

Inequality, not regulation, drives America's housing affordability crisis

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Abstract: A popular view holds that declining housing affordability stems from regulations that restrict new supply, and that deregulation will spur sufficient market-rate construction to meaningfully improve affordability. We argue that this ‘deregulationist’ view rests upon flawed assumptions. Through empirical simulation, we show that even a dramatic, deregulation-driven supply expansion would take decades to generate widespread affordability in high-cost U.S. markets. We advance an alternative explanation of declining affordability grounded in demand structure and geography: uneven demand growth – driven by rising interpersonal and interregional inequality – is the primary driver of declining affordability in recent decades. For cost-burdened households, trickle-down benefits from deregulation will be insufficient and too slow.

Keywords: housing; affordability; zoning; inequality; cities

1. Introduction

The share of renter households spending over 30 percent of their income on housing has consistently risen in recent decades (Council of Economic Advisors, 2024). What began in expensive coastal metropolitan areas has turned into a crisis afflicting almost every county, squeezing both renters and buyers across cities, suburbs, and rural areas (Baum-Snow & Duranton, 2025; Glaeser and Gyourko, 2025).

As America's housing affordability crisis has deepened, a particular explanation has become dominant: the core problem is an insufficient supply of new housing, whose construction has been limited by restrictive land-use regulations, especially zoning. Extrapolating from this diagnosis, advocates argue that deregulation and upzoning will produce a surge in the construction of new, market-rate dwellings. Through filtering, older units will decline in price and become accessible to lower-income households, generating widespread affordability.

This paper challenges this 'deregulationist' consensus. We advance two core arguments. First, for the majority of cost-burdened households, generalized deregulation or upzoning will have weak impacts on affordability. Other rationales for such policies may be valid—allowing more people to live in desirable locations, enabling quality replacement of old housing stock—but the key claim used to sell deregulation to the public, improving affordability, does not hold up to scrutiny. Second, supply restriction is not principally responsible for declining affordability. Instead, demand-side forces rooted in the wage structure and geography of the U.S. labor market are more important. The labor market has undergone major transformation over the past several decades, producing the affordability crisis experienced by many households today.

The paper proceeds as follows. Section 2 reviews the academic origins of the deregulationist view of housing, and traces how it has generated broad consensus in public

discourse. Section 3 examines empirical evidence drawn from the literature. It shows that the links between regulation and supply, and between supply and prices, are weak at best. We then conduct a simulation exercise using the most robust estimates drawn from this research. That exercise shows that no realistic shock could be large or quick enough to provide significant relief to today's cost-burdened households in major U.S. cities. Whether or not regulation is a major barrier to the addition of new supply, deregulation will do little to address affordability.

Section 4 reconstructs the causes of declining affordability. Housing markets have functioned as expected in recent decades: supply and prices have closely tracked demand across a broad range of city types. The problem lies not in a constrained market but in rising inequality. National income and wealth inequality have grown greatly, as have geographic gaps that divide places. This reflects a new geography of work concentrating high-earning college graduates in the largest, densest urban areas. In these cities, non-college-educated workers must compete for housing against residents whose incomes have benefited from globalization and technological change, amplified by agglomeration economies. Housing prices track average income growth, but that average obscures increasingly unequal income growth, with decades of stagnant wages for many workers. This gap between prices and stagnant incomes is the central driver of the affordability crisis.

Given our analysis and a growing literature establishing the importance of demand-side forces over supply constraints in shaping unaffordability, the overwhelming emphasis on deregulation and upzoning that characterizes the housing policy field today is perplexing, and in its distraction from root causes, harmful. We therefore conclude with a call to recenter the national housing debate on the most important causes of the affordability crisis, and on policies with greater promise of relief than deregulation.

2. A brief history of the deregulationist consensus

The genealogy of today's deregulationist policy consensus can be traced to three strains of academic scholarship. The first deploys neoclassical models of housing supply and demand in which housing production is constrained by regulation as it prevents developers from building at higher, more profitable densities (Glaeser et al., 2005a; 2005b; Quigley & Raphael, 2005). Such studies start from the observation of a general pattern: highly regulated areas, which are more likely to be coastal and metropolitan, are more expensive, while less regulated areas (in the Sunbelt and interior) offer cheaper housing and accommodate more population growth. Explaining this pattern, researchers argue that cities with more stringent land use regulations suffer from inelastic supply – that is, the ability of housing supply to respond to changes in demand – and exhibit higher price growth, hence explaining inter-regional differences in house prices (Molloy, 2020). Much of the core intellectual work behind the deregulationist supply-side policy movement stems from the seminal papers of Glaeser and Gyourko (e.g. Glaeser & Gyourko, 2018; 2025; Glaeser et al., 2005a; 2005b).

These studies generally rely on a historical narrative: mid-20th-century communities regulated far less, and subsequent regulatory expansion shifted regions from a high-building equilibrium to one with limited development, producing today's widespread unaffordability. In its simplest form, deregulationists posit that residents across a broad number of local jurisdictions decided in recent decades to “zone out change,” rejecting housing construction in their localities. Although they benchmark against the postwar era, when housing supply and population growth were far higher, these studies give little explicit attention to the major shifts since then in income distributions, demographic patterns, population movements, household size,

and the interactions among them. Some do recognize a recent spread of unaffordability to areas that were previously affordable, but they assign this trend to the recent spread of regulation, notably to the Sunbelt suburbs (Glaeser and Gyourko, 2025).

A second strand of research empirically investigates these issues at the neighborhood-scale to examine the extent to which a) upzoning impacts housing supply and b) new supply impacts prices. Advocates of deregulation point to these papers as evidence of the power of deregulation to improve affordability, though in both cases, actual effect sizes are modest at best (Damiano, 2025; Freemark, 2023). Perhaps due to the less-than-triumphal evidence at the neighborhood scale, other studies shift to the regional scale, drawing on the concept of filtering to argue that construction in desirable places will ease wider regional housing prices and enhance affordability (Mast, 2023; Bratu et al., 2023). These claims rest on inferences from assignment models (Sweeney, 1974; Braid, 1981), which predict that high-income households will move into new market-rate housing when available, in turn vacating older units. Since units decline in value as they age, dwellings left behind by high-income households should become cheaper, filtering down to less affluent inhabitants (Rosenthal, 2014), thus generating wider affordability. More broadly, allowing some neighborhoods to construct new housing and grow is seen as part of a long-term process of moderating prices in other neighborhoods (Baum-Snow, 2023).

A third area of work models general equilibrium effects of housing on migration and population sorting within the national system of cities. Hsieh and Moretti (2019), Hoxie et al. (2023), and Ganong and Shoag (2017) argue that declines in American interregional migration can be attributed to the high cost of housing in the country's most productive regions. In a counterfactual urban system in which the United States is liberated from land use restrictions, Hsieh and Moretti (2019) predict that greater affordability in large, high-productivity cities

would generate migration to the biggest, most productive urban regions, thus generating significantly higher national productivity growth. The idea that local regulations governing housing have played major roles in both the observed decline in Americans' mobility, and decades of anemic growth in per capita GDP, embeds the issue of housing deep within national politics.

