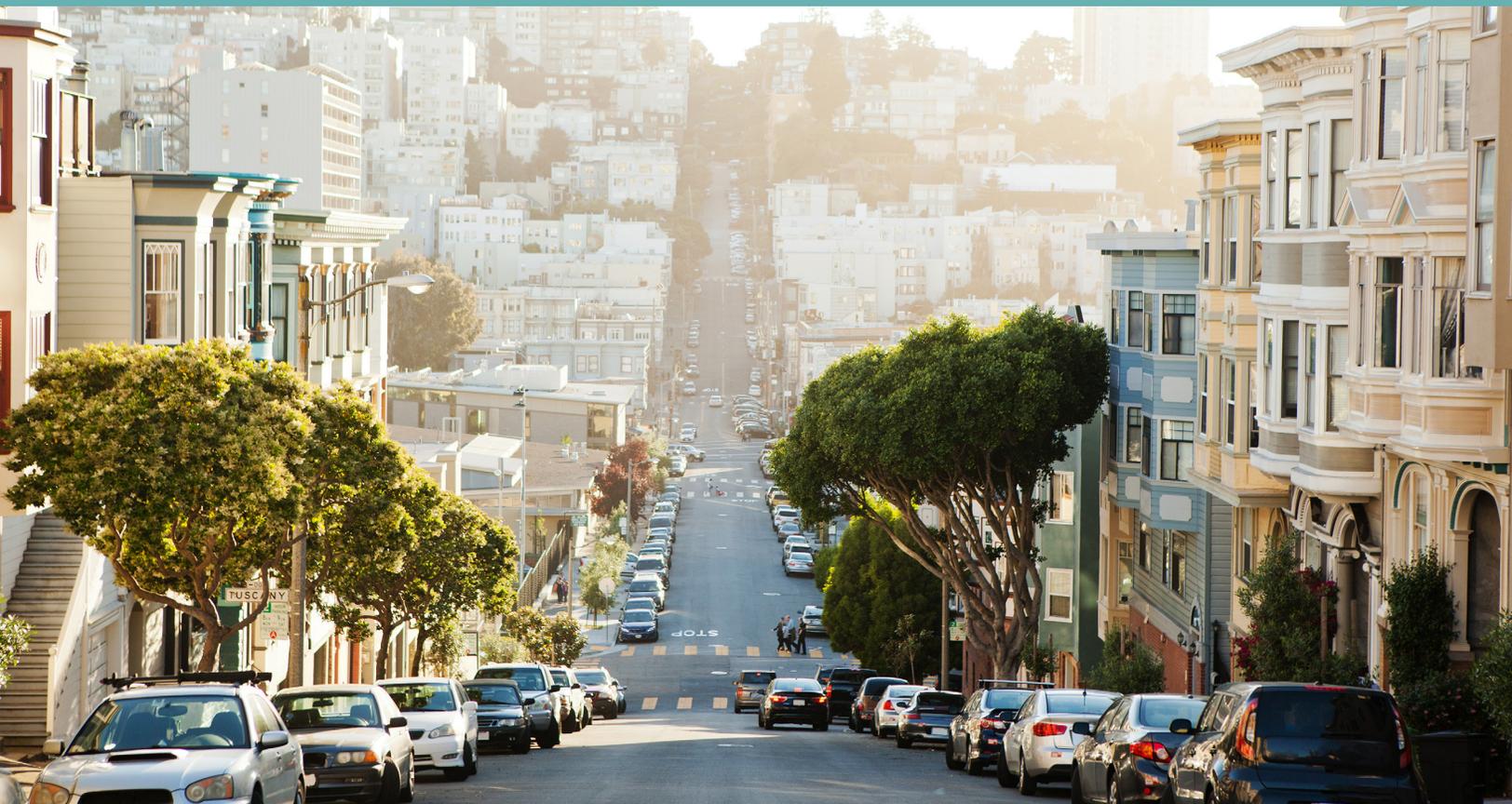


Removing Barriers to Accessing High-Productivity Places

Daniel Shoag



MISSION STATEMENT

The Hamilton Project seeks to advance America's promise of opportunity, prosperity, and growth.

We believe that today's increasingly competitive global economy demands public policy ideas commensurate with the challenges of the 21st Century. The Project's economic strategy reflects a judgment that long-term prosperity is best achieved by fostering economic growth and broad participation in that growth, by enhancing individual economic security, and by embracing a role for effective government in making needed public investments.

Our strategy calls for combining public investment, a secure social safety net, and fiscal discipline. In that framework, the Project puts forward innovative proposals from leading economic thinkers — based on credible evidence and experience, not ideology or doctrine — to introduce new and effective policy options into the national debate.

The Project is named after Alexander Hamilton, the nation's first Treasury Secretary, who laid the foundation for the modern American economy. Hamilton stood for sound fiscal policy, believed that broad-based opportunity for advancement would drive American economic growth, and recognized that “prudent aids and encouragements on the part of government” are necessary to enhance and guide market forces. The guiding principles of the Project remain consistent with these views.





Removing Barriers to Accessing High-Productivity Places

Daniel Shoag

Harvard Kennedy School and Case Western Reserve University

JANUARY 2019

This policy proposal is a proposal from the author(s). As emphasized in The Hamilton Project's original strategy paper, the Project was designed in part to provide a forum for leading thinkers across the nation to put forward innovative and potentially important economic policy ideas that share the Project's broad goals of promoting economic growth, broad-based participation in growth, and economic security. The author(s) are invited to express their own ideas in policy papers, whether or not the Project's staff or advisory council agrees with the specific proposals. This policy paper is offered in that spirit.

BROOKINGS

Abstract

Regulatory constraints on housing production have shut millions of Americans out of the country's most productive labor markets. Historically, Americans have moved to the parts of the country that offered the highest wages and most economic opportunity. This tendency for Americans to move has changed in recent decades, as changes in legal land-use restrictions have limited housing construction in America's richest locations. These restrictions have created limits on housing supply and have led to rapidly rising prices that make high-wage places unaffordable to less-educated workers. As a result, workers without a college education are now moving away from the places that offer them the highest wages and their children the best later-life outcomes.

In this proposal, I discuss strategies that policymakers at various levels of government can use to combat this relatively new problem, including case studies of cities that have successfully expanded access at the local level. This challenge differs from the more-traditional problem of making housing affordable for low-income households. Combating it requires new political coalitions and a sharper focus on the barriers, both political and legal, to development.

Table of Contents

ABSTRACT	2
INTRODUCTION	4
THE CHALLENGE	5
THE PROPOSALS	13
QUESTIONS AND CONCERNS	21
CONCLUSION	22
AUTHOR AND ACKNOWLEDGMENTS	23
ENDNOTES	24
REFERENCES	24

Introduction

Location matters. There are enormous differences in outcomes such as wages, education, and health across places in the United States; research suggests that these differences are caused by characteristics of places and the people who live there. When people move to more-productive, healthier places, their lives improve. Despite this fact, over the past few decades people have stopped moving (on net) to the country's most-productive cities. Why?

The data show that many people, even those in the middle of the income distribution, have been excluded from these high-wage places because of rising housing prices. Regulatory barriers to increasing the supply of housing, many of which were erected during the 1970s, are the culprit. Despite high demand and rising prices, the increase in available housing units has been anemic.

While housing unaffordability for those with low incomes has always been a problem, the problem of nonpoor workers being shut out of the most productive labor markets is relatively new

and worsening. In this proposal, I outline this problem and explore policies that might open up the opportunities in these places once again.

Solving this policy problem requires effort at many different levels of government. Local politicians can push to ease form and use restrictions, to simplify the approval process for developers, and to shift distortionary taxes away from development. State leaders can rein in local antidevelopment policies, set mandates enforced by funding, and expand transportation. The federal government can recognize the natural complementarity between its efforts to ensure housing affordability for low-income households and increased development. It can also eliminate tax provisions that encourage antidevelopment sentiment.

This is a surmountable problem, and with properly focused political efforts, it is possible to tear down the barriers that prevent low-income people from moving to America's strongest cities.

The Challenge

Despite the proliferation of communications technologies that once promised to make geography irrelevant, place is more important than ever. Economic possibilities for individuals and families are starkly different across the country; one important piece of this story is the wide variation in labor market opportunities across places. Unfortunately, it has also become more difficult to access many of the prosperous places due to tight land-use restrictions that have limited housing growth in some high-productivity areas. This section summarizes what is known about economic gaps across the country and the role that the housing market plays in exacerbating those gaps.

PLACE IS IMPORTANT

Economic outcomes vary widely across different parts of the United States. The gap in GDP per capita between the states of Massachusetts and Mississippi is as wide as the corresponding gap between Switzerland and Slovakia (Bureau of Economic Analysis [BEA] 2017; Organisation for Economic Co-operation and Development [OECD] 2018; author's calculations). Life expectancy in Gadsden, Alabama, is 72.9 years, equivalent to life expectancy in El Salvador. In San Jose, California, it is 82.7 years, which is on par with Iceland (Kent et al. 2015). Similar gargantuan differences can be found in college graduation rates (58 percent of those aged 25–34 in Boston versus 19 percent for the same demographic in Lakeland, Florida; Florida 2018), murder rates (60 per 100,000 people in St. Louis, which is just above the rate in Uruguay, versus only 1.5 per 100,000 in Honolulu; Federal Bureau of Investigation [FBI] 2015), and obesity rates (38.1 percent in West Virginia compared to 22.6 percent in Colorado; Warren et al. 2018). The average income of high school graduates in Boston is now more than 40 percent higher than the average income of college graduates in Flint, Michigan (Lindsey and Teles 2017, 115). People in some parts of the United States live significantly richer, healthier, and better-educated lives than people in others. Opening up these opportunities for those living in disadvantaged locations to move to richer areas should be a first-order priority.

Economists are deeply concerned with whether these differences are caused by conditions, institutions, and policies in the places themselves, or whether they are simply the result

of different people sorting into different places. After all, people might be as varied as the places where they live. Perhaps moving low-income people from a poorer city to a richer one would not make the individuals richer, but would only change the cities' averages. If that is the case, regional mobility alone cannot resolve inequities, and may indeed only mask them.

Recent research has strongly rejected this view. In a seminal paper in the *American Economic Review*, Chetty, Hendren, and Katz (2016) revisited the effects of the Department of Housing and Urban Development's (HUD) Moving to Opportunity program, which was designed to test the causal impact of place. Though prior research had shown no effects for adults, Chetty, Hendren, and Katz found that random assignment to richer areas resulted in very large benefits for children across a host of outcomes from income, to education, to teen pregnancy.

Shoag and Carollo (2016) studied the long-run consequences of place using variation among Japanese American internees. Shortly after the attack on Pearl Harbor, the United States removed nearly 120,000 Japanese Americans (the majority of whom were U.S. citizens) from their homes on the West Coast. The War Relocation Authority interned these Japanese Americans in 10 camps in seven different states, with the majority of them remaining interned for the duration of the war. Since many lost their property and received little relocation assistance, we found that people's locations many years later correlated with the location of their final internment camp. More importantly, we found that their long-run outcomes, and the long-run outcomes of their children and grandchildren, were highly dependent on the randomly chosen location of their particular camp. Those released in poorer areas such as Arkansas earned lower incomes and received less education than those released in relatively economically more-successful areas.

These findings match results found in other countries. Damm and Dustman (2014) found that refugees randomly assigned to higher-crime neighborhoods in Denmark were more likely to be convicted of crimes themselves. Similarly, Gould, Lavy, and Passerman (2011) found that Yemenite refugees randomly assigned to better dwellings in Israel had better outcomes along a host of measures. Finally, Åslund and Rooth (2007)

found that refugees entering Sweden who randomly lived in places with higher unemployment rates tended to experience worse labor market outcomes themselves.

STRUGGLING PLACES ARE NO LONGER CATCHING UP

Place has historically mattered for individual outcomes, but for most of the past 150 years, gaps between places were shrinking. Barro and Sala-i-Martin (1992) showed that, in the period from the Civil War to the 1980s, state average incomes were steadily converging. Education levels were also strongly converging. In 1940 fewer than 17 percent of men between the ages of 25–54 had completed 12th grade or higher in Alabama, as opposed to 38 percent in California. By 1980 those percentages had converged to 70 percent and 82 percent, respectively.¹

Moreover, Barro and Sala-i-Martin (1992) show that population growth was highest in the richest parts of the country. Even if places were unequal, Americans could move to places offering greater opportunity. Similarly, Blanchard and Katz (1992) demonstrated that migration was effective at eliminating short-run regional shocks.

