

Sand Castles Before the Tide? Affordable Housing in Expensive Cities

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For decades following World War II, America’s urban crisis was one of decline and population loss—problems that persist in some US cities. But the 1990 Census showed that an important set of cities had begun to gain population over the previous decade (and some neighborhoods had begun to attract new residents even earlier). Crisis became renaissance, and these cities came to experience an entirely different set of problems.

Today, we observe the divergent fates of American cities: some are becoming extremely costly while others continue to struggle with the problems of abandonment; some grow at a rapid pace while others resist new development. Broadly speaking, we can classify US cities into three types in terms of their housing cost dynamics. First, some cities continue to have shrinking populations, so the existing supply of housing is large compared to the quantity demanded and housing is often quite inexpensive. Examples include certain “Rust Belt” cities like Rochester, Detroit, and St. Louis. Second, some cities have both growing population and a growing supply of housing, including “Sun Belt” cities such as Atlanta, Houston, and Tucson. These cities tend to have relatively less-expensive housing. Third, in some cities, the demand for housing is growing at a much faster rate than the supply. These so-called “superstars” include New York City, Boston, Washington, DC, San Francisco, Los Angeles, Seattle, and Denver (Gyourko, Mayer, and Sinai 2013). Table 1 shows housing price increases over the past 20 years for 17 large metro areas.

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Table 1
Change in Median Home Values 1996 to 2016

<i>Core-based Statistical Area</i>	<i>Median value in 1996 (2016 USD)</i>	<i>Median value in 2016 (2016 USD)</i>	<i>Percent increase</i>
San Francisco–Oakland–Hayward, CA	\$302,926	\$813,108	168%
Los Angeles–Long Beach–Anaheim, CA	\$229,135	\$576,200	151%
San Diego–Carlsbad, CA	\$219,981	\$515,325	134%
Riverside–San Bernardino–Ontario, CA	\$150,947	\$310,433	106%
Boston–Cambridge–Newton, MA–NH	\$203,048	\$399,100	97%
Seattle–Tacoma–Bellevue, WA	\$204,289	\$396,717	94%
Denver–Aurora–Lakewood, CO	\$177,498	\$341,292	92%
Miami–Fort Lauderdale–West Palm Beach, FL	\$125,039	\$236,867	89%
Washington–Arlington–Alexandria, DC–VA–MD–WV	\$207,790	\$372,375	79%
New York–Newark–Jersey City, NY–NJ–PA	\$223,167	\$390,275	75%
Tampa–St. Petersburg–Clearwater, FL	\$ 99,863	\$169,908	70%
Phoenix–Mesa–Scottsdale, AZ	\$143,303	\$223,392	56%
Minneapolis–St. Paul–Bloomington, MN–WI	\$150,259	\$229,117	52%
Philadelphia–Camden–Wilmington, PA–NJ–DE–MD	\$142,929	\$209,900	47%
Dallas–Fort Worth–Arlington, TX	\$136,317	\$192,150	41%
St. Louis, MO–IL	\$110,619	\$143,917	30%
Atlanta–Sandy Springs–Roswell, GA	\$144,201	\$167,467	16%

Sources and Notes: Median values are based on Zillow Median Housing Value Index for all homes by Core-based Statistical Area. Monthly medians were collapsed to annual average medians. Figures were deflated to 2016 USD using CPI-U from the Bureau of Labor Statistics. List of Core-based Statistical Areas is based on the 20 largest Metropolitan Statistical Areas by population in 2016 (American Community Survey 2016 1-year estimates, Table B01003). Chicago, Detroit, and Houston CBSAs are not listed due to lack of data.

This third set of cities, with unprecedented economic success and a seemingly permanent crisis of affordable housing, is the focus of my article. In the expensive cities, policymakers expend great amounts of energy trying to bring down housing costs with subsidies for affordable housing and sometimes with rent control. But these efforts are undermined by planning decisions that make housing for most people vastly more expensive than it has to be by restricting the supply of new units even in the face of growing demand.

I begin by describing current housing policy in the expensive metro areas of the United States. I then show how this combination of policies affecting housing, despite internal contradictions, makes sense from the perspective of the political coalitions that can form in a setting of fragmented local jurisdictions, local control over land use policies, and homeowner control over local government. Finally, I propose some more effective approaches to housing policy.¹

¹How do we know if housing is “too expensive?” There are three common ways that practitioners think about affordability. First, the US Department of Housing and Urban Development defines a household as “cost-burdened” if it pays more than 30 percent of its pretax income for housing. Second, the Center for Neighborhood Technology (CNT) proposes a measure that combines household expenses on housing

We are interested in both metro areas and in the individual cities that make up metro areas. Housing markets and labor markets—conceptually, the same thing in most cases—exist at the scale of metropolitan regions. Because people within a metropolitan area can easily live in one city but work in another, it’s not possible to bring down the cost of housing in one city without bringing it down in the metro region as a whole. But as we will see, the decisions that affect housing costs are not made at the metropolitan scale, they are made at the scale of individual cities. So it is usually correct to speak about the housing policy choices of *cities*, even when the outcomes of those policy choices will be manifest at the metropolitan scale. I will try to be clear about scale throughout this discussion.

Overall, my view is that the effects of the formal affordable housing policies of expensive cities are quite small in their impact when compared to the size of the problem—like sand castles before the tide. I will argue that we can do more, potentially much more, to create subsidized affordable housing in high-cost American cities. But more fundamentally, we will need to rethink the broader set of exclusionary land use policies that are the primary reason that housing in these cities has become so expensive. We cannot solve the problem unless we fix the housing market itself.

Urban Housing Policy Today

Cities have four principal tools they use to affect housing prices: direct provision of social housing; vouchers to increase the purchasing power of households; price controls on rents; and regulations on development of new housing supply. We’ll review each of these.

Social Housing

In the early days of the affordable housing movement in America, many activists argued that housing for the broad working and middle class should be provided outside the market. They drew favorable lessons from European cities such as Amsterdam and Vienna. Activists like Catherine Bauer (1934, p. xvi) wrote approvingly of the European models, saying, “The land, construction, finance, and management of low- and medium-cost dwellings were removed from the speculative market: housing became a utility.”

and transportation, as a percent of household income (Haas, Makarewicz, Benedict, Sanchez, and Dawkins 2006). CNT’s work shows that metros with lower housing costs tend to have higher transportation costs; and metros that are more expensive on the “H+T” (Housing and Transportation Affordability) Index also have higher average household incomes—because housing costs partially determine wage rates necessary to attract workers. Third, Stone, Burke, and Ralston (2011) has proposed a “residual income” approach that defines housing affordability by how much money a household has left over after all nondiscretionary expenses, including housing. In this essay I take a qualitative view. I suggest that when we say that housing is “too expensive,” what we mean is that we want more people to be able to live in the high-productivity metro areas of America; in other words, we want people lower down on the skill ladder (or people without as much inherited wealth), to have the chance to be part of these successful agglomeration economies.

Table 2
Proportion of Housing Units Receiving Subsidies or under Rent Regulation for Selected US Cities

	<i>Social Housing Sector</i>				
	<i>Public housing</i>	<i>Other subsidized</i>	<i>Rent regulated</i>	<i>Unregulated rental</i>	<i>Owner occupied</i>
New York City	6.0%	4.0%	34.6%	25.1%	30.2%
Los Angeles	1.7%	3.4%	14.0%	42.3%	38.6%
Chicago	3.8%	2.6%	0.0%	49.8%	43.8%
Houston	1.0%	3.4%	0.0%	49.8%	45.8%
Philadelphia	3.7%	1.5%	0.0%	35.5%	59.3%
Phoenix	1.0%	1.9%	0.0%	36.5%	60.7%
San Diego	1.4%	3.4%	0.2%	45.5%	49.5%
Dallas	0.5%	2.9%	0.0%	53.3%	43.2%
San Antonio	2.8%	2.1%	0.0%	37.0%	58.1%
Detroit	2.0%	3.9%	0.0%	39.2%	54.9%
San Francisco	1.2%	6.8%	46%	9%	36%

Source: Based on Ellen and O’Flaherty (2013, Tables 10.1 and 10.4), who use data from the American Housing Survey Metropolitan Data series of the US Census Bureau. San Francisco data is from the San Francisco Mayor’s Office of Housing by communication with the author.

