

# Economic Implications of Housing Supply

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# Three Types of Housing Markets

## 1. Rising housing demand and **elastic** housing supply.

- ▶ Result: *large* increase in housing supply and *small* increase in housing price. E.g., Atlanta

## 2. Rising housing demand and **inelastic** housing supply.

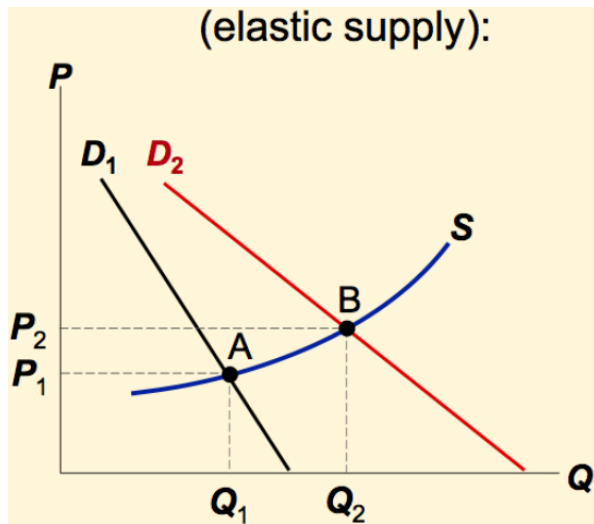
- ▶ Result: *small* increase in housing supply and *large* increase in housing price. E.g., San Francisco

# Three Types of Housing Markets

## 3. Declining housing demand

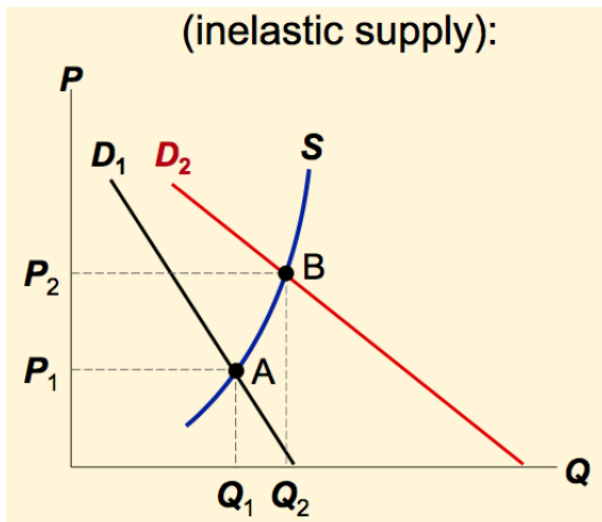
- ▶ When housing demand declines, because housing is durable, housing supply will *not* decrease (in the short run). Result: decrease in housing price only.
- ▶ Urban decline is not the mirror image of urban growth. A city's population grows with its economy, but does not decline with its economy (or declines at a very slow rate). When a city's economy declines, individuals with high human capital will leave the city, leading to a decrease in housing demand. This results in lower housing prices that attract individuals with lower levels of human capital to move into the city, since the total housing supply does not decrease in the short run. E.g., Detroit

