REGULATORY BARRIERS AND AFFORDABLE HOUSING

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Photo Credit: Catellus Development Corporation
Speaking to the policy advisory board of the Joint Center for Housing Studies of Harvard University, HUD Secretary Ben Carson underscored “how vitally important it is to develop more affordable housing,” referencing the center’s findings that 21 million U.S. households are cost burdened — spending more than one-third of household income on housing expenses — and that 11 million of those households are severely cost burdened — spending more than one-half of household income on housing expenses.¹ Affordability is a function of both income and housing costs, and the relative importance of each factor varies by location and market.² Recently, important gains have been made in employment and wages, but these increases have been modest and in many markets have not kept up with increasing housing costs.³ As Secretary Carson emphasized in his speech, one aspect of the problem is an inadequate supply of new affordable housing. He suggested that, among other responses, HUD should “identify and incentivize the tearing down of local regulations that serve as impediments to developing affordable housing stock,” including “[o]ut-of-date building codes, time-consuming approval processes, restrictive or exclusionary zoning ordinances, unnecessary fees or taxes, and excessive land development standards [that] can all contribute to higher housing costs.”⁴

Although affordability challenges in some areas of the country result primarily from low incomes and poverty, in other areas, particularly those with strong job and population growth, a constrained housing supply generates affordability challenges. In the latter locations, regulatory barriers such as density limitations, height restrictions, parking requirements, lengthy permitting and approval processes, and “not in my backyard” (NIMBY) opposition are the primary reasons for housing supply restrictions and increased housing

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**HIGHLIGHTS**

- Research points to local zoning and regulations, lengthy permitting processes, and “not in my backyard” opposition as primary causes of restricted housing supply and rising housing prices.

- An insufficient supply of affordable housing contributes to homelessness, housing cost burdens, and reduced economic growth.

- Local communities in the United States have struggled to combat regulatory barriers, but state and local governments can adopt several promising approaches that can reduce barriers and increase the supply of affordable housing.

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*A carriage house unit is a type of accessory dwelling unit that allows multiple residences to share the same lot.*
Editor’s Note

Local zoning and land use regulations, as well as “not in my backyard” opposition, the focus of this edition of Evidence Matters, increase development costs and contribute to a shortage of affordable housing in many places that desperately need it. Density limitations, height restrictions, and parking requirements, among other rules, limit the amount of land available for development, driving up land prices. Lengthy permitting and approval processes and community hearings create costly delays and uncertainty for developers. Consequently, less affordable housing is constructed, and the price of the housing that is built increases. Not only do renters end up paying higher prices, many becoming cost burdened, but economic growth is also stifled when workers cannot afford to live in places where they can be most productive. This issue examines some of the policies and practices that state and local governments are implementing to address the many regulatory barriers to affordable housing.

The lead article, “Regulatory Barriers and Affordable Housing: Problems and Solutions,” discusses the history and purpose of zoning and land use regulations, how these regulations have contributed to increased housing costs, and the local strategies and policy responses aimed at overcoming these barriers. The Research Spotlight, “Exploring the Current State of Knowledge on the Impact of Regulations on Housing Supply,” by Regina C. Gray, discusses research on the costs of regulatory barriers to date and recommends issues deserving further inquiry. Finally, the In Practice article, “States Reduce Regulatory Barriers for Affordable Housing,” looks specifically at legislative efforts in Massachusetts and California to streamline permitting processes and ease restrictive zoning laws that hinder affordable housing development.

We hope this edition of Evidence Matters provides a helpful overview of this critical topic. Our next issue will focus on the connections between housing and employment. Please provide feedback on any of our issues at www huduser gov/forums.

— Rachelle Levitt, Director of Research Utilization Division

costs. Local governments can pursue various strategies and policy responses to address these barriers, and state governments can encourage and empower local governments to do so.

The History and Purposes of Zoning

Land use zoning is the division of land into areas in which certain activities or uses, or certain building types, sizes, and features, are permitted or prohibited.⁵ In the United States, the authority for zoning comes from state governments rather than the federal government, and this authority is typically passed on to local municipal governments. In some “home rule” states, local governing bodies have wide latitude to innovate and implement land use policies, whereas other states require state-enabling legislation that specifically sanctions the policies available to the locality.⁶

Regulation of building construction and certain uses of private property to protect the public welfare date back to the late 19th century, as concerns rose about living conditions in growing cities. For example, in the 1890s, at least two U.S. cities — Chicago and Washington, DC — passed laws restricting building heights. Modern zoning practices — distinguished by the categorization of land use as residential, commercial, or industrial and the physical separation of those uses — emerged in the early 20th century. A 1916 New York City ordinance is generally considered to be the first comprehensive zoning law.⁷ Hirt calls the period of 1910 to 1930 a turning point during which “the United States changed from a place where the public control of private land and real-estate property consisted only of rudimentary nuisance and building laws to a place where practices related to private land, property, and construction were subject to tight public supervision in hundreds of municipalities around the country.”⁸ She argues that health and safety, welfare, convenience, prosperity, racial and class prejudices, and the protection of property values — especially those of single-family homes — all contributed to the emergence of zoning practices.⁹ The Supreme Court affirmed the legality of local zoning authority in 1926 in Euclid v. Ambler.¹⁰ Initially, most zoning was hierarchical, with residential use at the top of the hierarchy and industrial use at the bottom, meaning that residences could be built in industrial
or commercial zones, but industrial or commercial buildings could not be built in residential zones. In the middle of the 20th century, flat zoning, in which buildings of any type could be built only in zones of the same type, became more common, and the zones themselves became larger. A proliferation of regulations in the 1970s began to restrict the elasticity of the housing supply and place upward pressure on development costs. Throughout the 20th century, zoning and other regulations have given preferential treatment to single-family detached homes, which are typically the most expensive type of housing, says Brookings fellow Jenny Schuetz. This preference presents a substantial obstacle to achieving the density needed for more affordable housing. Indeed, compared with the rest of the world, the United States is unique in its proportion of residential land designated for single-family detached homes and in the size of homes and lots.