The contrast between US housing policy and that in Western Europe remains instructive: today we see high levels of social housing in the Netherlands (33 percent), France (17 percent), Denmark (20 percent), and the United Kingdom (18 percent) (Housing Europe 2015). In these countries, it is much more common for working-class and middle-class people (not just the very poor) to live in social housing. The sector contains a mix of publicly owned housing, publicly funded (but privately owned) housing, and cooperative housing, with lots of specific differences in institutional design across countries.

Table 2 loosely translates this idea into an American context with data for ten US cities. I define the “social housing” sector as housing that is both subsidized and permanently price-restricted.

In the United States, following some scattered experiments during World War I, large-scale construction of public housing began in earnest with the 1937 Wagner Housing Act, which launched both public housing and urban renewal as part of a national effort to tear down “slum” housing and replace it with “modern” housing (Radford 1996). The heyday of the program, in terms of how many units were produced, was the 1950s and 1960s. But by the end of the 1960s, public housing was in disrepute—the result of bad design (public housing became a playground for architectural fads); racism (one of the reasons Congress never adequately funded the program); public sector sclerosis (poor management by local housing authorities); broader economic decline in these local areas (which left residents in deeper poverty over time); and perhaps an underlying faulty premise about the efficacy of concentrating so many poor people in one location.

Many reforms of public housing were launched over the years, perhaps the most extensive being the HOPE VI program of 1993–1999, which offered block grants to cities to replace the modernist “towers in the park” with low-rise, more traditional buildings like row houses (Solomon 2003).

Addressing the mistakes of previous generations of public housing continues to be a major focus of housing policy in most cities. In the late 1960s and early 1970s, most cities began to contract out the construction and management of their subsidized housing programs. The Community Development Corporation (CDC) emerged as the primary organizational model for this work, bringing greater control by local community leaders, linking housing to a broader agenda of neighborhood revitalization, and introducing better management practices that marked a significant advance over the public housing authorities (Erickson 2009).

In more recent years, some cities (including New York, Washington, DC, Boston, Portland, Los Angeles, and San Francisco) have provided social housing through a policy of “inclusionary housing,” which requires that market-rate housing developers set aside a portion of their units at below-market prices permanently or pay an equivalent fee (Joseph, Chaskin, and Webber 2007). Typically, these laws require between 5 and 25 percent of the units in a market-rate building to be provided at below-market rents (activists always hope for more, and sometimes get it). The cost of each inclusionary unit can be quite high, ranging between \$250,000 per inclusionary unit in a lower-cost building to more like \$500,000–\$700,000 dollars in subsidy per inclusionary unit in a new high-rise. When a developer pays a fee rather than build the inclusionary units on site, the costs can also be significant; in San Francisco in 2016 the fee for each two-bedroom inclusionary unit built off-site was \$366,000. On a 100-unit building, with a 15 percent inclusionary requirement, the total fee would be \$5,490,000 (San Francisco Office of the Controller 2016). Those fees have continued to rise.

The inclusionary units are allocated by a lottery, with hundreds or even thousands of people applying for each one. Inclusionary housing has been important in a few markets, but the numbers of units that can be generated through this type of program are exceedingly small, because: a) the internal economics of the developments can support only so many below-market-rate units; and b) the taxable base—the number of market-rate projects that are built in any year—is not usually very large. Every now and then people suggest that more households could be helped if the subsidies from inclusionary programs were spent in less-expensive municipalities within the same metro region, as when the Mayor of Oakland suggested that San Francisco’s affordable housing dollars would make a bigger difference if they were spent in Oakland. Thus far, policymakers have decided that it is more important to spend these resources to further the goal of income diversity within their cities, in keeping with the concept of “inclusion.” Useful reports that compile data on US inclusionary housing programs include Hickey, Sturtevant, and Thaden (2014), Sturtevant (2016), Jacobus (2015), and Williams, Carlton, Juntunen, Picha, and Wilkerson (2016).

In theory, social housing has an important societal benefit beyond the improved well-being of the residents who get to live in it: by placing urban land into ownership by nonmarket actors, it provides one way to address issues related to the economic rents of landholding. The gains in housing wealth generated by the highly productive cities since the “great divergence” of the 1970s were not a reward for hard work or innovation on the part of landowners. The efforts of homeowners to use regulatory tools to protect and extend these wealth gains are the epitome of wasteful rent-seeking behavior.² Public and nonprofit ownership of urban land provides a direct way (although certainly not the only way) to remove some parcels from the rent-seeking behavior by private landowners in a context of housing scarcity. (For a modern discussion of Henry George’s famous proposal to tax away the “un-earned” increment of land value, see Arnott and Stiglitz 1979.)

Social housing could be expanded in novel ways, including serving a broader range of income levels as in the European models. In Metcalf (2015), I offer a history of the concept of “alternative institutions” in American social movements, various attempts to invent new models of affordable housing. The natural question with this approach is one of funding, and the numbers can become forbiddingly large. The math is conceptually simple: multiply the subsidy per unit by the number of units we want to build or acquire. Assuming a subsidy of \$300,000 per unit (it can be much more in high-cost cities), if we want to help one million households the cost would be \$300 billion.

Vouchers

In 2015, 2.2 million households, comprising 5 million people, used rental vouchers to secure housing in the private market. The biggest program known as “Section 8,” was created in 1974. Under the Section 8 program, households pay 30 percent of their income in rent, and the local Housing Authority covers the rest of the monthly rent to the landlord. Each year, the US Department of Housing and Urban Development determines “fair market rent” which sets the limits on how much rent subsidy will be provided in each city. (As of this writing in 2017, the HUD fair market rent for a two-bedroom unit in San Francisco is \$3,319 per month.)

The federal government does not fund vouchers for everyone who needs them, and there are long waiting lists in most cities. One study estimates that only 25 percent of the households that are income eligible according to the standards of the US Department of Housing and Urban Development receive federal assistance (Center on Budget and Policy Priorities 2017). In some cities, the odds are much worse: recently, 600,000 residents of Los Angeles were applying for 2,400 vouchers (Smith 2017). In expensive housing markets, there is also a perennial problem of

²Land rents can be roughly estimated as the difference between housing sales prices and the full cost of production. In an unconstrained housing market, prices should decline to approach marginal costs (Gyourko and Molloy 2014). Rognlie (2015) shows how the changing distribution of wealth in the form of land rents to the housing sector is a major cause of the changes in inequality of wealth since World War II (see also Arent 2015).

voucher dollar amounts being insufficient, so that many landlords are not willing to rent to voucher holders.

Cities generally do not invest their own affordable housing funds into expanded voucher programs, preferring to instead create permanent social housing units, but a local expansion of housing voucher programs remains an option that could be pursued.³ Indeed, this program could be expanded by any level of government (local, state, or national) if the political will existed.

In theory, vouchers have many virtues. They allow targeting of benefits to the people who most need them. When provided at the federal or state level, they can be used in many different locations, opening up different neighborhoods and school districts to people from different economic backgrounds. They are flexible in the depth of subsidy they provide based on the exact income of each household.

In practice, the program does not work as well as we might wish. There is pervasive discrimination against voucher holders, such that in many places certain landlords specialize in housing the population of voucher holders. In low-elasticity housing markets, vouchers can end up increasing the cost of housing, whereas direct provision of social housing can expand the supply and can drive down prices in the lower end of the housing market. To truly reach its potential as a tool for lifting low-income families out of poverty by giving them access to better school districts and other opportunities, voucher programs need to be supported by more intensive counseling programs and other forms of assistance (DeLuca and Rosenblatt 2017).

Given the costs of both social housing and vouchers, there is reason to wonder if the United States would ever have the political will to spend enough money on housing subsidies to help everyone who needs it, especially when we consider the question of trade-offs: Are we certain that it's best to spend that money on housing as opposed to say, education? But remember that the federal government spends far more on subsidies for homeowners than it does on subsidies for renters, this in the form of the mortgage interest deduction (\$71 billion), the deduction for real estate taxes (\$31.4 billion), and the tax exclusion on capital gains from housing (\$24.1 billion). Taken together, these numbers from 2015 totaled more than double the combined costs of support for low-income non-homeowners like Section 8 housing vouchers (\$29 billion), the low-income housing tax credit (\$7.6 billion), public housing (\$6.5 billion), and accelerated depreciation (\$4.7 billion), which is a tax benefit for rental apartment owners who use federal low-income tax credits (Fischer and Sard 2016; Schwartz 2015). We can surely spend more money on vouchers and/or social housing if we choose to.

