How can state governments support healthier housing markets?

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Abstract

Housing affordability has become an increasingly salient political issue across the U.S. in the past several years, reflecting rapid price appreciation in many metropolitan areas. State governments are beginning to push back against the prerogative of "local control" over land use regulation and housing production. In this paper, I examine the potential benefits of more targeted state engagement with housing markets; review the kinds of policy tools through which state governments can influence housing market outcomes; outline broad goals to guide statewide housing policy; and document the contrasting approaches currently taken by five states. Current state approaches vary widely in the intensity of state engagement, policy goals and tools. Housing market outcomes also differ across and within states; statewide policy approaches should be tailored to specific goals and market conditions.

Keywords: Housing policy; affordability; zoning; state policy

JEL codes: H7, R1, R2, R3, R5

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Section 1) Introduction

Housing affordability has become an increasingly salient political issue over the past several years. The COVID-19 pandemic put additional pressure on housing prices in mid-sized cities that have historically been relatively affordable; Boise ID, Salt Lake City UT, and Allentown PA rank in the top ten metros for highest housing price appreciation in 2021. Tight supply and rising costs have prompted new conversations about whether state or federal intervention could help increase housing production—in particular, whether higher levels of government can counteract excessively strict regulations by local government. State governments from Massachusetts to North Carolina to Washington have started pushing back against local authority over land use regulation (Chesto 2021, Furth and Coletti 2021, Kingsella 2020). In September 2021, California Governor Gavin Newsom signed landmark legislation that overrules local zoning to legalize duplexes in most residential areas throughout the state (Tobias 2021).

In this paper, I assess the potential for greater state-level engagement with housing production. Although land use regulation and housing development have traditionally been left up to local governments, there are strong economic rationales for state-level intervention. The goals of this paper are to discuss the potential benefits of statewide housing policy; review the kinds of policy tools through which state governments can influence housing market outcomes; outline broad goals to guide statewide housing policy; and document the contrasting approaches currently taken by several states.

While local governments have traditionally exercised primary authority over housing and land use, poorly functioning housing markets impose economic, social, and environmental costs that extend well beyond any one locality's boundaries. State-level regulation could correct some of the collective action problems and perverse fiscal incentives associated with local control. State governments already have a variety of legal and fiscal tools available to encourage local housing production—in clear contrast to the federal government. Four broad goals can guide state actions: assess market conditions and needs, support well-functioning housing markets, provide financial support to low-income households, and reduce climate risk. Within this general framework, detailed action plans should vary across states, depending on their market conditions, current policies, and institutional capacity.

Comparing current policies across five states—California, Massachusetts, Oregon, Utah, and Virginia—reveals wide variation in policy goals, tools, and outcomes. California takes a maximalist approach—high degree of state engagement, many layers of complex regulations, multiple subsidy programs—paired with the most expensive housing in the nation and consistently low housing production, especially among high-demand counties. Utah and Virginia have had little state engagement in housing, beyond narrowly targeted subsidy programs, while most counties in these states have to date enjoyed moderate housing costs. Oregon and Massachusetts both have long-standing state roles in housing and land use planning, although in notably different ways.

The remainder of the paper is organized as follows. Section 2 discusses the pros and cons of local government oversight of housing and land use. Section 3 reviews the range of policy tool

¹ https://www.fhfa.gov/DataTools/Tools/Pages/FHFA-HPI-Top-100-Metro-Area-Rankings.aspx

used by state and local governments to influence housing outcomes. Section 4 lays out a series of broad policy goals to guide states. Section 5 compares the approaches currently taken by five different states. Section 6 concludes and offers policy recommendations.

Section 2) Local government control over housing production has pros and cons

The degree of local control over housing production—which is unusual compared to most consumer goods and services—is usually justified because of the localized costs associated with housing development: increasing the number of homes in a community creates more demand for publicly provided services, such as schools and roads, and can reduce quality of life for current residents (increased noise or traffic congestion). These localized negative effects of new development create both financial and political pressures on local governments to restrict housing development—especially lower-cost housing—within their individual jurisdictions.

Local governments bear the primary responsibility for funding a wide range of public services, including schools, crime prevention, transportation and water infrastructure. When additional housing is built in a city or county, it increases the demand for these services. An important consideration for local governments in regulating development is whether new homes will bring in enough revenue through property taxes, impacts fees, and other mechanisms to cover the cost of services consumed by new residents. Zoning regulations such as apartment bans and large minimum lot sizes attempt to limit development of smaller, lower-cost homes, which local officials believe will be a net fiscal cost (Fischel 2005, Fischel 2013, Furth and Gray 2019). This perception is widespread, although assessing the actual fiscal impacts of new development is more complicated (Gallagher 2016).

Local elected officials also face pressure from voters to limit new development, especially of moderately-priced housing. Existing homeowners tend to oppose any changes to their community that they believe will reduce property values or alter "neighborhood character" in some way (Fischel 2005). Over the past 30 years, the development process has become increasingly discretionary, allowing existing residents substantial power to block unwanted development (Dain 2019, Dougherty 2020, Schuetz 2009). Political scientists have documented that community meetings required to approve development proposals tend to be dominated by older, wealthy white homeowners—even when they constitute a minority of local residents (Einstein et al 2019, Manville and Monkkonen 2021).

In short, local governments' adoption of highly restrictive zoning that limits the quantity of new development, and permits only expensive new homes, is quite rational from both a political and fiscal standpoint.

But overly restrictive regulation of housing production at the local level can impede well-functioning markets at the regional and state level. Decades of empirical research have documented that excessively strict local zoning and related land use regulations leads to too little housing being added in places with high demand, and drives up the cost of housing, relative to less tightly regulated markets (Hsieh & Moretti 2019, Gyourko & Molloy 2014, Glaeser &

Gyourko 2018). At the national level, housing prices have risen faster than overall inflation since 1990 (Figure 1), while housing production has not kept pace with population growth (Bernstein et al 2021).

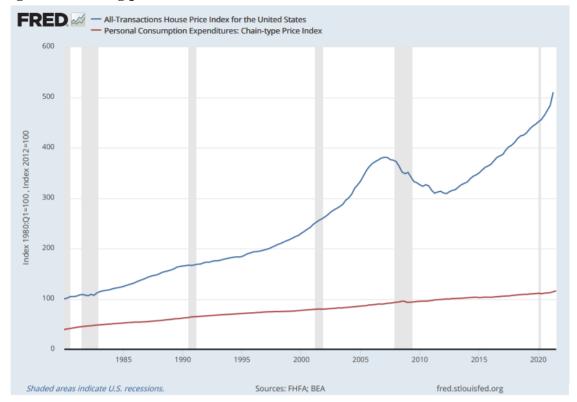


Figure 1: Housing prices have risen faster than overall inflation

Source: FRED.

At the state and regional (metropolitan area) level, poorly functioning housing markets create three types of costs: they impede regional labor markets, harm the environment, and limit economic opportunity for low-and moderate-income households. Even beyond regional impacts, regulations that limit housing growth and increase costs translate into substantial macroeconomic impacts for the country. Hsieh and Moretti (2017) estimate that restrictive land use regulations slowed GDP growth in the U.S. by about 36 percent between 1964 and 2009.

Firms located in expensive regions have greater difficulty attracting and retaining workers, who require higher wages to offset housing costs. The rapid increase in housing costs in highly-productive regions—metro areas including Boston, New York, Seattle, and San Francisco—deter some prospective workers from moving to those areas (Ganong and Shoag 2017). Within expensive regions, most new housing tends to be built on the urban periphery, far from job centers and public transportation, resulting in longer commutes and more traffic congestion (Glaeser & Kahn 2010, Crump et al 2020).

Spatial patterns of housing development have important implications for climate impacts and consumption of natural resources. Suburban dwellers have larger household carbon footprints than their urban counterparts, largely because of differences in housing consumption and

transportation (Glaeser and Kahn 2010, Kahn 2007, Jones and Kammen 2014). At the state and regional level, accommodating population and job growth through infill development—increasing density close to city centers and public transportation—creates less environmental harm.