Deregulationist narratives draw these three strains of research together into a powerful story about the sources of the country's housing affordability crisis and the policies necessary to solve it. If the problem is insufficient growth in the supply of housing due to regulation, then deregulation is the key to restoring construction to appropriate levels, limiting scope for owners' rent-seeking behavior, and enabling downward filtering. The argument has been further linked to scholarship that documents the (mis)uses of zoning and land use regulation for racial exclusion (Trounstein, 2018). In doing so, deregulationists frame skepticism of their argument as part of an ugly American tradition of stifling social mobility through regulation, casting doubt on the importance of community involvement in urban planning (Anbinder, 2023).

Deregulationism now holds sway across significant swaths of the political left, right, and center. In Congress, it is one of the rare areas of bipartisanship.¹ It has been taken up by a wide variety of non-governmental lobby groups, journalists, think tanks, and politicians of all stripes. Its core beliefs are articulated in major field journals and websites, recounted reflexively in countless media interviews and podcasts, and echoed among the most influential shapers of public opinion and policy. In their book, *Abundance* (2025), journalists Ezra Klein and Derek Thompson offer an account of the housing affordability crisis in which blame falls squarely on overly procedural and restrictive rules governing land use. According to *Stuck* (2025), written by

¹ <https://auchincloss.house.gov/media/press-releases/us-representative-jake-auchincloss-announces-launch-of-pro-housing-yimby-caucus-to-tackle-affordable-housing-shortage>

The Atlantic deputy executive editor Yoni Appelbaum, many of the social ills of American society today result from our inability to move, which is fundamentally rooted in our century-old, racist obsession with zoning. The Biden Administration’s Council of Economic Advisors adopted a deregulationist lens in their chapter on national housing policy (Council of Economic Advisors, 2024), and the second Trump administration blamed a “crushing regulatory burden” for housing unaffordability (The White House, 2025).

Unity here is not simply a function of a common policy goal; the policy instrument for its achievement is also an area of broad agreement, that legislation at state and national levels should be enacted to reduce the role of localities in controlling land use. Some of the most respected defenders of the alleged causal relationships between regulation, supply, and prices also acknowledge that housing price levels are primarily driven by regional income, yet when it comes to policy they fall back on arguments about supply restrictions (Gyourko et al, 2013). In a recent *New York Times* op-ed, the influential urban economist Ed Glaeser (2024) contends that to make housing affordable “the goal should be to nudge state legislatures to reduce the ability of communities to zone out change.” Variations on the theme call for eliminating procedural reviews of construction and requiring higher densities or no limits at all on use of a parcel. Today’s movement recycles many arguments from the past, even from periods of the 20th century described today as the golden age of housing expansion, when calls to override local land use controls were justified in terms of economic efficiency, geographical mobility, social justice, racial inclusion, or overcoming rent-seeking (Walker and Heiman, 1981).

This paper joins a growing number of studies that challenge deregulationist claims about regulation and affordability (Condon, 2024; Davidoff, 2013; Davidoff, 2016; Louie et al., 2025; McClure & Schwartz, 2025a; Murphy, 2018; Murray, 2020; Rodriguez-Pose & Storper, 2019;

Titman, 1985; Schragger & New, 2024; Serkin & Sitaraman, 2025). Some of these papers explore the role of demand in housing prices and affordability, while others challenge the view that affordability can be increased through supply shocks from deregulation. The present study contributes new evidence to both these arguments.

3. Regulation, Supply, and Prices

3.1 Existing evidence on the links between regulation and housing supply

The deregulationist view rests on the correlation between local housing costs and land use regulation. In the simplest reading, residents' exogenous desires to control development spur higher housing prices, with the spread of stricter regulation responsible for growing national unaffordability (Glaeser & Gyourko, 2025).

For these claims to hold, we should observe a clear empirical relationship between changes in regulation and changes in housing supply and prices. Yet evidence suggests that upzoning is not meaningfully related to improvements in regional affordability (Freemark, 2023). Other effects include “mixed short-term impacts on housing production, combined with increased land values within neighborhoods affected and reduced racial integration” (Freemark, 2023, 558).

Cross-regional research documents similarly weak relationships. Across widely adopted indicators of supply constraints, several careful studies find that housing supply and prices in “constrained” and “unconstrained” cities respond similarly to changes in demand (Louie et al., 2025; Davidoff, 2016; Howard & Liebersohn, 2021). McClure & Schwartz (2025a, 2025b) show that between 2000 and 2020, no major U.S. urban area experienced growth in household

formation that exceeded its growth in supply, suggesting there were not significant differences in supply growth between regulated and unregulated regions.

These studies cast major doubt on the view that supply in heavily regulated regions fails to keep pace with demand. This is consistent with the local nature of regulation: within any region, some localities accommodate new supply even when others restrict it. While deregulation might boost housing construction in specific neighborhoods – an outcome that may be desirable for a variety of reasons – it is unlikely to meaningfully impact overall regional production. Policies to reshape and densify certain neighborhoods or localities might be evaluated in light of other valid goals, such as reducing commute times or carbon footprints. But selling such measures as affordability policies is not supported by the academic literature.

3.2 Existing evidence on the links between supply and prices

While there is no clear evidence that deregulation can substantially increase supply, major supply shocks, obtained through other means, could still reverse the recent rise in unaffordability, since new supply ought to put downward pressure on prices. To evaluate this claim, we consider how such supply shocks might unfold under empirically-rooted assumptions about (1) the elasticity of prices to supply, and (2) filtering rates.

At the neighborhood scale, findings are inconsistent. Some studies find that new development decreases prices (Asquith et al., 2023; Pennington, 2021), while others show price increases depending on neighborhood type and market tier (Chapple & Song, 2025; Damiano and Frenier, 2020; Diamond & McQuade, 2019; González-Pampillón, 2022; Singh & Baldomero-Quintana, 2022). Estimates vary widely—for instance, Li (2022) finds that neighborhood prices decrease at one-tenth the rate that supply increases, while Singh &

Baldomero-Quintana (2022) find a *positive* elasticity of 1.8, suggesting new housing increases local prices through amenity effects. Such heterogeneous impacts reflect the coexistence of different housing submarkets even within neighborhoods. Given this heterogeneity across contexts, geographies, and analytical approaches, no blanket inference about supply-increasing policy effects is warranted at the neighborhood level.

At the regional scale, unless demand is perfectly elastic, positive shocks to supply put downward pressure on prices (Been et al., 2025). Yet surprisingly little research examines the magnitude of such effects; leaving policy analysts without reliable regional price elasticities. This underscores a deep analytic challenge: changes in supply are almost always endogenous to changes in prices. Most increases in housing supply are not pure shocks but instead are movements along the housing supply curve that are endogenous responses to shifts in demand.