We are already making an investment in housing subsidies at a massive scale. Perhaps it is no more unreasonable to hope for a truly large social housing program or voucher program than it is to wish for a truly large change to the local rules on housing supply; both are uphill fights.

³For a classic review of the debate between subsidizing the production of housing or subsidizing the purchasing power of households, see Apgar (1990). For interesting thinking about how to redesign the housing voucher program, see Collinson and Ganong (2017).

Rent Control

Rent control is relatively rare in American cities and occurs mainly in the states of New York, New Jersey, and California. In our cohort of expensive cities, rent control is especially significant in New York, San Francisco, and Los Angeles. From the sample of economists that I have known, it appears that opposition to rent control is something like an oath of office for the profession, but real-world rent control, at least in its modern form, is generally not very damaging in its impacts on the housing market (Arnott 1995). Generally, landlords are allowed to raise the rent a certain percent each year for existing tenants, and there are rules to prevent landlords from evicting tenants without “just cause.” But landlords can usually raise the rents up to market rate, with no restrictions, upon unit vacancy. Nowhere in the United States does rent control apply to new construction. In a sense, rent control works as a delay mechanism that slows the rate of price increases on incumbent tenants for part of the housing stock. This American version of rent control is quite different from rent control in places like Paris, where the government sets the allowable maximum rent each year for all the regulated units (O’Sullivan 2016).

We should acknowledge the downsides of US-style rent control. It limits unit turnover and leads to a misallocation of housing resources. It has poor targeting efficiency in terms of matching the benefits to the people who most need them. It adds to the perception of risk (and the cost of capital) for investors in new development, who will fear that cities with pro-rent control politics could at some point try to apply it to new construction or otherwise change the universe of units that fall under the price controls. It benefits current residents while doing nothing for new migrants to cities. But where rent control has been in place for a while, it is not typically a major cause of supply suppression. So long as cities are not trying to apply rent control to new (or recently built) development, it is a sidebar to the more fundamental dynamics that affect the cost of housing in expensive metro areas. Against these downsides, we should also acknowledge the significant upsides of large groups of people enjoying lower housing rents than they otherwise would, with the attendant benefits of greater community stability.

Regulation of the Housing Market

Given how much effort cities put into their official affordable housing programs, it is paradoxical, or even tragic, that when we turn to housing policy for the market-rate sector we find that the preponderance of the effort is geared toward suppressing supply. Local development regulations fall into four categories: zoning, building standards, permits to add supply, and fees.

Zoning codes regulate what land uses are allowed on a site—housing, office, retail, and so on. They also control building heights, densities (how much building per area of land is allowed), set-backs, rear-yard requirements, tower separation requirements, parking requirements, and other aspects of building use and form. Between historic districts, solar protection rules, and hundreds of other controls—a broader set of regulations than the mere designation of “zones”—the rules can become quite complex. Zoning in America is generally delegated to locally elected

legislative bodies, like city councils, although in many cities, especially in California, zoning ordinances can also be enacted by ballot initiatives (Fischel 2015).⁴

If zoning regulates *what* can be built where, the building code (and other related codes) regulate *how* it can be built: what materials are allowed, how big the windows must be, how large the rooms must be, how much heat can be lost through a wall, how a structure performs in an earthquake, and so on. Such technical regulations inevitably have both benefits and costs, which can be difficult to assess. Many of these codes are necessary, but they have the effect of raising the production costs of housing. Are the added costs worth it? In some cases, the answer will be no. Especially for those who hope that innovation will lead to reduced housing production costs, building standards will often prove to be a barrier.

Both zoning rules and building codes embody judgments regarding what constitutes “decent” housing. The rules inherently involve subjective criteria about aesthetics and livability. For example, many cities effectively outlaw single room occupant apartments, rooming houses, and other shared housing models that once provided cheap housing to the working class (Groth 1994). Those who believe that one strategy to bring down the costs of housing should be to allow people to live in smaller and less-expensive types of housing, may feel that the minimal standards have not been set in the right place.

The housing approval process is the next piece of the puzzle. A developer can propose to build housing that fits within the zoning code, the building code, and all the other codes, but must also still receive legal permission to build something. The process for getting this permission (or “entitlement”) varies widely across cities, in what can be viewed as a continuum of certainty. Some jurisdictions allow housing that fits within the zoning codes to be approved automatically. In other places—again, California cities stand out—a developer proposing a large project will need to pay for years of studies about environmental impacts; hold dozens of public meetings at which neighbors express their desires for the project to be changed, reduced, or rejected; hire lobbyists, make campaign contributions, and donate money to community groups to convince elected officials to allow the project; and ultimately face a vote of the city council to allow or disallow the project. After that, in some jurisdictions, the project may still end up on the ballot to face a vote of the entire electorate. More uncertainty and greater risk translates into a higher cost of capital. Longer approval processes translate into higher carrying costs for the land.

⁴The 1926 US Supreme Court case that established the validity of zoning, *Village of Euclid, Ohio v. Ambler Realty Co.* (272 US 365), established the “presumption of validity” that locally-elected legislative bodies were to be treated as the judges of what was in the public interest. But the court also noted that there could come a time in the future when what might be perceived to be good for a municipality would diverge from the broader public interest: “It is not meant by this, however, to exclude the possibility of cases where the general public interest would so far outweigh the interest of the municipality that the municipality would not be allowed to stand in the way.” This idea has reappeared in many important land use cases: as another example, see the 1972 case before the New York Court of Appeals, *Golden v. Planning Board of Town of Ramapo* (285 N.E. 2d). It remains to be seen whether housing reformers will be able to develop a legal strategy based on the insight that the broader regional or national public interest is not necessarily aligned with the incentives of individual cities.

Perhaps the greatest negative impact of an uncertain and hyperpoliticized entitlement process is that it functions as a barrier to entry for developers and investors into a market. The net effect is to reduce competition among developers.

The fourth type of local regulation on housing development is financial: fees and exactions. The legal distinctions between these types of payments are important for city officials and developers, but the economic logic is similar: these payments must be made in exchange for permission to build housing. Cities collect fees and exactions to support affordable housing production, transit expansion, parks, and general municipal budgets. The total costs of fees and exactions in a city like San Francisco range between \$60,000 and \$150,000 for each market-rate unit.

These costs interact with the uncertainties of the entitlement process in an interesting way. In some places, developers must negotiate a distinct set of payments for each project. Certain constituencies in these communities will oppose a project unless they receive sufficient payments or concessions. In some cities, these payments tend to go to affordable housing; in others they might take the form of labor union contracts or local hire preferences or even private legal settlements. Activists and politicians have developed effective methods for extracting these so-called “community benefits” from housing developments on a project-by-project, ad-hoc basis; and for these activists and politicians, it is essential to keep the transaction costs and regulatory barriers to housing high in order to increase their bargaining power with developers. To the activists fighting for these concessions, it is self-evident that they should try to extract as much funding for their priorities as possible, and they rightly point to negotiated deals that yielded public investments that helped people. But of course, at the level of the housing system as a whole, the resulting profound uncertainty about what level of payments will be required becomes one more factor driving up the cost of housing, scaring away potential investors, and reducing overall housing supply.

Who bears the burden of the costs of the fees and exactions on housing development? At the scale of an individual building, developers cannot simply “pass the costs on” to consumers; rational developers will already be charging the maximum the market will bear. Most of the costs of producing housing (materials, labor, capital) are given from the perspective of the developer; fees and exactions are no different. But if the costs of production go up, developers can try to bid less for land. If all the costs of fees and exaction are known in advance of a land transaction, developers should not bid more than they can afford—which in theory would drive down residual land value.

But there are significant limits, especially in high-demand markets. For one thing, if the rules are inherently unpredictable and changeable, it is nearly impossible to bid rationally on land, which inevitably drives up the cost of capital, and results in inefficient outcomes. More importantly, as a residential developer’s offer price decreases, fewer land-sellers will sell, which translates into a reduction in how many parcels will be developed. After all, urban land has other uses than housing. Almost always, the urban parcel in question is generating revenue already; it is occupied by a store, a parking lot, or some other business. It’s quite easy to impose such high costs that developers will not be able to outbid existing uses and redevelop so-called

“soft” sites. At some point, the capitalized net operating income flowing from a single-story strip mall retail development is worth more than a housing developer can offer. In jurisdictions like California, this problem is particularly acute because the ballot Proposition 13 approved in 1978 depresses property taxes on long-term owners, further disincentivizing the sale of their existing revenue-generating assets. In the long run, we can expect fees, exactions, and other financial requirements to reduce the quantity of land that is developed. Said differently, the market price for housing has to remain high enough to cover the cost of the fees and exactions, so these function as a price floor that keeps housing more expensive than it otherwise would be.