Housing affordability is important for the well-being of a state's residents, particularly for low-and moderate-income households. Zoning places the tightest restrictions on development of small, dense forms of housing, such as rowhouses and apartments, which are more likely to be used as rental housing (Murray and Schuetz 2019, Schuetz 2009). The poorest 20 percent of U.S. households spend over half their income on housing, leaving them too little cash for food, health care, and other necessities (Larrimore and Schuetz 2017). Family financial instability and stress negatively impacts children's health and educational outcomes (Newman 2008). High housing costs and zoning bans on rental housing effectively "price out" many low- and moderate-income families from living in neighborhoods with high-performing public schools, leading to long-term losses in human capital; where children grow up is strongly correlated with lifetime earnings (Chetty et al 2014, Chetty et al 2016, Ludwig et al 2013). In conjunction with persistent income and wealth gaps between Black, Latino, and white households, zoning exacerbates long-standing patterns of racial segregation (Rothstein 2018, Scherzer et al 2021, Trounstine 2018).

The economic, social, and environmental harms created by poorly functioning housing markets extend well beyond local borders, suggesting that states could improve well-being of their residents and businesses. State-level engagement could also help overcome the collective action problem created by anti-growth localities.

Shifting some authority over land use from localities to state governments does create some practical challenges and political risks (Collins 2019). Most state governments have not directly engaged with land use or housing supply in the past, so would need to build up staff capacity. The political dynamics between state legislatures and local governments can be fraught—especially the relationship between Republican-dominated legislatures and Democratic mayors of large cities. Housing politics are not neatly aligned with traditional partisan divides; shifting to more state involvement has the potential to improve housing outcomes, relative to the status quo, but is not without risk.

Section 3) State and local governments influence housing outcomes through multiple channels

Both state and local governments currently influence housing supply and affordability through a variety of tools, including taxes, subsidies, regulation, and information sharing. Crucially, state governments create the legal framework within which local governments operate, including defining local fiscal authority and delegating authority over land use. Figure 2 summarizes some of the key policy tools available to each level of government.

Figure 2)	State and local governments influence housing supply through multiple channels
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Policy type	State	Local				
Regulations						
	Set parameters for local govt zoning authority	Write & enforce zoning, historic preservation				
	(enabling legislation)					
	Environmental regulations (above natl baseline)	Enforce building code, fire safety				
	State minimum wage (above federal)	Local minimum wages				
	Occupational & business licensing (e.g. real estate					
	agents, mortgage brokers, building trades)	A d'andi ante la milla nel transmit d'annotan (cari et anno)				
	Regulate landlord-tenant relationships	Adjudicate landlord-tenant disputes (evictions)				
	"Fair share" housing requirements (MA & NJ)					
Taxes	Some regional planning requirements (CA, OR) Set parameters for local govt fiscal authority (TEL)	Sat & administra property toyon impact food & other exections (a.g. IZ)				
Taxes	Set parameters for focal govt fiscal authority (TEL)	Set & administer property taxes, impact fees, & other exactions (e.g. IZ) Municipal bonds (long-term infrastructure, subsidized hsg)				
Subsidies						
	Distribute federal grants (LIHTC, CDBG, transit)	Administer state & federal subsidies (vouchers, public housing, CDBG)				
	Some housing construction & maintenance	Local housing trust funds, rental assistance				
	(rehab & weatherization grants)	Homebuyer assistance programs				
	Grants to localities for housing-related infrastructure					
	(schools, transportation)					
Information s	haring					
	Some research & technical assistance	Maintain property records				
	Set requirements for information disclosure (e.g. sales					
	transactions)					

Source: Schuetz (2022)

Authority to regulate land use originates with state governments, but states have chosen to delegate this authority to localities. How much leeway states grant their cities and counties—what specific tools they may or may not use, and under what circumstances—varies somewhat across states, as discussed in more detail below. Because the power originates with states, state governments can also rescind authority if they choose to do so (Richardson 2011, Rosenberg 2013, Stahl 2021). One of the more unpopular mechanisms to tie local governments' hands is to pre-empt specific tools or actions: for instance, nearly half of states prohibit local rent control policies.²

States can regulate housing through a number of indirect channels. Numerous states have adopted environmental protection standards above the national minimum (set by the National Environmental Protection Act), which, for example, require additional review processes that can delay or deter development. Building codes that regulate health and safety of all structures are usually adopted (or not) at the state level; certain states have adopted higher energy efficiency requirements raise initial construction costs while lowering longer-term energy usage. State minimum wage laws and union work requirements affect the labor component of construction costs. Occupational and business licensing requirements for real estate agents, appraisers, and mortgage brokers affect transaction costs of buying and selling homes. And the legal framework for landlord-tenant relationships, including what provisions may be included in leases and eviction proceedings, are regulated by state governments.

Zoning laws are the most important and widely researched form of housing regulation, but local governments use a wide range of other regulatory tools. Parking requirements, historic preservation, local environmental rules (above federal and state minimums), fire safety, and subdivision regulations are some of the more common policies that affect the cost and feasibility of new construction (Pioneer Institute 2006). Local officials often exercise discretion in enforcing statewide laws, including health codes, seismic regulations, and disability access.

Because new development has substantial fiscal impacts on local governments, land use policies and local tax policies are closely linked. State governments set the parameters for local governments' taxing authority, similar to creating the legal framework for zoning authority. Property taxes are the workhorse of local public finance, accounting for roughly half of all local revenues (Urban-Brookings Tax Policy Center 2018). In states where local governments are restricted in their ability to raise revenues through property taxes (such as through California's Prop 13), localities rely more heavily on mechanisms such as impact fees to finance public services associated with new development (Been 2005). Whereas property taxes are a broad-based tax that apply to most residential and commercial properties within a jurisdiction, impact fees apply only to new construction, and are essentially a tax on newly built homes. Inclusionary zoning is a specialized form of impact fee, under which developers of new market-rate housing are required to set aside some units at below-market rents or prices (Schuetz et al 2009). Some localities charge transfer taxes or recording fees on real estate transactions (sales and/or mortgage originations).

This paper focuses particularly on state-level policies to influence better housing market outcomes, because state governments have substantially more effective levers than the federal

² https://www.nmhc.org/research-insight/analysis-and-guidance/rent-control-laws-by-state/

government. Notably, the U.S. government lacks constitutional authority over land use. Federal policies do play important roles in boosting housing demand through tax subsidies such as the mortgage interest deduction for homeowners and by regulating the availability and cost of mortgage loans (Gale, Gruber, and Stephens-Davidowitz 2007). In recent years, federal policymakers have issued a number of proposals to use federal funds as carrots or sticks for zoning reform. However, current federal subsidies are not well designed to encourage large-scale zoning reform, because they do not directly reach most localities, especially wealthy suburbs (Schuetz 2018). The infrastructure bill currently under consideration does include provisions for voluntary planning grants to localities to revise their zoning.⁴

Section 4) Four goals to guide state-level housing policies

Developing a precisely tailored action plan that could be implemented by all states is impossible. States start from widely varying baselines, depending on their housing market conditions, existing laws, and institutional capacity. As the five case studies in Section 5 will illustrate, each state's current policies reflect its unique history, including prior political and legal decisions. With that context in mind, this section suggests four broad goals to help guide governors and legislatures in developing statewide housing policy. Below I briefly introduce these goals; Section 5 examines what specific policy tools different states are currently using to achieve each goal.

Goal 1: Assess statewide housing market conditions and challenges

Better information enables better policies. Any state contemplating changes to its housing policy should start by assessing current market conditions and needs. The specific choice of metrics, data sources, and complexity of analysis depend on the state's primary goals and research capacity; below are a few metrics that can serve as a useful starting point.

- Housing affordability: prices and/or rents relative to household incomes
- Housing production (e.g. building permits or change in units) relative to population or job growth
- Vacancy rates (indicator of excess housing)
- Housing quality and access to urban infrastructure, such as water, sewer, and broadband

Section 5.1 provides an example of how some of these metrics can be calculated using readily accessible data from the Census Bureau. Understanding how these metrics differ across geographic areas within each state (for instance, urban versus rural or across metro areas) should be part of any analysis.

