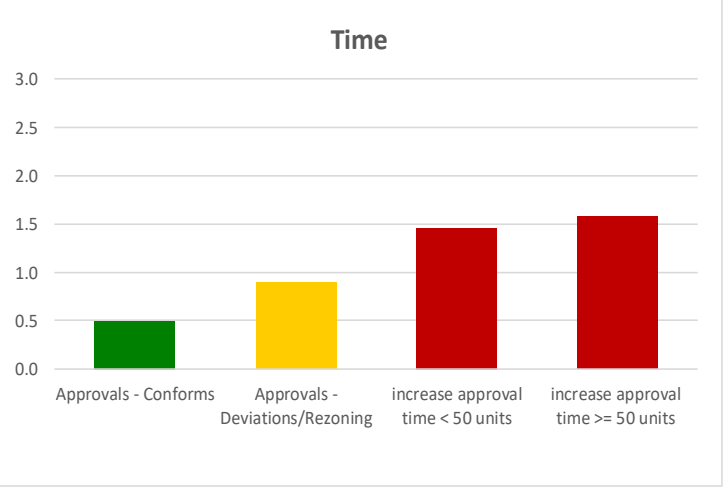


National Barriers to Supply (cont.)

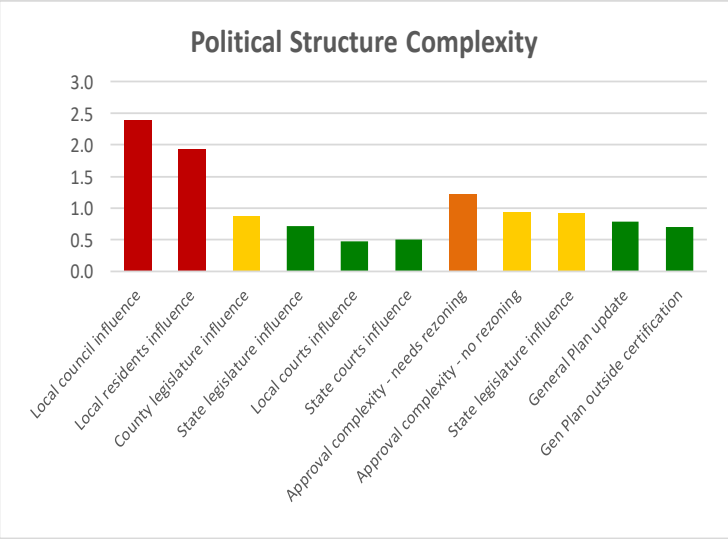


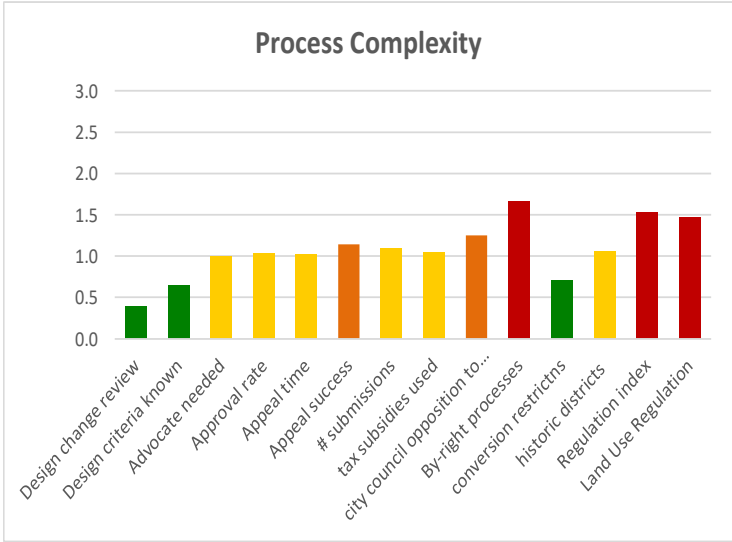






National Barriers to Supply (cont.)





Total Index - Weights Controllable Factors More Heavily

Subindex Code	SubIndex Category	Index Weight
CI	Community Involvement	5%
C	Construction Costs	5%
AH	Affordable Housing & Tenants	15%
I	Infrastructure	5%
D	Density / Growth Restrictions	15%
L	Land Supply	5%
E	Environmental Restrictions	15%
PC	Process Complexity	15%
PS	Political Structure Complexity	15%
T	Time to Develop	5%