Most public officials would state that affordable housing is one of their top priorities. But when looking at the combination of housing policies—both the official “affordable housing” policies and the broader set of exclusionary land use regulations—it seems clear that *de facto* housing policy for most of the cities in expensive metro areas is to make people live somewhere else (and suffer long commutes) or to discourage people from moving into the area in the first place (effectively preventing them from participating in the most successful economies of the country). Many more people experience this sort of exclusion than actually receive a price-restricted, subsidized housing unit, a rent controlled unit, or a housing voucher. The exclusionary effects of unnecessarily high housing costs due to local barriers to supply far outweigh the gains in housing access provided from the other programs. A policy trade-off arises here: is it worth helping one set of lower-income households by providing subsidized housing at the cost of increasing the price of units in the market sector?

For the country as a whole, the restrictive housing policies of the cities in expensive metro areas leads to the segregation of the wealthy into zoned enclave communities; a reduced ability of lower-income people to move to areas of higher opportunity; a diversion of enormous wealth into rent-seeking behavior by land-owners; and a decrease in economic productivity for the country as a whole, because labor is not able to be allocated to the most productive economic clusters (Furman 2015; Hsieh and Moretti 2015; Gyourko and Molloy 2014; Ganong and Schoag 2015).

The Collective Action Problem of Local Housing Policy

We can understand the tendency for misregulation of the housing market as the result of two sets of factors: first, the jurisdictional fragmentation of American metropolitan areas coupled with the local need to raise money for public services; and second, the combination of locating responsibility for development regulation with localities coupled with control of local democratic process by incumbent homeowners.

Jurisdictional Fragmentation and Local Taxation

Conceptually, both labor markets and housing markets exist at the metropolitan scale, which can be thought of as the “commute shed.” Each metropolitan area is

comprised of many individual cities, towns, villages, townships, and usually multiple counties—in other words, local governments that have control over land use decisions. In addition, some regions consist of adjacent and partially overlapping labor markets, which adds further complications—for example, the many cities along the Boston-to-Washington corridor, or the twin and increasingly merged economies of San Francisco and Silicon Valley (Savitch and Adhikari 2017).

Cities compete with one another to avoid “bads” like freeways, dumps, or other land uses with negative local impacts, and also to provide amenities that will be attractive to residents. Competition between cities is supposed to allow citizens to “vote with their feet” to live where they can find the mix of taxes and services that best matches their preferences (Tiebout 1956). While acknowledging that this sorting results partially from divergent personal preferences, it’s clear that the outcomes are not all benign. They include the secession of the wealthy into enclaves where they can provide good schools for their children; the segregation of the poor into cities that lack the resources to pay for adequate public services; and a chronic tendency to underproduce housing.

Each city has a fiscal incentive to minimize costs and maximize revenues. Typically that means trying to attract jobs while not adding residents (it is residents who consume public services). Also, each city has an incentive to avoid the negative impacts, especially traffic, that typically come from added housing. Because there are typically many cities within a metropolitan area, it is very possible for some cities to win this fiscal arms race by having a higher ratio of jobs to housing units, enabling those cities to provide higher levels of public service at a lower cost to residents.

From a macro policy perspective, it’s not essential for every city in a metropolitan area to produce housing so long as the total housing supply in aggregate is sufficient. But we face pervasive free-rider incentives, which lead every city (technically the people who run the city) to believe it could not possibly be asked to add housing, especially not at high densities, while believing that other cities would be much more logical places to put new housing. Jurisdictional fragmentation at the regional scale coupled with local taxation as the source of funding for essential public services sets up a classic collective action problem.

Localized Control over Land Use and Homeowner Control over Cities

Many things that bear on housing markets are beyond the control of cities: the occupational structure of the economy and the mix of employment opportunities for residents; the distribution of wealth, with all that it implies for purchasing power in the housing market; the expenditure priorities of federal housing and social welfare programs; and so much else. But one thing cities do control in the American system is land use. While there are certain limitations and exceptions (more on these below), the states have delegated land use regulatory power to cities, which exercise that authority through zoning and other development controls. The courts also tend to defer to the judgment of locally elected legislative bodies.

At the same time, smaller cities, comprising most of the land within a metro area, are generally controlled by homeowners because most voters are homeowners

(Jurjevich and Keisling 2015). It does not take a great leap to realize that most voters in most cities are going to be interested in protecting the value of their primary asset (Hertz 2016). In the strong version of this “home voter” hypothesis (as named by Fischel 2001), voters work to suppress housing supply as a way to protect higher housing values. This pattern appears to be especially pervasive in the suburbs. But we can construct a weaker version of the hypothesis, which simply asserts that home-owning voters are not strongly motivated to add supply because housing unaffordability does not directly hurt them, so other factors like the desire to avoid traffic or the desire to protect the character of their neighborhoods outweigh the appeal of seeking to reduce housing costs for other people. In both cases, we would expect that the electoral process would, on average, lead to the selection of politicians who reflect the preferences of their constituents not to add housing.

What about the people who are not homeowners—why are the concerns of renters not showing up in the form of more pro-housing politics? One reason is that most of them do not live in the jurisdiction. Most of the people who would potentially benefit from solving the housing shortage are the ones who have been kept out of the expensive cities to begin with: the people who would be residents, who would not live so far away, or who would join the successful economic cluster, if they were able to. Our local democratic process does not take their interests into account because only people who have already made it “in” are members of the polity.

But even renters in the expensive cities—the people who may or may not occupy a rent-controlled unit, the people who are most at risk of being displaced by rising housing costs—are not always a political force in favor of more open housing markets (Hankinson 2017). This fact is essential for understanding housing politics in the majority-renter cities like New York and San Francisco, and is probably the most difficult aspect of local politics for economists to understand. We have to start by remembering that in many situations, not just housing, people may not be rational about their own self-interest, and may be motivated by things other than self-interest. But we can add nuance to this observation in several ways that make it more understandable why renters might be skeptical about housing development.

In the cities with rent control, plenty of renters have incomes that are so low that they would not be able to afford market prices in any plausible scenario of supply increase. Some have occupied their units for a long time, with rents pegged to much lower levels from years ago. These tenants may be correct in their belief that nothing that adds to the market-rate housing supply will directly help them.

Some tenants fear that new housing development in a previously affordable neighborhood could actually *raise* the prices on the adjacent housing stock—when “gentrification” increases the amenity value of the block, or even by signaling that a street is now “safe” for middle-income residents. My own judgment is that these localized effects are tiny when compared to the overall pricing pressure from regional undersupply, but this is a real debate in many of these cities.

While I think it's clear that the opposition to market-rate housing supply by certain political constituencies inside cities has the effect of enriching homeowners and making the broader housing supply expensive, it is also true that there are localized impacts on particular people that we need to take seriously if we want to change this dynamic (Jacobus 2016). Those who would wish to actually bring down housing costs for everyone and make successful American cities more open once again can't just shrug in response to the displacement of particular individuals and say that nothing can be done; we need a response to the displacement of particular individuals beyond simply shrugging that nothing can be done if we want those individuals (and the leaders who speak on their behalf) to rethink their housing politics. There is a critical role for protecting current residents from displacement by rising housing costs, even while we work to fix the overall housing market.

Political Coalition-Building

Finally, to understand local policy making, we need to pay attention to the strategies pursued by activists and elected officials, who are working to assemble political coalitions. To wield political power it is always necessary to bring together multiple groups of people who have distinct interests and understandings: Judd and Swanstrom (2015) tell the story of changing political coalitions in American cities. Until the 1970s, "growth machine" coalitions of labor unions and business leaders wielded significant clout in many cities, and they still do in some. But antigrowth political coalitions are now widespread.

Renters who fear *increases* in housing prices can be brought into coalition with homeowners who fear *decreases* in housing prices around a shared distrust of elites and a fear of change. But at least in theory, renters who favor lower rents could also be brought into a different coalition with labor unions who favor building, environmentalists who prefer greater density to reduce emissions of greenhouse gases, and immigration rights advocates who believe that making a city more affordable will open it up to new entrants. Both types of political coalitions, and many others, are possible from the same set of interests (Been, Madar, and McDonnell 2014). Perhaps we need more comparative political science research on the formation of divergent urban coalitions, in order to understand why cities have evolved the way they have. But it's clear that the strategies of the political actors matter.