All these patterns have weakened considerably in the past 30 years. Ganong and Shoag (2017) showed that incomes and human capital levels have ceased converging since 1980, and Austin, Glaeser, and Summers (forthcoming) also note the decline in convergence. As seen in Figure 1, convergence in

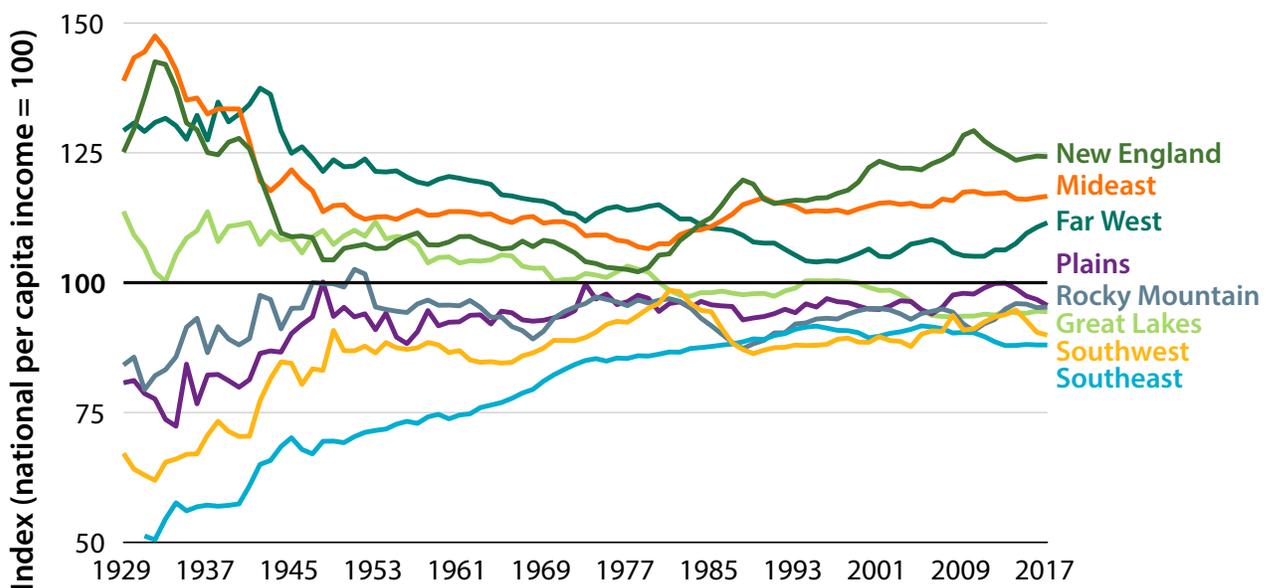
regional income per capita seemed to stop around 1980 and has in fact given way to divergence. Molloy, Smith, and Wozniak (2014), as well as Kaplan and Schulhofer-Wohl (2017), showed that internal U.S. migration has decreased significantly. They further showed that this decline cannot be explained by demographics, and that the largest component was a decline in the number of people moving for new jobs. Dao, Furceri, and Loungani (2017) demonstrated that mobility is less responsive to labor demand conditions than it was in the past. Ganong and Shoag (2017) also show that migration to the richer, more-productive parts of the country has virtually ceased.

Poor places are no longer catching up to rich ones, and people are no longer moving from poor places to rich ones. The traditional ways in which American society has ameliorated large gaps between places have broken down.

Why is this the case? Ganong and Shoag (2017) show that this breakdown appears to be linked to changes in the housing market. Although more-productive places were always more expensive, they have become increasingly expensive relative to offered wages, with housing prices now absorbing almost twice the share of the higher wages they offer.² Effectively, the housing price-to-income gradient has changed. This change disproportionately hurts lower-income households, since they spend a larger share of their budget on housing.

This change in housing markets has differentially affected the migration patterns of low- and high-skilled workers. Despite the higher housing prices, it is still worth it for

FIGURE 1. Per Capita Income Relative to the National Average by Region, 1929–2017



Source: Nunn, Parsons, and Shambaugh 2018.
Note: Regions are BEA regional categories.

college-educated workers to move from low-wage to high-wage places.³ This is not true for less-educated workers, who now make higher incomes net of housing costs in mid-wage places. In 1960 it made sense for both lawyers and janitors to move from the Deep South to the New York area, because both groups earned significantly higher wages even adjusting for housing costs (Ganong and Shoag 2017). Today, even though both groups earn higher wages in the New York metropolitan area, it no longer makes sense for janitors to move. Lawyers still earn more net of housing costs in the New York area, but the enormous housing costs mean that janitors' wages net of housing costs are actually *lower* in the New York area than they are in the Deep South.

LACK OF HOUSING IS TO BLAME

What exactly has changed in housing markets that has prevented low-skilled workers from accessing high-wage jobs? As discussed above, the immediate answer is that prices in some of the most productive parts of the country—precisely those parts that should be net recipients of migration—have risen dramatically. Sadly, prices continue to rise considerably faster than incomes in these places. From 2001 to 2017 median home value per square foot in San Francisco and San Jose rose by 15 percent more than the growth in per capita income. The gap in growth rates between home values and per capita incomes was even larger in Seattle.⁴

These rapidly rising prices do not reflect rising construction costs, as shown by Gyourko and Molloy (2015) and reproduced in figure 2. Instead, Gyourko and Molloy argue that the

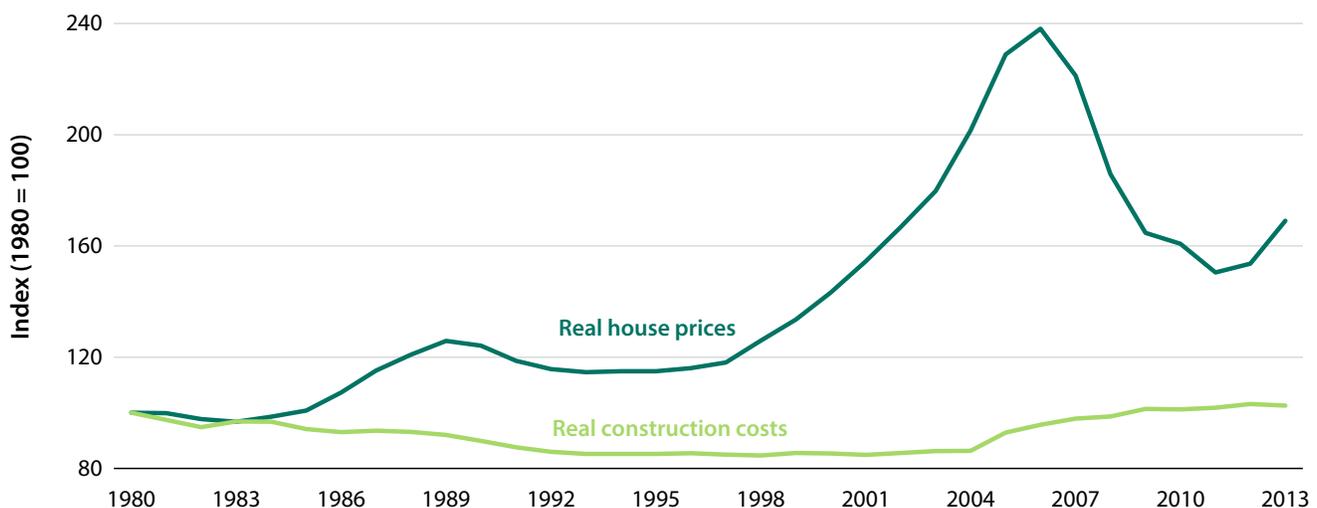
increase in prices is linked to the increasing stringency of regulations that block development.

Economists have long known that regulations were important drivers of housing prices. Quigley and Rosenthal (2005) provide a list of 40 studies estimating this relationship. Still, accurately measuring the impact is a challenge due to the difficulty in creating reliable and comprehensive regulation measures.

Many economists use the index created by Gyourko, Saiz, and Summers (2008) called the Wharton Residential Land Use Regulation Index. This index uses survey data and public legal and election information to cover more than 2,600 communities. Still, these data are a static cross-section, making analysis over time difficult.

To study changes, economists often use indirect proxies for regulation. For example, using as a proxy the gap between the marginal price of housing and the marginal construction cost of adding a story to a building, Glaeser, Gyourko, and Saks (2005a) show that regulations increased Manhattan prices in the early 2000s by 50 percent relative to a hypothetical market without the regulations. Other studies focus on specific areas where consistent direct measures exist over several years. For example, Glaeser and Ward (2009) study price changes and several regulation measures across Boston municipalities, Jackson (2016) studies the response of housing supply to regulation measures over time in California municipalities, and Morrow (2013) examines the relationship between population and legally developable land in Los Angeles.

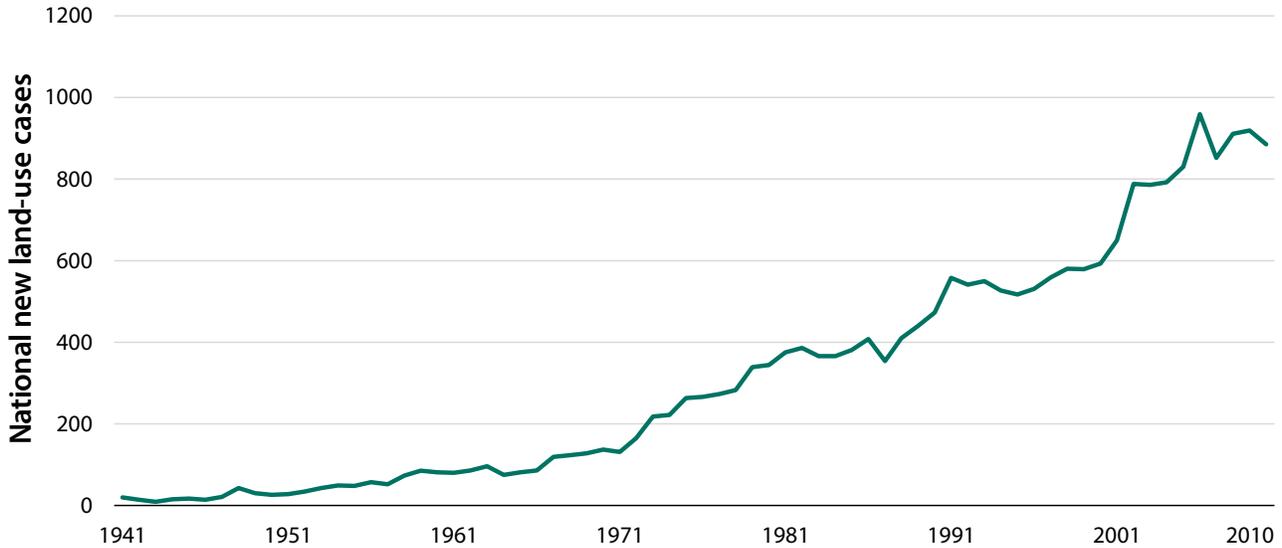
FIGURE 2.
Real Construction Costs and House Prices, 1980–2013



Source: Gyourko and Molloy 2015.
Note: Both series are indexed to their 1980 values.

FIGURE 3.

New Land-Use Cases in the United States, 1941–2010



Source: Ganong and Shoag 2017.

Note: The figure plots the number of cases containing the phrase "land use" in the state appeals court databases in per capita terms.



Ganong and Shoag (2017) expanded on this work by introducing one of the first national panel measures of land-use regulation across states. We based our series on the relative frequency of court cases involving land-use disputes, figuring this omnibus measure would capture the many different strategies used to block development. This series, shown at the national level in figure 3, shows a sharp rise at the same time that housing markets and migration and convergence patterns changed. Moreover, Ganong and Shoag (2017) show that changes in subnational migration patterns are associated with changes in this regulation measure. Places with rising regulation saw increased capitalization of incomes into housing prices (i.e., sharply higher housing prices when incomes are higher), less migration to rich places, and slower rates of income convergence across places.

Urban environments are complex, with housing markets that are only imperfectly linked to one another. Still, the simple supply-and-demand framework yields insights that are important and intuitive.

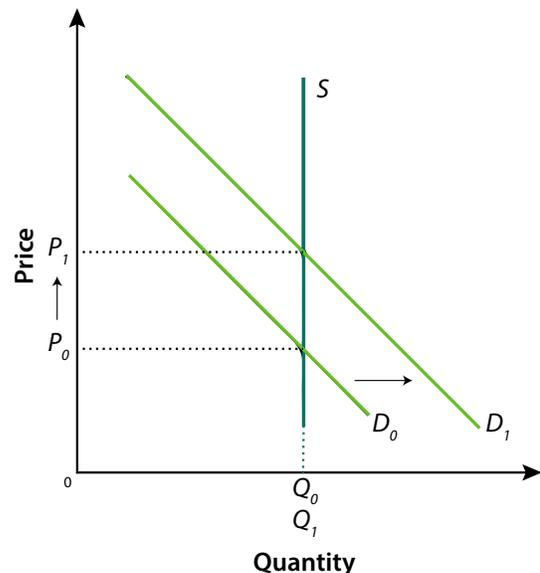
Housing in the richest parts of the country is becoming more expensive, but these areas are losing population relative to the rest of the country. As shown in figure 4, when price goes up but quantity does not increase quickly, the explanation must be a restriction of supply; the only way to decrease price, then, is to increase the supply of housing.

Though straightforward to an economist, many people do not share this intuition. There is a strongly held view that new market-rate housing may crowd out affordable housing

or existing residents. The evidence for this is scant, though, and studies that investigate the matter generally find the opposite effect (Uhler 2016). In fact, Rosenthal (2014) has shown that a substantial portion of low-income housing supply comes from a filtering down of market-rate properties. As homes age, they are sold or rented to people who are on a lower rung of the income distribution. Rosenthal shows that, on average, 10-year-old apartments are rented to people

FIGURE 4.