Land Generally Considered an Important Factor

MSA	CI	C	AH	I	D	L	E	PC	PS	T	Index	Rank
Albuquerque, NM	1.6	1.0	0.8	1.0	0.5	2.3	0.7	1.3	0.7	0.8	0.80	1
Greenwood, SC	0.5	1.3	0.3	1.2	1.5	1.0	1.0	0.8	1.0	0.5	0.80	2
Dayton, OH	0.9	1.0	0.9	1.0	0.7	2.5	1.2	0.8	0.7	0.5	0.82	3
Kansas City, MO-KS	0.6	1.3	0.9	1.4	1.2	1.5	0.9	0.9	0.7	0.6	0.83	4
Billings, MT	1.3	1.1	0.6	1.4	1.3	1.0	0.6	1.0	1.0	0.9	0.84	5
Eugene-Springfield, OR	1.1	1.3	1.0	1.1	0.6	2.0	1.3	0.6	0.9	0.5	0.84	6
Cleveland-Elyria-Mentor, OH	0.9	1.0	0.9	0.4	1.5	1.0	0.4	1.2	1.0	1.2	0.86	7
Milwaukee-Waukesha-West Allis, WI	1.1	1.4	0.6	0.8	1.2	2.0	1.2	1.0	0.7	0.4	0.88	8
Chicago-Joliet-Naperville, IL-IN-WI	1.1	1.1	1.0	1.1	1.0	2.1	0.8	1.0	0.8	0.9	0.88	9
Dallas-Fort Worth-Arlington, TX	0.9	0.9	0.8	1.3	1.1	2.3	0.9	0.9	1.0	0.8	0.89	10
Portland-Vancouver-Hillsboro, OR-WA	1.2	1.0	1.0	1.1	0.9	1.8	0.9	0.9	1.1	1.1	0.90	11
Des Moines-West Des Moines, IA	0.8	1.6	0.8	1.1	1.3	2.3	1.0	1.0	0.6	0.8	0.90	12
Indianapolis-Carmel, IN	1.2	1.2	0.8	1.4	0.9	1.8	1.1	1.1	0.9	0.9	0.91	13
Houston-Sugar Land-Baytown, TX	0.7	1.4	1.2	0.7	0.9	2.2	1.3	0.9	0.9	0.8	0.93	14
Seattle-Tacoma-Bellevue, WA	1.4	1.5	0.7	1.1	0.8	2.8	1.1	1.2	0.6	1.5	0.94	15
Santa Rosa-Petaluma, CA	1.4	1.2	0.9	1.4	0.8	1.5	1.7	0.7	1.1	0.8	0.95	16
Punta Gorda, FL	1.2	1.5	0.6	1.7	1.3	0.5	1.9	0.6	1.0	0.5	0.95	17
Reno-Sparks, NV	1.1	1.4	0.4	2.0	0.6	2.7	1.7	0.8	1.0	1.1	0.95	18
Akron, OH	1.2	1.4	0.8	1.1	1.4	1.5	1.7	1.1	0.4	0.7	0.96	19
St. Louis, MO-IL	1.3	1.4	0.8	0.9	0.9	2.4	1.2	1.3	0.8	0.9	0.97	20
Austin-Round Rock, TX	1.2	1.5	0.2	1.2	1.0	2.0	1.9	1.0	1.0	0.9	0.97	21
Sioux Falls, SD	1.3	1.4	1.0	1.3	0.8	1.7	1.3	1.4	0.8	0.9	0.97	22
Nashville-Davidson--Murfreesboro--Franklin, TN	1.1	1.7	0.8	1.6	1.2	1.0	1.5	0.9	1.2	1.0	0.99	23
New Orleans-Metairie-Kenner, LA	1.1	0.9	0.6	0.7	1.2	1.3	1.8	1.0	1.4	0.7	0.99	24
Atlanta-Sandy Springs-Marietta, GA	1.4	1.4	1.0	1.1	1.2	2.1	0.9	1.2	1.1	0.8	1.01	25
Detroit-Warren-Livonia, MI	1.1	1.4	0.6	1.0	1.0	2.5	2.2	0.6	1.1	0.6	1.02	26
Anchorage, AK	1.4	1.4	0.9	0.9	0.8	3.0	1.5	1.0	0.9	1.5	1.03	27
Phoenix-Mesa-Glendale, AZ	1.3	1.6	1.1	1.5	0.8	1.5	1.2	1.3	1.1	1.1	1.03	28
Tampa-St. Petersburg-Clearwater, FL	0.8	1.4	0.4	1.3	1.0	2.8	2.1	0.9	1.1	1.0	1.03	29

High Scoring Markets Have Multiple Complexities

MSA	CI	C	AH	I	D	L	E	PC	PS	T	Index	Rank
Madison, WI	1.3	1.1	0.6	1.3	0.9	1.7	1.7	1.3	1.0	1.4	1.04	30
North Port-Bradenton-Sarasota, FL	0.8	1.6	0.4	0.9	1.4	1.7	1.9	1.0	1.1	1.2	1.04	31
Denver-Aurora-Broomfield, CO	1.0	2.1	1.1	1.4	1.3	2.7	1.1	1.1	0.6	1.1	1.04	32
Charlotte-Gastonia-Rock Hill, NC-SC	1.4	1.4	0.8	1.3	0.7	2.2	1.5	1.3	1.2	1.4	1.05	33
Fort Collins-Loveland, CO	1.2	1.6	0.9	1.3	0.8	2.5	1.8	0.9	1.1	1.0	1.06	34
Salem, OR	1.3	1.8	0.8	1.3	0.9	3.0	1.2	0.9	1.5	1.0	1.06	35
Hartford-West Hartford-East Hartford, CT	1.4	1.1	0.5	1.0	1.2	2.3	1.9	1.1	1.0	1.1	1.07	36
Miami-Fort Lauderdale-West Palm Beach, FL	1.4	1.7	0.2	1.3	1.1	2.7	1.9	0.9	1.4	0.7	1.07	37
Las Vegas-Paradise, NV	1.1	1.2	1.2	1.2	1.2	2.3	1.1	1.1	1.2	1.1	1.08	38
Orlando-Kissimmee-Sanford, FL	1.6	1.6	1.1	1.6	0.8	2.3	1.8	1.0	1.1	0.9	1.10	39
Cincinnati-Middletown, OH-KY-IN	1.7	1.6	1.0	1.3	0.9	1.8	1.1	1.7	1.1	1.5	1.10	40
Columbus, OH	1.3	1.4	1.5	1.3	1.0	2.0	1.2	1.3	1.1	1.1	1.13	41
Jacksonville, FL	0.5	1.4	1.1	1.0	1.3	2.3	1.9	1.1	1.3	0.9	1.14	42
Cape Coral-Fort Myers, FL	1.2	1.6	0.9	1.1	1.2	2.7	1.7	1.0	1.4	1.0	1.14	43
Silverthorne, CO	1.2	1.4	1.1	1.0	1.1	2.8	1.9	1.1	1.3	0.8	1.16	44
Boston-Cambridge-Quincy, MA-NH	1.6	0.8	1.3	1.1	1.1	2.6	1.5	1.4	1.1	1.0	1.17	45
Providence-New Bedford-Fall River, RI-MA	1.2	1.2	2.1	0.9	1.0	2.3	1.7	1.1	0.9	1.2	1.19	46
Salt Lake City, UT	1.4	1.2	1.5	1.5	1.3	2.1	1.2	1.3	1.3	1.5	1.22	47
Los Angeles-Long Beach-Santa Ana, CA	1.3	1.5	1.7	1.2	1.0	2.4	1.4	1.2	1.4	1.5	1.23	48
Salinas, CA	1.9	1.6	1.2	1.6	1.3	2.5	1.6	1.1	1.2	1.5	1.23	49
New York-Newark-Jersey City, NY-NJ-PA	1.3	2.3	1.6	0.8	1.3	2.6	1.4	1.5	1.1	1.0	1.26	50
Baltimore-Towson, MD	1.2	1.2	1.0	1.7	1.2	2.8	1.7	1.5	1.3	1.8	1.26	51
Washington-Arlington-Alexandria, DC-VA-MD-WV	1.3	1.8	1.4	1.6	1.0	2.3	1.6	1.4	1.5	1.4	1.27	52
San Diego-Carlsbad, CA	2.0	2.0	0.2	1.3	1.2	2.6	2.2	1.6	1.7	1.4	1.30	53
Honolulu, HI	1.5	1.4	1.8	1.7	1.0	3.0	1.0	1.9	1.5	1.5	1.34	54
San Francisco-Oakland-Fremont, CA	1.7	1.9	1.7	1.5	0.9	2.3	1.6	1.4	1.7	1.6	1.35	55
Sacramento--Arden-Arcade--Roseville, CA	2.4	1.4	0.6	2.2	1.2	2.5	2.3	1.5	1.5	1.1	1.35	56
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.2	1.5	1.0	1.8	1.3	2.6	2.2	1.5	1.4	1.7	1.36	57
San Jose-Sunnyvale-Santa Clara, CA	2.6	2.0	2.1	1.9	0.6	3.0	1.9	1.8	1.3	2.1	1.52	58
United States	1.2	1.3	0.9	1.3	1.0	2.2	1.4	1.0	1.0	0.9	1.00	