For all of these reasons, we have arrived at a situation in which, to varying degrees, cities in the most economically successful metro areas have systematically created a scarcity of housing. We can understand the undersupply of housing as a logical outcome of the structure of our political system, which combines jurisdictional fragmentation, competition between cities, local control over land use, and control of the city politics by incumbent homeowners. But we also have to give some causal credit in many of these cities to the leaders of what we can call the neighborhood preservation movement, who have managed to build powerful political coalitions that lock in their privilege (Schneider and Teske 1993).

Toward a Better Housing Policy

Many useful changes to housing policy could be made at the national level, encompassing funding for social housing and vouchers, limits on the exclusionary behavior of cities, and more effective forms of social insurance (for some ideas along these lines, see Glaeser and Gyourko 2008). But failures at the national level do not excuse other failures at the local level. Cities are making things worse than they have to be and failing to solve the problems that they could solve. The good news is this: solutions are available that could substantially address the problem of high housing costs. Here are seven ideas.

1. Upzone

The most basic thing that expensive cities need to do to bring down housing costs is to change their zoning to allow more housing to be built, either allowing taller buildings or greater densities or both—in other words, upzoning. Generally, the right way to do this is through careful neighborhood planning to ensure good design and to ensure that we are building complete neighborhoods. The planning process will typically include public realm improvements and infrastructure improvements, not just private buildings. Occasionally there will be major sites that become available such as old shopping malls or industrial sites. More often, new development will be on smaller parcels. The upzoning will be most effective if it is done by many cities across a metropolitan area; and if the process of getting permission to build within the zoning is straightforward and transparent.

Reforming housing policy does not mean getting rid of all regulations.⁵ We care about city building for many noneconomic reasons that show up in land use regulations: we want our communities to be beautiful, to nurture a sense of belonging, to express the aspirations of our civilization. We will continue to try to address the sins of our country's past and present racial inequality through land use policies that we hope can help ameliorate segregation.

But there are also many bad reasons to regulate housing. These include the desire to exclude outsiders, the desire to exclude people of a lower socioeconomic status, and a pervasive and understandable desire by incumbent homeowners to protect the value of their properties by preventing changes that they consider undesirable. The solution is not to naively wish for an unregulated housing market; we must instead try to implement a better set of regulations.

⁵Building codes are justified because of the information asymmetry between sellers and buyers, assuring housing purchasers of the safety of the dwelling units they want to occupy. And planning regulations are justified for many reasons that economists should find compelling, including: externalities of property values (what happens on one property can raise or lower the values of adjacent parcels); externalities of environmental costs (settlement patterns determine how much air pollution and greenhouse gases are generated from transportation); and externalities of public infrastructure (typically, private development is facilitated by public investments in transportation access, water supply, and other infrastructure systems).

2. Rethink Minimal Standards

To reduce the production costs of housing, cities are going to need to look for ways to eliminate some of the regulations that are less essential. That doesn't mean compromising health and safety. It means legalizing smaller units created from accessory dwelling units (a small dwelling that is part of or attached to an existing structure) or single-room occupancy apartments, as well as steps like eliminating parking requirements and looking for ways to encourage innovation in construction techniques (such as prefabricated housing).

There is reason to be skeptical about the ability of public policy changes to reduce production costs of constructing housing. For almost a century, planners have dreamed of applying the techniques of mass production and automation to housing to lower the per-unit construction costs. So far, these dreams have not yielded meaningful results. True mass production should be more possible in green-field locations, but even here we find a building industry that has not driven costs lower over the decades. It must be difficult to do so.⁶ But we should do everything possible to support innovation to reduce the cost of production, and certainly work to remove barriers to lower-cost production techniques, wherever we can (Galante, Draper-Zivetz, and Stein 2017).

3. Connect Superstar Cities to Less-Expensive Places

If people have good transportation access, they can live someplace relatively more affordable and still participate in the economy and social life of a nearby city. In some situations, we can connect communities with less-expensive housing to the cities with the best job markets. Let's call this "the New York model" in honor of the web of rail lines that connects the economic center of Manhattan with towns and cities in every direction, from Philadelphia to Newark to Long Island. This strategy tends to be more available for East Coast cities, which have an inheritance of both rail lines and pre-war, compact towns. It is promising to see that western cities like Denver, Los Angeles, and Seattle have essentially built whole new regional rail networks from scratch over the past decade. Yet even when transit can be created, the transit-supportive, relatively affordable communities do not exist in as large a supply in western cities. In some cases, especially in the West, new transit will make a much bigger difference for housing costs only if it is accompanied by new development.

4. Build More Cities

This is probably the most controversial recommendation on the list from the perspective of city planners. For a century, city planners have debated the idea of "new towns" as a strategy for managing population growth (Fulton 2002; Hall and

⁶One reason is that the housing industry has a lot of inertia. The boom-bust cycle of the real estate economy leads to chronic labor shortages as workers must exit the industry during recessions, while the high cost of housing itself becomes a driver of high wages necessary to attract construction workers—a self-reinforcing cycle in which high housing costs keep housing costs high. And finally, the process of inserting new buildings into the existing urban fabric is by its nature an intricate endeavor.

Ward 1998). Many new towns have been built around the world and in the United States. Unfortunately, most have resulted in highly inefficient land use patterns, high rates of car dependency, and lack of real access to the job-rich city. But the story is not over yet. If sites can be found that are truly within reasonable commuting distance of the jobs in a high-demand city, and if the land can truly be developed at densities equal to traditional cities, it is probably worth experimenting with new cities, to see if we can rediscover the lost art of building great urban places (Duany and Plater-Zyberck 2006; Duany, Speck, and Lydon 2010).

5. Pool Taxes Regionally

We have seen that one of the drivers of housing undersupply is fiscal competition between cities for sales tax and business tax revenues. One structural solution to this problem is to pool sales tax revenues regionally and then redistribute them on a per-capita basis. This is exactly what the Minneapolis metropolitan area does. Its tax-sharing system deserves to be more broadly replicated around the country (Orfield 2002; Orfield and Luce 2010).

6. Move Responsibility for Housing to a Higher Level of Government

We are going to have a much harder time addressing the problem of high housing costs if we continue to defer all land use decisions to the local level. There are simply too many incentives for each jurisdiction to shirk its housing responsibilities and hope that other cities in the region pick up the slack. Portland, Oregon, has a directly elected regional government (called “Metro”) that allocates growth to cities within the region as a way to comply with the state’s strong growth management law (Abbott 2000). The State of Washington has largely copied Oregon’s growth management law, to good effect. Massachusetts has set up a legal process to override local zoning and approve housing developments in jurisdictions that do not comply with state affordable housing requirements (Reid, Galante, and Weinstein-Carnes 2016). In all of these models, the state government has acted to ensure adequate housing supply, recognizing that the incentives and spillover effects of local land use are producing pernicious results. Other states could enact similar reforms.

7. Spend More on Social Housing

Greater spending on social housing should be viewed as a long-term strategy that will help some of the most vulnerable people who are being priced out of expensive cities today. Over time, there are significant upsides to having some portion of urban land be owned by nonmarket actors; it is one tool for reducing the rent-seeking behavior that is channeling so much of the wealth of the most productive cities into a land-owning rentier class. Social housing, just like market-rate housing, is a way to add to the overall supply. Cities and states should experiment with vouchers and new types of delivery mechanisms. Social housing programs do not need to be confined to the same low-income households that today’s programs serve; new programs would provide social housing to a broader cross-section of the population as in the European models. In general, funding for these programs

should come from the broad tax base rather than exactions on new housing development in order to avoid the unintended consequences of reducing aggregate housing supply. Recognizing that most people will still obtain their housing in the market, and that we cannot solve the overall problem without a primary emphasis on overcoming the broader housing shortage, there is still an essential role for public spending on social housing.

It may be possible at the scale of the city or the metro area to construct “grand bargains” that include many of these ideas simultaneously. (Seattle’s Housing and Livability Agenda, agreed on in 2016, is a possible example.) The good news is that progress on housing prices in the expensive metros is possible, if the political will exists.