Supply and Demand Model After an Increase in Housing Demand



making just 70 percent of the income of the original tenant and 50-year-old apartments are rented to people making just 30 percent. Moreover, Rosenthal shows that filtering occurs most slowly in regions like New England and the Pacific states, where housing regulations tend to be most restrictive. While filtering works too slowly to be a panacea, more market-rate construction can push down prices across the spectrum. It is of course important that the new development actually increase the number of housing units. If redevelopment tears down older units to put up a small number of luxury units, that certainly could crowd out residents and reduce housing availability and affordability.

Changes in housing markets have had disproportionate impacts on particular groups. Rothwell and Massey (2009) show that more-restrictive density zoning in housing markets generates racial segregation. In addition, housing has contributed to deepening inequality. Albouy and Zabek (2016) show that increasing gaps in housing wealth are a source of rising wealth inequality. They find that the variance of house value has increased markedly since 1980, and that this rise is mostly due to variation in land values. In addition, Rognlie (2015) finds that housing scarcity is driving the increase in the net capital share of income; together, these studies imply that housing markets are now concentrating more wealth in a smaller share of the population.

The loss of opportunity caused by declining housing market access would be reason enough for concern, but recent research has emphasized the macroeconomic problems caused by people no longer moving to productive places.

Hsieh and Moretti (forthcoming) calculated the amount of forgone GDP growth attributable to this spatial misallocation. They estimated a spatial equilibrium model using the Wharton Residential Land Use Regulation Index to calibrate differences in regulations. They then experimented with the impact of changing the housing supply regulation of New York, San Francisco, and San Jose to that of the median U.S. city in the model. They found that, over the past 45 years, U.S. growth was substantially lower as a result. This calculation implies that, with less-restrictive rules, employment would have been much higher in those three cities. Even if one does not regard this reallocation of employment as plausible, the calculation highlights how restrictions on housing can prevent employment growth in the most productive areas.⁵

Before proceeding, it is important to be precise about the policy problem discussed in this report. HUD defines cost-burdened families as households “who pay more than 30 percent of their income for housing” (HUD n.d.). By this measure, an overwhelming fraction of the population earning less than 50 percent of the area median income is cost burdened even in relatively affordable metropolitan areas such as Cleveland (Herbert, Hermann, and McCue 2018). This affordability problem for people at the lower end of the income distribution is both serious and urgent. Success in dealing with this problem needs to be gauged on whether policies improve housing stability and living standards for those in this situation.

This is not, however, the problem I have been describing in this report (and it is unlikely to be addressable by the same

FIGURE 5.
Percent of Housing Units that are Cost Burdened, Selected Cities



Source: American Housing Survey (U.S. Census Bureau 2017); author's calculations.

Note: Values are for 2017. Data is limited to units with household income over the poverty line. "Cost burdened" refers to units where the monthly housing cost exceeds 30% of the unit's current household income.

TABLE 1.

Family Housing Wealth, by Race and Ethnicity

	White	Black	Hispanic	Other
Net Worth (thousands of 2016 dollars):				
Median	171	18	21	65
Mean	934	138	191	458
Assets (percent of families with):				
Primary residence	73	45	46	54
Debts (percent of families with):				
Debt secured by primary residence	46	32	31	38
Wealth from housing (for homeowners):				
Percent of assets in housing	32	37	39	35
Mean net housing wealth (thousands of 2016 dollars)	216	95	130	220

Source: Dettling et al. 2017

Note: Data are for 2016. All values are in thousands of 2016 dollars or percent.



solutions). The problem I am describing here is that in high-cost cities like Los Angeles, more than a third of the households earning 80–100 percent of the area median income are still cost burdened by the HUD definition (Herbert, Hermann, and McCue 2018). This affordability problem for families far above the federal poverty line is significantly more common in high-cost cities than in low-cost cities.

This can be seen in figure 5, which uses data from the 2017 American Housing Survey (U.S. Census Bureau 2017). The graph shows the fraction of units in which housing costs exceed 30 percent of current income. The graph is limited to units in which the household is above the poverty line. Thus, the graph shows that a significant fraction of nonpoor households are cost burdened. Moreover, there is a stark and strong correlation between the share of nonpoor households that are cost burdened in a metropolitan area and the American Housing Survey’s estimated median monthly housing cost for that city.

The cost of housing in certain places is forcing people to move away from places where their productivity and wages are highest and preventing others (especially lower-skilled workers) from moving in. Since the core of this problem is the role of housing in distorting where people live, success should not be defined solely in terms of lowering housing prices. For example, a reform that increases population growth in high-productivity areas while keeping prices stable should be considered a great success for providing more opportunity.

The problem of nonpoor people being priced out of high-wage labor markets is linked to land-use restrictions by both economic theory and the available data. Why, then, is it so difficult to remedy this policy problem?

EVERYONE’S MASSIVE, LEVERAGED INVESTMENT

Roughly 63 percent of Americans live in owner-occupied housing. As shown in table 1, this housing wealth is an important share of overall wealth: white homeowners hold 32 percent of their wealth in housing, and minorities hold an even larger share (Dettling et al. 2017). People usually invest in their homes with borrowed money, meaning that many American households have made a large, unhedged, leveraged bet on the price of a specific piece of real estate. Homeowners often have a powerful personal interest in blocking local development and keeping the price of their own homes high, even if, in aggregate, more development and lower prices would benefit the overall economy.

Many studies demonstrate exactly this point. Glaeser and Shapiro (2003) find a strong link between antidevelopment positions and ownership. Hall and Yoder (2018) used administrative data to show that people become significantly more likely to participate in local elections once they purchase a home. Breaking out the likelihood to vote by issue, they show this effect is particularly large for elections on zoning or development. While the actual eventual votes remain secret, it is not hard to guess in what direction ownership affected preferences.

A Taxonomy of Land-Use Regulations

Land-use regulations can be quite detailed, and can vary considerably from location to location. Conceptually, the three main categories of restrictions are use regulations, form-based regulations, and process regulations.

- Use regulations dictate the types of development allowed on a piece of land. For example, traditional Euclidean zoning laws divide a city's land mass into zones where only specific use types are permitted (e.g., single-family residential, commercial, industrial). Other types of use regulation, like urban growth boundaries or some historic designations, may even prohibit construction altogether. By making it illegal to use land for residential purposes, or to use it for more-dense residential purposes, this type of regulation can push housing prices up.
- Form-based regulations focus less on the intended purpose and more on the characteristics of the development. Classic examples of form-based regulation include minimum lot size, maximum height limitations, setback regulations, parking requirements, lot coverage, and other factors. By outlawing residential development that does not conform to these regulations, these laws can also increase the price of housing.
- Process regulations deal with the regulatory approval process for new construction. Development proposals are frequently subject to a discretionary approval process, including public hearings, environmental review, a public health review, fees, notification requirements, and other constraints. This process may involve several authorities, including various local boards, the state, and the courts. The uncertainty and delays associated with this process can be a major impediment to development. Additionally, municipalities can cap the number of permits they approve or otherwise impose direct limits on construction.
- The categories are not exhaustive or mutually exclusive. Obviously, each type of regulation can play an important and legitimate role in building successful communities. Still, the overlapping and multifaceted nature of these requirements means that it is difficult to pinpoint a specific target for reform. This complexity also helps explain why the National Association of Home Builders estimates that 25 percent of the cost of home construction is directly attributable to regulation (Emrath 2016).

Hall and Yoder (2018) found that the increase in voting holds true across the partisan spectrum. This research parallels the findings of Marble and Nall (2018), who also concluded that homeowners' aversion to development holds across the political spectrum. Hankinson (2018) shows that even renters will oppose local development to prevent crowding of local amenities.

YES IN MY BACK YARD (YIMBY)

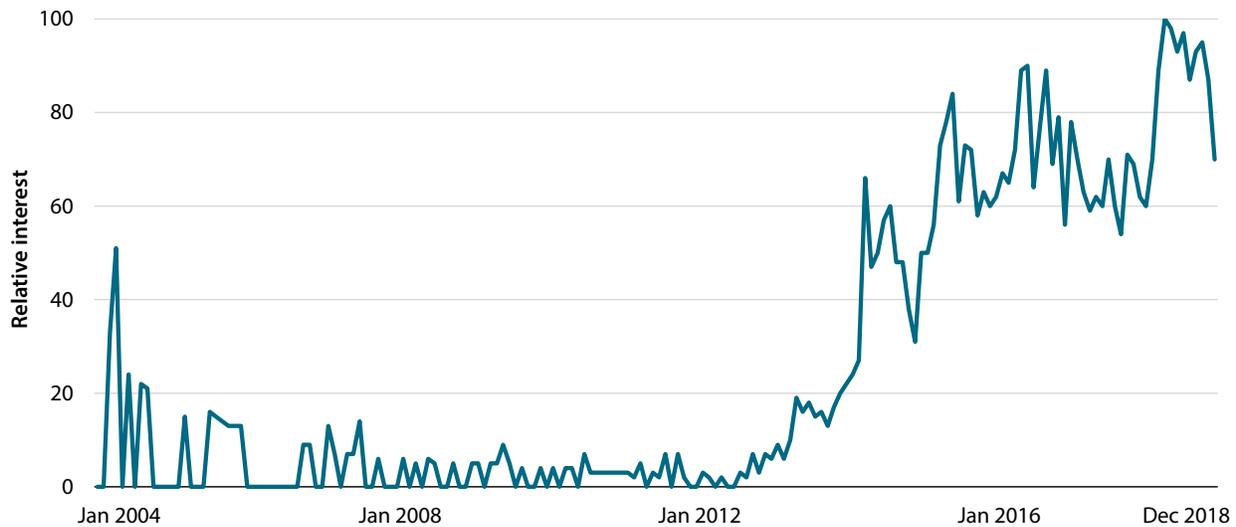
While the forms of land-use restrictions are varied (see box 1), the underlying political motivation is often thought to be a desire to limit change in a neighborhood, and perhaps to protect housing investments, as described previously. However, the recent growth of a grassroots pro-development movement has altered the picture and provides useful insights for policy. This movement, called YIMBY—for Yes In My Back Yard—has pushed back against local opposition to development, often called NIMBY—for Not In My Back Yard. YIMBY activists span the political spectrum, from left to right, and are generally young and well educated. There are nearly 98 chapters, and the YIMBY movement has held

national conferences since 2016 (YIMBYwiki 2018). These organizations have moderately different viewpoints, but are united by the common goal of making sure more housing is built.

While the YIMBY movement is growing, it is unlikely to ever become a mass movement, given the interest that residents often have in avoiding congestion of local public goods, reductions in house prices, and so forth. But even a small group of well-trained activists can affect local development policymaking, particularly when developers and environmental groups also intervene to support increased housing supply. Indeed, the young YIMBY movement has had enormous political success, as evidenced by the introduction of California SB 827. This bill would allow construction of five-story apartment buildings near every mass transit stop in the state. The YIMBY movement also contributed to the passage of an Oregon bill that requires cities to streamline permitting, and to permit accessory dwelling units (i.e., secondary housing on the same lots with primary houses) in residential neighborhoods. Similar reform efforts are under way in Boston, Boulder, and Austin. The movement has gotten high-profile support from

FIGURE 6.

Google Trends Search Volume for “YIMBY”, 2004–18



Source: Google Trends 2018.

Note: Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term.



Secretary Ben Carson of HUD via tweet, in the spirit of the administration (Carson 2018).

The movement is successful, in my view, because it adheres to three principles. The first principle is a broad-based approach to removing restrictions. The YIMBY movement has not focused on changing restrictions on particular sites or projects, but rather on ensuring that there is systemic reform of land-use rules. This focus defuses opposition from homeowners who would have been affected by a particular project, offsetting local housing price reductions with the broad-based increase in economic activity that comes with increased density. The second principle is that the YIMBY movement has focused on moving decision-making (to the extent possible) to higher

levels of government. Much of the benefits that stem from removing restrictions accrue to people who will eventually move to a city, not merely those currently living there. While local governments represent only their current residents, higher levels of government are more likely to represent the interests of potential new residents. Finally, the third principle is that the YIMBY movement has kept its focus on the real problem—removing the binding supply constraints—and, as a result, has managed to maintain its fractious coalition.

The problem of excessive land-use restrictions is by no means solved, but the growing influence of the YIMBY movement is cause for optimism. What types of political reforms can we hope to see from these activists?

The Proposals

There is no single solution to the problem of excessively burdensome land-use restrictions limiting access to high-wage jobs. I therefore propose multiple policy remedies at the state and federal levels, discussed later in this section and summarized in box 2. But regardless of which of these policies are enacted, local policymakers should adopt practices that yield increased housing supply. Some of those practices, and the efforts on the part of some local stakeholders to promote them, are described in box 2.

REFORMS FOR LOCAL GOVERNMENT

As the previous discussion suggests, there are many approaches local governments can take to increase their housing supply. Rather than provide an exhaustive list, I next provide case

studies of cities that have loosened regulation, smoothed the development process, and adjusted taxes with good outcomes. These cities can serve as examples for local policymakers.