Nonetheless, a handful of studies have attempted to surmount this problem using quasi-experimental settings. Diamond et al. (2019) find that a 6 percent decrease in San Francisco's rental housing stock between 1995 and 2012 led to a 5.1 percent increase in rental prices, implying an elasticity of 0.85. Greenaway-McGrevy (2025) infers that upzoning-induced changes in Auckland land values will prompt a 23.7 percent increase in floorspace and dwelling price declines between 13.1 and 21.2 percent—a long-run elasticity ranging from 0.55 to 0.89. Anagol et al. (2023) find that São Paulo's 2016 zoning reform increased supply by 1.9 percent and decreased prices by 0.5 percent, an elasticity of 0.26. Mense (2025) instruments for new housing supply across German municipalities with weather events that stifle construction, finding an elasticity of 0.19. Other studies suggest even smaller effects (Anenberg & Kung, 2020; Aura & Davidoff, 2008; Howard & Liebersohn, 2021). In sum, available evidence suggests modest price-to-supply elasticity, below 1.

The deregulationist view holds that new market-rate supply translates into affordability through filtering. The standard empirical approach to estimating filtering rates comes from Rosenthal's (2014) "repeat income" model, which follows housing units over time to determine the annual percentage by which new occupants' income differs from previous occupants'. Rosenthal finds that U.S. rental housing filters downward at about 2.5% per year, while owner-occupied housing filters downward at about 0.5% per year, with less filtering in markets with faster house price growth. A number of studies find meaningful heterogeneity in filtering rates across U.S. cities, with several documenting upward filtering – housing filtering up to higher income households rather than downward – in high demand metropolitan areas like Los Angeles, San Francisco, Seattle, Washington DC., and Austin, as well as in city centers in general (Liu et al, 2021; Spader, 2025). In sum, while filtering has historically been a process through which market-rate housing becomes available to lower-income households, it exhibits significant geographic, temporal, and submarket heterogeneity, with upward filtering in many contexts.

This repeat-income model and related vacancy chain literature (Bratu et al., 2023; Mast, 2023) cannot, however, tell us much about affordability. Even if housing filters downward to lower-income households, residents may experience higher housing cost burdens. Income filtering is consistent with the fact that housing cost burdens for low-income households have steadily risen in recent decades (Albouy et al., 2016). The rate at which housing prices depreciate with age is a clearer gauge of changes in affordability. In line with related studies, Rosenthal (2014) produces annual depreciation estimates of 0.31% per year for multifamily rental units and 0.90% per year for single family owner-occupied units. Housing prices thus depreciate much more slowly than housing filters down to lower-income households. Problematically, this also

assumes that the value of the land value depreciates, which is not true for city-regions that are growing in terms of population, income, or both.

3.3 Simulating the impact of the maximum feasible supply shock

Drawing from this evidence, we simulate the effects of a large exogenous construction shock on housing prices in selected high-cost markets. Despite weak evidence that this shock can be obtained through deregulation, for heuristic purposes we momentarily embrace the causal linkages posited by deregulationists. The exercise adopts estimates for (i) the rate of growth of local housing stocks; ii) the elasticity of prices with respect to supply and iii) filtering/depreciation rates.

We assume a 1.5% annual growth rate in the stock of housing in each commuting zone, approximately corresponding to the 90th percentile of growth between 2000 and 2020. For context, over that period, Deltona, FL grew nearest to the 90th percentile, while Sunbelt cities like Denver, Phoenix, Houston, and Austin grew at 1.6, 2, 2.1, and 3.2 percent respectively. The housing stock in the San Jose, San Francisco, Los Angeles, and Boston commuting zones grew at about 0.7% annually, while New York's grew at about 0.6%, so in each case this would imply more than doubling observed growth rates.

For each commuting zone, we simulate how long an annualized 1.5% local market-rate construction shock would need to be sustained for today's median 1-bedroom unit to become affordable to a worker without college education. Following convention, we define affordability as 30% of household income. Our primary data source is a 5-year public use microdata extract of the American Community Survey (Ruggles et al, 2025). For each commuting zone, we use these data to measure (a) median 1-bedroom rent, focusing on units of any age that became occupied

in the last year to capture the market a new renter would face; and (b) annual wages for workers aged 25 years and over, who have not attended college, who worked at least 40 weeks in the previous year for an average of at least 30 hours a week. Our focus on workers without a college education reflects the likelihood that rising area housing costs are likely to be most burdensome for this group.

Equation (1) defines the rate R at which housing prices decline in response to a construction boom:

$$R = (C * E) + F \quad (1)$$

where C is the rate at which supply is increased (1.5), E is the elasticity of prices to supply, and F is the filtering rate. Equation (2) applies a compound decline formula to calculate how many years T a shock would be required to achieve affordability under different values of R :

$$T = \log\left(\frac{W}{H}\right) / \log\left(1 - \left(\frac{R}{100}\right)\right) \quad (2)$$

where W is 30% of the monthly median noncollege wage in a commuting zone, and H the median monthly 1-bedroom rental cost. Finally, we use T to calculate the implied increase in the housing stock of each commuting zone.

Table 1 reports results from a lower-bound and upper-bound scenario. In our lower bound (i.e. lower in terms of the duration of the shock) scenario, we set $E=1$, more optimistic than any estimate drawn from the literature. From Rosenthal (2014), we adopt a filtering rate $F=2.5$ percent, which, because it applies to the incomes of occupants and not housing prices, is likely very high. In our upper bound scenario, we rely on a value of E of 0.2 approximating Mense (2025), and a 0.3 percent depreciation rate (F) from Rosenthal (2014). These imply that the 1.5 percent supply shock reduces prices by 4 percent per year in the first scenario and 0.6 percent in the second. In both cases, we assume no segmentation across housing submarkets—new market-

rate supply has uniform impacts on prices across all submarkets in a region, an assumption that may underestimate the true number of years required to achieve affordability if new market-rate supply has smaller impacts on prices at the lower end. We also assume that the effect of the shock is confined to the city-region.

Table 1. Simulated affordability impacts of a 1.5% market-rate local construction shock in selected commuting zones

Largest City in Commuting Zone	Median 1 Bedroom Rent	No College Median Wage	Affordable Rent	2020 Housing Stock	Implied Final Housing Stock	Number of Years for Shock
<i>Lower bound: $E=1$; $F=2.5$</i>						
San Jose, CA	\$2,200	\$35,634	\$890.85	958,378	1,332,701	22.15
San Francisco, CA	\$2,050	\$38,848	\$971.2	2,064,868	2,711,590	18.30
New York, NY	\$1,731	\$35,000	\$875	5,101,578	6,542,853	16.71
Los Angeles, CA	\$1,511	\$31,288	\$782.2	6,608,750	8,402,527	16.13
Washington, DC	\$1,564	\$38,400	\$960	2,373,088	2,835,450	11.96
Boston, MA	\$1,500	\$41,717	\$1,042.93	2,357,992	2,692,211	8.90
<i>Upper bound: $E=0.2$; $F=0.3$</i>						
San Jose, CA	\$2,200	\$35,634	\$890.85	958,378	8,971,553	150.22
San Francisco, CA	\$2,050	\$38,848	\$971.2	2,064,868	13,108,843	124.14
New York, NY	\$1,731	\$35,000	\$875	5,101,578	27,587,904	113.36
Los Angeles, CA	\$1,511	\$31,288	\$782.2	6,608,750	33,693,542	109.41
Washington, DC	\$1,564	\$38,400	\$960	2,373,088	7,938,035	81.10
Boston, MA	\$1,500	\$41,717	\$1,042.93	2,357,992	5,794,706	60.39

Notes: Affordability is defined as 30% of the income of a worker without any college education. Per Equation (1), E represents the elasticity of prices to supply, and F is the filtering rate. Median 1 bedroom rent is measured for units of any age that were occupied by all tenants in the previous year (as this is the market a person will face) using 2019 5-year American Community Survey (ACS) microdata (Ruggles et al., 2025) with the weighting procedure for 1990-vintage commuting zones (Tolbert & Sizer, 1996) described in Autor & Dorn (2013) and Dorn (2009). Noncollege median wage was also measured with 2019 5-year ACS microdata for workers with no college education, who were at least 25 years old, and who worked at least 40 weeks in the previous year for 30 hours per week on average. The 2020 housing stock was measured with 2020 decennial census summary data for counties standardized to 2010 boundaries (Manson et al., 2024), and aggregated to 1990 commuting zones. Housing stock numbers are rounded to the nearest whole number.