Conclusion

A group of metro areas in the United States is simultaneously enjoying both considerable economic success and unprecedented challenges with housing costs. Opening up these metro areas so that far more people can participate in their economic success will require substantial changes to the institutional and physical structure of these metro areas. I have argued that while we can and should spend more money on subsidies for social housing in various forms, this solution cannot scale to help most people. Instead, we will need to do the hard work of reforming our housing markets so that the supply of housing can expand more easily. In other words, we need to change the spatial settlement patterns of the metropolitan areas by adding density within the existing urbanized fabric and/or by creating new urban fabric that is linked by high-quality transportation.

How do we know when we have created “enough” capacity for housing? The per-unit price of land offers one key indicator. What developers call the “pad cost”—the land component of each new housing unit—is the measure of how much restrictive zoning has allowed land owners to capture rents. In the expensive-housing cities, pad costs typically range between \$80,000 to \$100,000, whereas in the unconstrained sunbelt cities, pad costs are more like \$20,000 to \$30,000. In the most restrictive zoning regimes, they can rise above \$150,000. When a city has zoned for sufficient capacity, bidders on land have many options for which parcels to purchase. Of course, the price per square foot of land cannot go lower than the other available uses of the land: a developer generally has to buy out the business that operates on the site—the store, the parking lot, or whatever it may be. But if a site is zoned for very high densities, and if many sites all over the city are zoned for very high densities, then the per-unit cost of land can be driven quite low. Indeed, it would be useful to have public agencies, or maybe even researchers at the regional Federal Reserve banks, track the per-unit cost of land and other indicators as a guide to housing policy.

Might we reach a point where a city is “full” and cannot (or should not) add population? This has been an important debate in planning theory (Lynch 1981). Physically, the answer is “no.” We observe a great range of settlement and urban

density patterns across the world, and US cities are not especially dense. Moreover there are great ecological benefits to increasing the density of US settlement patterns as a way to reduce per capita energy consumption (Newman and Kenworthy 1999). The most relevant limits to growth in a metropolitan area are political and aesthetic, not physical.

We will lift far more people into the middle class if we can make it easier to join successful urban economies than it is today. In addition, we will reduce the ecological footprint of our nation if we make it easier for urban growth to happen in compact forms rather than in sprawling suburban patterns. The solution to high housing costs in the expensive metro areas of the United States is also a solution for increasing economic opportunity and increasing ecological resilience.

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References

- Abbott, Carl J.** 2000. "The Capital of Good Planning: Metropolitan Portland since 1970." In *The American Planning Tradition: Culture and Policy*, edited by Robert Fishman, 241–61. Washington, DC: Woodrow Wilson Center Press.
- Apgar, William C., Jr.** 1990. "Which Housing Policy is Best." *Housing Policy Debate* 1(1): 1–32.
- Arnott, Richard.** 1995. "Time for Revisionism on Rent Control?" *Journal of Economic Perspectives* 9(1): 99–120.
- Arnott, Richard J., and Joseph E. Stiglitz.** 1979. "Aggregate Land Rents, Expenditure on Public Goods, and Optimal City Size." *Quarterly Journal of Economics* 93(4): 471–500.
- Bauer, Catherine.** 1934. *Modern Housing*. Boston and New York: Houghton Mifflin Company.
- Been, Vicki, Josiah Madar, and Simon McDonnell.** 2014. "Urban Land-Use Regulations: Are Homevoters Overtaking the Growth Machine?" *Journal of Empirical Legal Studies* 11(2): 227–65.
- Center on Budget and Policy Priorities.** 2017. "Policy Basics: Federal Rental Assistance." May 3. <https://www.cbpp.org/research/housing/policy-basics-federal-rental-assistance>.
- Collinson, Robert, and Peter Ganong.** 2017. "How Do Changes in Housing Voucher Design Affect Rent and Neighborhood Quality?" June. <http://furmancenter.org/files/collinsonGanong0502.pdf>.
- DeLuca, Stefanie, and Peter Rosenblatt.** 2017. "Walking Away from *The Wire*: Housing Mobility and Neighborhood Opportunity in Baltimore." *Housing Policy Debate* 27(4): 519–46.
- Duany, Andres, and Elizabeth Plater-Zyberck.** 2006. *Towns and Town-Making Principles*. New York: Rizolli.
- Duany, Andres, Jeff Speck, and Mike Lydon.** 2010. *The Smart Growth Manual*. New York: McGraw-Hill.
- Economist, The.** 2015. "The Paradox of Soil." April 4. <http://www.economist.com/news/briefing/21647622-land-centre-pre-industrial-economy-has-retained-constraint-growth>.
- Ellen, Ingrid Gould, and Brendan O'Flaherty.** 2013. "How New York and Los Angeles Housing Policies are Different—And Maybe Why" In *New York and Los Angeles: The Uncertain Future*, edited by David Halle and Andrew A. Beveridge, 286–309.

New York: Oxford University Press.

Erickson, David J. 2009. *The Housing Policy Revolution: Networks and Neighborhoods*. Washington, DC: Urban Institute Press.

Fischel, William A. 2001. *The Homevoter Hypothesis: How Home Values Influence Local Government Taxation, School Finance, and Land-Use Policies*. Cambridge, MA: Harvard University Press.

Fischel, William A. 2015. *Zoning Rules: The Economics of Land Use Regulation*. Cambridge, MA: Lincoln Institute of Land Policy.

Fischer, Will, and Barbara Sard. 2016. "Chart Book: Federal Housing Spending is Poorly Matched to Need." Center on Budget and Policy Priorities, June 8, <http://www.cbpp.org/research/housing/chart-book-federal-housing-spending-is-poorly-matched-to-need>.

Fulton, William. 2002. "The Garden Suburb and the New Urbanism." In *From Garden City to Green City: The Legacy of Ebenezer Howard*, pp. 159–70. Baltimore: John Hopkins University Press.

Furman, Jason. 2015. "Barriers to Shared Growth: The Case of Land Use Regulation and Economic Rents." Remarks ("expanded version of the remarks as prepared for delivery"). November 20. https://obamawhitehouse.archives.gov/sites/default/files/page/files/20151120_barriers_shared_growth_land_use_regulation_and_economic_rents.pdf.

Galante, Carol, Sara Draper-Zivetz, and Allie Stein. 2017. "Building Affordability by Building Affordably: Exploring the Benefits, Barriers, and Breakthroughs Needed to Scale Off-Site Multifamily Construction." Terner Center for Housing Innovation, UC Berkeley. March. http://ternercenter.berkeley.edu/uploads/offsite_construction.pdf.

Ganong, Peter, and Daniel Shoag. 2015. "Why has Regional Income Convergence in the U.S. Declined?" January. http://scholar.harvard.edu/files/shoag/files/why_has_regional_income_convergence_in_the_us_declined_01.pdf.

Glaeser, Edward L., and Joseph Gyourko. 2008. *Rethinking Federal Housing Policy: How to Make Housing Plentiful and Affordable*. Washington, DC: American Enterprise Institute.

Groth, Paul. 1994. *Living Downtown: The History of Residential Hotels in the United States*. Berkeley: University of California Press.

Gyourko, Joseph, and Raven Molloy. 2014. "Regulation and Housing Supply." NBER Working Paper 20536, October.

Gyourko, Joseph, Christopher Mayer, and Todd Sinai. 2013. "Superstar Cities." *American Economic Journal: Economic Policy* 5(4): 167–99.

Haas, Peter M., Carrie Makarewicz, Albert Benedict, Thomas W. Sanchez, and Casey J.

Dawkins. 2006. "Housing & Transportation Cost Trade-offs and Burdens of Working Households in 28 Metros." Centre for Neighbourhood Technology, July.

Hall, Peter, and Colin Ward. 1998. *Sociable Cities: The Legacy of Ebenezer Howard*. John Wiley and Sons.

Hankinson, Michael. 2017. "When Do Renters Behave Like Homeowners? High Rent, Price Anxiety, and NIMBYism." Working Paper, Harvard Joint Center for Housing Studies. February. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/harvard_jchs_hankinson_2017_renters_behave_like_homeowners_0.pdf.

Hertz, Daniel. 2016. "Housing Cannot Be a Good Investment and Affordable." *City Observatory*, July 20. <http://cityobservatory.org/housing-cant-be-a-good-investment-and-affordable>.