Tokyo: Build Up

Tokyo has not always been a model for housing market best practices. Until 1963 earthquake concerns demanded an absolute height limit of 31 meters (102 feet), meaning that developers could not build skyscrapers in the city. And, in the 1980s, despite the limit having been lifted and replaced with a floor-area ratio, Japan suffered through a terrible housing bubble, thought by many to have been caused or exacerbated by reduced supply caused by the country's planning and zoning laws. Now, however, the city is flourishing: despite steady

BOX 2.

Proposals to Reduce Housing Barriers in High-Productivity Places

▪ Local Governments

- Reduce regulatory barriers to density
 - Local governments can loosen both form and use regulations by enacting higher-density zoning, eliminating parking requirements, and allowing accessory dwelling units.
- Remove process barriers to development
 - Local governments can broaden the scope for by-right development.
 - Local governments can streamline and shorten the permitting process, reduce fees, and reduce uncertainty.
- Put more weight on land value in setting property taxes.

▪ State Governments

- Create statewide by-right policies that are enforceable in the courts.
- Reform approval processes currently tilted against development.
- Create local mandates, enforced by local government funding linked to population growth.
- Expand public transportation capacity.

▪ Federal Government

- Link federal funding for affordable housing to progress on land-use restrictions.
- Reduce tax incentives that incentivize antidevelopment policies.
- Broaden the conceptual framework for environmental impact assessment.

population growth, home prices have risen at reasonable rates. Minato Ward, for example—a popular area of Tokyo—has seen a population growth of 66 percent in the past two decades, but only a 45 percent rise in price. Compare that to San Francisco, where a 16 percent population growth was accompanied by a 231 percent increase in home prices, and we can see why Tokyo is worth a second look (Harding 2016).

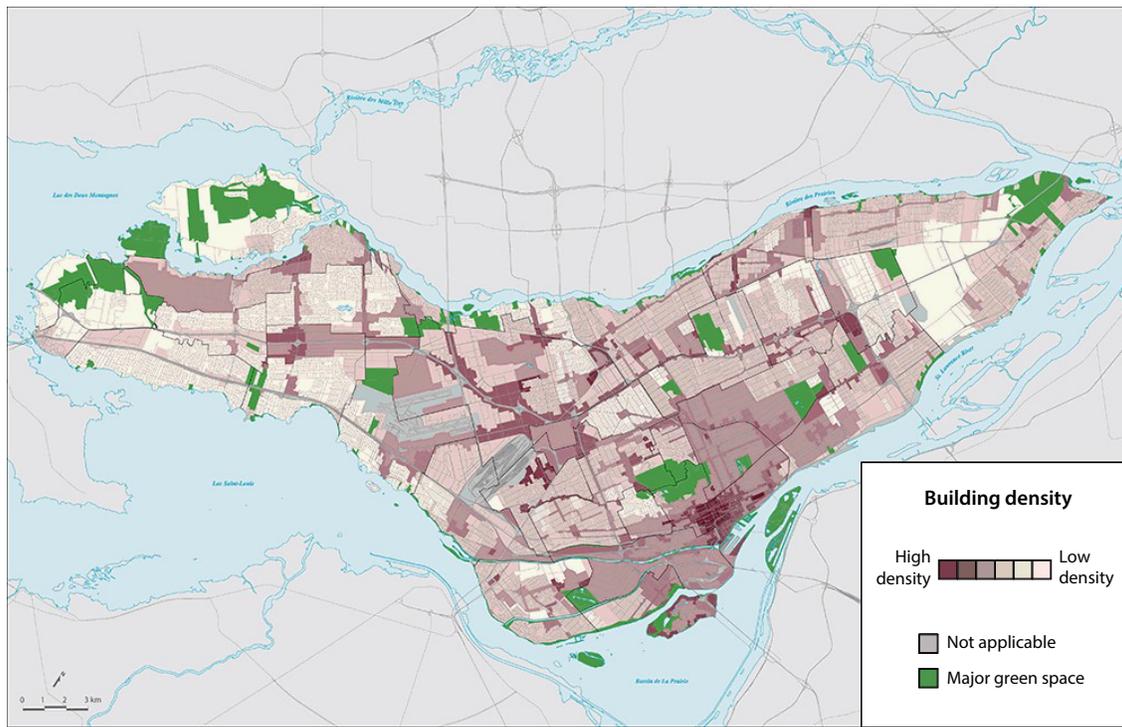
There are three main explanations for Tokyo’s ample housing supply and accommodation of new residents. First, the city issues a lot of housing permits: in 2014 Tokyo issued 142,417 permits for new units. For comparison, the state of California—with more than three times the population of Tokyo—issued permits for only 83,657 units (Harding 2016). Second, despite some restrictions in residential areas, zoning laws are very lax in mixed-use areas, leading to the building of many apartment towers in the city. Third, that generosity extends to how land is used, and neighbors have little legal recourse against construction that they oppose. As Robin Harding reported in the *Financial Times*, “The rights of landowners are strong. In fact, Japan’s constitution declares that ‘the right to own or to hold property is inviolable’...If you want to build a mock-Gothic castle faced in pink seashells that is your business” (Harding 2016). As a result, Tokyo has seen an increase in the number of buildings torn down and

rebuilt. The rebuilt buildings are often larger, allowing more people to live on the same footprint of land. While it is a bit of an exaggeration to say that Tokyo developers have complete freedom, the flexibility enabled by Tokyo’s Urban Renaissance Law in 2002 (in which the central government overrode and eased many local regulations) has been credited by recent research with this favorable outcome (Sorensen, Okata, and Fujii 2010).

Montreal: Mid-Level Zoning

Housing in Montreal is significantly less expensive than it is in Toronto, despite the two cities having similar median incomes (Statistics Canada 2018). The main way Montreal supports housing growth is through zoning that encourages the building of low- and mid-rise flats and apartments, instead of standalone single-family houses or towering skyscrapers. According to the 2016 census, 611,790 (78 percent) of Montreal’s 779,805 residences were apartments in a duplex or other building with fewer than five stories, row houses, semidetached houses, or other single-attached houses. (For comparison, that statistic is only 35 percent for Canada as a whole [Statistics Canada 2017].) The map in figure 7 shows building density by region, illustrating how much of the city is designated for mid-density construction. Building density is

FIGURE 7.
Building Density in Montreal, 2004



Source: City of Montreal 2004.

Note: This map shows the building density for the entire city of Montreal in a 17-color scheme that reflects the various density parameters. Darker areas are more dense.

defined using a combination of factors, including the number of stories, building configuration, and floor-area ratio.

A specific instance of such mid-density zoning, and a wonderful success story for Montreal, is the city’s Grow Homes plan piloted in the 1990s. This plan entails the construction of narrow, prefabricated row houses that are sold to homeowners in an unfinished state. This allows homeowners to finish and add to their house as they save up the money, while simultaneously reducing the initial purchase cost. In 2015 the creator of the Grow Homes initiative estimated the number of units built to be close to 10,000 (Schatz and Sidhu 2015).

The Grow Home model has been effective in keeping prices down. According to Small Housing BC’s 2015 report, “Even in suburban areas where the price of a new Grow Home has risen to approximately \$150,000 [CAD] (from \$60,000 [CAD]), this is still considerably less than a single-family home (whose value can be as high as \$360,000 [CAD] in similar areas)” (Schatz and Sidhu 2015, 29).

Montreal is one of the few cities to solve the “missing middle” problem, and this success has been a big factor in reining in prices in the city.

Raleigh: Simplifying the Administrative Process

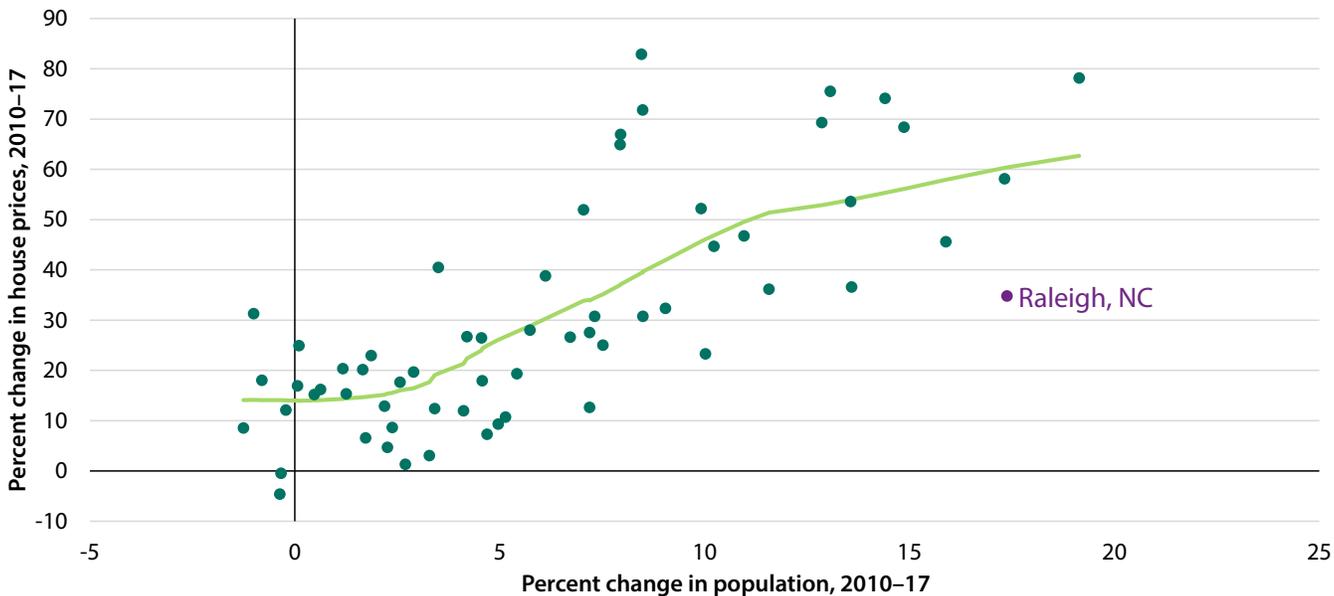
The population of Raleigh has grown by roughly 60 percent since the year 2000, and by 17 percent since 2010 (figure 8). This

puts the city on par with Charleston, Houston, and Orlando in terms of population growth. The growth is understandable, and its booming economy and nearby universities led it onto the shortlist of locations for Amazon’s HQ2. What is amazing, though, is that, despite this rapid growth, house prices have grown relatively slowly. From 2010 to 2017 Raleigh’s house price index rose just 34 percent as compared to an average of 54 percent in those other fast-growing locations (Federal Housing Finance Agency [FHFA] 2018; author’s calculations). A plot of the percentage change in the FHFA house price index against metropolitan area population growth, shown in figure 8, highlights Raleigh’s accomplishment.

Why was Raleigh such an outlier? It is hard to be definitive, but one contributing factor was the major rezoning accomplished in 2013 via Raleigh’s Unified Development Ordinance, a comprehensive document that contained an updated version of all of the city’s land-use and development regulations.

Raleigh’s Unified Development Ordinance was not a pure YIMBY document. The plan disallowed accessory dwelling units, discontinued townhouse allowances in low- to medium-density residential tracts, introduced new regulations on street setbacks and height in residential neighborhoods, and introduced tough neighborhood transition standards (that create a required transition zone between mixed-use and residential districts) (Band 2014). Why, then, can it be said to have kept Raleigh affordable?

FIGURE 8.
Growth in Population and House Prices for Selected Metropolitan Statistical Areas, 2010–17



Source: U.S. Census Bureau 2010–17; Federal Housing Finance Agency 2018; author’s calculations.

Note: Values are for Metropolitan Statistical Areas with a 2010 population over 150,000. The graph plots a LOWESS curve to demonstrate the nonlinear relationship between population and housing price growth.

The plan also created several mixed-use zoning districts without any density limits. While these areas do have to meet context-dependent review of minimum frontages and maximum heights, the introduction of higher-density mixed-use by-right zoning was novel and represented a break from the more-restrictive traditional system.

The most important change, perhaps, is the extent to which the Unified Development Ordinance simplified Raleigh's administrative process. Raleigh's old "codes were a morass of obstacles, public-hearing triggers, and reviews by elected bodies" (Band 2014, 55). The new system eliminated redundancies, like triggers that required a city council review in addition to a planning commission review. Furthermore, the reform made the public hearing the last step of the process, rather than the first step. This change was crucial in reducing the frictions in the process, since changes requested by the city council can be incorporated before a public hearing, rather than needing to wait for the next quarterly public hearing to include revisions.

These changes, and the updated plan, have been contributing factors in Raleigh's ability to be an outlier (see figure 8) in terms of population growth without exploding house prices.

Vienna: Public Housing

While public housing has been characterized by many problems, it also provides affordable housing for more than 2 million Americans.⁶ The fact that public housing is often poorly perceived in the United States does not mean that it is an inherently flawed concept. In Vienna nearly three in five residents live in houses owned, built, or managed by the government. One key distinction is that, unlike in the United States, Vienna allows nonpoor people to apply for public housing. Roughly 80 percent of the population is eligible. Moreover, rents in public housing are tied to maintenance costs of the property and not just the residents' income. This ensures that the properties do not deteriorate, as they do in the United States (Gowan and Cooper 2018).