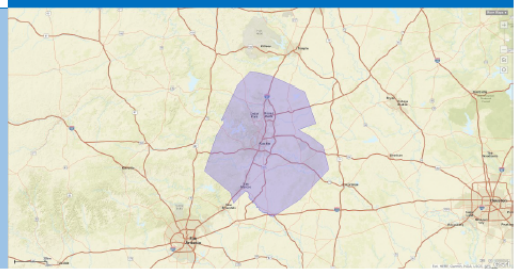
Total Index Scores

Key Market Sample

BARRIERS to APARTMENT CONSTRUCTION	AUSTIN

BARRIERS RANKING[1]	NEW MF DEMAND[2]	HIGH RENT BURDEN[3]	STAR SHARE[4]
21	98.1k	40%	17%

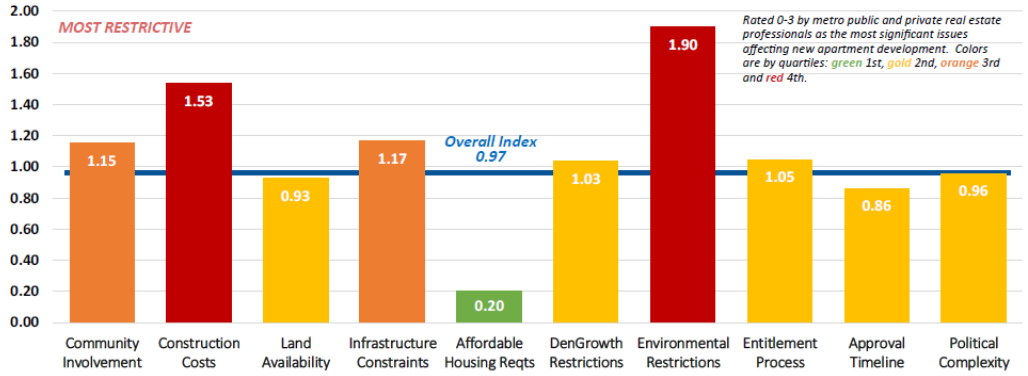
MEDIAN RENTAL HOUSEHOLD INCOME	$50,305
INCOME REQUIRED FOR AVERAGE RENT[5]	$48,920



MOST RESTRICTIVE APARTMENT CATEGORIES:
- ENVIRONMENTAL RESTRICTIONS
- CONSTRUCTION COSTS

Austin was one of four pilot metro markets explored with an earlier survey and is recast below with updated indexing. A young and growing housing market, Austin metro is in the top third least restrictive of major markets with a supply index of 0.97 and ranked sixth among metro demand. Austin was one of four pilot metros for a national approach and the original subindices plotted below. Respondents cited heavy environmental restrictions as their top barrier, followed by high construction costs and increased land costs. Other above-index issues were community involvement and constraints on infrastructure. All others were below index, including a slight 0.20 for affordable housing requirements. Current median incomes for rental households rank in the top sixth of major markets, while their income requirement for today's average rent is a slight 3.0% below the median. Yet, some 40% of renters are paying over 35% of incomes on the average market rents of $1,225.