Goal 2: Support well-functioning housing markets

In well-functioning housing markets, developers build more homes in places where people want to live (e.g. locations with strong demand). For firms to be able to attract and retain workers across a wide spectrum of incomes, housing markets need to offer a diversity of housing choices (e.g., by home size, tenure, and price range). Regional labor markets depend on workers' ability

³ For example, see Senator Cory Booker and Rep. James Clyburn's 2019 proposed Housing Opportunity Mobility and Equity (HOME) Act. https://www.booker.senate.gov/news/press/booker-clyburn-take-innovative-two-pronged-approach-to-tackling-affordable-housing-crisis

⁴ https://www.bloomberg.com/news/articles/2021-03-23/klobuchar-bill-would-offer-yimby-grants-to-cities

to live within a reasonable commuting distance of their jobs, accounting for existing transportation systems. Recent zoning reform efforts are motivated by the underlying question: how can state governments encourage (or require) localities to allow more development in places with strong demand? Four general approaches offer the most potential—with the caveat that details of policy design and implementation matter enormously.

The most market-oriented approach is for state governments to use financial carrots and/or sticks tied to housing production. Localities would be assigned a target—increase the total number of homes by five percent over the next five years, for example—and would either receive extra funding from the state for achieving that target ("carrot") or have existing funds withheld ("stick"). This basic idea can be implemented in a multitude of ways (production targets set at various price points, sliding scale of carrots and sticks, options for localities to pay into a fund rather than building homes).

A conceptually similar approach that focuses farther upstream from housing production is for the state to assume greater oversight of local land use planning, requiring local governments to build capacity for more housing into their plans. (Many states require localities to develop a Comprehensive Plan or related document that guides the more detailed zoning laws.) As discussed below, both California and Oregon require localities to receive state approval of their land use plans, including provision for additional housing. This approach can work in concert with quantitative production targets; tying carrots and sticks to plans but not housing production is likely to be ineffective at changing outcomes.

Third, states can pre-empt local governments from adopting specific zoning rules. Several states have applied this approach to accessory dwelling units (ADUs), essentially prohibiting local governments from zoning provisions that ban ADUs. Pre-emption is politically very unpopular with local governments, not just in the housing arena; states like Florida and Texas have raised concern during COVID by pre-empting local governments' ability to require masks indoors. How effective pre-emption can be at increasing housing production depends crucially on identifying the "right" rules to pre-empt. For example, telling local governments that they cannot ban ADUs outright, while allowing them to pile on other regulations (restricting ADU occupancy to relatives of the primary home, requiring two off-street parking spaces per ADU) can render a state pre-emption largely toothless.

Fourth, states can create a mechanism for developers to override local zoning in order to build housing under certain conditions. Sometimes referred to as a "builders' remedy", this approach is most often used to allow development of below-market-rate housing; the Massachusetts case study describes one version in more detail. How much additional housing a builders' remedy can produce depends on what types of housing are eligible, and under what circumstances (Marantz and Zheng 2020). One potential advantage of states creating a builders' remedy is that it does not require localities to revise their land use plans or rewrite zoning laws, sidestepping a lengthy and contentious public process.

With any of these four approaches, policy design and implementation matter greatly for the effectiveness at increasing housing production. A few key considerations include: whether policies should apply broadly to all localities in the state or focus on worst offenders (expensive

but low-producing places); how to set quantitative targets; and what legal or fiscal mechanisms are used to enforce compliance. Political expediency is likely to be a driving factor in which approach states pursue and how they design policies: legalizing ADUs or duplexes statewide may be less contentious than withholding school funding from a subset of wealthy suburbs that determinedly resist any new development.

Goal 3: Provide financial support to low-income households

Improving the efficiency and productivity of statewide housing markets will mitigate housing cost pressures on middle-income households but does not directly address affordability concerns for low-income households. Affordability for the poorest 20 percent of households is driven primarily by low incomes: they earn too little to cover the operating costs on market-rate housing without direct subsidies (Larrimore and Schuetz 2017, Mallach 2019). Most low-income households rent their homes, creating a large need for rental subsidies. Among low-income homeowners—many of whom are older adults—maintenance costs and utilities are often a large share of monthly housing costs (Begley and Lambie-Hanson 2015).

The market analysis (Goal 1) should help policymakers identify the types of households most in need of assistance (e.g. renters versus homeowners, age and family status, geography) and design appropriate subsidies. These could include state-funded rental vouchers to augment federal vouchers, one-time emergency rental assistance, legal counsel for tenants facing eviction, or grants to homeowners for maintenance or weatherization. As described above, states are also conduits for some federal housing subsidies, including LIHTC and CDBG, and have some discretion to tailor the allocation of those funds.

Two policy design considerations are particularly relevant for developing state-funded subsidies. First, for a given amount of money, how can funds be used most effectively and efficiently? This could mean supporting the largest number of eligible households, or targeting households with the greatest need. Household-based assistance like vouchers are nearly always cheaper per household served than project-based assistance (construction or acquisition of below-market housing). Second, simple application processes reduce the administrative burden both for households who receive assistance and for the public agencies or non-profits who distribute subsidies.

Goal 4: Reduce climate risk and conserve natural resources

Land use regulation is one of a set of environmental protection tools available to state governments. States can regulate land to discourage housing development in climate-risky or damaging locations, such as places with high exposure to sea level rise, intense storms, or wildfires (Schuetz 2022). Zoning that allows moderate-density development with a mixture of residential and commercial uses also enables more people to achieve car-light lifestyles, thus reducing household carbon footprints (Jones and Kammen 2014). Related policies such as building codes can encourage greater energy efficiency in new and existing homes. Ideally, state environmental protection laws would reduce greenhouse gas emissions (GHGs) from homes and transportation, while not unduly restricting overall housing stock relative to population and job growth. In practice, many states struggle to balance these goals.

Across all four of these goals, policymakers should focus on housing outcomes, like increased production and improved affordability, rather than inputs or narrowly targeted rules. Recent efforts at city- and state-level zoning reform have tended to focus on pre-emption of specific activities. Campaigns to legalize duplexes or accessory dwelling units (ADUs) have been framed as "ending single-family zoning" (Badger and Bui 2019, Grabar 2018, Los Angeles Times Editorial Board 2021). However, housing production is influenced by a complex network of overlapping regulations (zoning, building codes, historic preservation, environmental regulations), each containing multitudes of specific rules. Apartment bans, large minimum lot sizes, and discretionary approval processes can all be used by local governments or existing residents to impede unwanted development. Focusing on pre-empting specific rules runs the danger of creating contentious political fights with limited progress towards the larger goals: increased housing production and improved affordability. Similarly, the effectiveness of housing subsidies to low-income households should be assessed on how many eligible households are helped, rather than the amount of money spent. Being clear about desired housing outcomes, preferably tied to observable metrics, makes it more likely that state policy interventions will succeed.

Section 5) Current state approaches run the gamut, from barely there to the kitchen sink

To illustrate how different states are approaching the four goals described above, I compare current housing policies from five states—California, Massachusetts, Oregon, Utah, and Virginia—that vary along several important dimensions. First, they represent different points along the intensity and complexity of current policies, from highly complex (California) to lightest touch (Utah and Virginia). Second, they operate under different legal and institutional structures. California and Oregon have explicit statewide mandates to monitor land use planning and/or housing production. Massachusetts has a statewide "fair share" rule focused on lowincome housing, which allows developers to override local zoning under certain conditions. Virginia is a Dillon's Rule state, which means that localities may require explicit approval from the legislature before adopting some policies. Third, housing costs are a salient political issue in all five states; at least one statewide housing bill has been introduced or adopted within the past two years.

Figure 3 summarizes high-level differences in how each state addresses the four policy goals; specific policies and institutional structures are discussed in more detail below.⁵

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⁵ Statewide policies are evolving in real time; this paper summarizes policies as of September 2021. California's legislature has been particularly active passing new legislation during the 2021 session, with several notable bills (SB 9 and 10) signed into law as this draft was being written.

Figure 3) State policy goals & current engagement levels vary widely

State govt roles	CA	MA	OR	UT	VA
Assess housing market conditions					
Data collection/analysis	Yes	Yes	Yes	No	Occasional
Support well-functioning markets					
Housing production targets	Yes	Yes	No	No	No
Direct role in land use planning	Yes	No	Yes	No	No
Pre-empt local policies/practices	Yes	Yes	Yes	No	Yes
Zoning override mechanism	No	Yes	No	No	No
Financial support for low-income households					
Homeowner or rental subsidies	Yes	Yes	Yes	Yes	Yes
Reduce climate harms & conserve resources					
	Yes	Yes	Yes	n/a	n/a

Note: Policies marked as "Yes" can include partial or targeted policies (e.g. states that pre-empt local policies do this only in specific instances).