Costs of Regulatory Barriers and NIMBYism
Evidence supports the contention that zoning and land use regulations increase housing prices (see “Exploring the Current State of Knowledge on the Impact of Regulations on Housing Supply,” p.11). Although researchers Joseph Gyourko and Raven Molloy note that “it is challenging to identify the effects of regulation,” they find that most studies, including their own, support the conclusion that “regulation appears to raise home prices, reduce construction, [and] reduce the elasticity of housing supply….” Over the past several decades, housing prices have increased even though construction costs have remained relatively flat. This relationship points to land prices as the driver behind rising housing prices. Geographic limitations can constrain the supply of land; in many cases, however, restrictions on land use and density cause an increase in land prices, which lead to a constrained supply of housing and, in turn, higher housing prices. Research suggests that more highly regulated jurisdictions tend to have higher housing prices, with regulations...
Research suggests that more highly regulated jurisdictions tend to have higher housing prices, with regulations discouraging new development or making it less dense.

Regulations. Local land use regulations have accumulated in municipalities’ code and statute books over many decades. Although governments originally adopted each regulation for some rationale or purpose, those rationales may not apply to present conditions. In most cases, regulations are implemented to provide some benefit to existing homeowners, if not the general public. Although some basic public health and safety regulations are accepted as necessary and nonnegotiable, others exist in a gray area of tension between their public benefit and public cost — their negative impact on affordability. Localities must weigh these costs and benefits, which in some cases may be difficult to measure or compare in terms of monetary value. C.J. Gabbe categorizes regulations that can lead to higher housing costs, such as those that limit density, impose design standards, or shift cost burdens onto developers.

Land use and zoning regulations may include explicit density restrictions; requirements for parking, setbacks, and side yards; minimum lot sizes; height limits; and open space requirements that limit the amount of housing that can be built, either through caps or by assigning space that could be used for housing to other uses. Builders typically want to maximize the number of units in a given tract of land; limitations reduce the profitability of development, which may discourage development in certain areas and result in fewer units built or higher rents for the units that are constructed. Jurisdictions with a preference for single-family detached housing may not even have zones that allow multifamily housing. In other cases, large Local regulations may include restrictive design guidelines and dwelling unit mix requirements. Localities may also have rules that prohibit accessory dwelling units or smaller units that would otherwise expand affordable residential options. Zoning that excludes manufactured housing also contributes to affordability challenges, because manufactured housing potentially offers a more affordable alternative to traditionally built housing without compromising building safety and quality.

In addition, regulations such as flat impact fees shift cost burdens onto developers. Impact and other fees increase overall development costs and may influence builders’ decisions about where, how much, and at what price point to build.

Permitting and Approvals. Beyond meeting the standards and requirements of local land use regulations, developers must go through permitting, review, and approval processes that can increase development costs. In addition to the hard costs for the permits themselves, permits may also lead to additional soft costs resulting from delays and uncertainty. Some of these processes also include forums for community input, which open developments to potential opposition. Abt Associates reports that in some cases, approvals can take years, while builders incur carrying costs such as interest payments. In addition to being lengthy, these processes can be complex and confusing, and they can differ widely from jurisdiction to jurisdiction — a particular problem for builders who work in many different areas and have to learn the requirements for each. Even within a single jurisdiction, the permitting process may require interacting with several public agencies.

NIMBYism. NIMBY opposition can take many forms, including public pressure on elected officials, such as members of a city council, who may have authority over funding applications or other approvals that developers need.
Community opposition can thwart projects, reduce a project’s density, or cause delays that create uncertainty and add costs for developers who often have little financial flexibility.

Land use regulations and NIMBYism not only increase the costs of individual developments but can also incur broader social and economic costs. A restricted supply of affordable housing increases the number of cost-burdened households and contributes to homelessness and housing insecurity, which in turn affect residents’ health, education, and employment, among other things. A dearth of affordable housing options, particularly in markets experiencing population growth, can also displace existing residents as a tight housing supply with few affordable alternatives pushes rents higher. Exclusionary zoning and NIMBYism also keep affordable housing out of places of opportunity, restricting the potential benefits for low-income households that would ultimately benefit the economy and society as a whole. Evidence also suggests that such restrictions suppress economic growth.

Another general approach that communities can take is to establish by-right development, meaning that proposed developments that meet zoning requirements are administratively approved without public hearings or local legislative approval. This policy could be tied to other desirable goals such as encouraging transit-oriented development or increasing affordability. Similarly, adopting form-based codes can reduce NIMBY opposition by “putting the argument up front,” says Sturtevant. A locality can invite substantial community input into code requirements, adopt those requirements, and subsequently allow buildings that meet those standards to proceed without additional reviews subject to community input. Localities can also coordinate all of the public hearings required for the various permits and approvals of a single development so that they are held together.

Local governments can also address specific regulatory barriers. Reducing minimum parking requirements, for example, can free up land for development, permit greater density, and reduce development costs. The drawback, and likely associated pushback from...
residents, is that reducing the number of parking spaces may inconvenience residents with cars and increase traffic congestion. Parking reductions, however, can be targeted to situations in which the negative effects will be minimized. The city of Seattle, for example, reduces minimum parking requirements by up to 50 percent for developments in multifamily zones that are within 1,320 feet of a street with frequent transit service.\textsuperscript{44}

Localities can also streamline or expedite permitting processes. In some cases, governments can offer faster approvals as an incentive to develop projects that meet desirable goals such as increasing affordability. The city of San Diego, for example, expedites permitting for projects meeting specified standards of sustainability or affordability. The program also allows certain deviations from standard regulations. Developers do pay additional fees to participate in the program; however, the city waives those extra fees for projects that are 100 percent affordable. In addition to the fees, developers participating in the program must be prepared for several reviews and applications up front.\textsuperscript{45} Communities such as Denver, Colorado; Leesburg, Virginia; and Goodyear, Arizona, have set up one-stop administration of permitting to consolidate and streamline processes to the benefit of developers. Short of a one-stop system, localities can proactively improve interagency coordination among all the entities responsible for permitting within a jurisdiction.\textsuperscript{46}

Orlando, Florida, offers numerous incentives for developers of affordable housing and for developers who make in-lieu contributions to the city’s trust fund for low- and very low-income housing. Developers meeting these criteria may be eligible for federal or state funds, reduced or waived impact fees, density bonuses, alternative development standards, and expedited permitting. Each of these incentives can potentially reduce development costs or, in

Construction of Folsom & Dore Apartments, which houses 130 low-income individuals, including those with a history of homelessness, benefited from reduced parking requirements.
the case of a density bonus, increase the revenue and profitability of a development.  

Zoning and regulations can be loosened to allow multifamily housing, manufactured housing, homes with footprints that are significantly smaller than average, accessory dwelling units (ADUs), and garage or basement rental units, all of which can expand affordable housing options. The California state legislature has adopted statutory changes to encourage construction of ADUs and increase the supply of affordable housing (see “States Reduce Regulatory Barriers for Affordable Housing,” p.16).