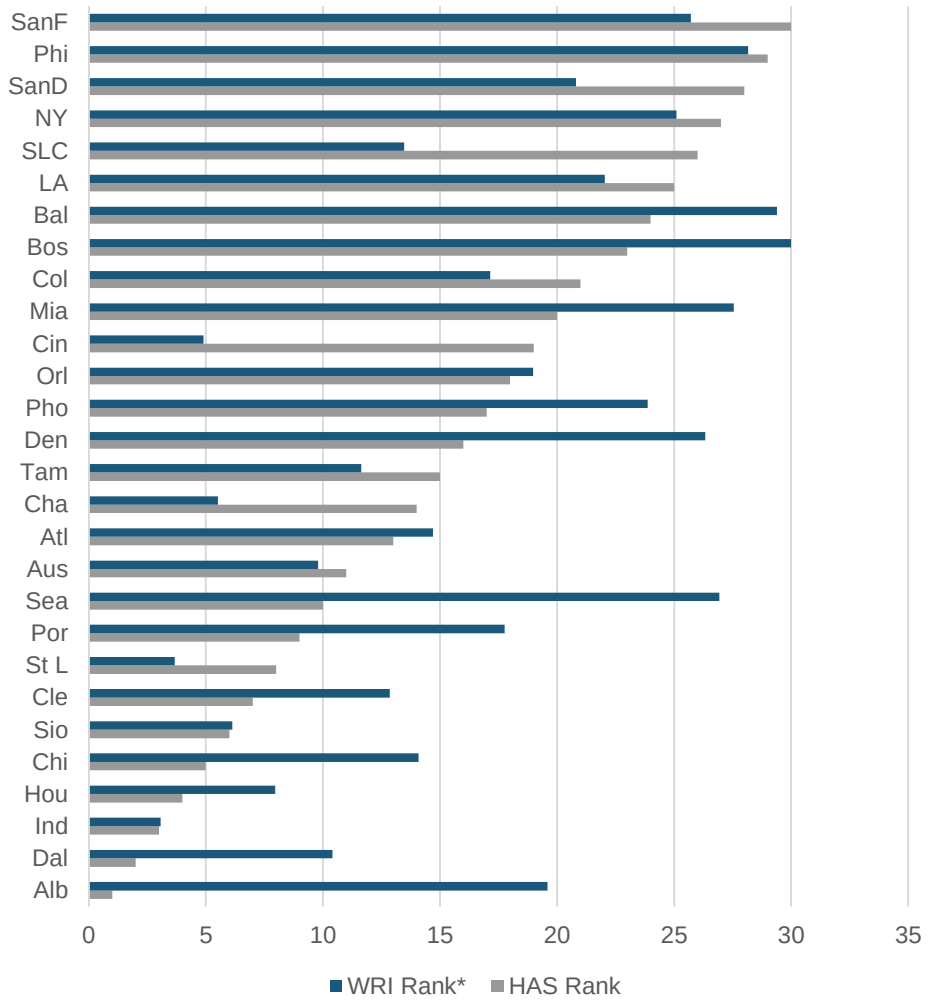
Barriers to Apartment Construction Subindices



BARRIERS INDEX METHODOLOGY:

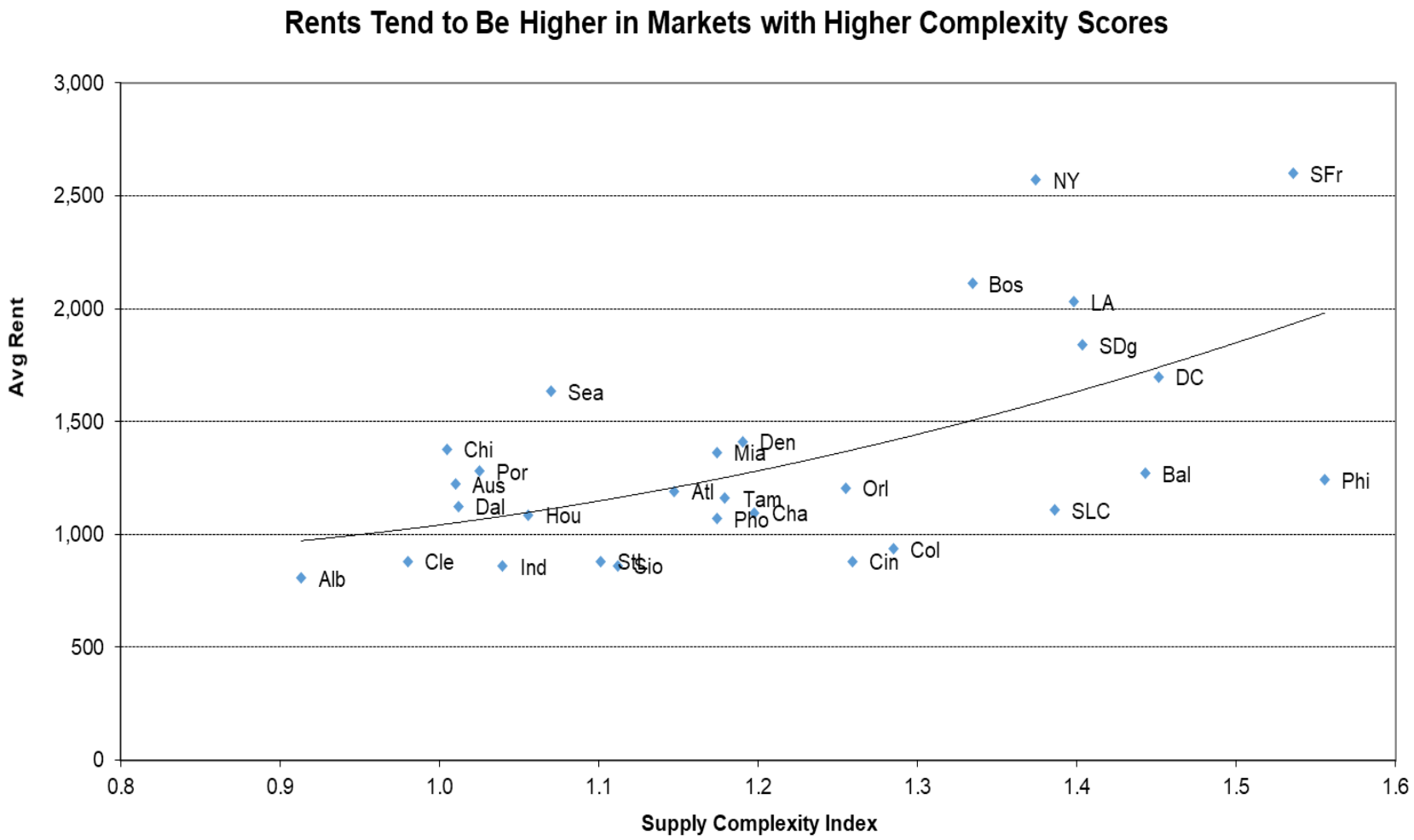
Source: Hoyt Advisory Services, https://www.naahq.org/news-publications/barriers-apartment-construction-index