As a result of this policy, Vienna initiates more construction per resident than its peer cities in Europe, and has one of the lower house price-to-income ratios (Linhart et al. 2017).

Pittsburgh: Land Tax

For years, Pittsburgh taxed land values at a significantly higher rate than property values. This policy encouraged development because the value of new structures was not taxed. Oates and Schwab (1997) credit this tax with preventing Pittsburgh from declining like its Rust Belt-peer cities. Banzhaf and Lavery (2010) similarly find that the adoption of split-rate taxes (separate rates for land and improvements) increases the capital-to-land ratio; in other words, they promote more-intense development. The intuition behind

these findings is easy to understand. Traditional property taxes rise when land is developed or additional units are built; land taxes do not. Simulations suggest that switching to land taxes in high-productivity places like New York City could lead to substantial increases in population (Haughwout 2001).

Land taxes can be more difficult to administer, though. Whereas sales data are readily observable, partitioning the value of a sale into a land and nonland components is more difficult and subjective. Furthermore, it may create inefficient incentives to split ownership of land and improvements in such a way as to minimize tax bills. And any tax reform will create winners and losers: after a sharp rise in appraised land values, Pittsburgh abandoned this unique institution in 2001.

REFORMS FOR THE FEDERAL GOVERNMENT

The lack of affordable housing in high-wage places may be a national problem, but the regulations in need of reform are at the state and local levels. The most practical way for the federal government to induce change, then, is to provide incentives for lower-level governments to reform their policies.

Recent legislation like The American Housing and Economic Mobility Act of 2018 provides an example of how the federal government can structure these incentives. This bill calls for direct federal investment in the Housing Trust Fund and the Capital Magnet Fund, both of which finance the construction and rehabilitation of affordable housing. It also calls for less-restrictive grants that can be used for infrastructure such as parks, roads, and schools in the communities that liberalize housing policies. Among the policies that would satisfy this requirement, it provides a YIMBY laundry list, including establishing streamlined regulatory processes; allowing accessory dwelling units; providing development tax incentives; and eliminating minimum parking requirements, minimum lot sizes, and bans on multifamily development.

The key insight of this proposal is its appreciation for the complementarity between efforts to supply housing for lower-income people and the affordability crisis that exists in some places for those who are higher up the income spectrum. Subsidized housing construction can have strong crowdout effects when development is restricted—it can reallocate housing without expanding supply overall—but by combining this program with incentives to ease restrictions, this crowdout is less likely to occur. Similarly, one of the most common objections to further development is congestion of existing amenities like roads, parks, and schools. By providing incentives to supply more amenities, this proposal addresses these important concerns.

There are several other avenues for policy reform. One is to add measurable requirements on population growth alongside the list of development-promoting reforms—the intermediate

steps—that communities must undertake to win the reform grants. This is important given that there are so many ways to block development, including regulations on use, design, process, historic preservation, and so on, that could offset attainment of intermediate objectives. The second proposed modification is to wield a stick in addition to dangling a carrot. The federal government could play a more active role in pressuring cities to weaken restrictions, even using existing funds by leveraging the Affirmatively Further Fair Housing rule for allocating existing HUD funds. Secretary Carson has indicated that he may pursue this avenue (Kusisto 2018).

While race-to-the-top programs like The American Housing and Economic Mobility Act of 2018 are promising, the federal government can also take a longer-term perspective on the political economy underlying antidevelopment policies. Antidevelopment sentiment may be rational for people who have invested a great deal of their personal wealth in a risky asset whose value can decline when supply increases. To weaken the forces underlying development restrictions, the federal government needs to reduce subsidies for homeownership.

The best-known tax incentive for home ownership is the mortgage interest deduction. Other federal tax provisions that favor home ownership include the capital gains exemption and the favorable rate on capital gains in housing assets. The state and local tax deduction also largely exempts property taxes, providing an indirect subsidy. Overall, the tax code provides an enormous spur toward individual ownership, with little justification and significant cost (Viard 2013). Though the recent tax reform has limited the scope of some of these policies considerably, these tax expenditure should be scaled back further.

The tax incentives for housing have also been shown to promote larger home sizes (Hanson 2012; Rosen 1985) and to raise house prices due to capitalization (Martin and Hanson 2016; Rosen 1985). Many studies have shown that it is wildly regressive, conferring disproportionate benefits on high-income households (O'Brien 2012). The benefits from this tax accrue to places with tight housing supply constraints, where prices can rise significantly above costs. The counties with the largest average deductions are all suburbs of tightly constrained Denver, San Francisco, and Washington, D.C. (Li 2017). Voith and Gyourko (2002) and Voith (2000) argue that housing tax preferences like exemptions for property taxes (which in turn are used to fund amenities like roads and parks) may be important contributors to local support for restrictive zoning. As Vanessa Calder (2017, 10) notes, “Local governments seem to be rewarded for counterproductive behavior.” The revenues raised by scaling back these tax preferences could instead be used to reward local governments that permit more housing (Calder 2017).

Another key element of the tax code that can serve as a barrier to development is the growing use of conservation easements (Pidot 2005). A conservation easement is a permanent right given to a land trust or government agency that limits the ways in which a property owner can use their land. For example, the owner of a large plot of land may create an easement that says the land cannot be subdivided. If the land was assessed at \$7 million without the easement and only \$2 million with the easement, the creation and transfer of the easement entitles the owner to both income tax deductions and estate tax relief.

This segment of the tax code has been criticized for its lack of clear valuation standards and the lack of a clear process for enforcement and termination (Korngold 2007). Others have noted that this process can have dubious public benefit (Ellickson 2015). Nevertheless, conservation easements are growing in popularity and are widely used even in tightly constrained markets like San Francisco. A recent estimate suggests that 20 percent of the permanently protected land in the Bay Area is privately owned under conservation easements (George 2018). Given the importance of promoting development in productive places, it is counterproductive for the tax system to richly subsidize limiting land use in perpetuity in these markets.

Finally, the federal government is directly involved in land-use decisions via its role in regulating the environment. The Clean Water Act extends federal land-use regulation to wetlands and even to areas that are mostly dry, but that support wetland vegetation. The National Environmental Policy Act requires an environmental impact study for projects using federal funds, and serves as a model for state efforts like New York’s State Environmental Quality Review Act and California’s California Environmental Quality Act that mandate reviews. These assessments often focus on the local environmental impact of a policy. The true impact of deterring local development in productive places, however, is dispersed. Households in temperate—and tightly regulated—places like San Francisco release significantly less carbon than people in hot, humid Houston and frigid Minneapolis (Glaeser and Kahn 2010). An environmental evaluation process that blocks development in San Francisco may reduce carbon emissions there, but if people move to Houston this process may increase carbon emissions overall (Lewyn 2014). Obviously a broader scope for considering the impact of a project is needed, and the federal government has an opportunity to encourage more-comprehensive assessments of environmental impact that better identify the costs and benefits of a project.

REFORMS FOR STATE GOVERNMENTS

State governments, as evidenced by the legislation introduced in California and enacted in Oregon, can often preempt local restrictions. Several such proposals would make progress

toward increased housing supply and enhanced access to opportunity.

The most comprehensive reform would see state governments establish thoughtful by-right development policies. A zoning system that allows for by-right development means that projects complying with existing standards can be approved administratively, without a discretionary review process or public hearing. For example, Gottlieb (2018) calls for a version of this in which states set “minimum [density] zoning mandates” that localities cannot limit further. In fact, reforms along this line have been made recently. California’s SB 35 made important progress on this front in 2017. It requires cities failing to meet their housing needs assessment (i.e., nearly every city in California [Brinklow 2018]) to create an approval process without a public hearing and with well-defined time limits for projects meeting certain affordable unit creation thresholds.

SB 35 is not perfect, but it has tilted the balance toward more housing. Cupertino, California granted preliminary approval to a massive redevelopment of the derelict Vallco Shopping Mall via the SB 35 process. The project proposes to create 2,400 multifamily units, 50 percent of which will be designated as affordable. The Mission Economic Development Agency, based in San Francisco, has invoked SB 35 to seek to build a 130-unit, 100 percent-affordable housing project in the Mission District (Spyridonidis 2017). Developers have recently sued the City of Berkeley for violating SB 35 by blocking their proposed building of 260 apartments, including 130 designated as affordable (Kemp 2018).

Even in the absence of sweeping by-right reforms, state governments can rein in local regulations. One way in which this can be done is by requiring localities to allow a certain number of units to be developed or provide localities with a “zoning budget” (Hills and Schleicher 2011). However, in the absence of by-right development, which allows developers to use the courts for specific proposals as opposed to general targets, enforcement is likely to be a challenge (Field 1993). To encourage compliance, states should change the process by which they allocate revenue to local governments so that they reward development and population growth.

States can also alter the political process used by municipalities to make decisions about land use. Ten states require a supermajority to change zoning rules. In 2017 Massachusetts governor Charlie Baker introduced the Act to Promote Housing Choices that would change the requirement for up-zoning changes from two thirds of the local government vote to a simple majority. While as of late 2018 the bill has stalled (Logan 2018), this type of reform could spur development without overriding local control completely.

States themselves, in many cases, have made the approval process more difficult through the creation of statewide (e.g., Vermont and Oregon) or regional (e.g., New Jersey’s Pine Barrens Commission and California’s Coastal Commission) commissions on land use. As William Fischel notes, “The chief impact of the[se] agencies is to provide a ‘double veto’ power to residents who oppose a particular development” (Fischel 2015, 55). Fischel credits the rise of these larger bodies with slowing development in “safety value” (206) suburbs, that had previously prevented metropolitan-wide prices from skyrocketing by allowing more development and affordable housing. Like the federal government, states often create an additional layer of hurdles via environmental review. This process can be skewed against development; a recent analysis of the California’s Environmental Quality Act (CEQA) has found that “most CEQA lawsuits . . . seek to block infill housing and transit-oriented land use plans . . . [that are] precisely the types of projects today’s environmental and climate policies seek to promote” (Hernandez 2018, 21). Going forward, states should try to limit the impact of the double-veto system, especially in high-productivity locations where housing supply is already constrained. Even simple reforms to the process, such as Jesús Fernández-Villaverde and Lee Ohanion’s suggestion that CEQA eliminate duplicative challenges (Fernández-Villaverde and Ohanion 2018), could have a large impact.

Another key lever states can use is transportation expansions. By bringing more towns within commuting distance, cities can effectively increase the supply of housing without directly interfering with zoning rules. While transportation expansions can be expensive, transportation policy reforms are likely to be an important part of the solution. A 2019 Hamilton Project proposal by Matthew Turner considers what such investments can and cannot achieve (Turner 2019).

No reform at the state or federal level will increase development in every local jurisdiction. Success should not be assessed on this unrealistic expectation. The key problem is that many people are being unnecessarily excluded from the nation’s most-productive labor markets. Reforms that open up opportunities for people to live and work in high-wage places are valuable, even if some local jurisdictions resist this effort.

SOLUTIONS TO DIFFERENT PROBLEMS

Given the immense political challenges to loosening land-use restrictions, it is no surprise that most policy initiatives related to housing have taken alternative routes. The thrust of reform efforts have focused on demand-side subsidies, policies that serve as a tax on development, or explicit price controls.

While some of these policies have been very successful in achieving certain objectives and have served as an important source of redistribution, a supply constraint problem cannot be fixed without addressing the constraints head-on. A full

assessment of these demand-oriented policies is outside the scope of this paper, but it is important to point out that they will not fix the supply-side housing problems discussed here.

One major class of proposals to address the problem of rising house prices in rich areas has been subsidies to housing demand. HUD vouchers are one example of such subsidies. They have served as an important part of the safety net, but property owners capture a significant share of the benefits (Desmond and Perkins 2016; Ganong and Collison 2013).⁷ This problem seems especially severe in markets with inelastic supply (Eriksen and Ross 2015). It therefore seems unlikely that further demand-side subsidies, such as the recent proposal to offer tax credits for rent-burdened Americans (Rent Relief Act of 2018), can solve this specific problem. Similarly, interventions in the credit markets such as expanding Federal Housing Administration loans are likely to benefit the existing owners—particularly in supply-constrained markets—much more than they are to expand access. There is evidence that subsidized construction may simply crowd out market development, given existing land-use laws (Chapelle 2018; Eriksen and Rosenthal 2010).

Another major class of proposals are programs that effectively tax developers for building homes. Inclusionary zoning—a broad term that refers to a requirement that developers of multiunit housing set aside units for rent at below-market rates—lowers the return on development investments. This discourages developers from building multifamily units by making it relatively attractive for them to build single-family or less-dense units without this requirement. Inclusionary zoning also intensifies incentives for neighborhoods to block up-zoning (i.e., loosening restrictions to allow for increased density) to discourage poorer residents from moving nearby. Evidence shows that the benefits of inclusionary zoning are very mixed. Some studies show it discouraging development in general (Schuetz, Meltzer, and Been 2010), discouraging multiunit housing in particular (Mitchell 2004), or increasing the cost of non-set aside units (Bento et al. 2009). To be sure, there are studies that find positive effects as well (Dawkins, Jeon, and Knaap 2016). Still, recent estimates suggest that any gains in affordable housing units are modest (Thaden and Wang 2017). For example, a recent project in Brooklyn had nearly 90,000 applications for its 200 affordable units (Croghan 2016). Despite the popularity of these programs, my judgement is that these policies are unlikely to make a real dent in the supply problem, even for low-income households.