5.1) Assess statewide housing market conditions and challenges

Understanding current housing market conditions is an essential first step before developing or altering a statewide housing policy. Key needs and policy priorities vary widely across states, and potentially across cities or counties within states. Identifying metrics that track specific outcomes of interest—such as housing affordability or production—will better enable policymakers to assess the effectiveness of new policies after implementation.

While most states monitor some economic indicators, few states conduct (or at least publish) regular analyses of housing metrics. A statewide housing assessment does not necessarily require extensive data collection or specialized knowledge: simple descriptive statistics using publicly available data from the U.S. Census Bureau can provide a snapshot of housing conditions for cities, towns, and counties. The Housing Policy Matchmaker tool developed by Schuetz et al (2021) illustrates how a few metrics can help diagnose key issues and point towards appropriate policy responses.

Three of the five states have statewide agencies that produce regular reports on housing market conditions, needs, and challenges (California Department of Housing and Community Development, Massachusetts Housing Partnership, Oregon Housing and Community Services). Virginia has produced occasional reports, but not at regular intervals. The Joint Legislative Audit and Review Committee is currently conducted a statewide analysis, due to the legislature in December 2021. Utah Housing Corporation does not appear to have a research component.

Figure 4 illustrates some key metrics that could inform state policymakers—and shows the range of conditions and challenges facing different states. This analysis uses counties as the unit of

⁶ Metropolitan planning organizations (MPOs) often produce housing market reports that include similar information. However, MPOs only cover localities within urban areas, while rural localities can have quite different housing needs. Because MPOs' primary responsibility is to allocate federal transportation funds, most MPOs have limited staff and resources assigned to monitor housing.

observation; the underlying data are also available for cities and towns. At the most basic level, states and localities with fast-growing populations have the greatest need for additional construction, to meet increased demand. Utah's counties had the highest population growth rate (0.156), more than three times the growth rate of Massachusetts's counties (0.051).

Figure 4) Housing market conditions and needs vary across states

	CA	MA	OR	UT	VA
Population	677,302	489,325	114,717	106,788	63,567
Pct of pop in metro counties	0.979	0.996	0.838	0.895	0.875
Pop growth, 2009-2019	0.080	0.051	0.103	0.156	0.096
Median household income	77,311	82,934	64,362	72,377	81,469
Median home value	554,105	398,982	314,304	285,173	313,688
Value-income ratio	7.00	4.78	4.85	3.94	3.92
Income needed to pay median rent	61,306	53,240	44,174	41,405	51,382
Housing built prior to 1940	8.9	33.1	11.0	6.9	6.8
Housing built after 1990	25.6	17.9	36.4	47.7	37.8
Number of counties:	58	14	36	29	133

Source: Table shows county-level averages using data from ACS 2019 5-year estimates, via IPUMS NHGIS.

Notes: Population growth rates, income, and housing characteristics are county-level averages weighted by 2019 population. Value-income ratio is calculated as the median home value in each county divided by the median income within the metropolitan area. Income needed to pay median rent assumes that households will spend 30 percent of their income on housing. Population growth is calculated as (Pop2019 - Pop2009)/(0.5*(Pop2009 + 2019)). Housing growth in Figure 5 is calculated the same way.

All five of the selected states are highly urbanized, with more than 80 percent of the state's population residing in metro area counties. Urban and rural communities often face different housing challenges, so states with highly diverse local markets should design any statewide policies with flexibility to accommodate varying local needs.

California has by far the most expensive housing, measured in several different ways. County median home values exceeded \$550,000 in California, more than 25% higher than in the next highest state (Massachusetts) and nearly double home values in Utah. A typical housing affordability metric compares home values to household income; value-to-income ratios between three and four are considered affordable (because typical households could purchase the typical home while spending roughly 30% of their income on housing costs). Utah and Virginia counties have value-to-income ratios just under four, Massachusetts and Oregon have ratios slightly below five. In California, home values are roughly seven times median income—well outside any traditional benchmark of affordability.

⁷ These ratios are somewhat sensitive to assumptions about mortgage interest rates, downpayments, property taxes and insurance.

While the American Community Survey has few direct measures of housing quality, the age of housing stock is a useful proxy for quality: buildings deteriorate over time, so older homes tend to have higher maintenance costs. Massachusetts has by far the oldest housing stock among the five states: one-third of homes were built prior to 1940. California's relatively small share of housing built since 1990 is another indicator of limited housing production.

Figure 4 shows average differences across states, while an individual state's housing analysis would naturally focus on within-state variation. Many states have substantial differences in housing market conditions, resources, and challenges between cities, suburbs, and rural areas, or across metro areas within the same state. Developing a clear understanding of these localized patterns will yield better state policies.

Identifying which local governments (if any) are producing too little housing can help guide policies that aim to boost production. In most states, land use regulations are not a binding constraint on new housing in all localities (or not to the same degree). Identifying places where regulations create the largest distortions would allow state governments to focus additional efforts (fiscal carrots and sticks or pre-empting zoning) where such policies would have the largest impact.

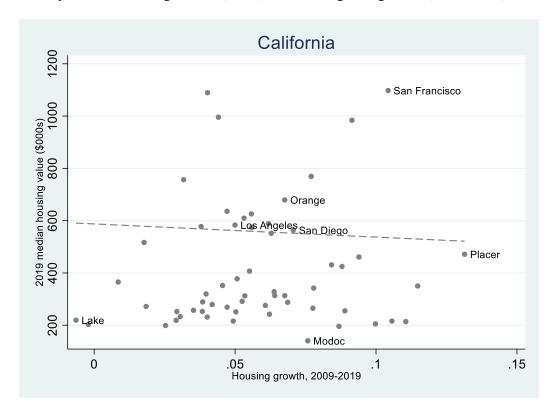
A preliminary investigation into where localities have regulatory constraints on housing production starts from a simple premise: in well-functioning housing markets, places with strong housing demand will build additional housing, while places with weak demand built relatively little. That is, housing growth should be positively correlated with housing prices (or rents).

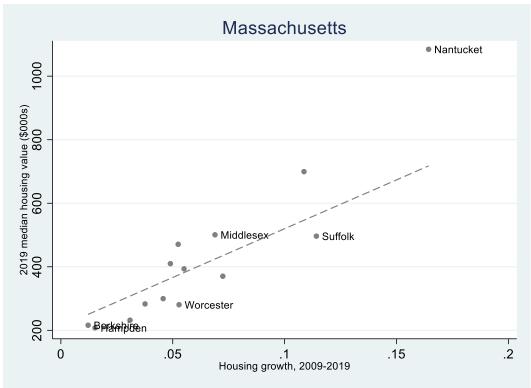
Graphing this relationship for each of the five sample states suggests reasonably healthy statewide housing markets in four of the five states (Figure 5). In all states except California, counties that had higher population growth from 2009-2019 had higher housing prices in 2019. Massachusetts and Utah both have one county that is a notable outlier: Nantucket County, MA, and Summit County, UT, have much higher housing prices than would be predicted from their growth rates, suggesting that supply is not keeping up with demand. Both of these counties cater to high-end tourism and have an unusually high share of second homes or vacation properties. California is the one statewide exception: the more rapidly growing counties are among the least expensive. This corresponds with prior research that affluent counties have the most restrictive regulations and generally oppose new development (Dougherty 2020; Monkkonen, Lens, and Manville 2020; Murray and Schuetz 2019).