Comparison to WRI Index

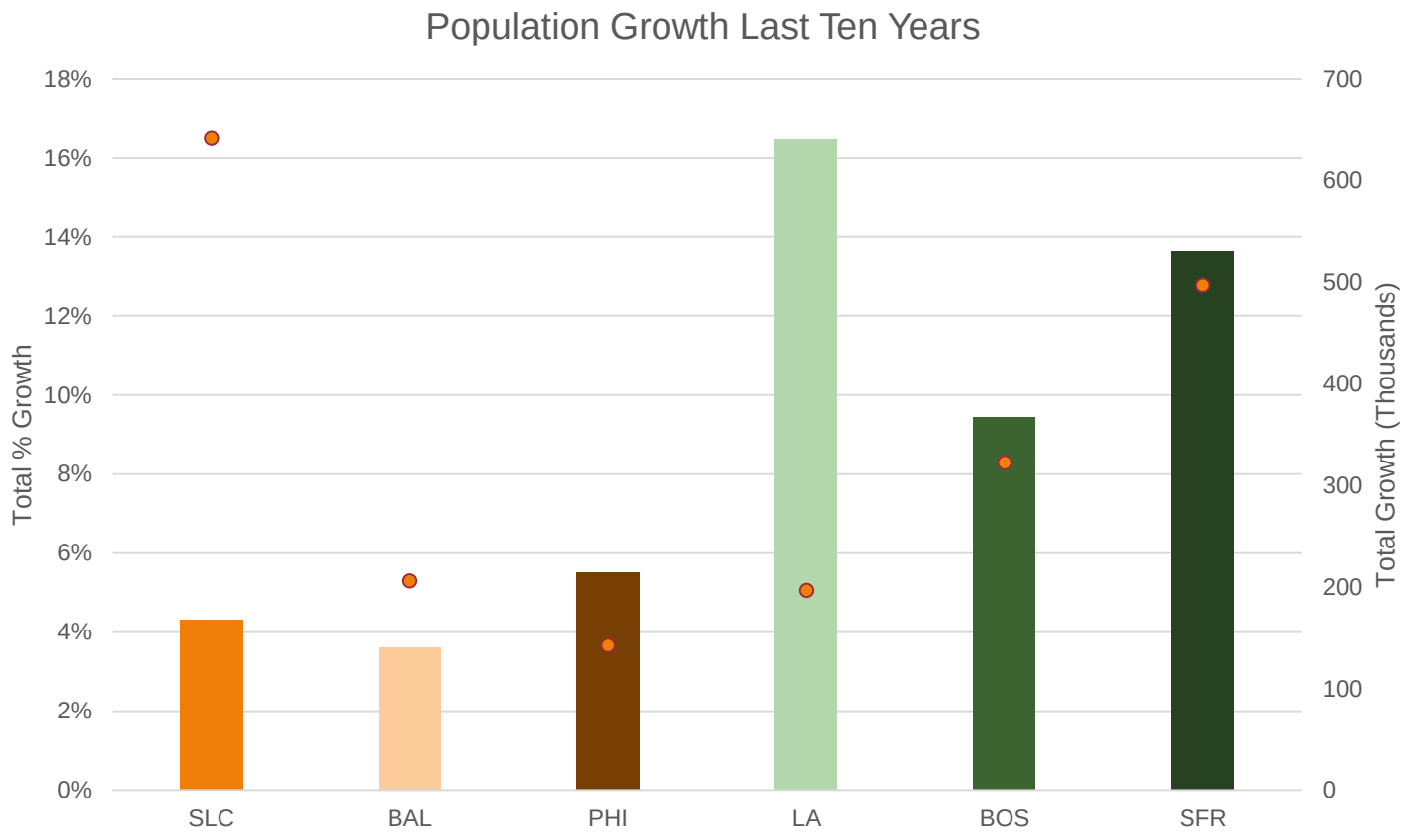


*Wharton Regulatory Index (WRI) rankings adjusted to a maximum of 30 to have a similar range as the HAS Index rank.

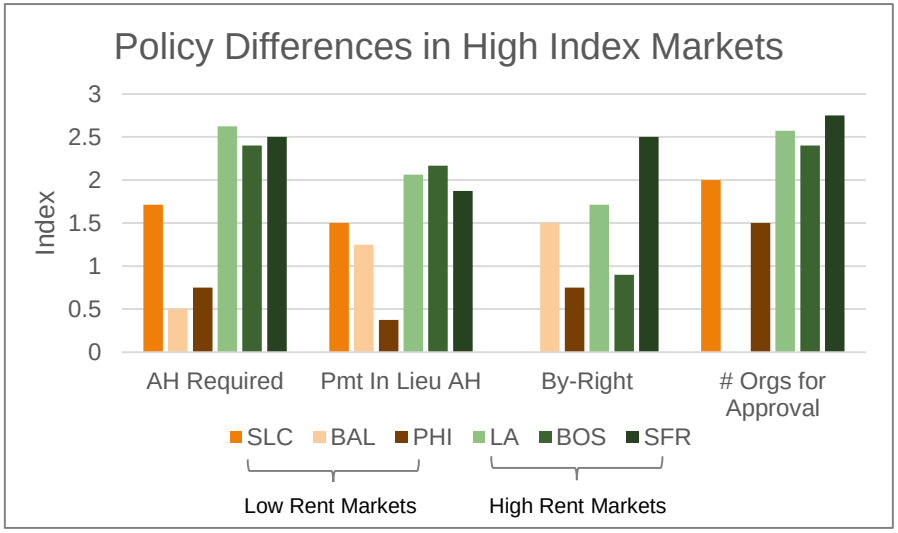
Rents Higher in Markets with High Scores