Cottage housing, modestly sized homes on smaller lots that are either used as infill development or clustered with other cottage homes around a common area, can increase the density of single-family detached housing. A handful of cities such as Kirkland and Lakewood in Washington have adopted codes or ordinances to allow cottage housing. Another strategy is to allow tandem housing — two detached homes on a lot. To foster greater density and affordability, the city of Portland has allowed lot sizes that are less than 36 feet wide on which developers can build homes with preapproved “permit-ready” plans. This approach combines zoning rules that encourage density with a streamlined approval process to provide a dual incentive to builders.

Some cities have implemented inclusionary zoning (IZ), requiring developments of a certain size to include units with affordability restrictions, typically in exchange for density bonuses. In some instances, as in the Orlando case mentioned above, developers can pay in-lieu fees (to support affordable housing construction) or build affordable units offsite. Research shows that these options can be effective in creating affordable units while avoiding some

Some jurisdictions have relaxed parking requirements for housing located near public transit.
of the likely costs and controversies from building the affordable units onsite.\textsuperscript{52} IZ policies have produced a modest number of affordable units.\textsuperscript{53} Some critics argue that IZ is ultimately counterproductive. Calder, for example, argues that, as with other land use regulations, IZ requirements weaken economic incentives for development.\textsuperscript{24} One study that compares jurisdictions with IZ to those without concludes that IZ increases the prices of single-family homes and reduces their average size, but it also increases multifamily construction.\textsuperscript{55} Another study, however, finds no statistically significant adverse effect on housing supply in markets with IZ.\textsuperscript{56}

Noting that it is difficult to generalize the many studies of IZ in particular locations at particular times, Sturtevant concludes that “the most highly regarded empirical evidence suggests that inclusionary housing programs can produce affordable housing and do not lead to significant declines in overall housing production or to increases in market-rate prices.”\textsuperscript{57} She says that the effectiveness of IZ ultimately is determined by local conditions and implementation.\textsuperscript{58} Williams suggests that, in particular, localities need flexibility to adjust to changing market conditions.\textsuperscript{59} Local governments can evaluate the tradeoffs of such policies to determine whether they result in a net benefit.

A Role for States
States have authority over zoning, which they typically grant to local governing bodies. States, however, can set parameters and encourage certain practices. Bratt and Vladeck note three categories of state interventions to address land use and zoning policies that exclude affordable housing: a statewide affordable housing goal that applies to all jurisdictions, a fair-share mandate that allocates affordable housing according to need, and a statewide requirement that local communities include a housing element in their comprehensive plans.\textsuperscript{60} A recent ULI housing policy report identifies strategies for states and local communities to increase their supply of affordable housing by reducing barriers related to land use and other regulations. The report’s authors view the state’s authority over land use policies and their resources for supporting localities in planning as underutilized and potentially significant levers for expanding housing choice and opportunities.\textsuperscript{61}

The ULI report offers five specific, complementary strategies that states can pursue to reduce barriers to an expanded housing supply. First, states can require local and regional housing needs assessments that could prompt communities to be more thoughtful about land use policies.\textsuperscript{52} Sturtevant says that combining planning for housing with that for schools and other services may help localities better understand and address housing needs.\textsuperscript{63} Second, states can support local communities by providing technical assistance and financial incentives to implement zoning frameworks that encourage denser development. Third, they can reduce regulatory barriers and streamline processes that increase development costs. Fourth, states can empower localities to align their own resources to create incentives for development, which may require states to grant these localities additional flexibility or authority to deploy their resources more effectively.\textsuperscript{64} For example, Washington state gave local jurisdictions the power to exempt developers that build multifamily housing from property taxes for 8 to 12 years when they meet certain criteria. For developers to get the benefit for 12 years, the property must allocate 20 percent of its units to low- or moderate-income residents. As of 2016, the policy had resulted in more than 7,000 affordable units in Seattle.\textsuperscript{65} Finally, states can authorize localities to combat or moderate NIMBY opposition to new development.\textsuperscript{66}

When states adopt zoning parameters or requirements that preempt those of local governments, they can help facilitate development that may be unpopular with existing residents but that ultimately benefits the state and local economies.\textsuperscript{67} States can also coordinate state-local and interjurisdictional requirements to streamline processes and reduce paperwork for developers.\textsuperscript{68} Developers may have to prepare applications and meet requirements for multiple jurisdictions (for example, at the state level and the local level) with different standards instead of a simpler, uniform framework.\textsuperscript{69}

Conclusion
Evidence suggests that regulatory barriers and NIMBY opposition are significant factors in affordable housing challenges, particularly in markets with strong job and population growth. Housing supply restrictions contribute to high rates of housing cost burdens, homelessness, displacement, and housing instability. Broader implications include spatial mismatch of housing and jobs that depress economic output and growth and exclude low-income households from areas of opportunity. Generally, local communities in the United States have struggled to combat regulatory barriers effectively. However, state and local governments can take numerous approaches to shape zoning and regulation in a way that increases the housing supply and drives

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**States can support local communities by providing technical assistance and financial incentives to implement zoning frameworks that encourage denser development.**
down prices to better meet the housing needs of their communities. EM

2 Interview with Lisa Sturtevant, 2 February 2018.
4 Carson.
7 Hirt, 34–5.
8 Ibid., 135.
9 Ibid., 120–1.
10 Ibid., 34.
11 Ibid., 34–5, 39–40.
13 Interview with Jenny Schuetz, 3 January 2018.
14 Hirt, 22–3.
15 Gyourko and Molloy, 1289, 1293.
16 Ibid., 1297.
23 Interview with Jenny Schuetz.
29 Gabbe.
30 Interview with Paula Mungur, 22 February 2018.
34 Fischel, 38.
36 Interview with Lisa Sturtevant.
37 Interview with Paula Mungur.
38 Scally and Tiggie.
40 Glaeser and Gyourko, 5.
41 Interview with Lisa Sturtevant.
42 Ibid.
43 Aht Associates, 12.
46 Aht Associates, 7–9.
57 Lisa A. Sturtevant. 2016. “Separating Fact from Fiction to Design Effective Inclusionary Housing Programs,” Center for Housing Policy, 1.
58 Ibid.
62 Ibid., 7.
63 Interview with Lisa Sturtevant.
64 Williams et al., 7.
65 Ibid., 15–6.
66 Ibid., 7.
67 Interview with Lisa Sturtevant.
68 Andrew Jakobovics, Lynn M. Ross, Molly Simpson, and Michael Spotts. 2014. Bending the Cost Curve: Solutions to Expand the Supply of Affordable Rental, Urban Land Institute, Terwilliger Center for Housing, 22.
69 Ibid., 20.
Although local and state housing regulations are usually passed with good intentions, they often serve as barriers instead, impeding the development and availability of affordable housing without providing residents with a commensurate health and or safety benefit. Many of these regulations prolong the completion of new construction and rehabilitation and exacerbate the high housing costs that burden residents of certain communities. This article will review early research on the cost of regulatory barriers, discuss how this research has evolved since the Great Recession and the ensuing housing crisis, and offer recommendations for further inquiry.