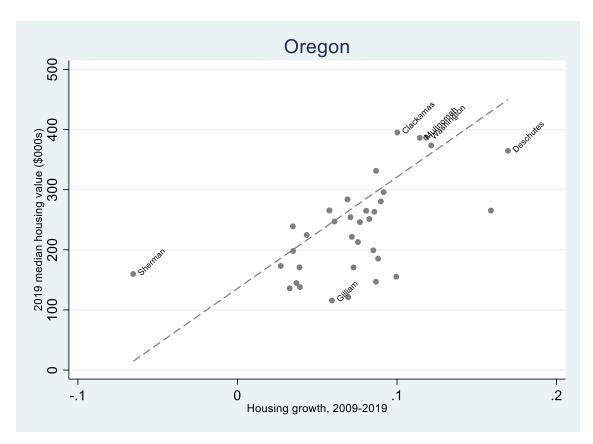
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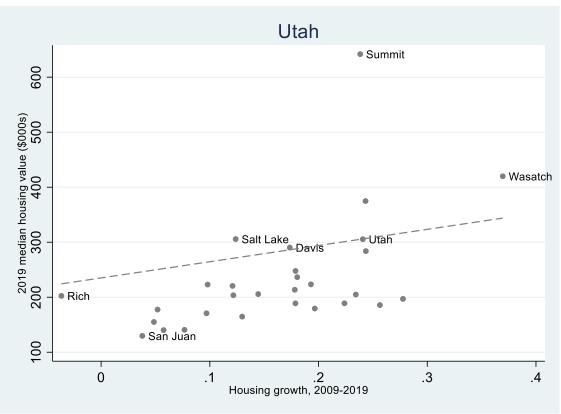
⁸ This analysis uses counties as the unit of analysis for convenience because it is a consistent Census geography, but the "right" level of geography will vary across and within states. For instance, all land in Massachusetts is incorporated into cities and towns, which have primary responsibility for zoning.

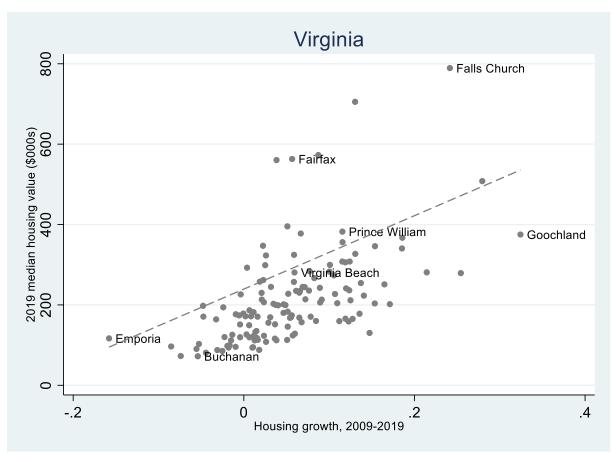
Figure 5) Housing prices in most states are positively correlated with production County median housing values (2019) and housing unit growth (2009-2019)











Source: IPUMS NHGIS 2009 and 2019. Regression lines weighted by 2019 population. Each graph includes county names for the three most populous counties in the state, the most and least expensive counties, and the counties with highest and lowest housing growth.

Even a simple analysis can help define the scope of housing production problems: most states do not have statewide housing shortages but do have some communities that are under-building relative to demand. For states that are contemplating zoning reforms or other efforts to boost housing production, understanding whether such efforts should cover all localities or just focus on a subset of cities and counties will help policymakers design and implement appropriate strategies. For instance, Massachusetts' policymakers may want to encourage zoning reform efforts among cities and towns in Greater Boston and Cape Cod, while exempting more rural areas in Western Massachusetts. In Virginia, housing production lags demand mostly among affluent suburbs of D.C., such as Fairfax County.

Publishing the results of statewide housing analysis could be a helpful tool to nudge some local governments towards better outcomes. Even the appearance of state oversight can provide political cover to local elected officials who want to improve affordability, but face resistance from their constituents. While "naming and shaming" strategies are unlikely to produce different behavior among intentionally exclusionary localities, they could be effective nudges among jurisdictions that genuinely want to serve their residents better.

5.2) Support well-functioning private housing markets

The five states highlighted in this paper use a wide range of approaches to encouraging increased housing production—including versions of all four approaches described in the previous section. Oregon has the most theoretically coherent and comprehensive approach to state engagement, dating back to major legislation adopted in the 1970s. California has a complicated tangle of statewide policies and regulations, some of which encourage housing production, while others actively impede it. Massachusetts grants local governments considerable autonomy over land use decisions, but with a few targeted efforts to discourage the worst of exclusionary zoning. Utah and Virginia do not have explicit state roles aimed at market-rate housing production.

Under Oregon's unique approach to land use planning, the state plays a central role in establishing broad policy goals and overseeing local government actions to carry out these goals. The regime has been written about extensively by both legal and environmental researchers (see Liberty 2021 for a recent review). Two goals expressed in the original 1973 legislation that are most relevant to this paper are to preserve open space and natural resources—farmland, forests, and coastal areas—from development, while encouraging compact residential development in urban areas (Oregon DLCD 2021). To implement these goals, Oregon requires local governments to develop comprehensive plans, including planned capacity for additional housing, which must be approved by the state's Land Conservation and Development Commission (Cortright 2019). All localities are required to include some capacity for relatively dense housing, including small-lot detached homes and multifamily apartments. Each metropolitan area has a defined Urban Growth Boundaries (UGB), which is intended to limit horizontal suburban growth while encouraging infill development inside the UGB (Kline and Alig 2002, Wu and Cho 2006). Portland's regional governing agency, Metro, has stronger authority over its constituent local governments than most MPOs, making it more difficult for affluent suburbs to block additional housing.

Recent efforts in Oregon to legalize "missing middle" housing build on this long-standing and well-understood state land use framework. In 2019, Oregon passed a law (HB 2001) that requires all cities to allow duplexes in residential neighborhoods, while large cities must also allow triplexes, fourplexes, and "cottage clusters" (Anderson 2019). Local governments have been given until 2021 to revise their zoning laws consistent with HB 2001, or they can adopt model codes issued by the state. Revisions must be approved by Oregon's Department of Land Conservation and Development. These changes are too new for evidence to have emerged, but collecting data and evaluating outcomes over the next few years should be a priority for both policymakers and researchers.

In contrast to Oregon, Massachusetts has traditionally deferred land use planning and housing production almost entirely to local governments. The state's political geography is highly fragmented: all land is incorporated in cities and towns, thus eliminating the role of county governments, which are typically responsible for larger areas and therefore internalize more of the costs of limited housing production (Goodman 2019). The primary attempts to boost market-rate housing production through statewide policy have focused on increasing densities around transit stations and commercial corridors. In 2004, the state adopted a Smart Growth Zoning Overlay District, known locally as Chapter 40R, which "seeks to substantially increase the

supply of housing and decrease its cost, by increasing the amount of land zoned for dense housing" near transit stations or town centers (Massachusetts DHCD). Chapter 40R and a parallel law, Chapter 40S, offer financial incentives for local governments that choose to create new "smart growth" zones, including a state commitment to cover some of the increased school and infrastructure costs associated with new housing. Massachusetts also has a zoning override provision, Chapter 40B, which is primarily intended to boost production of below-market housing in affluent locations, but has also increased the amount of market-rate rental housing (discussed in more detail below).

To date, few local governments have taken up the state's offer and voluntarily adopted smart growth zones (Robayna 2018). The affluent suburbs around Boston continue to be zoned almost exclusively for single-family detached homes on large lots, even on land in close proximity to commuter rail stations (Glaeser, Schuetz, and Ward 2006; Crump et al 2020). In January 2021, a bipartisan majority of the legislature passed an economic development bill that includes a provision requiring localities near transit stations to create a multifamily housing district (Chesto 2021). Like Oregon's HB 2001, localities have some flexibility in how to legalize apartments through revisions to their zoning (Massachusetts DHCD). The state is still writing the implementing regulations, so it is too early to determine how effective the new law will be.

California is in a league of its own with statewide housing interventions—both helping and hindering production. Among policies intended to encourage housing growth, the state requires each locality to adopt a general land use plan that includes a housing element, detailing the locality's capacity to accommodate state-generated demographic projections of the specific amount of new housing needed at multiple price tiers. These plans are reviewed by the state's Department of Housing and Community Development, which has the authority to deny housing elements that do not show sufficient capacity for growth (California DHCD, Stahl 2020). This system, known as the Regional Housing Needs Allocation (RHNA), has been in place since 1969, and has grown more complex—and more contentious—over time. Conceptually, the RHNA system is similar to "zoning budget" proposed by Hills and Schleicher (2011), in which localities are assigned quantitative production targets but given flexibility in how to reach those targets. California's state housing department enforces significant penalties on jurisdictions that fail to undertake this state mandated planning process but does not penalize jurisdictions for falling short on actual construction of new homes, limiting the policy's effectiveness (Elmendorf 2021).