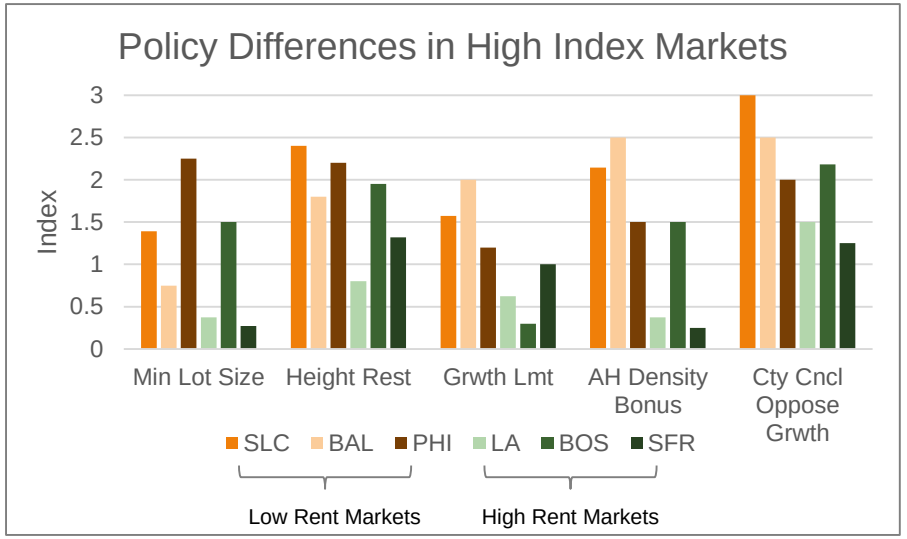


Why the Variance in Rents in High Index Markets?

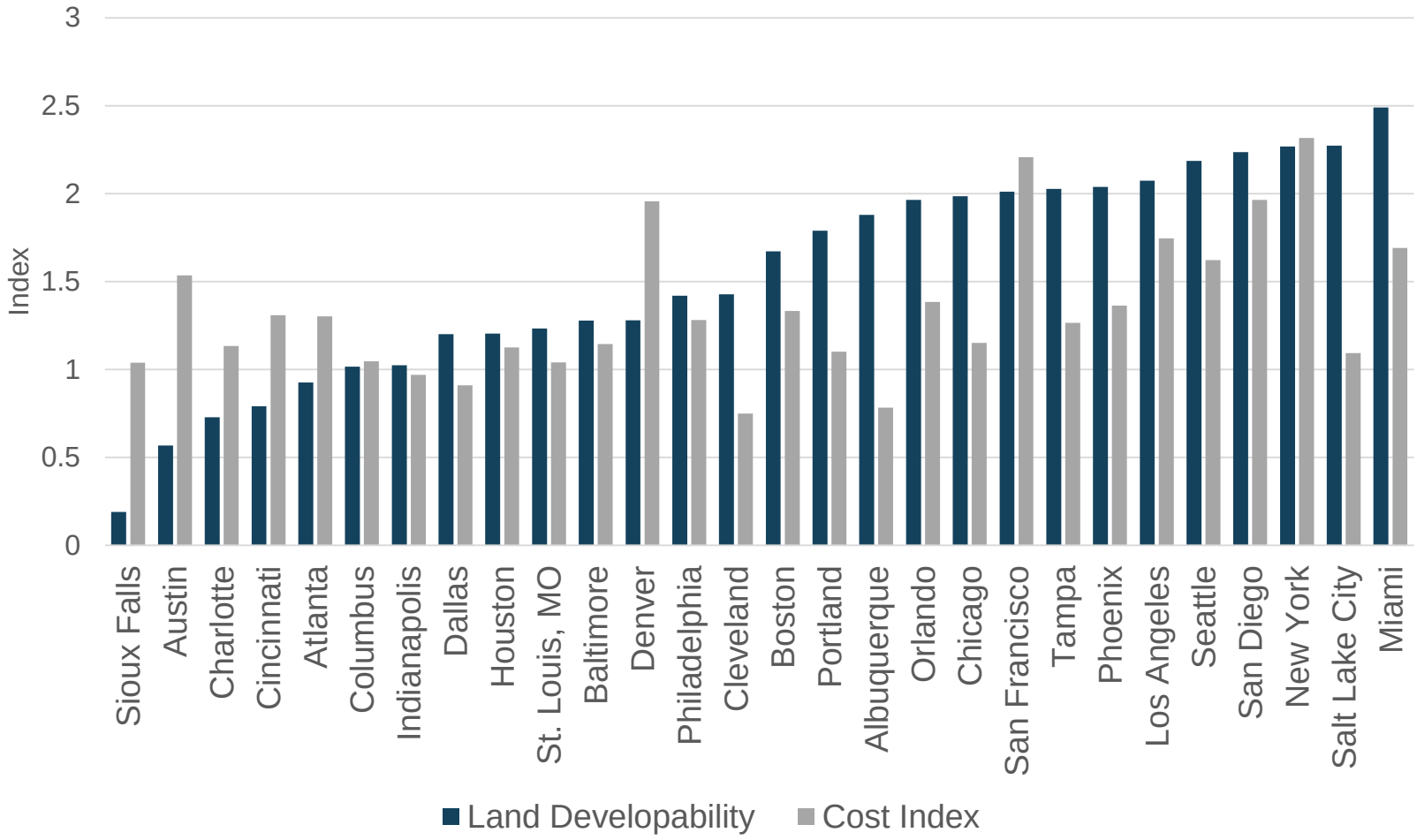


Why the Variance in Rents in High Index Markets?