Environmental requirements and other regulations, including those that respect and preserve historical and cultural tradition, are necessary. Significant regulatory trends over the past 10 years, however, have exacerbated an already serious affordability problem. Both anecdotal and empirical research indicate that in the suburbs, NIMBYism (Not in My Back Yard, or resistance to unwanted development in one’s own neighborhood) may have worsened; many suburbs have enacted restrictions on affordable housing development, employed exclusionary zoning, imposed restrictive subdivision controls, and established complex review processes and requirements for permit approvals. These barriers can effectively exclude rental and affordable housing developments from a community. In addition, some environmental protection regulations have increased in complexity, creating new mitigation requirements, lengthy approval processes, and added consultant expenses that raise development costs and restrict development opportunities. Schill argued that

HIGHLIGHTS

- Researchers have developed analytical tools to test the effect of regulations on housing costs and have found that the stricter the regulatory environment is, the greater its impact on the cost of housing.
- Density requirements limit housing options for low- and moderate-income families seeking quality housing in high-cost markets.
- Researchers can determine both costs and benefits of land use regulations and make empirical distinctions between necessary regulations that enhance public health and safety but increase cost, and regulations that are burdensome without offering commensurate public benefits.
researchers should carefully consider regulations that, while costly, are effective at promoting the health and safety of community residents versus those that respond to demand for additional development beyond what is necessary to maintain a high quality of life for those residents. He examined changes in the median sales price of new residential housing starts over time and found that from 1990 to 2002, the cost of new development rose by 52 percent, driven in part by the costs associated with restrictions on design and building type.

A growing number of communities have introduced poorly conceived growth management and growth containment strategies without also implementing policies to ensure a stable supply of land to accommodate community growth. Communities are also increasingly imposing impact fees that are intended to cover the upfront infrastructure costs of development; in some cases, these fees have exceeded the actual costs generated by growth and have had a regressive impact. Urban barriers such as slow and burdensome permitting and approval systems, obsolete building codes, and difficulties associated with infill development are also significant impediments to the development of affordable housing in cities. For example, Quigley and Raphael created an analytic tool to test the effect of regulations on housing costs. Applying the hedonic pricing method to California housing costs between 1990 and 2000, they found that the more strangled the regulatory environment, the greater the impact on the cost of housing, increasing prices by nearly 5 percent for single-family homes and 2.5 percent for rental units.

Regulations also restrict the supply of housing by depressing housing starts. Quigley and Raphael found evidence that land use controls such as minimum and maximum allowable densities, delays in the permitting process for residential construction, and growth containment strategies such as urban growth boundaries are all strongly associated with high-cost housing. Increasing evidence suggests that many communities, particularly those in growing suburbs, are engaging in practices that limit the construction of high-density multifamily housing, particularly affordable rental housing. These practices may persist even when high-density housing is legally permitted in the community and demand for such housing exists.

Indeed, residents of growing suburban communities are demonstrating strong demand for low-density housing. Renowned economist Ed Glaeser and his colleagues’ seminal work involved an analysis of land use restrictions on rental housing supply in New York City, Boston, San Francisco, and Washington, D.C., between 1980 and 2000. They hypothesized that competition among builders to respond to consumer preferences for certain housing options drives down development costs in the absence of regulations. The argument is that the home building industry exerts considerable influence on the decisionmaking process, as elected officials often take cues from builders who are attuned to the preferences of voters who put them in office. If voters are unhappy with a development plan that does not reflect these preferences, they can and often do “vote with their feet.” As such, decisionmakers respond by finding ways to strike a balance between satisfying voter preferences and reasonable land use regulations that address larger community health and safety needs while reducing the development cost burden and negative spillover effects. The researchers rely on American Housing Survey (AHS) data to estimate the marginal value of available land and compare it with rising construction costs in these areas. Their analysis indicates that height restrictions on buildings, imposed to prevent overcrowding and congestion, could be responsible for increased housing costs. Their conclusion confirms that density requirements limit the available choices for low- and moderate-income families in search of quality housing in these high-priced markets.

Although multifamily rental housing is not automatically or exclusively affordable, it makes up a substantial portion of the nation’s affordable housing stock. AHS data indicate that growing suburban communities throughout the country are experiencing severe shortages of affordable housing, and many of these communities likely have a substantial amount of land zoned for multifamily housing development. Empirical evidence, however, suggests that these communities are engaging in practices that severely restrict the development of high-density multifamily housing despite the existence of as-of-right zoning laws that permit its development.

In addition to these regulatory trends are extensive regulatory barriers, including high infrastructure costs, restrictive and obsolete local building practices, bureaucratic inertia, exclusionary zoning practices, protracted project reviews, and excessive property taxes and fees as well as public opposition to affordable housing. These barriers significantly raise development costs; prevent the development of affordable housing in areas with high job growth, forcing lower-income households to live far from job opportunities; and limit available market-rate and affordable housing options, including higher-density housing, multifamily rental housing, accessory units, and manufactured homes.

Several researchers have measured the effects of housing regulations. Joseph Gyourko and his team developed the Wharton Residential Land Use Regulatory Index, an analytical tool to quantify the impact of regulations on the amount of housing built and the cost of housing. The researchers created a national survey of more than 2,500 municipalities across the country to understand variations in regulatory policies, practices, and procedures and their effects on the land development process. From the data,
they developed an aggregated index that tests for “regulatory stringency” to estimate the cost of development over time for state and local governments, ranking states based on their degree of regulatory strictness. They concluded that the more stringent a state’s regulatory environment, the higher the cost of its housing, which prices low- and middle-income Americans out of high-opportunity communities. Their continued work to measure the effects of the local, regional, and state regulatory environment on housing development has been used by researchers nationwide.