As noted earlier in the paper, the governor and state legislature have recently passed a series of laws intended to legalize "gentle density" such as ADUs and duplexes, along with procedural reforms aimed at making it easier for cities to adopt pro-housing zoning (Tobias 2021). Monitoring housing outcomes in the wake of these laws should be a priority for state policymakers and researchers—making sure that appropriate metrics are being collected and analyzed, consistent with Goal 1.

But California also has a formidable list of state policies that make housing production more difficult and costly. Chief among these is the notoriously ambiguous California Environmental Quality Act (CEQA) which gives current residents wide latitude to protest unwanted development (Barbour and Teitz 2005). Because Proposition 13 hampers local governments'

ability to pay for public services through property taxes, California localities rely heavily on impact fees assessed against new construction, effectively a tax on development (Been 2005). The state also has a relatively strict building code, incorporating both health and safety elements and environmental controls, like requiring all new single-family homes to have rooftop solar panels.

Utah and Virginia are typical of most states: neither one currently has an explicit state role in land use planning or overall housing production (Utah Housing Corporation, Virginia DHCD). But both legislatures have introduced legislation aimed at legalizing similar types of "gentle density" to California and Oregon. In 2020, Virginia Delegate Ibrahim Samirah introduced a bill that would have legalized duplexes statewide, but the bill did not make it out of committee (Capps 2019). The following year, Utah's legislature considered HB 82, which would have legalized ADUs (with some limitations).⁹

For many zoning reform advocates, Oregon provides an aspirational model of a comprehensive state housing strategy. But it seems unlikely that creating a strong centralized government role is politically or legally feasible (or even desirable) for other states, particularly those with strong historical traditions of state deference to localities. California's recent steps towards relaxing limits on ADUs and duplexes are steps in the right direction, but at very small scale, relative to decades of underbuilding and layers of complex regulations. For states like Utah and Virginia with limited state policies and where housing underproduction is mostly a local problem, incremental policies to relax restrictions may be a more prudent initial strategy.

5.3) Financial support for low-income households

To effectively help low-income households access decent quality housing in high-opportunity neighborhoods, state policy should identify population groups and locations in most need of support.

All five of the surveyed states offer some forms of housing assistance to low-income households, although they vary widely in targeted populations, funding sources, program design and implementation. All states have a housing finance agency, which is responsible for administering the federal Low-Income Housing Tax Credit (LIHTC) program within the state. Some states have multiple agencies or quasi-public organizations that oversee housing-related programs. As with land use regulation, Utah takes a minimalist approach to housing subsidies, while California has the most complex and extensive set of programs.

The Utah Housing Corporation focuses mainly on reducing the cost of homebuying for qualifying first-time homebuyers (Utah Housing 2021). Its secondary focus is financial assistance to developers that build or rehab low-income multifamily rental housing, using LIHTC and tax-exempt bonds. Unlike the other four state agencies, Utah Housing does not provide direct rental assistance to low-income households; these funds are allocated through county or city housing authorities. The agency's website notes that it receives no direct funding from the state of Utah, but rather raises funds through private sector banks and the real estate industry (in addition to being a conduit for federal tax credits). Utah Housing says that it has

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⁹ https://le.utah.gov/~2021/bills/static/HB0082.html

invested over \$15 billion (presumably since its inception in 1975), and has assisted 100,000 homebuyers and nearly 34,000 renters.

Virginia's Department of Housing and Community Development (DHCD) administers a mixture of state-funded subsidies and pass-throughs of federal funding, targeted at both owner-occupied and rental housing. For homeowners, the state offers first-time homebuyer assistance, programs to finance housing repair, weatherization and energy efficiency upgrades, as well as funding for accessibility retrofits. DHCD oversees distribution of emergency rental assistance programs and eviction prevention, both of which have received substantial funding increases during the COVID-19 pandemic. The agency also administers programs for construction and rehab of affordable rental housing, including LIHTC. According to the agency's website, it invests more than \$100 million each year for housing and community development projects, targeted primarily at low- to moderate-income households (Virginia DHCD).

Massachusetts oversees a similar set of subsidy programs to Virginia—household assistance for homeowners and renters, rental construction subsidies—plus a few additional programs (Massachusetts DHCD 2021). Notably, the state operates a state-funded rental voucher that supplements their allotment of federal housing vouchers, and an "alternative" voucher for non-elderly households with disabilities. Housing subsidies are administered both by Massachusetts DHCD and Mass Housing Partnership, a separate quasi-public organization.

Besides public subsidies, Massachusetts has a statewide "fair share" law (Chapter 40B) that enables developers to bypass local zoning in order to build income-restricted rental housing in qualifying localities. Specifically, in cities towns where less than 10 percent of the existing housing meets affordability criteria, developers can request approval for housing projects that do not conform with local zoning, as long as 25 percent of the homes are set aside for low-income households. The purpose of this law is to generate below-market rate housing in high-income areas without requiring direct public subsidy (conceptually similar to inclusionary zoning). Developers have used it to build both market-rate and affordable rental housing in communities where zoning prohibits multifamily housing. Localities have limited ability to influence projects built under Chapter 40B (e.g. have less negotiating power over project size, appearance, or other characteristics). This creates an incentive for local governments to voluntarily meet their 10 percent "fair share" obligation.

Researchers have found that Chapter 40B increased the production of both market-rate and income-restricted multifamily rental housing in high-cost suburbs, relative to what would have been built in the law's absence (Fisher and Marantz 2014, Marantz and Zheng 2020). But it has not fundamentally changed the underlying problem: most affluent suburbs have extremely restrictive land use regulations and produce much less housing than consumers want (Dain 2019; Glaeser, Schuetz, and Ward 2006). The effectiveness of 40B relies largely on strong housing demand in desirable locations, which makes building mixed-income rental housing financially attractive to developers (high profits on the market-rate units offset lower rents on incomerestricted units within the same project).

Oregon's housing subsidies are administered through the state's Department of Housing & Community Services (not the same agency that oversees land use planning). The types of

subsidies available are quite similar to those offered by Virginia and Massachusetts, including rental assistance, homebuyer assistance, weatherization, and low-income rental housing development (Oregon OHCS 2021). OHCS also provides support for landlord-tenant mediation, as an alternative to court-ordered proceedings, including a program aimed at manufactured housing and residential boats ("Marina and Floating Communities). The agency's most recent budget is about \$3.7 billion per year, including pass-through of federal funds, and covers about 250 full-time equivalent staff.¹⁰

California has by far the most extensive and complex set of housing-related subsidies. The state's Department of Housing and Community Development list 27 active programs, ranging from emergency rental assistance, supportive housing, and housing-related parks to mobile home park rehabilitation and pet assistance and support (which provides resources for shelters to accommodate pets belonging to homeless people). The state's 2021 budget includes \$10 billion for all housing-related programs across multiple different agencies, including HCD, the California Housing Finance Agency, legal assistance to renters, and other agencies.

Assessing the efficiency and effectiveness of individual subsidy programs is complicated task, well beyond the scope of this paper. But a few broad policy design questions are: what's the scale of subsidies, relative to underlying need? That is, what share of households who are eligible for various subsidies receive assistance? How difficult is it for households to apply for and access subsidies (complex application process, amount of documentation required)? What are the administrative costs of subsidies to state and local governments (staff time and resources needed to screen applications, distribute subsidies, and monitor compliance)?

5.4) Reduce climate-related risks and conserve natural resources

While most states have some policies targeted towards environmental protection and resource conservation, these policies are not always integrated with state land use planning and housing production. Ideally, environmental protection laws would discourage development in risky or sensitive areas, and encourage climate-friendly construction techniques, while not unduly restricting the overall quantity of new housing relative to population growth. In practice, state policies have struggled to find the right balance. Two of the studied states—Oregon and California—highlight very different approaches.

Oregon's statewide role in land use planning stems directly from the goal of conserving forest, farmlands, and coastal areas while channeling new development towards compact urban areas. Research suggest that the law has been effective at preserving open space, relative to the growth of other western states (Wu and Cho 2006, Kline and Alig 2002). Evidence is mixed on how much policies like the Urban Growth Boundary have contributed to reduced housing construction and higher housing prices, though.