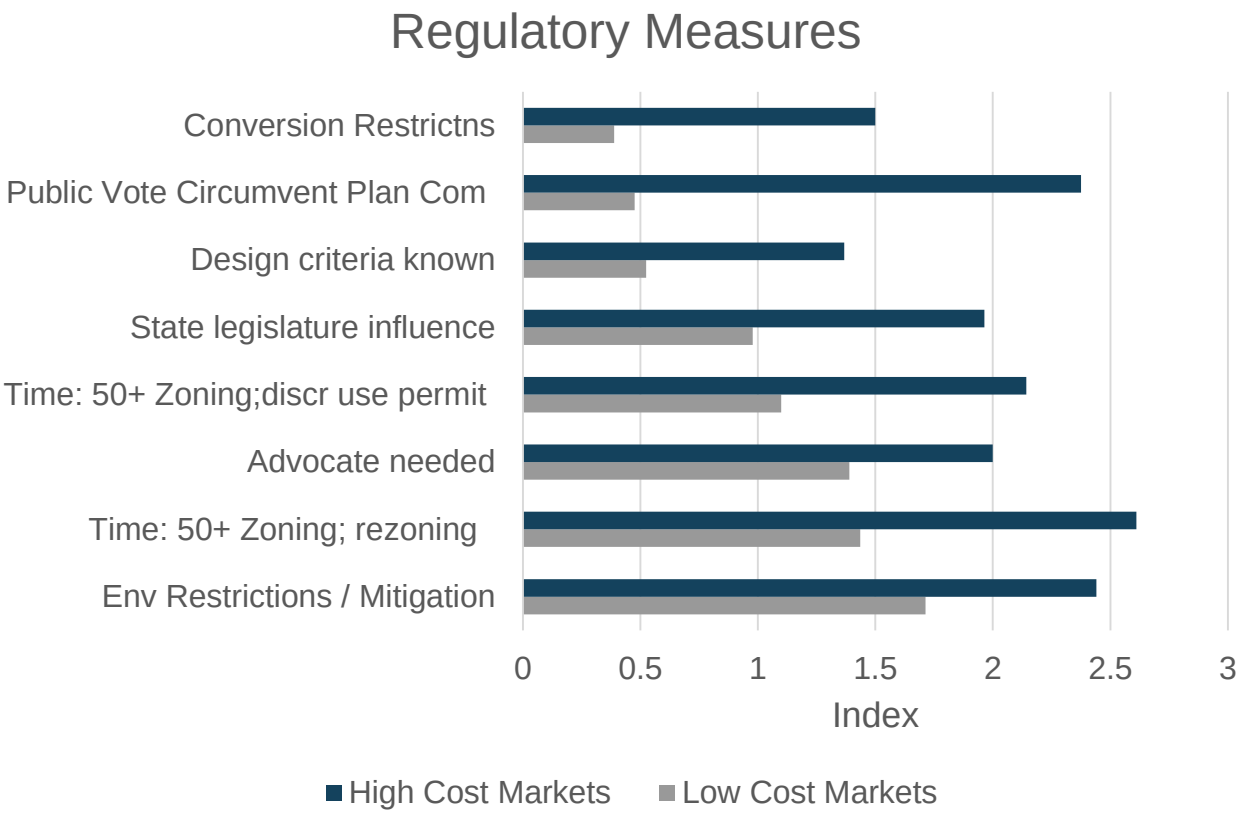


Using the Data, e.g. Less Land Availability* Often but Not Always Correlated with Higher Costs



Higher Land Developability scores indicate less land available for development

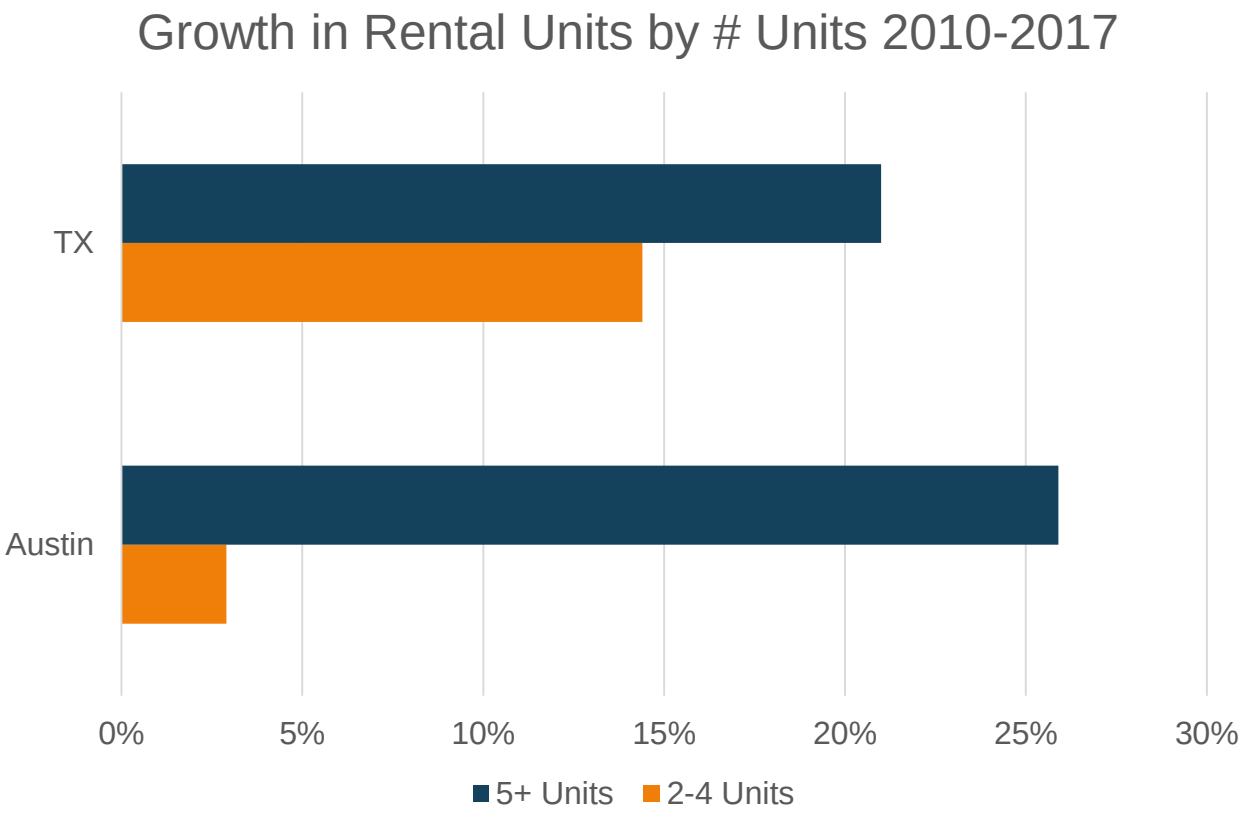
Regulatory Differences in High-Cost and Low-Cost, Land-Constrained Markets