Dalton and Zabel developed a fixed-effects model that accounts for the endogeneity of local land use regulations and controls for cross-jurisdictional spillover. Their analysis of unit characteristics and lot size requirements in San Francisco and the greater Boston area from 1987 to 2006 found that policymakers implemented most zoning regulations in response to political pressure to keep taxes low and to meet the communities’ demands for public goods and amenities. These pressures, however, also resulted in negative externalities, including the unequal distribution of public services and increased housing costs, that adversely affect low-income families. The findings themselves are not surprising, but they confirm and quantify a well-known but unverified observation: that large-lot zoning and various site development requirements limit or prevent the development of affordable housing. These requirements, therefore, can harm a community’s ability to provide moderate-income residents with broad access to homeownership and rental opportunities.

Current Research on Regulatory Barriers to Housing Affordability

More recently, scholars have attempted to update their analyses on the regulatory impacts on availability of affordable housing. For example, Haifang and Tang studied housing price fluctuations by examining market trends in 300 large cities before and after the Great Recession. Holding all else constant, they found that governments impose more regulation on less developable land, resulting in higher housing prices after the recession. Hilber and Robert-Nicoud confirmed that land use restrictions increase the cost of housing, especially in high-demand markets. On the positive side, Furman noted that housing starts have recently increased and existing housing has appreciated in value, which has generated wealth for middle-income families. Land use restrictions, however, have not only continued unabated but have also become more expansive. The evidence is clear that land use regulations disproportionately affect low- and moderate-income families by limiting housing options and driving up housing costs. And, as Gyourko and Molloy pointed out, most researchers agree that the costs of regulations are quantifiable. However, more studies are needed to empirically measure the efficiency and public benefits of regulations. Reaffirming this point,
Reeves et al. confirmed that land use regulations still pose significant challenges for low-income families searching for quality neighborhoods with access to good schools, job opportunities, and attractive community amenities.\textsuperscript{14} Even though post-recession household incomes have improved as low- and semiskilled workers take advantage of employment opportunities, the authors found that in modest and high-cost housing markets, local governments use their zoning powers to price out low-income families, bowing to pressure from upper-middle-income households to preserve or increase home values.

The United States continues to grapple with rising inequality in housing. Lens and Monkkonen examined the regulatory environment of the 95 largest U.S. cities and found that the number of local approvals for new residential development is highly correlated with income segregation. In addition, they found that only specific types of land regulations, most prominently, density requirements, result in high levels of income segregation. They argued that local governments require more assistance from state governments to address increasing inequities resulting from fragmentation and burdensome bureaucratic requirements that slow down the permit approval process.\textsuperscript{15}

**Recommendations for Further Inquiry**

With the rising demand for quality, affordable housing choices, regulatory reform has reemerged as a prominent issue at the federal, state, and local levels. As states and municipalities grapple with the challenges involved in meeting this demand, researchers should respond by advancing evidence-based research on regulatory barriers. Researchers could, for example, continue to develop measures of the degree and intensity of the effects of regulatory restrictions on housing outcomes at the local and regional levels and update existing measures as needed. Researchers are also documenting local and state regulatory practices to help understand how the regulatory environment affects the supply elasticity of housing. This research could eventually be compiled into a data repository that could be used to create indices or for further investigation.

Researchers should also make empirical distinctions between necessary regulations that enhance public health and safety but may increase the cost of housing and regulations versus those that are simply unnecessary or burdensome. More evidence is needed to determine both the costs and benefits of land use restrictions on housing development.

Higher density for single-family housing can be achieved through reduced setback requirements or zero lot line development.
More research is needed to quantify the impact of minimum-parking requirements on housing development. Ikeda and Washington, for example, suggested that minimum-parking regulations themselves, rather than the public demand for additional parking spaces, are associated with the high cost of housing in urban areas. In addition, ample evidence confirms that the permitting process is often slow and burdensome. Researchers should continue to review procedural practices, such as the use of special permits rather than the as-of-right permitting process, that may impede the development of affordable housing. Studies on the availability of fast-track permitting are also needed for a richer analysis of impacts. To understand how certain types of regulations affect development decisions, researchers should compare the ways that residential regulations and commercial and industrial regulations affect land values and housing outcomes. Planning decisions that will greatly affect a community’s future built environment could be driven, in part, by policymakers’ inability to anticipate the community’s needs.

Finally, studies are needed to examine incentive-based strategies employed at the state level to strengthen local and regional capacity to respond to regulatory challenges to housing. Williams, Sturtevant, and Harper’s review of state policies that allow for enhanced jurisdictional reviews of housing needs, evaluation of state housing requirements that align with local and regional goals, and examination of how states can offer communities technical advice and assistance, for example, considerably improves our knowledge base in these areas.

### Conclusion

Between 2000 and 2030, the United States will develop approximately 213 billion square feet of homes, offices, and other commercial and industrial building — two-thirds the amount built as of 2000. Adopting a path that favors more compact forms of development can lead to greater environmental quality and social equity as well as create more housing choices for American families.

The evidence demonstrates that a positive relationship exists between land use regulations and the cost of America’s housing. State and local land use regulations still constitute a significant part of the review process for housing development projects, representing a significant investment of resources and time by applicants, who must respond to these requirements, and by the public agencies who administer the reviews. To ensure that local and state policies significantly reduce the regulatory cost barriers associated with land and site development standards, policymakers would have to focus on the most significant land use controls identified by researchers: excessive zoning regulations and house size requirements. Researchers who commit to further investigation of the costs and potential benefits of regulations would be making a critical contribution to evidence-based research on affordable housing policy.

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Regina C. Gray, HUD Staff

3. Ibid.
5. Glaser and Ward (2009) noted that the lack of affordable housing is not necessarily a national epidemic; the problem is subject to local housing market conditions. To illustrate the point, they examined housing supply elasticity in Boston during the past 25 years and found that the greater Boston area has been facing a land shortage because of increasing demand for low-density development. However, they warn against assuming that the lack of available land alone drives up the cost of new construction. Rather, they found evidence that land use regulations — primarily subdivision requirements such as minimum lot sizes — drove both the decline in construction starts and the rise in housing costs through the mid-2000s. Edward L. Glaser and Bryce A. Ward. 2009. “The causes and consequences of land use regulation: Evidence from Greater Boston.” Journal of Urban Economics 65, 260–78. Also note that Gyourko and Saiz (2006) argued that regulatory impositions on where and how housing is built greatly affect the total costs of land acquisition and construction. Joseph Gyourko and Albert Saiz. 2006. “Construction Costs and the Supply of Housing Structure.” Journal of Regional Science 46:3, 661–80.
States Reduce Regulatory Barriers for Affordable Housing