The rightmost column of Table 1 summarizes the key findings. Even a major positive shock to housing supply – sustained year after year – would take decades to meaningfully ameliorate residents’ affordability challenges. In the San Francisco Bay Area, where the mismatch between prices and non-college wages is the largest, even under the highly optimistic lower bound scenario it would take about 20 years for house prices to become widely affordable; under the upper bound scenario, it would take over 100 years. Both scenarios require enormous, localized shocks to the housing stock. This simple exercise clearly illustrates that interventions focused on market-rate supply alone are unlikely to generate widespread affordability in any meaningful timeframe.

In making sense of this exercise, it is worth considering several additional forces that are not included in our simulation but negatively impact the probability of housing units becoming affordable in this scenario:

1. Upzoning and deregulation likely have immediate positive impacts on land values and increase wealth inequality between landowners and renters (Freemark, 2023).
2. A shock of this magnitude ought to significantly increase the short-term cost of construction labor in affected MSAs (Serkin & Sitaraman, 2025), influencing the cost of new units.
3. Table 1 ignores retirement rates of housing. The same processes which generate this shock may also accelerate the replacement of the current affordable housing stock with market-rate housing, which would increase prices in lower tier submarkets.
4. Homes tend to depreciate more slowly than they filter downward across income tiers (Rosenthal, 2014). The use of a 2.5% filtering rate in the lower-bound

scenario thus overstates the extent to which today's market-rate housing will become affordable as it ages.

This simulation is consistent with the idea that, in aggregate, increased supply will slow the growth of housing prices (Been et al., 2025). Nor does it deny other potential benefits from increasing supply, including augmented aggregate productivity (Duranton & Puga, 2023; Hsieh & Moretti, 2019), reduced carbon emissions (if it prompts more density and less commuting), and improved access to desirable regions. But the simulation makes clear it is unrealistic to think that we can deregulate and build our way out of the affordability crisis with market-rate housing, even with large positive supply shocks, in any reasonable time frame.

Two additional points on timing merit consideration. First, the supply-constraint literature assumes that deregulation alters developer behavior, unleashing bursts of new supply formerly discouraged by regulation. But existing research demonstrates that developers behave strategically in deciding when to undertake projects (Titman, 1985), particularly for transitions to higher-density development. In areas zoned for high-density, there is a high future opportunity cost of development today. When developers build today, they forfeit the option to develop the same site later when market conditions might be more favorable. Recent research on option value demonstrates that developers often delay construction in anticipation of higher future returns, particularly when they expect demand to grow (Lange & Teulings, 2024; Murphy, 2018). Ironically, regulations might actually increase housing supply if they reduce developers' expectations about future profits, prompting them to build sooner rather than wait (Murray, 2020).

Second, there is no reason to believe that developers would ever knowingly build enough housing to drive investment returns below market rates. In the past when they have done so, it

has been a cyclical overshoot error, a coordination failure, usually induced by speculative bubbles. As a short-term cyclical matter, such price-reducing oversupply might be good for potential entrants to the market, but if it were to become a structural feature of housing markets, it would destroy much personal wealth in housing equity (Kuhn et al., 2020). In other words, when supply shocks are proposed as a means to reduce housing prices or price growth, such proposals must be evaluated not only on whether the instrument to induce them is realistic and effective, but also in consideration of their general equilibrium effects on the economy and full distributional effects on existing property owners and potential first-time buyers. These considerations are largely absent in the deregulationist literature.

If the deregulationist policy framework is unlikely to remedy unaffordability, where do more feasible solutions lie? To answer this question, we must achieve greater clarity on the true drivers of the decline in affordability. We turn now to this task.

4. Demand drives supply and prices, and inequality in demand makes housing unaffordable for many

There is substantial agreement that recent decades have seen a growing share of households spending over 30 percent of their income on housing. Regulation-induced supply restriction is not a satisfactory explanation. Instead, we stress the combination of rising per capita income, rising per capita income inequality, and geographical sorting of different groups. We first argue that the housing market has responded similarly to shifts in demand across U.S. regions, regardless of regulation (4.1). We then show that in a context of rising aggregate demand, demand has also become increasingly uneven, with growing incomes for some segments and stagnating or declining incomes for others, mechanically reducing affordability for

the latter (section 4.2). Next, we zero in on some representative cases to show how the combination of rising aggregate demand and growing inequality generates unaffordability (section 4.3). Finally, we bring these increases in interpersonal, interregional and intraregional inequality into a narrative explaining the decline in affordability (section 4.4).

4.1 Housing markets respond to aggregate demand

As established in Section 3.1, housing supply and prices have responded similarly to demand shifts across regions in recent decades, regardless of regulatory stringency. This is further evident in two facts: (a) the overall vacancy rate is higher today than in 1970 (McClure & Schwartz, 2025a) and (b) housing costs have tracked almost perfectly with per capita income growth since the 1960s, even in supposedly "supply-restricted" markets like San Francisco.

The supply-restriction view becomes harder to justify given other shifts in housing demand over the last 50 years. Average household size declined from 3.2 people per household in 1970 to 2.6 in 2020 (Freemark, 2025). If supply were truly constrained, we would expect people to be living in progressively larger, not smaller, households. Moreover, dramatic improvement in urban amenities (Couture & Handbury, 2020; Diamond, 2016) combined with significant increases in average unit sizes since 1970 imply rising housing amenity value (Louie et al., 2025).

These historical changes are significant omissions from deregulationist accounts. Yet they make it remarkable that, rather than suffering from regulation-induced supply restriction, the housing market in aggregate appears to be functioning well: supply and prices move with demand. The question is why housing has become so unaffordable for many.