Low-Cost Markets = Salt Lake City, Miami, Tampa, Phoenix
High-Cost Markets = San Diego & San Francisco

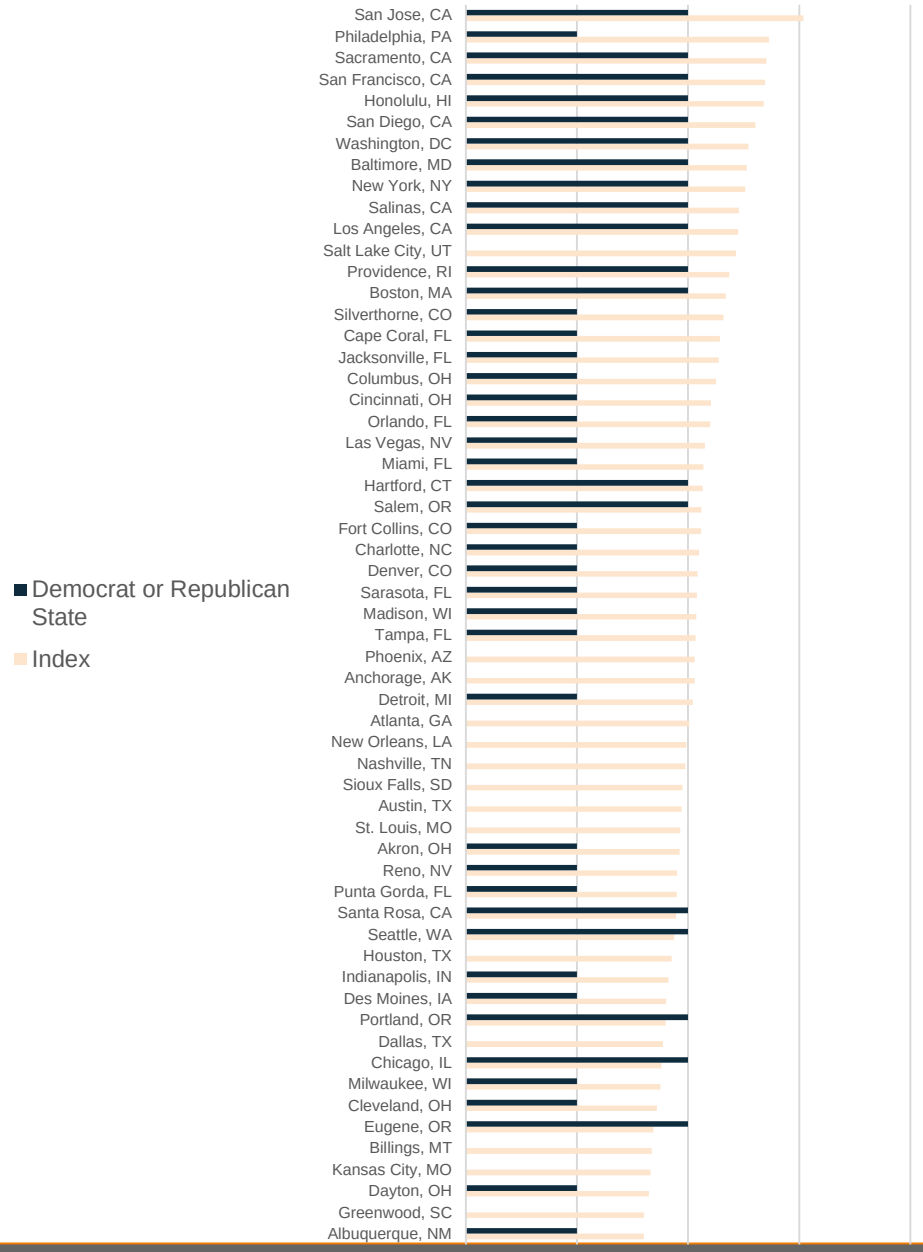
Hidden / Unintended Consequences of Regulation?

High Fixed Fees Inhibit Supply of Smaller Units in Austin



Source: U.S. Census

Index Score vs Democrat or Republican State



Source: https://www.270towin.com/content/blue-and-red-states
1=Democratic state,0.5 = Mixed; 0=Republican