Although the authority to regulate land use is delegated primarily to local governments, states have the constitutional authority to reduce or remove regulations that drive up housing costs, offer financial and technical support for local communities to zone for affordable housing, and empower municipalities to use their own resources to create incentives for development. States can also help address community opposition to new housing developments and encourage regular assessments of housing needs at the local level. This article discusses efforts by Massachusetts and California to streamline permitting processes and ease restrictive zoning laws that hinder the development of affordable housing. More than any other state, Massachusetts has taken steps to supersede local development decisions and overcome neighborhood resistance to produce affordable housing. The state adopted legislation to remove requirements for affordable housing developers to secure multiple permits, allow by-right development, and increase density. California demonstrates how a state can support efforts that lower the cost of affordable housing construction and make implementing regulatory changes easier for local governments. California enacted legislation allowing fewer parking spaces in housing developments to increase affordability in areas close to public transit and promote the construction of accessory dwelling units (ADUs) in single-family and multifamily residential neighborhoods.

Overcoming Regulatory Barriers in Massachusetts

In the late 1960s, Massachusetts recognized the need to simplify approval processes for local permits for affordable housing and limit exclusionary zoning practices hindering the production of affordable housing in the suburbs, which are typically zoned for single-family residences. To this end, in 1969 Massachusetts enacted the Comprehensive Permit and Zoning Appeal Law (Chapter 40B), which encourages all cities to set aside at least 10 percent of their housing units as affordable. The law reduces barriers to affordable housing production by granting local zoning boards of appeal (ZBAs) the authority to approve housing developments if 20 to 25 percent of the units remain affordable for a period of 30 years to households with incomes at or below 80 percent of the area median income (AMI). As Rachel Heller, chief executive officer at the Citizens’ Housing and Planning Association, noted, the law supports mixed-income housing and the production of multifamily rental housing.

Chapter 40B also simplifies the permitting process for developers by allowing them to apply to a single authority: the local ZBA. Qualified developers can appeal denials of housing permits to the state Housing Appeals Committee when less than 10 percent of the housing stock in a municipality is affordable. Once a municipality meets the 10 percent goal, however, it has the right to deny further applications for comprehensive permits under Chapter 40B. In this case, developers can still apply for a permit, but they cannot appeal the decision.

Several years later, Massachusetts took additional steps to reduce the high cost of housing and address the restrictive zoning practices that kept housing out of reach for the state’s most vulnerable residents. In 2004, Massachusetts adopted the Smart Growth Zoning Overlay District Act (Chapter 40R), a voluntary program offering financial incentives to foster affordable housing production that was the first state-level program of its kind. According to Heller, the main goal of Chapter 40R was to spur “compact, smart growth development to meet the state’s housing needs while also preserving open spaces.” Chapter 40R eliminates the need for multiple permits by making compact, mixed-use developments allowable by right in smart growth locations. The legislation sets minimum densities for developable land at 8 units per acre zoned for single-family homes, 12 units per acre zoned for two- or three-family buildings, and 20 units per acre zoned for multifamily housing. Housing projects with 12 or more units in a smart growth district must make at least 20 percent of the units affordable to those earning up to 80 percent of AMI and maintain this standard for 30 years. In addition, 2016 revisions to Chapter 40R incorporate starter home districts of at least 4 units per acre with 20 percent or more affordable to households earning up to 100 percent of AMI. The law requires that Chapter 40R districts be in “highly suitable” areas with public transit, concentrated development, and amenities. The state allocates density bonus payments and production bonuses based on the number of housing units that will be produced, with the Smart Growth Housing Trust Fund as the funding source.

HIGHLIGHTS

- Massachusetts spurred the production of affordable housing with its Comprehensive Permitting and Zoning Appeal Law and Smart Growth Zoning Overlay District Act, which streamline approval processes for local affordable housing permits and allow by-right development in smart growth locations, respectively.
- California’s parking reduction law allows developers to construct fewer parking spaces for affordable housing developments located within a half-mile of transit.
- California’s planning and zoning laws require local governments to adopt ordinances for accessory dwelling units to increase the supply of affordable housing in areas occupied predominantly by single-family homes.
A Chapter 40R project typically begins with a public hearing to gather community input on a developer’s proposal. Municipalities have three years to adopt a Chapter 40R district ordinance through a two-thirds majority vote by the local council. The state’s Department of Housing and Community Development (DHCD) can also request data from local municipalities for annual progress reports that explain trends in affordable housing production and projects awaiting approval. The law’s “claw-back” provision requires the community to repay incentives to the DHCD, which returns them to the trust fund, if housing construction has not begun within three years of approval.17

Achieving Positive Outcomes
Heller notes that Chapter 40B has been the most successful tool in Massachusetts to reduce the state’s dire affordable housing shortage, producing more than 70,000 homes by forcing communities to think about how to meet the 10 percent goal.18 The program has produced far more affordable housing outside of major cities than would have been developed without it.19 As of September 2017, 65 communities reached the 10 percent goal and several more are continuing to make progress, with 39 communities between 8 and 9.99 percent and an additional 55 communities at 6 percent or higher. According to Heller, “75 percent of the state’s population lives in municipalities that are above 6 percent, and less than 1 percent of residents live in the 42 smaller communities that have zero subsidized housing.”20 Chapter 40R continues to build on these successful trends. Currently, 37 municipalities have approved 42 smart growth districts under Chapter 40R. Of these municipalities, seven have expanded their original districts.21 The success of Chapter 40B — most notably for establishing an appeals process at the state level for affordable housing developments — has made it a model for other states such as Rhode Island, Connecticut, and Illinois that are working to alleviate barriers to affordable housing production.22
Mitigating Challenges

Resident opposition to affordable housing development in the form of “not in my backyard” sentiments is a significant barrier for communities trying to satisfy the requirements of Chapter 40B. Common arguments are that affordable housing will increase school costs, traffic congestion, noise, pollution, and crime. Communities may also fear that Chapter 40B housing developments will cause property values to decline. Through archival research, site visits, and semistructured stakeholder interviews at four Chapter 40B housing developments, DeGenova et al. determined that these concerns were “unrealized” and “overstated.” Negotiation between municipalities and developers helped calm fears and improve the developments. According to Karki, such concerns can also motivate communities to pursue Chapter 40R to receive incentive payments while satisfying Chapter 40B’s 10 percent threshold.