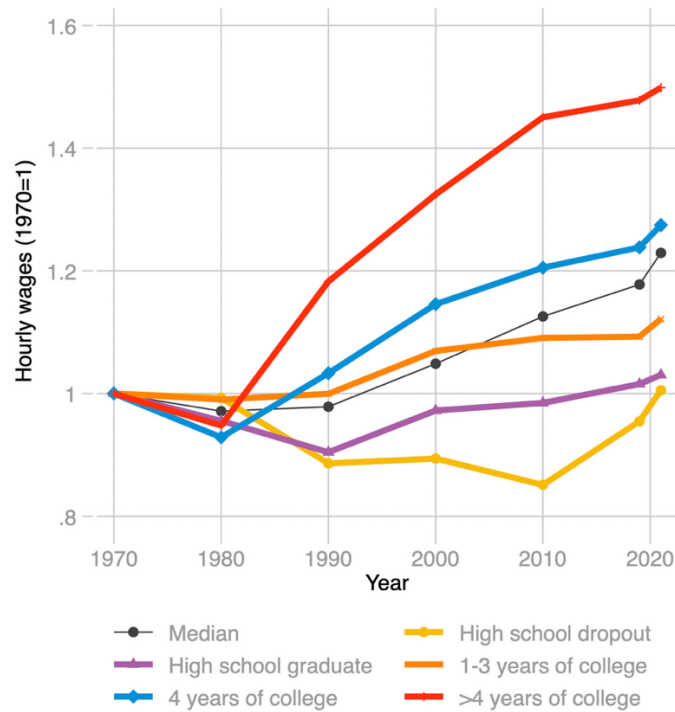
4.2 The rise in spatial and interpersonal inequality

Aggregate regional demand for housing is primarily a function of local average income and population levels (Notowidigdo, 2020; Jia et al., 2023), but these have changed unevenly across regions over the past half-century, creating a wedge between prices and incomes at the bottom of the income distribution.

Americans increasingly live in large urban regions marked by high aggregate demand for housing. Between 1970 and 2019, the number of people living in commuting zones with at least one million residents grew by over 100 percent, while the number of people in commuting zones with less than 1 million people grew by about 15 percent. This population growth has not been equally distributed across the education gradient. Differential spatial sorting (Moretti, 2013; Diamond & Gaubert, 2022; Frigon & Storper, 2025) has meant that college-educated workers have disproportionately chosen to inhabit large, dense cities marked by high wages and desirable urban amenities (Buchholz, 2022; Diamond, 2016).

Income changes are more complex. Computers, robots, and global trade have diminished demand for Americans in middle-skill, middle-income jobs – especially those performing manufacturing and clerical tasks (Kemeny & Rigby, 2012; Cooke et al., 2019; Autor et al., 2016; Acemoglu & Restrepo, 2020) – while simultaneously increasing demand for education-intensive jobs made up of nonroutine cognitive tasks (Autor et al., 2003). Demand for such highly educated workers has also outstripped their supply in recent decades (Goldin & Katz, 2009; Autor et al., 2020), while new technologies have disproportionately augmented their productivity (Burststein et al., 2019). Jointly, these changes have produced steep national inequality, often described in terms of an increase in the incomes of college graduates relative to those with lower educational attainment (Lemieux, 2006; Autor, 2019).

Figure 1. The returns to education over time



Note: Authors' calculations based on successive public use extracts of the decennial census and ACS from Ruggles et al., (2025). The sample of workers includes those in employment at the time of survey, between the ages of 16 and 64. Hourly wages are calculated as annual wage and salary income adjusted based on the assumption of 48 weeks of work and 40 hours work per week. Following Hoxie et al (2023), we drop individuals who earn less than \$112 per week, inflation-adjusted to 2015 dollars using CPI-U. Wages in the figure are indexed to 1970 values. High school dropouts are workers with less than 12 years of education. Graduates have exactly 12 years of education.

Figure 1 illustrates this inequality, demonstrating that, between 1970 and 2021, workers with higher levels of educational attainment, especially those with at least four years of college, experienced dramatically higher rates of wage growth compared to those with lower education levels, whose wages remain essentially unchanged. Wage gaps have also expanded between workers with a four-year college degree and those with graduate degrees. Though changes in housing prices track changes in demand, which has risen consistently as incomes have grown (Louie et al., 2025; Howard & Liebersohn, 2021, 2025), rising housing costs disadvantage the large segment of the population with more or less stagnant wages. Such residents may respond

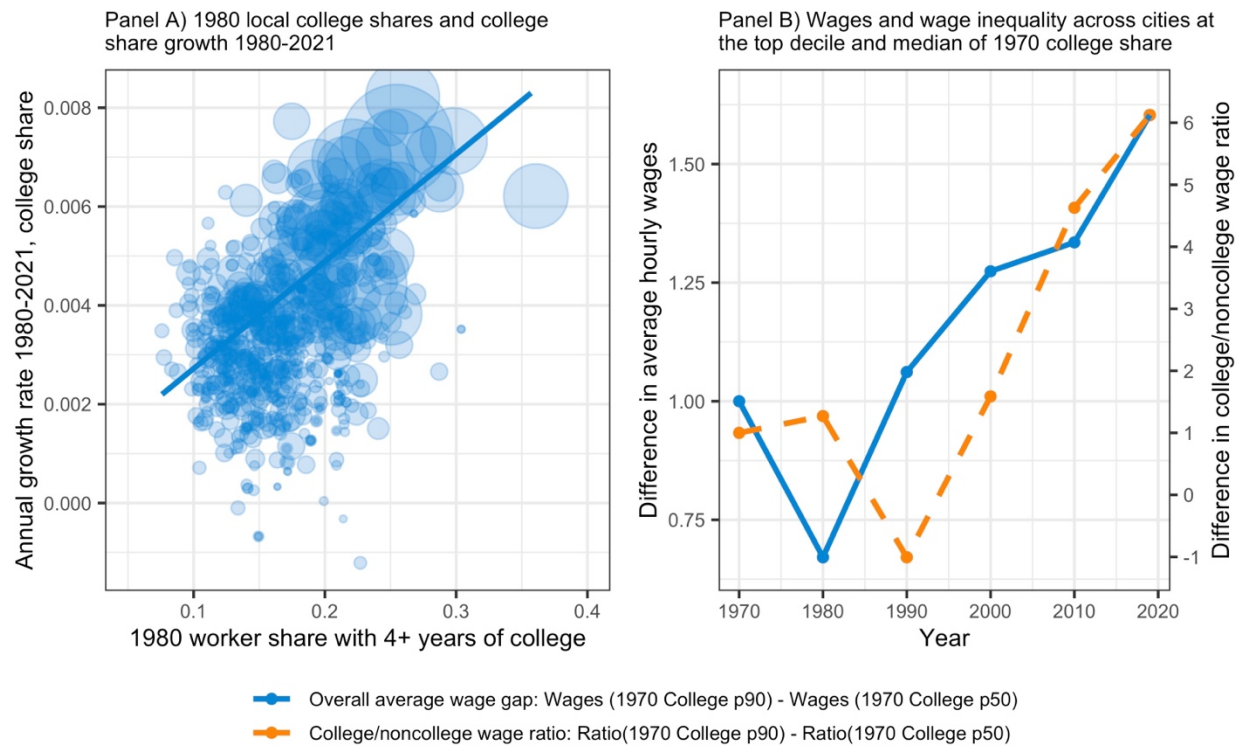
by consuming less housing, spending more of their income on rent, or relocating. The national rise in income inequality is thus an independent driver of growing housing unaffordability (Dong, 2018; Petach, 2022).