 $^{^{10}\,\}underline{https://www.oregon.gov/ohcs/about-us/Documents/budget/2021-2023-OHCS-Agency-Request-Budget-Summary.pdf}$

¹¹ https://www.hcd.ca.gov/grants-funding/active-funding/index.shtml

¹² http://www.ebudget.ca.gov/2021-

 $[\]underline{22/pdf/Enacted/BudgetSummary/Housing and Homelessness.pdf}$

Unsurprisingly, California has multiple state policies aimed at environmental protection, but the impacts on land use and housing development patterns are complicated. California's Environmental Quality Act (CEQA), the first state law of its kind, was intended to provide policymakers and the public with information about negative environmental impacts of major development—a laudable goal. Over time, the open-ended nature of CEQA has become problematic; the law is widely criticized for giving opponents of new development excessive power to delay or prevent even climate-friendly projects, like bike lanes (Dillon 2017). In the decades since CEQA was enacted, California has continued to build substantial amounts of new housing in fire- and flood-prone areas, and most new housing is constructed at the urban fringe far from public transportation—even as overall production has failed to keep up with demand (Dougherty 2020).

The interaction between state environmental protection laws and housing markets have drawn less attention in the other three states. In Massachusetts, many suburban localities have adopted wetlands protection bylaws, which slow the conversion of open space but do not appear to impede housing development (Sims and Schuetz 2009). Virginia's status as a Dillon's Rule state has created limited cities wanting to adopt local climate protections. These must be explicitly approved by the state legislature or are subject to legal challenges (Rosenberg 2013).

Section 6) Conclusions and policy recommendations

Even before the COVID-19 pandemic, housing affordability concerns had begun spilling over from high-cost coastal cities into mid-sized and smaller communities throughout the country. Continued strong demand for housing combined with pandemic-related supply chain bottlenecks have led to increased prices and rents, putting increased financial pressure on many households. Currently, local governments exercise primary authority over housing production through zoning and related types of regulations. Yet building too few homes in places with high demand has serious economic, social, and environmental consequences for metro areas, states, and the country.

The analysis in this paper illustrates how state governments have chosen widely varying levels of engagement and different policy suites to influence housing markets. Across all areas examined, California has consistently the most interventionist approach: extensive data collection and research, a direct state role in housing planning, many (many) layers of state regulations, and multiple separate subsidy programs. Utah has the most minimalist approach, with few direct regulations and limited subsidies. Oregon, Massachusetts, and Virginia lie between these two poles.

An inherent challenge in making housing policy recommendations is that there is not one "best" policy, no single template that will provide good results across all places. States start from very different baselines, both in terms of housing market conditions and institutional and legal capacity. California would almost certainly benefit from simplifying and streamlining its myriad existing policies. Utah and Virginia will need to build state-level staff capacity and conduct market analysis before developing more active roles. Determining the direction and form of statewide policies is inherently a political choice, directed by elected officials and influenced by

their constituents' preferences. But a few guidelines could help policymakers considering a change in direction.

<u>Do your homework</u>. The lightest-touch intervention is to assess current housing market conditions and needs, and to review the outcomes of existing policies. Understanding whether limited housing production results from regulatory or political barriers, or reflects lack of demand, is a critical step before devising any statewide intervention targeted at increasing production. For states with limited research staff capacity, partnering with a local university could provide enough information to start developing an informed action plan, tailored to address the most pressing issues, and tied to measurable housing outcomes.

Experiment, evaluate, and tweak. State-level engagement to boost housing production is a new endeavor for almost everyone. Getting things exactly right on the first try is unlikely. One option is to design pilot programs—say, offering block grants to selected localities that shorten approval processes for multifamily development—see how they work over a designated time period, then tweak the design as needed before rolling out permanent programs. Technical assistance to local governments, especially for resource-constrained localities, can be helpful.

Complex policies have higher administrative costs. Adopting a new regulation or creating a new subsidy program is just the first step. California's RHNA system requires a large staff and complicated data management system to assign production targets, review local housing elements, monitor outcomes, and mediate disputes. Even programs that in theory don't have direct costs to the government (like Massachusetts' Chapter 40B, or local inclusionary zoning) require staff time to administer. Designing programs with simple, clear rules will help keep down administrative costs for the state, and compliance costs for targeted organizations or communities.

<u>Think hard about unintended consequences</u>. Any new policy will change the incentives and behavior of households, developers, landlords, or local governments—often in far-reaching and complex ways. California's CEQA offers the ultimate cautionary tale: adopted with good intentions to limit climate harm, it can be weaponized to block climate-friendly infrastructure investments. Monitoring policy outcomes—including possible spillovers across geographic areas or different policy sectors—can help identify potential problems for mid-course correction. Once harmful policies are deeply entrenched, it is difficult to repeal them.

References

Andersen, Michael. 2019. Oregon just voted to legalize duplexes on almost every lot. Sightline Institute. https://www.sightline.org/2019/06/30/oregon-just-voted-to-legalize-duplexes-on-almost-every-city-lot/

Badger, Emily and Quoctrong Bui. 2019. Cities start to question an American ideal: A house with a yard on every lot. New York Times.

Barbour, Elisa and Michael Teitz. 2005. CEQA Reform: Issues and Options. Public Policy Institute of California.

Been, Vicki. 2005. "Impact Fees and Housing Affordability," *Cityscape: A Journal of Policy Development and Research* 8, no. 1: 139-185.

Begley, Jaclene and Lauren Lambie-Hanson. 2015. The Home Maintenance and Improvement Behaviors of Older Adults in Boston. Housing Policy Debate 25(4): 754-781.

Bernstein, Jared, Jeffrey Zhang, Ryan Cummings, and Matthew Maury. 2021. Alleviating Supply Constraints in the Housing Market. White House Council of Economic Advisers. https://www.whitehouse.gov/cea/blog/2021/09/01/alleviating-supply-constraints-in-the-housing-market/

California Department of Housing and Community Development. 2021.

https://www.hcd.ca.gov/

https://www.hcd.ca.gov/community-development/rhna/index.shtml

Capps, Kriston. 2019. With new Democratic majority, Virginia sees a push for denser housing. Bloomberg CityLab.

Chesto, Jon. 2021. Housing Choice brings the biggest changes to Massachusetts' zoning laws in decades. Boston Globe.

 $\frac{https://www.bostonglobe.com/2021/02/09/business/housing-choice-brings-biggest-changes-massachusetts-zoning-laws-decades/$

Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez. 2014. Where is the land of opportunity? The geography of inter-generational mobility in the United States. Quarterly Journal of Economics 129(4): 1553-1623.

Chetty, Raj, Nathaniel Hendren, and Lawrence Katz. 2016. The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity experiment. American Economic Review 106(4): 855-902.

Collins, Lorraine. 2019. Justice Zoning: Without it, we invite history to repeat itself. NYU Furman Center for Housing Policy blogpost.

https://furmancenter.org/research/iri/essay/justice-zoning-without-it-we-invite-history-to-repeatitself

Cortright, Joe. 2019. In Oregon, the Middle Isn't Missing Anymore. City Observatory. https://cityobservatory.org/in-oregon-the-middle-isnt-missing-any-more/

Crump, Sarah, Trevor Mattos, Jenny Schuetz, and Luc Schuster. 2020. Zoned Out: Boston Indicators report.

Dain, Amy. 2019. The state of zoning for multifamily housing in Greater Boston. Report for Massachusetts Housing Partnership.

https://www.housingtoolbox.org/writable/files/resources/AMY-DAIN_Multi-Family_Housing_Report.pdf

Dillon, Liam. 2017. "A Key Reform of California's Environmental Law Hasn't Kept Its Promises," *Los Angeles Times*, January 24, 2017, www.latimes.com/politics/la-pol-sac-environmental-law-reform-failures-20170124-story.html.

Dougherty, Conor. 2020. Golden Gates: Fighting for Housing in America. New York: Penguin Press.

Einstein, Katherine Levine, Palmer, Maxwell, Glick, David M. 2019. "Who Participates in Local Government? Evidence from Meeting Minutes." Perspectives on Politics 17 (1): 28–46.

Fischel, William. 2005. The homevoter hypothesis: How home values influence local government taxation, school finance, and land-use policies. Cambridge MA: Harvard University Press.