Finally, several jurisdictions still use price interventions like rent control to address unaffordable housing. Economists have long understood that rent control creates substantial misallocation of housing (Glaeser and Luttmer 2003), since those grandfathered into below-market-rate units keep apartments even when they would be valued more highly by

others. Rent control weakens incentives to supply housing, increases crime (Autor, Palmer, and Pathak 2017), and may ultimately lead to even more gentrification (Diamond, McQuade, and Qian 2018). In short, caps on prices seem to be an ineffective remedy to the fundamental problem, even if they can temporarily shelter those fortunate enough to benefit from the rent control from price increases.

Demand-side policies may cushion some from increasing prices and make living in a place with inadequate supply more affordable to a limited group of beneficiaries, but they do not solve the problem of providing adequate housing supply proximate to high-quality jobs.

Enhancing Affordability and Enhancing Housing Supply Are Complementary

Though unlikely to solve the problem if used in isolation, some variants of the policies just discussed may have an important role when used in conjunction with loosening of land-use restrictions.

One of the bitter truths about the movement to ease restrictions on creating housing is that it is often easiest to surmount political opposition to development in poorer neighborhoods and in neighborhoods populated by minority communities. Moreover, the gains from easing land-use restrictions often accrue to white and wealthier people. For example, Goldberg (2015) analyzed changes in the roughly 120 neighborhood-scale rezonings that took place in New York City between 2002 and 2014, including major expansions of residential development like Hudson Yards and Greenpoint-Williamsburg. After rezoning, the Greenpoint-Williamsburg area added 10,000 housing units. The white population of Greenpoint-Williamsburg increased by nearly 5,500, and these residents tended to be richer and to pay higher rents than their neighbors. This growth in the white population occurred alongside declines in the Hispanic population, despite that segment growing in the rest of city (Goldberg 2015).

While Goldberg (2015) shows that this pattern was not typical of up-zoning neighborhoods during this time (up-zoned neighborhoods saw identical Black population growth as the city as a whole, significantly higher Asian population growth, and only slightly lower Hispanic population growth), the fear over displacement is real and understandable. Moreover, those who do leave gentrifying neighborhoods wind up in very low-income locations (Ding, Hwang, and Divringi 2016). It is important, then, that efforts to loosen development restrictions are advanced alongside efforts that make housing more affordable for lower-income or minority communities.

What type of policies can make housing more affordable at the bottom without inhibiting development? Right now, several policies inadvertently promote displacement. For example, HUD's voucher program (in most cities) calculates fair market

rent at the metropolitan level, which makes it difficult for recipients to afford housing in relatively high-cost parts of the metropolitan area. One obvious improvement is to more broadly implement the court-ordered Small Area Fair Market Rent program, which switches the calculation of the housing choice voucher's fair market rent value from the metropolitan area to the zip code. While not perfect, tying vouchers to price changes at a very local level should offset some displacement pressure that result from rising rents.

On a broader level, it is important to remember that demand-side policies are strong *complements* to an easing of land-use restrictions. A recent study by the Institute of Governmental Studies at the University of California Berkeley (Zuk and Chapple 2016) found that the construction of subsidized housing was protective against displacement. Low-Income Housing Tax Credit construction may crowd out other

construction under current land-use laws (Eriksen and Rosenthal 2010), but this is likely to be much less of an issue when these regulations are relaxed. Similarly, several studies have shown that blanket increases in voucher generosity are partially capitalized into rents. This is less likely when housing supply is more elastic, meaning that more of the benefits of vouchers will accrue to tenants rather than to property owners. Finally, an analysis by the Urban Institute shows that affordable housing construction is significantly more viable for developers at higher densities (Urban Institute 2016).

Promoting demand-side subsidies alongside movements to allow market-rate construction is not just sound politics—it is sound economics. These affordability programs will provide better bang for the buck when housing supply is less restricted (Goldberg 2015).

Questions and Concerns

1. Some of your proposals appear to infringe on local prerogatives. Why is this justified?

Federalism in the United States allows local governments to respond to the desires of their residents. As Tiebout (1956) and others have shown, this decentralization can lead to public policy that is more efficient. This deference to local governments does not always make sense, though. Fischel (2015) has shown that local governments—like monopolists—may inefficiently restrict supply. In fact, in this case, localism makes the problem worse. Fischel shows that metropolitan areas that are more fragmented tend to have less-inclusive zoning rules.

2. Leaving aside land-use restrictions, is it even physically possible to add units in productive places?

While New York City is the densest metropolitan area in the United States, other high-productivity places are much less concentrated. San Francisco and Los Angeles have a population-weighted density less than half that of New York. Boston and Philadelphia have very similar population-weighted densities, despite the median monthly housing cost being 36 percent higher in Boston according to the American Housing Survey (Wilson et al. 2012). Las Vegas is denser than Washington, DC, Laredo is denser than Denver, and Salt Lake City is denser than Portland. The fact that many metropolitan areas are far less dense than New York City, and are instead comparably dense with less-restricted and growing metropolitan areas, demonstrates that those places are not up against a physical or technological limit.

3. Would increasing density in large cities harm the environment?

If anything, research suggests the opposite. While environmentalism has often served as a cover for NIMBY sentiments, the impact studies used in the development process focus only on local impacts. Glaeser and Kahn (2010) show that, rather than help the environment, land-use restrictions that raise prices in low-carbon emissions places like California push people toward higher-emission locations like Texas and Oklahoma. These restrictions unintentionally harm the environment. Moreover, as I discussed in the introduction, life expectancy varies considerably across places. Restricting people from the healthiest and most-productive metropolitan areas is bad for the planet and for human health.

4. Would relaxing land-use restrictions—and increasing migration to higher-wage places—harm workers who remain in lower-wage places that lose population?

This is a possibility, but it is unlikely. The issue discussed in this brief is how to remove barriers to productive places. Though many Americans are unable to move to the country's most productive places, a substantial number of people do still move.⁸ The crux of this proposal is to allow this migration flow to be redirected to high-productivity places, not just places with more-lenient housing regulation. Additionally, the research on the labor market impacts of reduced labor supply in places experiencing migration outflows is mixed. While some research shows that some regions may lose important agglomeration economies (Greenstone, Hornbeck, and Moretti 2010), other research suggests that labor scarcity may actually raise wages in these locations (Acemoglu et al. 2004; Ganong and Shoag 2017; Hornbeck 2012).

While the fate of lower-wage places is an area of concern, targeting this problem by restricting access to high-productivity places is not the answer.⁹

Conclusion

Housing markets in the country's most-productive regions have landed in bad equilibria, becoming inaccessible to poorer citizens on the basis of cost. Without a doubt, finding a solution that provides adequate access to these engines of opportunity will be challenging. There are, however, encouraging signs. The YIMBY movement, though young, has had great momentum, and policy remedies

are legion. Success stories abound locally and the world over, providing ways this problem can be addressed. We need more research to determine how these movements can actually succeed, and how their messaging can better connect with the general (and often skeptical) public. There is a growing sense that this is a fight that can, and must be won.

Author

Daniel Shoag

Associate Professor, Harvard Kennedy School

Visiting Associate Professor, Case Western Reserve University

Daniel Shoag is an associate professor of public policy at Harvard Kennedy School, a visiting professor at Case Western Reserve University, and an affiliate of the Taubman Center for State and Local Government. His research focuses on state and local government finance, worker signaling and the hiring process, and regional and urban economics. Daniel's research has been published in major academic journals like the *Quarterly Journal of Economics* and the *Review of Economics and Statistics*, and has been featured, among other outlets, in the *New York Times*, *Bloomberg*, the *Washington Post*, and the *Wall Street Journal*. He was selected as one of *Forbes* magazine's 30 under 30 in 2012. Daniel has worked as a visiting scholar at the Federal Reserve Bank of Boston,

a visiting professor at Tel Aviv University, and was selected as a rising new scholar by the Stanford University Center on Poverty and Inequality. Daniel has received research grants from the U.S. Department of Transportation, the Russell Sage Foundation, and the Laura and John Arnold Foundation. His research was awarded a prize for *Best Paper on State, Local, and Regional Economic and Fiscal Issues* at the Brookings Conference on Municipal Finance in 2017. He co-founded and now co-chairs the 200+ person HumTech conference in Boston and is a co-editor of the annual peer-reviewed conference proceedings volume. Daniel received his BA and Ph.D. in economics from Harvard University and lives in Newton, MA and Cleveland, OH with his wife and four sons.

Acknowledgments

The author is grateful to Ryan Nunn, Jay Shambaugh, Jimmy O'Donnell, and the participants of the Hamilton Project Authors' Conference for their helpful insights and suggestions. He is also grateful to William Fischel and to Peter Ganong for all he has learned from them and their work. The views expressed in this paper are those solely of the author and do not represent those of the Brookings Institution, the Harvard Kennedy School, or Case Western Reserve University.

Endnotes

1. Author's calculations based on the IPUMS Census extracts.
2. In 1960 the elasticity of median housing price to median per capita income was roughly 1 across states. Today, this elasticity is roughly 2. Several papers document to this change including Glaeser, Gyourko, and Saks (2005b), Gyourko, Mayer, and Sinai (2013), and Van Nieuwerburgh and Weill (2010).
3. This discussion abstracts from the consideration of local amenities. Obviously migration decisions will depend on people's personal preferences for different locations, but the wage and housing cost differentials are major determinants of the migration choice.
4. Authors' calculations based on Bureau of Economic Analysis Regional Income data and Zillow Median House Price Per Square Foot index data.
5. Herkenhoff, Ohanian, and Prescott (2018) similarly find very large output effects of relaxing land-use regulations in California.
6. For an example of a recent study finding gains for people leaving public housing, see Chyn (2016).
7. Some papers, such as Eriksen and Ross (2015), find less of an impact.
8. There has been significant population gains in places like Atlanta, Charleston, Orlando, Houston, Phoenix, and Las Vegas—all of which have issued building permits between 2000 and 2013 totaling 30–60 percent of the stock in 2000 (Elmendorf 2018).
9. For a review of effective policies targeting these areas, see the recent Brookings report (Hendrickson, Muro, and Galston 2018) and The Hamilton Project's edited book (Shambaugh and Nunn 2018).

References

- Acemoglu, Daron, David H Autor, and David Lyle. 2004. "Women, War, and Wages: The Effect of Female Labor Supply on the Wage Structure at Midcentury." *Journal of Political Economy* 112 (3): 497–551.
- Albouy, David, and Mike Zabek. 2016. "Housing Inequality." Working Paper 21916, National Bureau of Economic Research, Cambridge, MA.
- American Housing and Economic Mobility Act of 2018. 115th Congress. S. Res. S.3503 (2018).
- Åslund, Olof, and Dan-Olof Rooth. 2007. "Do When and Where Matter? Initial Labour Market Conditions and Immigrant Earnings." *Economic Journal* 117 (518): 422–48.
- Austin, Benjamin, Edward Glaeser, and Lawrence Summers. Forthcoming. "Saving the Heartland: Place-based Policies in 21st Century America." *Brookings Papers on Economic Activity*, (Spring): 151–255.
- Autor, David, Christoher J. Palmer, and Parag A. Pathak. 2017. "Gentrification and the Amenity Value of Crime Reductions: Evidence from Rent Deregulation." *Working Paper 23914*, National Bureau of Economic Research, Cambridge, MA.
- Band, Daniel C. 2014. "An Analysis of the 2013 Raleigh Unified Development Ordinance." Working Paper, University of North Carolina at Chapel Hill, Chapel Hill, NC.
- Banzhaf, H. Spencer, and Nathan Lavery. 2010. "Can the Land Tax Help Curb Urban Sprawl? Evidence from Growth Patterns in Pennsylvania." *Journal of Urban Economics* 67 (2): 169–79.
- Barro, Robert J., and Xavier Sala-i-Martin. 1992. "Convergence." *Journal of Political Economy* 100 (2): 223–51.
- Bento, Antonio, Scott Lowe, Gerrit-Jan Knaap, and Arnab Chakraborty. 2009. "Housing Market Effects of Inclusionary Zoning." *Regulatory Innovation and Affordable Housing* 11 (2): 7–26.
- Blanchard, O. J., and Lawrence F. Katz. 1992. "Regional Evolutions." *Brookings Papers on Economic Activity* (Spring): 1–75.
- Brinklow, Adam. 2018, March 20. "Law Will Force 97.6 Percent of California Cities to Build More." *Curbed San Francisco*.
- Bureau of Economic Analysis (BEA). 2017. "Regional Data: GDP and Personal Income, Table SAGDP10N - Per capita Real GDP by State." U.S. Department of Commerce, Suitland, MD.
- Calder, Vanessa. 2017. "Zoning, Land-Use Planning, and Housing Affordability." Policy Analysis 823, Cato Institute, Washington, DC.
- Carson, Ben (@SecretaryCarson). 2018. Twitter, September 12, 2018, 12:55 p.m. <https://twitter.com/SecretaryCarson/status/1039965760012132358>