In the presence of education- and task-based spatial sorting, rising income inequality implies particular affordability challenges. Imagine that each American settlement mirrored the national interpersonal income distribution. In this case, rising inequality would have generated similar rises in unaffordability across places. But in 1970—at the start of 50 years of rising national wage inequality—different locations began with different relative distributions of college- and noncollege-educated workers. Cities like Washington DC, San Jose, Austin, and San Francisco already had four to five times the share of graduates in 1970 than some of the least-educated areas, located mostly in the south. Mechanically then, if workers and their descendants had been fixed in place, rising national inequality would have generated different patterns of intra-locational inequality, with some places remaining relatively egalitarian, and others increasingly divided (Manduca, 2019). Cities like San Francisco, having become highly income-polarized, would experience a rise in unaffordability for their lower-income residents exceeding the rise in unaffordability nationally.

Yet places like San Francisco not only began the period with greater stocks of more highly educated workers; as Figure 2, Panel A makes clear, in succeeding decades they have also reinforced this educational advantage by attracting college-educated workers at disproportionate rates. American cities that began in 1980 with larger relative endowments of college-educated workers exhibited faster growth rates up to 2021 in their shares of college-educated workers. The disproportionate growth in housing demand in metropolitan areas like San Francisco, through

creating high-wage jobs and attracting highly compensated workers, has also conferred an additional advantage on incumbent homeowners: swift appreciation of their home values.

Figure 2. The changing geography of college-educated workers and its implications for between-place wage inequality



Note: Authors' calculations based on successive public use extracts of the decennial census and ACS from Ruggles et al., (2025). Observations are 1990-vintage Commuting Zones (CZs), defined according to Tolbert and Sizer (1996). The sample of workers includes those in employment at the time of survey, between the ages of 16 and 64. Workers are assigned to CZs probabilistically, following Dorn (2009) and Autor and Dorn (2013). Hourly wages are calculated as annual wage and salary income adjusted based on the assumption of 48 weeks of work and 40 hours work per week. Following Hoxie et al (2023), we drop individuals who earn less than \$112 per week, inflation-adjusted to 2015 dollars using CPI-U. Wages in Panel B are adjusted for inflation to constant 2015 dollars using the CPI-U. For each series in Panel B, the comparison is between the group of cities that fall into the top decile according to the 1970 share of college-educated and cities at the median of the 1970 share of college-educated. The left y-axis of Panel B captures the absolute difference between hourly wages across these two groups of cities (indexed to 1 in 1970). The right y-axis of Panel B describes differences between these two groups of cities in terms of the ratio of wages for workers with at least four years of college to wages for workers with less than four years of college (also indexed to 1 in 1970). Marker size and linear fit in Panel A are weighted by 1980 commuting zone population.

This sorting reflects a new geography of jobs: the shift from an American economy rooted in building physical objects to one producing knowledge (Moretti, 2012; Davis & Dingel,

2019; Kemeny & Storper, 2020a; Eckert et al., 2022). The most highly-educated workers have been drawn to populous, dense and already education-abundant cities to share ideas and match effectively in a series of spatially-concentrated sectors at the frontiers of knowledge, such as information technology, biotech, finance and professional services (Buchholz, 2022; Kemeny & Storper, 2020b; Dauth et al., 2022; Connor et al., 2024; Moretti & Yi, 2024). In these superstar cities, college-educated workers do not simply enjoy higher incomes than their less well-educated fellow residents; they also receive higher wages than observationally equivalent workers elsewhere in the country. Explanations for this geographic variation highlight place-specific differences in skills and tasks (Card et al., 2025; Kemeny and Storper, 2015; Atalay et al., 2024), as well as amenity-seeking by skilled workers (Couture and Handbury, 2020); net patterns of sorting includes outmigration by the less skilled in the face of rising living costs (Ganong and Shoag, 2017).

Rising national college/noncollege wage gaps, the spatial clustering of college-educated workers, and a growing urban college wage premium mean that the last half century has witnessed a significant expansion of interregional inequality (Kemeny & Storper, 2020a; Storper, 2018). Rather than simply rising differentiation in the urban system, a small subset of densely populated and economically important ‘superstar’ cities have pulled away from other places in terms of average wages and total income (Kemeny & Storper, 2024) and wealth (Suss et al., 2024), but also housing costs (Gyourko et al., 2013) and income polarization (Buchholz, 2025; Buchholz & Storper, 2025).

Figure 2 Panel B visualizes these changes. The solid line describes changes in the gap between average hourly wages in cities at the top decile and the median in terms of the share of college-educated workers in 1970. Between 1980 and 2020, the difference in average hourly

wages between these two kinds of cities more than doubled. For these two groups of cities, the dashed line considers relative changes in the local ratio of college-to-noncollege wages—capturing differences in the evolution of local income polarization. In cities with the greatest proportions of college-educated workers, the gap between local college and non-college wages grew 6 times more than in local labor markets with the median share of college-educated workers. Though inequality has risen almost everywhere in the U.S., in highly educated cities its rise over the past 30 years has been dramatic.

While affluence and inequality have become more geographically concentrated, lower income workers and their households are present in communities of all kinds (Gaubert et al., 2021). Workers in ‘middle-skill’ jobs such as clerical, production and sales occupations, though diminished in terms of their share of jobs overall, are now relatively scarce in dense and populous cities (Autor, 2019; Frigon & Storper, 2025), resulting in deep local polarization.

4.3 Inequality reduces affordability by creating a wedge between prices and incomes

Growing inequality reduces affordability by creating a wedge between prices—which have roughly tracked per capita income growth—and the stagnant incomes of those at the bottom of the distribution. We illustrate this across the entire U.S. and the commuting zones centered around San Francisco, Houston, and Cleveland, in Figure 3. Our analysis focuses on 1980 onward, identified earlier as a key inflection point in the labor market. We focus on of 3 sets of variables:

- Mean income from the Bureau of Economic Analysis (BEA) (2025), which is measured for counties and aggregated up to CZs and nationwide. This is arguably the most comprehensive and accurate measure of total personal income available. It includes