Hickey, Robert, Lisa Sturtevant, and Emily Thaden. 2014. "Achieving Lasting Affordability through Inclusionary Housing." Lincoln Institute of Land Policy Working Paper. <http://www.inhousing.org/wp-content/uploads/PollockPRisingInterestInclusionaryHousingLincolnInstituteWorkingPaper.pdf>.

Housing Europe. 2015. *The State of Housing in the EU 2015*. <http://www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015>.

Hsieh, Chang-Tai, and Enrico Moretti. 2015. "Housing Constraints and Spatial Misallocation." NBER Working Paper 21154.

Jacobus, Rick. 2015. "Inclusionary Housing: Creating and Maintaining Equitable Communities." Lincoln Institute of Land Policy. <http://www.inhousing.org/wp-content/uploads/Inclusionary-Housing-Report-2015.pdf>.

Jacobus, Rick. 2016. "Why We Must Build." *Shelterforce*, March 10. https://shelterforce.org/2016/03/10/why_we_must_build/.

Joseph, Mark L., Robert J. Chaskin, and Henry S. Webber. 2007. "The Theoretical Basis for Addressing Poverty Through Mixed-Income Development." *Urban Affairs Review* 42(3): 369–409.

Judd, Dennis R, and Todd Swanstrom. 2015. *City Politics*, Ninth Edition. New York: Routledge.

Jurjevich, Jason R., and Phil Keisling. 2015. "Who Votes for Mayor?" PSU Pilot Research Report, Portland State University, July. Knight Foundation.

Lynch, Kevin. 1981. *Good City Form*. Boston: MIT Press.

Metcalfe, Gabriel. 2015. *Democrat by Design: How Carsharing, Co-ops, and Community Land Trusts are Reinventing America*. New York: St. Martin's Press.

Newman, Peter, and Jeffrey Kenworthy. 1999. *Sustainability and Cities*. Washington, DC: Island Press.

- Orfield, Myron.** 2002. *American Metropolitcs: The New Suburban Reality*. Washington, DC: Brookings Institution Press.
- Orfield, Myron, and Thomas F. Luce, Jr., eds.** 2010. *Region: Planning the Future of the Twin Cities*. University of Minnesota Press.
- O'Sullivan, Feargus.** 2016. "The Rent is Now Somewhat Less High in Paris." In *The Atlantic CityLab*, August 3.
- Radford, Gail.** 1996. *Modern Housing for America: Policy Struggles in the New Deal Era*. University of Chicago Press.
- Reid, Carolina, Carol Galante, and Ashley Weinstein-Carnes.** 2016. "Borrowing Innovation, Achieving Affordability: What We Can Learn from Massachusetts Chapter 40B." Policy Paper 1, August, Turner Center for Housing Innovation, University of California, Berkeley. [http://turnercenter.berkeley.edu/uploads/Caifornia_40B_Working_Paper.pdf](http://turnercenter.berkeley.edu/uploads/California_40B_Working_Paper.pdf).
- Rognlie, Matthew.** 2015. "Deciphering the Fall and Rise in the Net Capital Share." *Brookings Papers on Economic Activity*, Spring.
- San Francisco Office of the Controller.** 2016. "Inclusionary Housing Working Group: Final Report." February 13, <http://sfcontroller.org/sites/default/files/Documents/Economic%20Analysis/Final%20Inclusionary%20Housing%20Report%20February%202017.pdf>.
- Savitch, H. V., and Sarin Adhikari.** 2017. "Fragmented Regionalism: Why Metropolitan America Continues to Splinter." *Urban Affairs Review* 53(2) 381–402.
- Schleicher, David.** 2013. "City Unplanning." *Yale Law Journal* 122(7): 1670–1737.
- Schneider, Mark, and Paul Teske.** 1993. "The Antigrowth Entrepreneur: Challenging the 'Equilibrium' of the Growth Machine." *Journal of Politics* 55(3): 720–36.
- Schwartz, Alex F.** 2015. *Housing Policy in the United States*, Third Edition. New York: Routledge.
- Smith, Doug.** 2017. "Up to 600,000 Expected to Apply When L.A. Reopens Section 8 Housing List This Month after 13 Years." *Los Angeles Times*, October 1.
- Solomon, Daniel.** 2003. *Global City Blues*. Washington, DC: Island Press.
- Stone, Michael E., Terry Burke, and Liss Ralston.** 2011. "The Residual Income Approach to Housing Affordability: The Theory and the Practice." http://works.bepress.com/michael_stone/7.
- Sturtevant, Lisa A.** 2016. "Separating Fact from Fiction to Design Effective Inclusionary Housing Programs." Inclusionary Housing, Research and Policy Brief, Center for Housing Policy, http://media.wix.com/ugd/19cfbe_9a68f933ed6c45bf5f8b7d2ef49dda0.pdf.
- Tiebout, Charles M.** 1956. "A Pure Theory of Local Expenditures." *Journal of Political Economy* 64(5): 416–24.
- Williams, Stockton, Ian Carlton, Lorelei Juntunen, Emily Picha, and Mike Wilkerson.** 2016. "The Economics of Inclusionary Development." Washington, DC: Urban Land Institute. <http://uli.org/wp-content/uploads/ULI-Documents/Economics-of-Inclusionary-Zoning.pdf>.

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1. Tea Lönnroth, Pauliina Krigsholm, Heidi Falkenbach, Elias Oikarinen. 2024. Advancing understanding of the linkages between local land policy interventions and the responsiveness of housing supply: Intervention mechanisms in the Finnish context. *Land Use Policy* **141**, 107157. [[Crossref](#)]
2. Cameron K. Murray, Joshua C. Gordon. 2024. Land as Airspace: How Rezoning Privatizes Public Space (and Why Governments Should Not Give It Away for Free). *Housing Policy Debate* **34**:2, 228-241. [[Crossref](#)]
3. Oluwasinaayomi Faith Kasim, Charles Olufisayo Olatubara, Olusiyi Ipingbemi, Olaitan Olutayo Odunola, Olayide Josiah Omirin, Saeed Kamaldeen Ojelowo, Abiodun Akeem Audu. 2024. Determinants of housing and environmental conditions in a medium-sized city in Osun State, Southwestern Nigeria. *Journal of Contemporary African Studies* **42**:1, 73-87. [[Crossref](#)]
4. Mikhail Samarin, Madhuri Sharma. 2023. A typology of U.S. metropolises by rent burden and its major drivers. *GeoJournal* **88**:5, 4887-4906. [[Crossref](#)]
5. Tuna Taşan-Kok, Andre Legarza, Sara Özogul. 2023. Governing regional affordability: rethinking the production of affordable spaces across the Metropolitan Region Amsterdam (MRA). *Regional Studies* **57**:9, 1866-1881. [[Crossref](#)]
6. Geoff Boeing, Jake Wegmann, Junfeng Jiao. 2023. Rental Housing Spot Markets: How Online Information Exchanges Can Supplement Transacted-Rents Data. *Journal of Planning Education and Research* **43**:3, 525-537. [[Crossref](#)]
7. Alexander Styhre, Sara Brorström. 2023. The mundanity of cost cutting: The value of small wins in affordable housing production. *Scandinavian Journal of Management* **39**:3, 101276. [[Crossref](#)]
8. Mario A. Fernandez, Jennifer L.R. Joynt, Chad Hu, Shane L. Martin. 2023. Sorting (and costing) the way out of the housing affordability crisis in Auckland, New Zealand. *International Journal of Housing Markets and Analysis* **16**:5, 955-978. [[Crossref](#)]
9. Megan C. Smith, Thomas H. Byrne. 2023. Locked Out: The Systematic Exclusion of Poor Renters From Federally Subsidized Housing. *Housing Policy Debate* **33**:4, 983-1001. [[Crossref](#)]
10. Prabath Suranga Morawakage, George Earl, Benjamin Liu, Eduardo Roca, Akihiro Omura. 2023. A win-win partnership for affordable homeownership solutions by connecting responsible investors, community housing providers, and government. *Habitat International* **134**, 102781. [[Crossref](#)]
11. Wadim Strielkowski, Oleg V. Grebennikov, Elena A. Baydetskaya, Juliet A. Kuraeva. The Role of Education-Based Migration in the Country's Economic Development 239-253. [[Crossref](#)]
12. Wei Chen, Zaiyan Wei, Karen Xie. 2022. The Battle for Homes: How Does Home Sharing Disrupt Local Residential Markets?. *Management Science* **68**:12, 8589-8612. [[Crossref](#)]
13. Madhuri Sharma, Mikhail Samarin. 2022. Rental tenure and rent burden: progress in interdisciplinary scholarship and pathways for geographical research. *GeoJournal* **87**:4, 3403-3421. [[Crossref](#)]
14. Scott D. Siegel. 2022. Advancing Health Equity through Empowered Place-Based Community Action. *Delaware Journal of Public Health* **8**:3, 4-4. [[Crossref](#)]
15. Jie Chen, Xin Qi, Zhenguo Lin, Yidong Wu. 2022. Impact of Governments' Commitment to Housing Affordability Policy on People's Happiness: Evidence from China. *Housing Policy Debate* **32**:4-5, 622-641. [[Crossref](#)]
16. Christian Dustmann, Bernd Fitzenberger, Markus Zimmermann. 2022. Housing Expenditure and Income Inequality. *The Economic Journal* **132**:645, 1709-1736. [[Crossref](#)]