Tension can also arise when communities have not yet reached the 10 percent goal, giving a developer the ability to appeal permit denials to the state and proceed with a housing project. To alleviate this tension, the state encourages communities to create a housing production plan that identifies housing needs and strategies for future development. Communities that can show progress on implementing the plan have more leverage to approve or disapprove a planning proposal. Heller indicated that following through with the goals outlined in the housing production plan can make communities appeal-proof if they can show they have planned for development and made progress on those plans.

Despite efforts to expedite the permitting process and adopt local ordinances, approval can be time consuming. One study that collected permit data from 144 towns between 1999 and 2005 found that ZBA approval took about 10 months, and the time needed to receive a building permit for a Chapter 40B project was about 2 years from the date the developer submitted.

Developers of Japantown Senior Apartments in San Jose, California, unbundled parking from overall development costs to meet GreenTRIP standards and further lower the cost of housing.
Parking costs are bundled with the cost of development, and additional parking drives up overall development costs, which can translate into higher housing costs per unit for residential properties.

Achieving consensus through the local two-thirds vote can also delay the approval of 40R projects. Moreover, the state capital budget currently funds the Smart Growth Housing Trust Fund, but one constraint is that municipalities can spend the funds only on capital improvements rather than at their discretion. The voluntary nature of Chapter 40R also requires communities to be motivated to develop affordable housing.

Recent Progress
In 2017, Governor Charlie Baker announced the Housing Choice Initiative Program to grant municipalities additional incentives and technical assistance with the goal of constructing 135,000 new housing units by 2025. Along with the Housing Choice Initiative Program, the state legislature is considering a complementary piece of legislation, House Bill 4075, An Act to Promote Housing Choices, which Choice Designation, which makes them eligible for financial benefits. Two additional bills addressing zoning barriers to housing production are currently under consideration by the state legislature. House Bill 673, An Act Relative to Housing Production, requires communities to zone for multifamily housing in smart growth locations and to allow, by right, ADUs and clusters of single-family homes that preserve surrounding open spaces. House Bill 2420, An Act Building for the Future of the Commonwealth, reforms the state’s planning, zoning, and permitting laws to expand housing choice in smart growth locations.

Flexible Zoning Laws in California
In California, the supply of affordable housing is not keeping pace with population growth. Since 1969, California has required local municipalities to create a general plan every five or eight years that identifies current and future housing needs based on the state’s projections for household growth. Unlike population projections, which look at the number of individuals, household growth projections account for changes in household size, which make them more useful for identifying housing needs. Although California’s Regional Housing Needs Allocation process encourages local allocation of housing, it has not substantially closed the affordable housing gap. From 2009 to 2014, 467,000 units were added to the housing stock — not enough to accommodate the increase in the number of households (544,000).

California has enacted several laws to address its shortage of affordable housing. In 2015, the state adopted its parking reduction law, which allows developers seeking a density bonus to request lower minimum parking requirements contingent on constructing affordable housing near transit. Meea Kang, director of the Council of Infill Builders and lead advocate for the law, explained that the projects she proposed typically required regulatory changes, and “parking made sense to reduce, especially if it was an infill project close to transit.”

As a cosponsor of California’s parking reduction law, Transform — a Bay Area transportation nonprofit organization — has supported policy discussions through its publicly accessible GreenTRIP Parking Database, which offers information such as rental costs, building characteristics, affordability, and parking occupancy. A 2015 GreenTRIP analysis found that at 68 affordable housing developments in the Bay Area, 31 percent of the 9,387 total parking spaces were empty at night. In 2015, construction costs for these spaces stood at approximately $139 million; nationally, the average construction cost per space was $24,000 for aboveground parking and $34,000 for underground parking. An underground space in San Francisco costs about $50,000. Parking costs are bundled with the cost of development, and additional parking drives up overall development costs, which can translate into higher housing costs per unit for residential properties. According to Williams et al., reducing unnecessary parking can lower development costs “by $20,000 to $50,000 per unit in high-cost areas.” This reduction can make it easier to construct affordable housing for seniors, people with special needs, and low-income households, who may be less likely to drive.

The ministerial approval embedded in the parking reduction law bypasses the need for planning commissions to weigh in on local decisions, which can stall projects. For developers constructing housing within a half-mile of public transportation, the parking reduction law sets the minimum parking requirement at 0.5 spaces per unit for senior housing and 0.3 spaces per unit for special needs housing. The parking law encourages market-rate developments to provide affordable housing by requiring 0.5 spaces per bedroom for mixed-income housing with up to 20 percent of units for low-income
households or 11 percent for very low-income households. Currently, California still requires two parking spaces per unit for a two-bedroom apartment, and municipalities have the freedom to increase this ratio, but if developers want to build affordable housing near transit, this law allows them to construct fewer parking spaces. The parking legislation speeds up the project approval process and has helped cities reach their affordable housing goals.47

Facilitating the Production of Accessory Dwelling Units
California also sees the potential for ADUs to accommodate future population growth. ADUs are an innovative way to increase affordable housing supply in high amenity areas that are occupied primarily by single-family homes, which make up 56.4 percent of California’s total housing stock.48 An ADU is a secondary dwelling unit sometimes referred to as a “granny flat” or “in-law suite.” (See Evidence Matters, Summer 2017.) ADUs can be small studios or one-bedroom units in a detached, attached, or converted space within the main house such as a garage, first floor, or basement.49 Constructing an ADU is cheaper ($156,000 on average) than a single unit of affordable housing in a new development, averaging $332,000 statewide, $591,000 in San Francisco, and $372,000 in Los Angeles.50 The accessory units provide multipurpose, flexible housing arrangements such as short-term rentals, art studios, and housing for extended family. Karen Chapple, professor of city and regional planning at University of California at Berkeley, notes that flexible housing “allows the neighborhood to change quite quickly without changing built form.”51

Effective January 2017, California enacted planning and zoning laws requiring local governments to adopt ADU ordinances.52 These laws reduce regulations to facilitate the development of ADUs in numerous ways, such as eliminating setback requirements for garage conversions, utility connection fees, and parking requirements for ADUs in a historic district, a half-mile from transit, or near a car share area. State laws also require ADUs to be located on lots zoned for single- or multifamily use. Detached ADUs can be no larger than 1,200 square feet. ADU requests in compliance can become permitted within 120 days of receipt of application, without the need for a public hearing.53

From 2015 to 2017, Los Angeles saw the largest jump in ADU applications of any California city, from 90 in 2015 to 1,980 in 2017. In addition, the number of applications in San Francisco was approximately 14 times larger in 2017 than in 2015, while Oakland saw about 8 times more applications during the same period.54 Currently, more than 100 cities in California have enacted
ADU ordinances. Because many cities had already implemented ordinances before the new legislation, it is unclear whether the jump in permits can be attributed to the new state legislation or to previous city reforms. The biggest short-term impact, according to Chapple, has been increased awareness of the benefits of ADUs for homeowners and tenants.