- Chapelle, Guillaume. 2018. "Does Social Housing Crowd Out Private Construction: The Land Channel of the Crowding Out Effect." Job Market Paper, Sciences Po, Paris, France.
- Chetty, Raj, Nathan Hendren, and Lawrence Katz. 2016. "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Project." *American Economic Review* 106 (4): 855–902.
- Chyn, Eric. 2016. "Moved to Opportunity: The Long-Run Effect of Public Housing Demolition on Labor Market Outcomes of Children." Working Paper, University of Virginia, Charlottesville, VA.
- City of Montreal. 2004. "Master Plan Map 3.1.2: Building Density." Executive Committee Responsible for Urban Planning and Architecture, City of Montreal, Montreal, Quebec.
- Croghan, Lore. 2016, March 16. "Nearly 90,000 Applications for Affordable Apartments at City Point in Downtown Brooklyn." *Brooklyn Daily Eagle*.
- Damm, Anna, and Christian Dustmann. 2014. "Does Growing Up in a High Crime Neighborhood Affect Youth Criminal Behavior?" *American Economic Review* 104 (6): 1806–32.
- Dao, Mai, Davide Furceri, and Prakash Loungani. 2017. "Regional Labor Market Adjustment in the United States: Trend and Cycle." *Review of Economics and Statistics* 99 (2): 243–57.
- Dawkins, Casey, Jae Sik Jeon, and Gerrit-Jan Knaap. 2016. "Creating and Preserving Affordable Homeownership Opportunities: Does Inclusionary Zoning Make Sense?" *Journal of Planning Education and Research* 37 (4): 444–56.
- Desmond, Matthew, and Krisin L. Perkins. 2016. "Are Landlords Overcharging Housing Voucher Holders?" *City and Community* 15 (2): 137–62.
- Detting, Lisa J., Joanne W. Hsu, Lindsay Jacobs, Kevin B. Moore, Jeffrey P. Thompson, and Elizabeth Llanes. 2017. "Recent Trends in Wealth-Holding by Race and Ethnicity: Evidence from the Survey of Consumer Finances." FEDS Notes, Board of Governors of the Federal Reserve System, Washington, DC.
- Diamond, Rebecca, Timothy McQuade, and Franklin Qian. 2018. "The Effects of Rent Control Expansion on Tenants, Landlords, and Inequality Evidence from San Francisco." Working Paper 24181, National Bureau of Economic Research, Cambridge, MA.
- Ding, Lei, Jackelyn Hwang, and Eileen Divringi. 2016. "Gentrification and Residential Mobility in Philadelphia." *Regional Science and Urban Economics* 61: 38–51.
- Ellickson, Robert C. 2015. "Open Space in an Urban Area: Might There Be Too Much of a Good Thing?" Available online at SSRN.
- Elmendorf, Christopher S. 2018. "Beyond the Double Veto: Land Use Plans As Preemptive Intergovernmental Contracts." Available online at SSRN.
- Emrath, Paul. 2016. "Government Regulation in the Price of a New Home." Special Study for Housing Economics, National Association of Home Builders, Washington, DC.
- Eriksen, Michael D., and Stuart S. Rosenthal. 2010. "Crowd Out Effects of Place-Based Subsidized Rental Housing: New Evidence from the LIHTC Program." *Journal of Public Economics* 94, (11–12): 953–66.
- Eriksen, Michael D., and Amanda Ross. 2015. "Housing Vouchers and the Price of Rental Housing." *American Economic Journal: Economic Policy* 7 (3): 154–76.
- Federal Bureau of Investigation (FBI). 2015. "Crime in the United States: 2015." Uniform Crime Reports, Federal Bureau of Investigation, U.S. Department of Justice, Washington, DC.
- Federal Housing Finance Agency. 2018. "Quarterly Purchase-Only House Price Index: 100 Largest Metropolitan Statistical Areas (Seasonally Adjusted)." Federal Housing Finance Agency, Washington, DC.
- Fernández-Villaverde, Jesús, and Lee Ohanian. 2018. "Housing Policy Reform." In *Economic Policy Challenges Facing California's Next Governor*, edited by Scott W. Atlas, Jesús Fernández-Villaverde, Eric Hanushek, Edward P. Lazear, Lee Ohanian, Joshua D. Rauh, and Frank A. Wolak, 15–18. Stanford, CA: The Hoover Institution on War, Revolution, and Peace at Stanford University.
- Field, Ben. 1993. "Why Our Fair Share Housing Laws Fail." *Santa Clara Law Review* 34 (1): 35–79.
- Fischel, William. 2015. *Zoning Rules! The Economics of Land Use Regulation*. Cambridge, MA: Lincoln Institute of Land Policy.
- Florida, Richard. 2018, March 6. "The Geography of Millennial Talent." *CityLab*.
- Ganong, Peter and Robert Collison. 2013. "Incidence and Price Discrimination: Evidence from Housing Vouchers." Working Paper, Joint Center for Housing Studies, Harvard University, Cambridge, MA.
- Ganong, Peter, and Daniel W. Shoag. 2017. "Why Has Regional Income Convergence in the U.S. Declined?" *Journal of Urban Economics* 102 (November): 76–90.
- George, Aleta. 2018, February/March. "Not So Easy: The Complex Mechanisms of Conservation Easements." *Bay Area Monitor*
- Glaeser, Edward L., Joseph Gyourko, and Raven Saks. 2005a. "Why Is Manhattan So Expensive? Regulation and the Rise in Housing Prices." *Journal of Law and Economics* 48 (2): 331–70.
- . 2005b. "Why Have Housing Prices Gone Up?" *American Economic Review* 95 (2): 329–33.
- Glaeser, Edward L., Matthew E. Kahn. 2010. "The Greenness of Cities: Carbon Dioxide Emissions and Urban Development." *Journal of Urban Economics* 67 (3): 404–18.
- Glaeser, Edward L., and Erzo F. P. Luttmer. 2003. "The Misallocation of Housing Under Rent Control." *American Economic Review* 93 (4): 1027–46.
- Glaeser, Edward L., and Jesse M. Shapiro. 2003. "The Benefits of the Home Mortgage Interest Deduction." In *Tax Policy and the Economy*, vol. 17, edited by James Poterba, 37–82. Cambridge, MA: National Bureau of Economic Research.
- Glaeser, Edward L., and Bryce A. Ward. 2009. "The Causes and Consequences of Land use Regulation: Evidence from Greater Boston." *Journal of Urban Economics* 65 (3): 265–78.
- Goldberg, Leo. 2015. *Game of Zones: Neighborhood Rezonings and Uneven Urban Growth in Bloomberg's New York City*. Working Paper, Massachusetts Institute of Technology, Cambridge, MA.

- Google Trends. 2018. "YIMBY, Interest over Time: January 1, 2004 to December 31, 2018." Google Trends, Google LLC, Mountain View, CA.
- Gottlieb, Joshua D. 2018. "How Minimum Zoning Mandates Can Improve Housing Markets and Expand Opportunity." The Aspen Institute, Economic Strategy Group, Washington, DC.
- Gould, Eric D., Victor Lavy, and M. Daniele Paserman. 2011. "Sixty Years after the Magic Carpet Ride: The Long-Run Effect of the Early Childhood Environment on Social and Economic Outcomes." *Review of Economic Studies* 78 (3): 938–73.
- Gowan, Peter, and Ryan Cooper. 2018. "Social Housing in the United States." Report, People's Policy Project.
- Greenstone, Michael, Richard Hornbeck, and Enrico Moretti. 2010. "Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plant Openings." *Journal of Political Economy* 118 (3): 536–98.
- Gyourko, Joseph, Christopher Mayer, and Todd Sinai. 2013. "Superstar Cities." *American Economic Journal: Economic Policy* 5 (4): 167–99.
- Gyourko, Joseph, and Raven Molloy. 2015. "Regulation and Housing Supply." In *Handbook of Regional and Urban Economics*, vol. 5B, edited by Gilles Duranton, J. Vernon Henderson, and William C. Strange, 1289–337. Amsterdam, Netherlands: Elsevier.
- Gyourko, Joseph, Albert Saiz, and Anita Summers. 2008. "A New Measure of the Local Regulatory Environment for Housing Markets: The Wharton Residential Land Use Regulatory Index." *Urban Studies* 45 (3): 693–729.
- Hall, Andrew B., and Jesse Yoder. 2018. "Does Homeownership Influence Political Behavior? Evidence from Administrative Data." Working Paper, Stanford University, Stanford, CA.
- Hankinson, Michael. 2018. "When Do Renters Behave Like Homeowners? High Rent, Price Anxiety, and NIMBYism." *American Political Science Review* 112 (3): 473–93.
- Hanson, Andrew. 2012. "Size of Home, Homeownership, and the Mortgage Interest Deduction." *Journal of Housing Economics* 21 (3): 195–210.
- Harding, Robin. 2016, August 3. "Why Tokyo is the Land of Rising Home Construction but Not Prices." *Financial Times*.
- Haughwout, Andrew F. 2001. "Land Taxation in New York City: A General Equilibrium Analysis." Research and Market Analysis Group, Federal Reserve Bank of New York, New York, NY.
- Hendrickson, Clara, Mark Muro, and William A. Galston. 2018. "Strategies for Left-Behind Places." Report, Brookings Institution, Washington, DC.
- Herbert, Christopher, Alexander Hermann, and Daniel McCue. 2018. "Measuring Housing Affordability: Assessing the 30 Percent of Income Standard." Working Paper, Joint Center for Housing Studies, Harvard University, Cambridge, MA.
- Herkenhoff, Kyle F., Lee E. Ohanian, and Edward C. Prescott. 2018. "Tarnishing the Golden and Empire States: Land-Use Restrictions and the U.S. Economic Slowdown." *Journal of Monetary Economics* 93: 89–109.
- Hernandez, Jennifer. 2018. "California Environmental Quality Act Lawsuits and California's Housing Crisis." *Hastings Environmental Law Journal* 24 (1): 21–71.
- Hills, Roderick M. Jr., and David N. Schleicher. 2011. "Balancing the Zoning Budget." *Case Western Reserve Law Review* 62 (1): 81–133.
- Hornbeck, Richard. 2012. "The Enduring Impact of the American Dust Bowl: Short- and Long-run Adjustments to Environmental Catastrophe." *American Economic Review*, 102(4): 1477–507.
- Hsieh, Chang-Tai, and Enrico Moretti. Forthcoming. "Housing Constraints and Spatial Misallocation." *American Economic Journal: Macroeconomics* (forthcoming).
- Jackson, Kristoffer. 2016. "Regulation and California's Boom and Bust." Available online at SSRN.
- Kaplan, Greg, and Sam Schulhofer-Wohl. 2017. "Understanding the Long-Run Decline in Interstate Migration." *International Economic Review* 58 (1): 57–94.
- Kemp, Katherine. 2018, December 3. "Developers of 1900 Fourth St. Sue City of Berkeley over Alleged State Law Violation." *The Daily Californian*.
- Kent, Alexander, Thomas C. Frohlich, Even Comen, and Samuel Stebbins. 2015, December 21. "Cities with the Longest Life Expectancy in Every State." *24/7 Wall St*.
- Korngold, Gerald. 2007. "Solving the Contentious Issues of Private Conservation Easements: Promoting Flexibility for the Future and Engaging the Public Land Use Process." Case Legal Studies Research Paper 07-24, Case Western Reserve University, Cleveland, OK.
- Kusisto, Laura. 2018, August 13. "HUD Moves to Shake Up Fair-Housing Enforcement." *Wall Street Journal*.
- Lewyn, Michael. 2014. "How Environmental Review Can Generate Car-Induced Pollution: A Case Study." *Sustainable Development Law & Policy* 14 (1): 16–22, 64–66.