Fischel, William A. 2013. Fiscal Zoning and Economists' Views of the Property Tax. Lincoln Institute of Land Policy working paper.

Fisher, Lynn and Nicholas Marantz. 2014. Can state law combat exclusionary zoning? Evidence from Massachusetts. Urban Studies.

Furth, Salim and Matthew Nolan Gray. 2019. Do Minimum-Lot-Size Regulations Limit Housing Supply in Texas? George Mason University Mercatus Center research paper.

Furth, Salim and Joseph Coletti. 2021. North Carolina's SB 349 is the most ambitious state zoning reform yet. Carolina Journal.

https://www.carolinajournal.com/opinion-article/north-carolinas-sb-349-is-the-most-ambitious-state-zoning-reform-yet/

Gale, William, Jonathan Gruber, and Seth Stephens-Davidowitz. 2007. Encouraging Homeownership Through the Tax Code. Brookings Institution Tax Notes. https://www.brookings.edu/wp-content/uploads/2016/06/20070618.pdf

Gallagher, Ryan. 2016. The fiscal externality of multifamily housing and its impact on the property tax: Evidence from cities and schools, 1980-2010. Regional Science and Urban Economics 60: 249-259.

Ganong, Peter and Daniel Shoag. 2017. Why has regional income convergence in the U.S. declined? Journal of Urban Economics 102: 76-90.

Glaeser, Edward and Joseph Gyourko. 2018. The Economic Implications of Housing Supply. Journal of Economic Perspectives 32(1): 3-30.

Glaeser, Edward L. and Matthew Kahn. 2010. The greenness of cities: Carbon dioxide emissions and urban development. Journal of Urban Economics.

Glaeser, Edward L., Jenny Schuetz, and Bryce Ward. 2006. Regulation and the rise of housing prices in Greater Boston. Cambridge MA: Rappaport Institute working paper.

Grabar, Henry. 2018. Minneapolis confronts its history of housing segregation. Slate.

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

Hills, Roderick and David Schleicher. 2011. Balancing the Zoning "Budget". Case Western Reserve Law Review.

Hsieh, Chang-Tai and Enrico Moretti. 2019. "Housing Constraints and Spatial Misallocation." American Economic Journal: Macroeconomics 11(2): 1-39;

Jones, Christopher and Daniel Kammen. 2014. Spatial distribution of U.S. household carbon footprints reveals suburbanization undermines greenhouse gas benefits of urban population density. Environmental Science & Technology 48(2): 895-902.

Kahn, Matthew. 2007. Green Cities: Urban growth and the environment. Washington DC: Brookings Institution Press.

Kingsella, Mike. 2020. Washington becomes the latest state to consider statewide zoning reform. Up For Growth blog.

 $\underline{https://www.upforgrowth.org/news/washington-becomes-latest-state-consider-statewide-zoning-reform}$

Kline, Jeffrey and Ralph Alig. 2002. Does Land Use Planning Slow the Conversion of Forest and Farmlands? Growth and Change 30(1): 3-22.

Larrimore, Jeff and Jenny Schuetz. 2017. Assessing the severity of rent burdens on low-income families. Washington DC: Board of Governors of the Federal Reserve System FEDS Notes.

Liberty, Robert. 2021. Exclusionary Zoning Reform: How Oregon translated policy into reality. Willamette University Law Review. (forthcoming)

Manville, Michael and Paavo Monkkonen. 2021. Unwanted Housing: Localisms and the politics of housing development. Journal of Planning Education and Research (forthcoming).

Marantz, Nicholas and Huixin Zheng. 2020. State Affordable Housing Appeals Systems and Access to Opportunity: Evidence from the Northeastern United States. Housing Policy Debate 30(3).

Monkkonen, Paavo, Michael Lens, and Michael Manville. 2020. Built-Out Cities? How California Cities Restrict Housing Production Through Prohibition and Process. UC-Berkeley Terner Center for Housing Innovation working paper.

Los Angeles Times Editorial Board. 2021. Editorial: Watch out, NIMBYs. Newsom just dumped single-family zoning.

https://www.latimes.com/opinion/story/2021-09-17/newsom-housing-sb9

Ludwig, Jens, Greg J Duncan, Lisa A Gennetian, Lawrence F Katz, Ronald C Kessler, Jeffrey R Kling, Lisa Sanbonmatsu. 2013. Long-Term Neighborhood Effects on Long-Income Families: Evidence from Moving to Opportunity. American Economic Review 103(3): 226-231.

Mallach, Alan. 2019. Rents will only go so low no matter how much we build. Shelterforce.

Massachusetts Department of Housing and Community Development. 2021. https://www.mass.gov/orgs/housing-and-community-development

Massachusetts Housing Partnership. 2021. https://www.mhp.net/about-us

Murray, Cecile and Jenny Schuetz. 2019. Is California's Apartment Market Broken? The Relationship Between Zoning, Rents, and Multifamily Development. UC-Berkeley Terner Center for Housing Innovation working paper.

Oregon Department of Housing and Community Services. 2021. https://www.oregon.gov/ohcs/Pages/index.aspx

Oregon Department of Land Conservation and Development. 2021. https://www.oregon.gov/lcd/op/pages/goals.aspx

Pioneer Institute. 2006. Local Housing Regulation Database.

Richardson Jr, Jesse. 2011. Dillon's Rule is From Mars, Home Rule is From Venus: Local Government Autonomy and the Rules of Statutory Construction. Publius 41(4): 662-685.

Robayna, Matthew. 2018. When incentives aren't enough: Challenges in Chapter 40R Massachusetts Smart Growth Overlay District Act. Cambridge, MA: MIT Master's in Urban Planning thesis. https://dspace.mit.edu/handle/1721.1/118237

Rosenberg, Ronald H. 2013. The potential impact of Dillon's Rule doctrine on local government responses to coastal flooding and other aspects of sea level rise. Presentation at Virginia Coastal Policy Center, College of William and Mary Law School.

https://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1007&context=vcpcconference

Rothstein, Richard. 2018. The Color of Law.

Schuetz, Jenny. 2008. "Guarding the Town Walls: Mechanisms and Motives for Restricting Multifamily Housing in Massachusetts." Real Estate Economics 36 (3): 555–86.

Schuetz, Jenny. 2009. No Renters in My Suburban Backyard: Land use regulation and rental housing. Journal of Policy Analysis and Management 28 (2), 296-320.

Schuetz, Jenny. 2018. HUD can't fix exclusionary zoning by withholding CDBG funds. Brookings Institution brief.

https://www.brookings.edu/research/hud-cant-fix-exclusionary-zoning-by-withholding-cdbg-funds/

Schuetz, Jenny. 2021. The housing challenges Virginia's next governor will have to face. Brookings Institution brief.

Schuetz, Jenny. 2022. Fixer Upper: How to repair America's Broken Housing Systems. Washington DC: Brookings Institution Press. (forthcoming)

Schuetz, Jenny, Tim Shaw, Katherine Lucas McKay, and Genevieve Melford. 2021. Introducing the Housing Policy Matchmaker. Brookings Institution research brief.

Shertzer, Alison, Tate Twinam, Randall Walsh. 2021. Zoning and segregation in urban economic history. Regional Science and Urban Economics (forthcoming).

Sims, Katherine and Jenny Schuetz. 2009. Local regulation and land-use change: The effects of wetlands bylaws in Massachusetts. Regional Science and Urban Economics 39: 409-421.

Stahl, Kenneth. 2021. Home Rule and State Pre-emption of Local Land Use Control. The Urban Lawyer 50(2): 179-212.

Tobias, Manuela. 2021. California's housing crisis: How much difference will a zoning bill make? California Public Radio.

https://www.capradio.org/articles/2021/09/17/californias-housing-crisis-how-much-difference-will-a-zoning-bill-make/

Trounstine, Jessica. 2018. Segregation by Design. New York: Cambridge Univ. Press.

Utah Housing Corporation. 2021. https://utahhousingcorp.org/about/overview

Virginia Department of Housing and Community Development. 2021. https://www.dhcd.virginia.gov/housing

Wu, JunJie and Seong-Hoon Cho. 2006. The effect of local land use regulations on urban development in the Western United States. Regional Science and Urban Economics 37: 69-86.