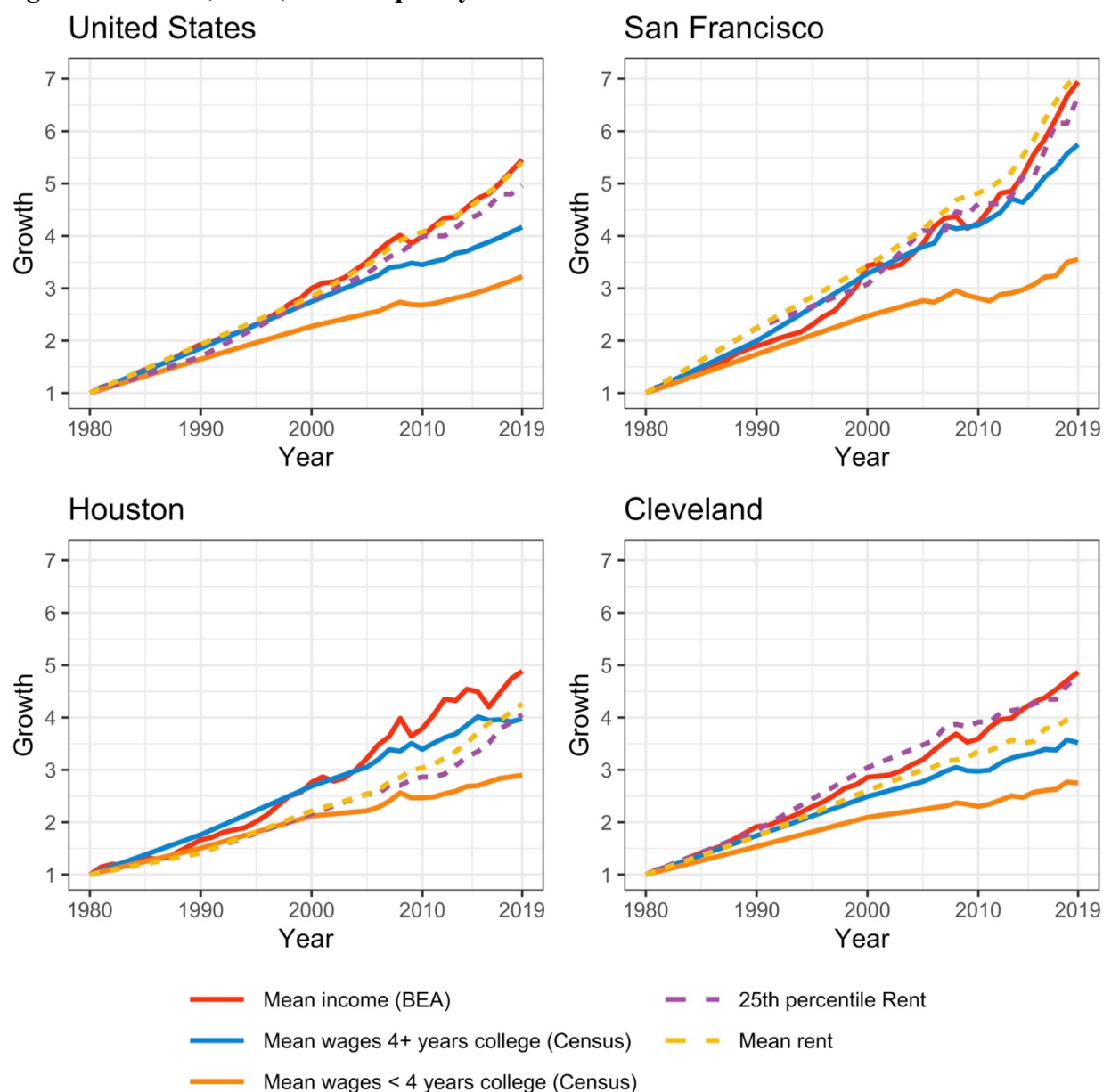
income from a broad range of sources, including wages and salaries, investments (e.g. rental income, dividends, interest), businesses, government transfers, and non-wage and salary employment income (e.g. employer contributions to health insurance or 401ks). Unlike Census data which is self-reported, BEA income estimates are derived in large part from administrative records, though they are only available as county aggregates.

- Wage and salary (or simply “wage”) income derived from Decennial Census and American Community Survey extracts (Ruggles et al., 2025). This variable is measured separately for workers whose highest level of educational attainment is 3 years of college and for workers with at least 4 years of college education, which we refer to as “noncollege” and “college” workers.
- Rent, measured at the mean and the 25th percentile of the rent distribution within each CZ using Decennial Census and American Community Survey extracts (Ruggles et al., 2025). We focus on rental prices since they better represent the economic cost of housing, unlike owner costs which are influenced by things like interest rates, taxes, and growth expectations (Murray & Phibbs, 2023).

For the whole U.S., Figure 3 demonstrates a tight relationship between mean income and rent. This relationship holds for both mean and 25th percentile rent, which is unsurprising if increases at the mean prompt owners of lower-quality units to raise rents to justify keeping their unit in the low-quality submarket and not redeveloping into a higher-quality unit. Remarkably, this relationship holds almost perfectly over the entire 40-year period, suggesting the market is functioning normally by historical standards. At the same time, the gap between college and noncollege incomes has widened, with national wage growth being about 317 percent for the college-educated and only 223 percent for the noncollege-educated. Overall income growth has

pushed up housing costs across the price distribution, closely mirroring average income growth, mechanically making housing more unaffordable for those with lower income growth. This is the fundamental dynamic that underlies the affordability crisis.

Figure 3. Income, Rent, and Inequality Growth



Note: Authors' calculations based on successive public use extracts of the Decennial Census (1980, 1990, and 2000) and 1-year American Community Survey (2005-2019) from Ruggles et al. (2025), as well as annual personal income data from the Bureau of Economic Analysis (2025). All values are indexed to 1 in 1980. The sample of workers for wage income includes those who are 25 and older, worked at least 40 weeks in the previous year, had non-zero wage

and salary incomes, and were employed at the time of the survey. Rent values are calculated for all renter households that were not in group quarters. Workers and households are assigned to CZs probabilistically, following Dorn (2009) and Autor and Dorn (2013).

This set of dynamics can explain affordability challenges across a broad range of city-types. In the San Francisco CZ, where observers often lament regulation-induced supply restriction as the cause of the dramatic increase in housing costs – about 600 percent in mean rent over the 1980–2019 period – mean income has increased by the same amount. The affordability crisis is particularly dramatic in San Francisco because income inequality has widened much more than elsewhere. The wage incomes of the college educated grew 475 percent while those of the noncollege-educated grew 255 percent, more than double the national increase in inequality.

The same underlying forces are at play in Houston (a rapid growth Sunbelt region held up as a poster child for unregulated land use) and Cleveland (a Rustbelt region whose population declined by over 100,000 people between 1980 and 2019). While mean rent in Houston has risen 326 percent, far less than in San Francisco, this increase is closely aligned with the increase in mean income (389 percent). Cleveland, facing different economic, institutional, and population dynamics than either Houston or San Francisco, nevertheless witnesses a close association between income growth and rent growth (387% and 301%, respectively) as well. In all three cities, wage growth of those without college degrees has fallen far behind that of college graduates – and thus behind average rates of growth – forcing them to confront a mounting affordability problem. This challenge is most acute in ‘superstar’ cities like San Francisco, where the college-noncollege wage gap is largest and where college-educated workers are a majority of the workforce, but the mechanical effect of income inequality also affects those at the bottom of the income distribution in places like Houston and Cleveland. San Francisco's slightly tighter

income-price relationship likely reflects stronger upper-tail income growth. Higher-income households may be more likely to translate income gains into increased housing consumption, unlike lower-income households already spending large shares on rent.

The national story of unaffordability driven by growing income inequality will have specific local manifestations, shaped by historical, institutional, and economic factors. Deeper research into Cleveland’s housing market, for example, might reveal why rents at the 25th percentile have grown slightly faster than mean rent, an idiosyncrasy not observed in either San Francisco or Houston. While they are important for policymakers in particular cities and regions to understand, such variations do not undermine the basic mechanism underlying the housing affordability crisis: stagnating wages for those at the bottom of the income distribution amid substantial growth in average income (and thus housing demand).