- Li, Huaqun. 2017, August 24. "Which Areas Benefit Most from the Home Mortgage Interest Deduction?" Tax Foundation, Washington, DC (blog).
- Lindsey, Brink, and Steven M. Teles. 2017. *The Captured Economy: How the Powerful Enrich Themselves, Slow Down Growth, and Increase Inequality*. New York, NY: Oxford University Press.
- Linhart, Miroslav, Petr Hána, Vojtěch Petrik, and David Marek. 2017. "Property Index: Overview of European Residential Markets." Report, Deloitte, Prague, Czech Republic.
- Logan, Tom. 2018, December 4. "A Year after Baker's Push for More Housing, It's Still in Limbo." *The Boston Globe*.
- Marble, William, and Clayton Nall. 2018. "Where Interests Trump Ideology: The Persistent Influence of Homeownership in Local Development Politics." Working Paper, New York University, New York, NY.
- Martin, Hal and Andrew Hanson. 2016. "Metropolitan Area Home Price and the Mortgage Interest Deduction: Estimates and Simulations from Policy Change." *Regional Science and Urban Economics* 59: 12–23.
- Mitchell, James L. 2004. "Will Empowering Developers to Challenge Exclusionary Zoning Increase Suburban Housing Choice?" *Journal of Policy Analysis and Management* 23 (1): 119–34.
- Molloy, Raven, Christopher L. Smith, and Abigail K. Wozniak. 2014. "Declining Migration within the U.S.: The Role of the Labor Market." Working Paper 20065, National Bureau of Economic Research, Cambridge, MA.
- Morrow, Gregory D. 2013. "The Homeowner Revolution: Democracy, Land Use and the Los Angeles Slow-Growth Movement, 1965–1992." Job Market Paper, University of California Los Angeles, Los Angeles, CA.
- Nunn, Ryan, Jana Parsons, and Jay Shambaugh. 2018. "The Geography of Prosperity." In *Place Based Policies for Shared Economic Growth*, edited by Jay Shambaugh and Ryan Nunn, 11–42. Washington, DC: The Hamilton Project.
- O'Brien, Matthew. 2012, July 17. "Why the Mortgage Interest Deduction Is Terrible." *The Atlantic*.
- Oates, Wallace E., and Robert Schwab. 1997. "The Impact of Urban Land Taxation: The Pittsburgh Experience." *National Tax Journal* 50 (1): 1–21.
- Organisation for Economic Co-operation and Development (OECD). 2018. "Level of GDP per Capita and Productivity." OECD.Stat, OECD Productivity Database, Paris, France.
- Pidot, Jeff. 2005. *Reinventing Conservation Easements: A Critical Examination and Ideas for Reform*. Cambridge, MA: Lincoln Institute of Land Policy.
- Quigley, John M., and Larry A. Rosenthal. 2005. "The Effects of Land Use Regulation on the Price of Housing: What Do We Know? What Can We Learn?" *Cityscape: A Journal of Policy Development and Research* 8 (1): 69–137.
- Rent Relief Act of 2018. 115th Congress. S. Res. S.3250 (2018).
- Rognlie, Matthew. 2015. "Deciphering the Fall and Rise in the Net Capital Share: Accumulation or Scarcity?" *Brookings Papers on Economic Activity* (Spring): 1–69.
- Rosen, Harvey. 1985. "Housing Subsidies: Effects on Housing Decisions, Efficiency, and Equity." In *Handbook of Public Economics*, vol. 1, edited by Alan J. Auerbach and Martin Feldstein, 375–420. Amsterdam, Netherlands: Elsevier.
- Rosenthal, Stuart S. 2014. "Are Private Markets and Filtering a Viable Source of Low-Income Housing? Estimates from a 'Repeat Income' Model." *American Economic Review* 104 (2): 687–706.
- Rothwell, Jonathan, and Douglas S. Massey. 2009. "The Effect of Density Zoning on Racial Segregation in U.S. Urban Areas." *Urban Affairs Review* 44 (6): 779–806.
- Schatz, Akua, and Terry Sidhu. 2015. "Small Houses: Innovations in Small-scale Living from North America." Report, Small Housing BC, Vancouver, BC.
- Schuetz, Jenny, Rachel Meltzer, and Vicki Been. 2010. "Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets in the United States." *Urban Studies* 48 (2): 297–329.
- Shambaugh, Jay, and Ryan Nunn, eds. 2018. *Place-based Policies for Shared Economic Growth*. Washington, DC: The Hamilton Project.
- Shoag, Daniel, and Nicholas Carollo. 2016. "The Causal Effect of Place: Evidence from Japanese-American Internment." Available online at SSRN.
- Sorensen, André, Junichiro Okata, and Sayaka Fujii. 2010. "Urban Renaissance as Intensification: Building Regulation and the Rescaling of Place Governance in Tokyo's High-Rise Manshon Boom." *Urban Studies* 47 (3): 556–83.
- Spyridonidis, Artemis. 2017. "Bay Area Begins to Feel Effect of SB 35." LeSar Development Consultants, San Diego, CA (blog).
- Statistics Canada. 2017. "Type of Dwelling Highlight Tables, 2016 Census." Statistics Canada, Ottawa, Ontario.
- . 2018. "Table 11-10-0012-01: Distribution of Total Income by Census Family Type and Age of Older Partner, Parent or Individual." Statistics Canada, Ottawa, Ontario.
- Thaden, Emily, and Ruoniu Wang. 2017. "Inclusionary Housing in the United States: Prevalence, Impact, and Practices." Working Paper WP17ET1, Lincoln Institute of Land Policy, Cambridge, MA.

- Tiebout, Charles M. 1956. "A Pure Theory of Local Expenditures." *Journal of Political Economy* 64 (5): 416–24.
- Turner, Matthew. 2019. "Local Transportation Policy and Economic Opportunity." Policy Proposal 2019–03, The Hamilton Project, Brookings Institution, Washington, DC.
- Uhler, Brian. 2016. "Perspectives on Helping Low-income Californians Afford Housing." LAO Brief, The Legislative Analyst's Office, Sacramento, CA.
- U.S. Census Bureau. 2010–17. "Combined Statistical Area Population and Estimated Components of Change: April 1, 2010 to July 1, 2017." Population Division, U.S. Census Bureau, Suitland, MD.
- . 2017. "American Housing Survey." U.S. Census Bureau, Suitland, MD.
- U.S. Department of Housing and Urban Development (HUD). n.d. "Affordable Housing." https://www.hud.gov/program_offices/comm_planning/affordablehousing/
- Urban Institute. 2016. "The Cost of Affordable Housing: Does It Pencil Out?" Urban Institute and National Housing Conference, Washington, DC.
- Van Nieuwerburgh, Stijn, and Pierre-Olivier Weill. 2010. "Why Has House Price Dispersion Gone Up?" *Review of Economic Studies* 77 (4): 1567–606.
- Viard, Alan D. 2013. "Proposal 8: Replacing the Home Mortgage Interest Deduction." In *15 Ways to Rethink the Federal Budget*, edited by Michael Greenstone, Max Harris, Karen Li, Adam Looney, and Jeremy Patashnik, 45–49. Washington, DC: The Hamilton Project.
- Voith, Richard. 2000. "Has Suburbanization Diminished the Importance of Access to Center City?" Federal Reserve Bank of Philadelphia, Business Review, July/August: 3–12.
- Voith, Richard, and Joseph Gyourko. 2002. "Capitalization of Federal Taxes, the Relative Price of Housing, and Urban Form: Density and Sorting Effects." *Regional Science and Urban Economics* 32 (6): 673–90.
- Warren, Molly, Stacy Beck, Jack Rayburn, Sarah Ketchen Lipson, Megan Wolfe, James Krieger, and Corby Kummer. 2018. "The State of Obesity: Better Policies for a Healthier America." Issue Report. Trust for America's Health, Washington, DC.
- Wilson, Steven G., David A. Plane, Paul J. Mackun, Thomas R. Fischetti, and Justyna Goworowska. 2012. "Patterns of Metropolitan and Micropolitan Population Change: 2000 to 2010." Report C2010SR-01, U.S. Census Bureau, Washington, DC.
- YIMBYwiki. 2018. "YIMBY Movement." YIMBY.wiki. http://www.yimby.wiki/wiki/YIMBY_movement
- Zuk, Miriam, and Karen Chapple. 2016. "Housing Production, Filtering and Displacement: Untangling the Relationships." Research Brief, Institute of Governmental Studies, University of California Berkeley, Berkeley, CA.



ADVISORY COUNCIL

GEORGE A. AKERLOF
University Professor
Georgetown University

ROGER C. ALTMAN
Founder & Senior Chairman, Evercore

KAREN L. ANDERSON
Senior Director of Policy & Communications
Becker Friedman Institute for
Research in Economics
The University of Chicago

ALAN S. BLINDER
Gordon S. Rentschler Memorial Professor of
Economics & Public Affairs
Princeton University
Nonresident Senior Fellow
The Brookings Institution

ROBERT CUMBY
Professor of Economics
Georgetown University

STEVEN A. DENNING
Chairman, General Atlantic

JOHN M. DEUTCH
Institute Professor
Massachusetts Institute of Technology

CHRISTOPHER EDLEY, JR.
Co-President & Co-Founder
The Opportunity Institute

BLAIR W. EFFRON
Partner, Centerview Partners LLC

DOUGLAS W. ELMENDORF
Dean & Don K. Price Professor
of Public Policy
Harvard Kennedy School

JUDY FEDER
Professor & Former Dean
McCourt School of Public Policy
Georgetown University

ROLAND FRYER
Henry Lee Professor of Economics
Harvard University

JASON FURMAN
Professor of the Practice of
Economic Policy
Harvard Kennedy School
Senior Counselor
The Hamilton Project

MARK T. GALLOGLY
Cofounder & Managing Principal
Centerbridge Partners

TED GAYER
Executive Vice President
Joseph A. Pechman Senior Fellow,
Economic Studies
The Brookings Institution

TIMOTHY F. GEITHNER
President, Warburg Pincus

RICHARD GEPHARDT
President & Chief Executive Officer
Gephardt Group Government Affairs

JOHN GRAY
President & Chief Operating Officer
Blackstone

ROBERT GREENSTEIN
Founder & President
Center on Budget and Policy Priorities

MICHAEL GREENSTONE
Milton Friedman Professor in Economics & the
College
Director of the Becker Friedman Institute for
Research in Economics
Director of the Energy Policy Institute
University of Chicago

GLENN H. HUTCHINS
Co-founder, North Island
Co-founder, Silver Lake

JAMES A. JOHNSON
Chairman, Johnson Capital Partners

LAWRENCE F. KATZ
Elisabeth Allison Professor of Economics
Harvard University

MELISSA S. KEARNEY
Professor of Economics
University of Maryland
Nonresident Senior Fellow
The Brookings Institution

LILI LYNTON
Founding Partner
Boulud Restaurant Group

HOWARD S. MARKS
Co-Chairman
Oaktree Capital Management, L.P.

MARK MCKINNON
Former Advisor to George W. Bush
Co-Founder, No Labels

ERIC MINDICH
Chief Executive Officer & Founder
Eton Park Capital Management

ALEX NAVAB
Former Head of Americas Private Equity
KKR
Founder, Navab Holdings

SUZANNE NORA JOHNSON
Former Vice Chairman
Goldman Sachs Group, Inc.

PETER ORSZAG
Head of North American M&A &
Vice Chairman of Investment Banking
Lazard Freres & Co LLC

RICHARD PERRY
Managing Partner & Chief Executive Officer
Perry Capital

PENNY PRITZKER
Chairman & Founder, PSP Partners

MEEGHAN PRUNTY
Managing Director, Blue Meridian Partners
Edna McConnell Clark Foundation

ROBERT D. REISCHAUER
Distinguished Institute Fellow &
President Emeritus
Urban Institute

ALICE M. RIVLIN
Senior Fellow, Economic Studies
Center for Health Policy
The Brookings Institution

DAVID M. RUBENSTEIN
Co-Founder & Co-Executive Chairman
The Carlyle Group

ROBERT E. RUBIN
Former U.S. Treasury Secretary
Co-Chair Emeritus
Council on Foreign Relations

LESLIE B. SAMUELS
Senior Counsel
Cleary Gottlieb Steen & Hamilton LLP

SHERYL SANDBERG
Chief Operating Officer, Facebook

DIANE WHITMORE SCHANZENBACH
Margaret Walker Alexander Professor
Director
The Institute for Policy Research
Northwestern University
Nonresident Senior Fellow
The Brookings Institution

STEPHEN SCHERR
Chief Executive Officer
Goldman Sachs Bank USA

RALPH L. SCHLOSSTEIN
President & Chief Executive Officer, Evercore

ERIC SCHMIDT
Technical Advisor, Alphabet Inc.

ERIC SCHWARTZ
Chairman & CEO, 76 West Holdings

THOMAS F. STEYER
Business Leader & Philanthropist

LAWRENCE H. SUMMERS
Charles W. Eliot University Professor
Harvard University

LAURA D'ANDREA TYSON
Professor of Business Administration &
Economics
Director
Institute for Business & Social Impact
Berkeley-Haas School of Business

JAY SHAMBAUGH
Director

Highlights

In this paper, Daniel Shoag of Harvard Kennedy School and Case Western Reserve University discusses the inefficiencies of current housing policies—specifically those related to housing supply—and their effects on economic growth and mobility. High regional inequality is driven in part by local housing rules that prevent low- and middle-income workers from accessing high-productivity places. To remove these barriers, the author outlines local, state, and federal policy initiatives that can boost the stock of housing in booming parts of the country.

The Proposals

Reform local housing supply restrictions to allow for an expanded stock of housing. The author offers several case studies of localities—both domestic and international—that have rolled back inefficient restrictions and thereby enhanced access to high-productivity places. Each of these cases shows how thoughtful policy interventions can increase the stock of housing and expand access for potential entrants.

Support better housing policy with state and federal incentives. The author proposes that states establish by-right development policies or other policies that lower barriers to housing supply. Federal policymakers should provide incentives to encourage local innovation in expanding access to housing.

Benefits

Restrictive housing policies reinforce regional inequality by keeping low- and middle-income workers out of high-productivity areas. By removing these barriers, Shoag's proposed policies would open up the opportunity of these economic hubs to more Americans, enhancing economic growth and allowing it to be shared more widely.



1775 Massachusetts Ave., NW
Washington, DC 20036

(202) 797-6484

BROOKINGS



Printed on recycled paper.

WWW.HAMILTONPROJECT.ORG