17. Sharon Gilad, Saar Alon-Barkat, Nitzan Faibish, Sarah Goldberg. 2022. Leveraging city officials' professional and social Identities to facilitate affordable housing. *Political Geography* **94**, 102570. [[Crossref](#)]
18. Robert Mark Silverman, Kelly L. Patterson, Chihuangji Wang. 2022. Housing Choice Vouchers (HCVs) on the Geographic, Socio-economic, and Public Policy Periphery: A Critical Case Study of Blocked Mobility in the City of San Diego, California. *Critical Sociology* **48:2**, 341-360. [[Crossref](#)]
19. Fei Li, Zhan Guo. 2022. How Does an Expansion of Mandatory Inclusionary Housing Affect Housing Supply?. *Journal of the American Planning Association* **88:1**, 83-96. [[Crossref](#)]
20. Josh Conrad, Sarah Mawhorter, Jake Wegmann. 2022. Can we use administrative data to quantify informal housing additions at the parcel level? An analysis of Austin, USA. *International Journal of Housing Policy* **22:1**, 34-58. [[Crossref](#)]
21. Aishwariaa Unni, G. Anjali. Evaluation of Conventional Red Bricks with Compressed Stabilized Earth Blocks as Alternate Sustainable Building Materials in Indian Context 253-266. [[Crossref](#)]
22. O. E. Bellini, C. Del Pero. Housing in East Africa 25-50. [[Crossref](#)]
23. Noemi Schmitt, Frank Westerhoff. 2022. Speculative housing markets and rent control: insights from nonlinear economic dynamics. *Journal of Economic Interaction and Coordination* **17:1**, 141-163. [[Crossref](#)]
24. Yuming Fu, Song Shi. 2022. Barriers to urban spatial development: Evidence from the 2010-2011 Christchurch earthquakes. *Journal of Regional Science* **62:1**, 218-245. [[Crossref](#)]
25. Hanchen Jiang, Luis Quintero, Xi Yang. 2022. Does Rent Regulation Affect Tenant Unemployment? Evidence from New York City. *SSRN Electronic Journal* **91**. . [[Crossref](#)]
26. Adam Millard-Ball. 2021. Planning as Bargaining. *Journal of the American Planning Association* **87:4**, 556-569. [[Crossref](#)]
27. Bernard Nzau, Claudia Trillo. 2021. Harnessing the real estate market for equitable affordable housing provision: insights from the city of Santa Monica, California. *Housing Studies* **36:7**, 1086-1121. [[Crossref](#)]
28. Tammy Leonard, Xi Yang, Lei Zhang. 2021. The impact of land use regulation across the conditional distribution of home prices: an application of quantile regression for group-level treatments. *The Annals of Regional Science* **66:3**, 655-676. [[Crossref](#)]
29. Alexander Styhre, Sara Brorström. 2021. Urban development project goals and the role of professional ignorance: ambiguous policy objectives and their consequences. *Qualitative Research in Organizations and Management: An International Journal* **16:2**, 281-298. [[Crossref](#)]
30. C.J. Gabbe, Michael Kevane, William A. Sundstrom. 2021. The effects of an "urban village" planning and zoning strategy in San Jose, California. *Regional Science and Urban Economics* **88**, 103648. [[Crossref](#)]
31. David Hernández Falagán. 2021. Review of Design of Collective Housing in the 21st Century. *Buildings* **11:4**, 157. [[Crossref](#)]
32. Elliott Sclar. 2021. The Infinite Elasticity of Air: New York City's Financialization of Transferable Development Rights. *The American Journal of Economics and Sociology* **80:2**, 353-380. [[Crossref](#)]
33. Alan Morris, Kath Hulse, Hal Pawson. Private Rental in Australia: A Lightly Regulated Sector 25-43. [[Crossref](#)]
34. Lei Zhang, Tammy Leonard. 2021. External validity of hedonic price estimates: Heterogeneity in the price discount associated with having Black and Hispanic neighbors. *Journal of Regional Science* **61:1**, 62-85. [[Crossref](#)]
35. Eric Seymour, K. Arthur Endsley, Rachel S. Franklin. 2020. Differential drivers of rent burden in growing and shrinking cities. *Applied Geography* **125**, 102302. [[Crossref](#)]

36. Frank J. Fabozzi, Robert J. Shiller, Radu S. Tunaru. 2020. A 30-Year Perspective on Property Derivatives: What Can Be Done to Tame Property Price Risk?. *Journal of Economic Perspectives* 34:4, 121-145. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
37. Jamila Michener. 2020. Power from the Margins: Grassroots Mobilization and Urban Expansions of Civil Legal Rights. *Urban Affairs Review* 56:5, 1390-1422. [[Crossref](#)]
38. Katrin Auspurg, Andreas Schneck, Fabian Thiel. 2020. Different samples, different results? How sampling techniques affect the results of field experiments on ethnic discrimination. *Research in Social Stratification and Mobility* 65, 100444. [[Crossref](#)]
39. Mario A. Fernandez. 2020. A matching simulation to assess additional housing capacity in Auckland. *New Zealand Economic Papers* 54:1, 67-88. [[Crossref](#)]
40. Raven Molloy. 2020. The effect of housing supply regulation on housing affordability: A review. *Regional Science and Urban Economics* 80, 103350. [[Crossref](#)]
41. Hal Pawson, Vivienne Milligan, Judith Yates. Roles of Land Use Planning Policy in Housing Supply and Affordable Housing 299-337. [[Crossref](#)]
42. Evan J. Soltas. 2020. The Price of Inclusion: Evidence from Housing Developer Behavior. *SSRN Electronic Journal* 101. . [[Crossref](#)]
43. Xiang Cai, Wei-Ning Wu. 2019. Affordable housing policy development: public official perspectives. *International Journal of Housing Markets and Analysis* 12:5, 934-951. [[Crossref](#)]
44. Madeline Buitelaar. 2019. Cui Bono? Assessing Community Engagement in San Francisco Community Benefit Agreements. *Societies* 9:1, 25. [[Crossref](#)]
45. Christian Lennartz, Barbara Baarsma, Nic Vrieselaar. Exploding House Prices in Urban Housing Markets: Explanations and Policy Solutions for the Netherlands 207-221. [[Crossref](#)]
46. Wei Chen, Zaiyan Wei, Karen Xie. 2019. The Battle for Homes: How Does Home Sharing Disrupt Local Residential Markets?. *SSRN Electronic Journal* 72. . [[Crossref](#)]
47. David S. Bieri, Casey J. Dawkins. 2019. Amenities, affordability, and housing vouchers. *Journal of Regional Science* 59:1, 56-82. [[Crossref](#)]
48. Eryn Piper Block, Frederick J. Zimmerman, Efrén Aguilar, Lisa Stanley, Neal Halfon. 2018. Early Child Development, Residential Crowding, and Commute Time in 8 US States, 2010-2017. *American Journal of Public Health* 108:11, 1550-1557. [[Crossref](#)]
49. David S. Bieri, Casey Dawkins. 2018. Amenities, Affordability, and Housing Vouchers. *SSRN Electronic Journal* . [[Crossref](#)]
50. Calvin Schnure, Alexandra Thompson. 2018. Apartment Markets and the Cascade of Demand. *SSRN Electronic Journal* . [[Crossref](#)]
51. Christian Dustmann, Bernd Fitzenberger, Markus Zimmermann. 2018. Housing Expenditures and Income Inequality. *SSRN Electronic Journal* . [[Crossref](#)]