Several challenges remain, especially concerning preexisting, unpermitted ADUs; financing; and assessment. Rigid land use regulations have led to a large, informal housing market composed of unpermitted ADUs. Roughly 50,000 unpermitted accessory units are in Los Angeles alone. State building codes, which emphasize energy-efficiency standards meant for larger units, can be a barrier for homeowners trying to convert garages or construct new cottages. Cost remains the biggest barrier for homeowners looking to construct ADUs, particularly for low-income elderly residents, whose incomes in retirement may be too low to qualify for a mortgage. Traditional banks and credit unions are still developing loan financing tools for ADUs, but these financing mechanisms tend to favor high-income, high-equity households. Monitoring and evaluation also remains a challenge at the state level; cities are required to report the number of housing units constructed, but ADUs have not been part of that count.

New Reforms
In September 2017, California adopted sweeping housing legislation that, among other actions, provides incentives to local governments that develop affordable housing near transit and streamline processes for approving local projects. Senate Bill 831 builds on the success of previous ADU legislation by allowing a pending ADU application to be automatically approved if a local agency has not acted within 60 days. The existing laws leave cities to define transit options, however broad, within their local ordinances, but the latest bill eliminates this ambiguity by defining public transit as “a location, including, but not limited to, a bus stop or train station, where the public may access buses, trains, subways, and other forms of transportation that charge set fares, run on fixed routes, and are available to the public.” In addition, Assembly Bill 2890 amends existing ADU laws by proposing a state-mandated program to limit the land use restrictions that local municipalities can impose on ADUs.

Realizing Change
Efforts in Massachusetts and California demonstrate that state actions to reduce regulatory barriers can facilitate the development of affordable housing at the local level. In Massachusetts, Chapter 40B set the groundwork to spur the growth of affordable housing production, and decades later, Chapter 40R became the added incentive to help communities meet the 10 percent
goal for affordable housing units. By revising parking regulations, California is helping developers and cities build affordable, higher-density housing near transit. California also demonstrates that ADUs can serve multiple purposes by helping homeowners generate additional income while filling the affordable housing gap. These laws can serve as models for other states looking to expand affordable housing by reducing regulatory barriers, and they grant residents more of what they desire — housing in affordable and walkable communities near transit and amenities.

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2 Ibid., 18–20.
3 Ibid., 14; Interview with Meea Kang, 8 February 2018.
6 Interview with Rachel Heller.
8 Reid et al., 3.
9 Williams et al., 10–2.
10 Interview with Rachel Heller.
13 The General Court of the Commonwealth of Massaccusetts, n.d. “Chapter 40R: Smart Growth Zones and Housing Production” (www.mass.gov/service-details/chapter-40r/).
15 General Court of the Commonwealth of Massachusetts, “Chapter 40R: Smart Growth Zoning and Housing Production.”
16 Ibid.
17 Ibid.; Kirk. 246; General Court of the Commonwealth of Massachusetts, “Chapter 40R: Smart Growth Zoning and Housing Production”; State of Massachusetts, “Chapter 40R.”
18 Interview with Rachel Heller.
19 Reid et al., 4; Interview with Rachel Heller.
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21 Ibid.
24 Kirk, 217.
25 Interview with Rachel Heller.
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34 Williams et al., 7.
35 California Department of Housing and Community Development. 2018. “California’s Housing Future: Challenges and Opportunities — Final Statewide Housing Assessment 2025.”
36 Williams et al., 8.
37 Woetzel et al., 2
39 Interview with Meea Kang.
42 kimura.
44 Williams et al., 14.
45 Melanie Curry. 2015. “Bill to Reform Parking Minimums Passes CA Senate Transportation Committee,” Streetsblog CA, 10 July.
46 California State Legislature 2015; Cohen; Interview with Meea Kang.
47 Interview with Meea Kang.
49 California Department of Housing and Community Development, 1.
50 Garcia, 2.
51 Interview with Karen Chapple, 5 February 2018.
52 Garcia, 3.
56 Interview with Karen Chapple.
58 Office of Senator Bob Wieckowski.
59 Office of Senator Bob Wieckowski; Garcia, 6–7; Interview with Karen Chapple.
62 Interview with Karen Chapple; California State Legislature. 2018. An Act to Amend Sections 65585 and 65852.2, and to add Section 65852.21, to, and to add and repeal Section 65852.23 of, the Government Code, Relating to Land Use, Senate Bill No. 831, 2017–2018 Reg. Session (1 January).
64 Interview with Rachel Heller.
65 Interview with Meea Kang.
66 Interview with Rachel Heller; Interview with Meea Kang.

“The New Exclusionary Zoning” (2014), by John Mangin, investigates how exclusionary policies typical of suburbs have emerged in several cities as higher-income residents gentrify neighborhoods and then seek to stem further population growth. [law.stanford.edu/publications/new-exclusionary-zoning/](http://law.stanford.edu/publications/new-exclusionary-zoning/).

“Responding to Changing Households: Regulatory Challenges for Micro-Units and Accessory Dwelling Units” (2014), by Vicki Been, Benjamin Gross, and John Infranca, examines regulatory restraints that prevent the addition of housing that could meet the increasing demand for smaller units in some markets. [furmancenter.org/files/NYUFurmanCenter_RespondingtoChangingHouseholds_2014_1.pdf](http://furmancenter.org/files/NYUFurmanCenter_RespondingtoChangingHouseholds_2014_1.pdf).


“Why has regional income convergence in the U.S. declined?” (2017), by Peter Ganong and Daniel Shoag, studies the decline in regional income convergence in relation to the increase in housing prices in high-income places. Their model highlights the importance of housing supply regulations. [www.sciencedirect.com/science/article/pii/S0094119017300591](http://www.sciencedirect.com/science/article/pii/S0094119017300591).

“Parking Requirements and Housing Development: Regulation and Reform in Los Angeles” (2013), by Michael Manville, discusses the results of a change in Los Angeles that removed parking requirements for vacant downtown commercial and industrial buildings that converted to residential use. [www.tandfonline.com/doi/abs/10.1080/01944363.2013.785346](http://www.tandfonline.com/doi/abs/10.1080/01944363.2013.785346).


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