One notable feature of Figure 3 is that income from all sources has risen more rapidly than income from wages and salaries alone.² This suggests that income from sources like investments and non-wage and salary employment income may be increasingly important determinants of what is happening in the housing market as well. More likely than not, this income is concentrated among the college-educated, suggesting Figure 3 may understate the extent to which income inequality among the different groups we examine has risen. Moreover, though BEA data cannot be disaggregated across groups, there are likely substantial differences in income from non-wage sources *among* college-educated households – for example, between older and younger households and between white and non-white households. In general, college-educated workers in large, expensive cities experience swift growth in their wages due to steep wage-experience gradients (Buchholz & Storper, 2025; De la Roca & Puga, 2017); but if non-

² We confirmed this is not simply a function of measurement error in the census with a separate analysis of BEA income data by source of income. In the BEA data as well, wage and salary income has grown more slowly than income from other sources in all locations in Figure 3.

wage income is increasingly important in determining housing demand, then initial wealth disadvantage may be difficult to overcome, as many non-wage income sources are derived from wealth (e.g. dividends, interest, rental income).

Rather than regulation-induced supply restriction, today's affordability crisis reflects fundamental transformation in the structure and geography of the American economy. The combination of rising national inequality and spatial sorting of economic activity has reshaped regional labor markets and incomes, producing divergent affordability outcomes. These shifts are evident across cities with widely varying regulatory environments and growth rates.

4.4 Factuals and counterfactuals of housing, migration and population

A deregulationist might argue that a much less regulated San Francisco region would be both more populous and affordable, offering noncollege-educated workers a better deal. It is impossible to observe a counterfactual, but simulations of it, as found in Hsieh and Moretti (2019), suffer from assuming that local industrial structure and labor markets are perfectly plastic. In reality, San Francisco's job structure has over decades shifted away from middle-skill work in production and clerical work to its present polarized structure. If, overnight, deregulation gifted the region with affordable housing, it is hard to imagine it becoming a haven for workers without college degrees. Demand for workers of different kinds in different places is not plausibly an outcome of the land use regulation stringency, nor is it solely a function of housing costs. Even if costly housing has driven away many middle-skill workers and their employers out of expensive areas like San Francisco, this is inseparable from what is happening in the labor market. Less expensive housing, were it achievable with deregulation, would still leave the Bay Area as a profoundly polarized labor market with few firms hiring middle-skilled workers.

Growing inter-regional per capita income inequality drives a wedge between the average housing prices of regions: higher income levels of in-migrants compared to out-migrants increase regional housing prices (Howard and Liebersohn, 2025). Many scholars agree that regulation is largely endogenous to these demand-side forces (Davidoff, 2013; 2016; Baum-Snow & Duranton, 2025), not a primary independent cause of labor market differences.

We have shown that intra-regional income inequality increases unaffordability for workers with below-average income growth, and that inequality is systematically higher in the high-income regions. In the contemporary United States, this is why the affordability crisis is most acute for lower-income households in education-dense, high-income cities. Different combinations of these demand-side forces operate in other types of labor markets, but the fundamental challenge is rising spatial and inter-personal income inequality.

5. Reframing research and debate over declining affordability and policy to improve it

Our principal goal in this paper has been to demonstrate that deregulation has very little power to ameliorate today's affordability crisis, whereas inequality is a fundamental but underappreciated driver. We join a growing body of scholarship casting doubt on deregulationist claims that the crisis results primarily from restrictive land use regulations, and that lifting such regulations will meaningfully resolve the acute housing cost burdens faced by a growing share of American households (Davidoff, 2013; Davidoff, 2016; Louie et al., 2025; Rodriguez-Pose & Storper, 2019).

Addressing the housing affordability crisis requires confronting rising income inequality. For many, income growth has fallen behind growth in the price of the existing housing stock.

Our simulation exercise shows that the gap between incomes and prices afflicting those at the lower end cannot be overcome through policies that aim to boost the supply of market-rate housing alone. Insofar as deregulation is promulgated as the primary structural tool to address today's affordability challenges, this advocacy acts as a harmful distraction in a crucial policy debate affecting millions of American households.

Part of the appeal of the deregulationist narrative is that it suggests we can achieve affordability without major changes to labor market structure or significant public investment in the housing sector. But if affordability issues are driven primarily by demand-side forces, then resolving them requires at least one of two approaches. First, policymakers could enact policies that reduce income inequality. This brings housing policy into conversation with a much wider policy dialogue about the causes and solutions to growing income and wealth disparity. The second is to directly increase access to affordable housing among low- to moderate-income households. Many municipalities are attempting to do this, but relatively low levels of public investment mean they are swimming upstream against the demand-side factors we have described. Per capita spending on low-income housing has been essentially flat since the 1990s (Collinson et al., 2019). A growing body of evidence, this paper included, implies that this trend must be reversed if the affordability crisis is to be curbed. This may entail an expansion and strengthening of existing affordable housing programs – such as the Low-Income Housing Tax Credit (LIHTC) and Section 8 housing vouchers – vigorous investment in alternative strategies such as community land trusts, or some combination. A granular assessment of such policy approaches is beyond our scope, but they have in common the aim of strengthening the position of low-income households in the housing market through subsidy or insulation. More generally, our contention is that the market is unlikely to resolve the affordability crisis.

Proponents of upzoning and deregulation sometimes mobilize arguments other than affordability to advance their policy goals. Our research does not contradict these arguments. While upzoning does not appear to have much of an impact on supply at the regional level, it can redirect supply to more desirable parts of cities. This is a worthwhile goal (Freemark, 2025), as limiting residential population in these areas may have negative national economic effects (Duranton & Puga, 2023). Under the right circumstances, well designed and executed upzoning may also reduce carbon emissions and improve urban amenities. But ironically, if these goals are achieved, increased access to jobs and amenities will make those same locations more expensive; they will not make desirable locations affordable to households facing onerous cost-burdens, and may in fact worsen their outcomes if policies are not sufficiently context-sensitive (Damiano, 2025; Freemark, 2023). Hence, while upzoning may be desirable from the standpoint of some policy objectives, it is not a robust tool to increase affordability (Mallach, 2025).

To conclude, we return to the cognitive biases that have come to dominate the policy discussion. The deregulationist view of our housing crisis, and the academic literature upon which it stands, fails to account for key conditions that structure today's housing affordability crisis. It harkens back to a mid-20th century America in which housing was more affordable, but ignores how this period was marked by a fundamentally different distribution of income, and different spatial sorting patterns of people and jobs. This past was, as the saying goes, "another country." A lack of careful incorporation of these factors weakens the deregulationist case. Future analyses might also incorporate additional aspects of demand to which we have given less attention, such as household size, lifestyle preferences, and housing quality standards. Future research might also investigate the interaction of rising inequality with local policy factors, such as rent control. The idea that today's housing affordability crisis can be addressed by a simple

swing of the pendulum back to a mythical free market for construction – through overriding local authority over zoning and regulation – could well be another “great planning disaster,” along the lines of other great historical mistakes in urban policy for which we have paid dearly afterwards (Hall, 1980). Attention is a scarce resource in policy formation. When dominant paradigms become conventional wisdom, alternatives may be locked out (Jones and Baumgartner, 2005). If the current focus on deregulation and upzoning crowds out political and policy attention to effective affordability policies, the opportunity cost may be very high.

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