## Markets with Rising Demand



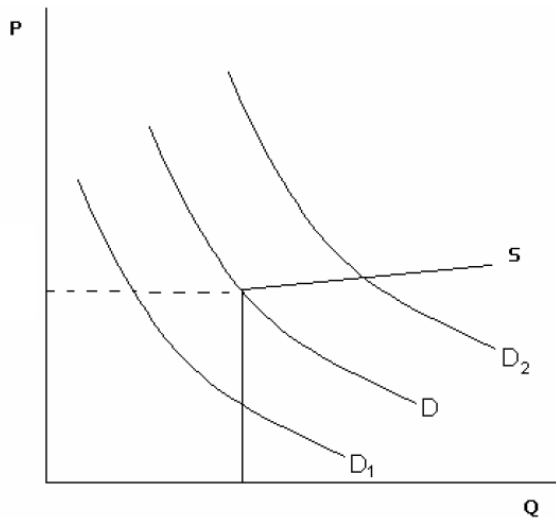
E.g., Atlanta

## Markets with Rising Demand



E.g., San Francisco

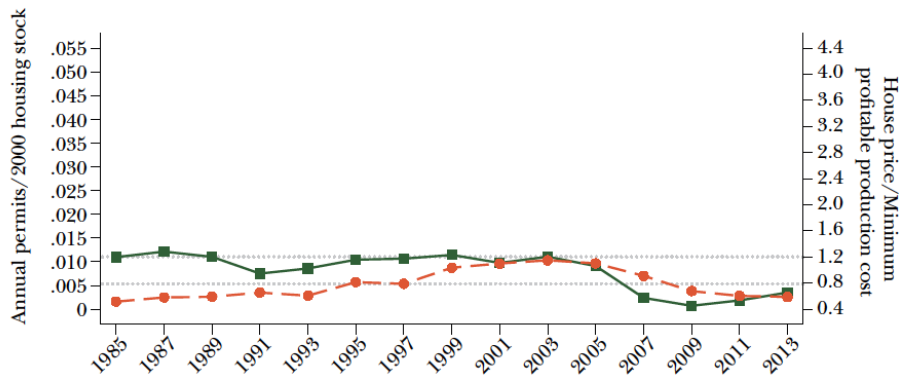
## Markets with Declining Demand



E.g., Detroit

# New Housing Supply and House Prices

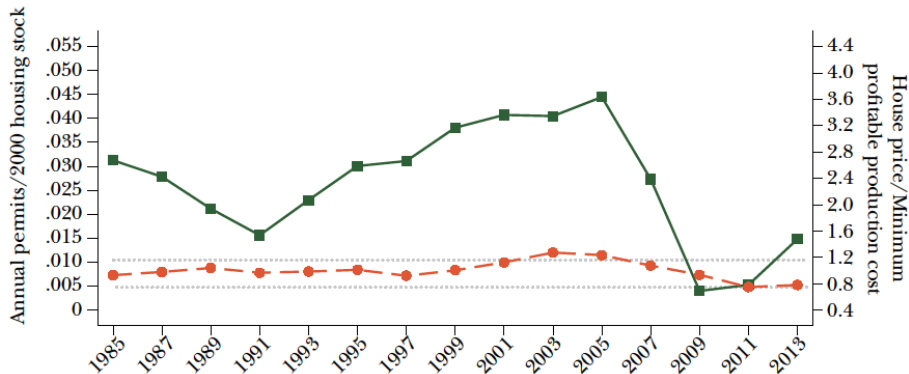
A: (Declining Market): Detroit-Warrant-Dearborn, MI





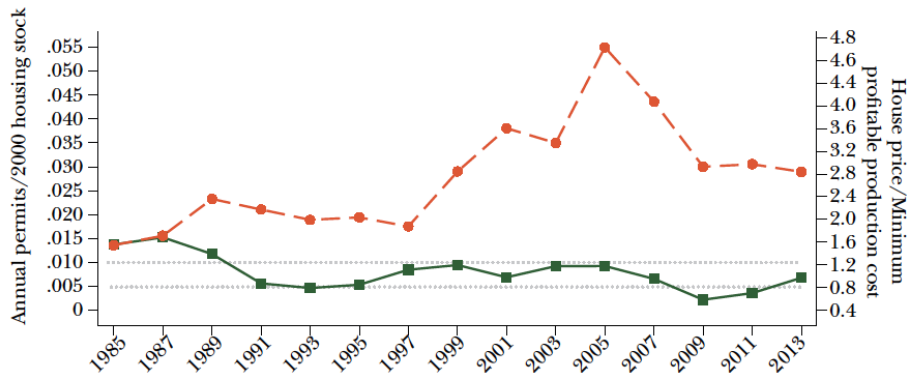
# New Housing Supply and House Prices

B: (Growing, Elastically Supplied Market): Atlanta–Sandy Springs–Roswell, GA



# New Housing Supply and House Prices

C: (Growing, Inelastically Supplied Market): San Francisco–Oakland–Hayward, CA



# Housing Supply Elasticity and Housing Price Dynamics

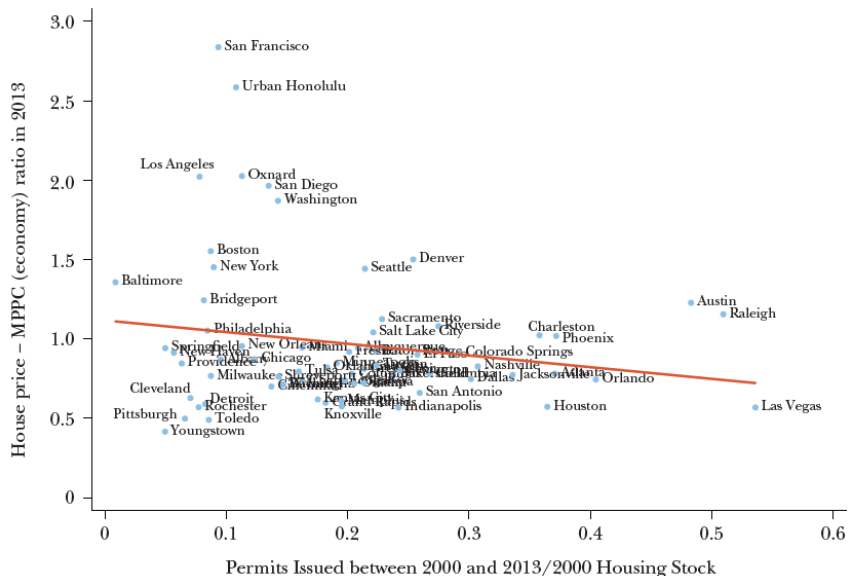
Cities with inelastic housing supply generally experienced much more extreme price gyrations during the boom–bust cycles of the 1980s and 2000s (Glaeser, Gyourko, and Saiz, 2008).

- In the 1980s boom, mean price growth was 29% for most inelastic metropolitan areas and 3.4% for the most elastic metropolitan areas.
- During the 1996–2006 boom, mean real price growth was 93.9% in the most inelastic cities and 28.2% in the most elastic cities.

## Zoning Regulations and Housing Supply Elasticity

- An important determinant of a city's housing supply elasticity is its government's regulations on residential land use (zoning regulations).
- The [Wharton Residential Land Use Regulation Index](#) measures the degree of housing regulation by surveying local government officials on the difficulty of obtaining building permits across metropolitan areas.
- In lightly regulated markets, housing price is close to the cost of producing the housing unit.
- In highly regulated markets, housing price can be substantially above production cost.
- The gap between price and production cost can be understood as a **regulatory tax**.

# Price-to-Cost Ratios and Permitting Intensity



# The Impact of Housing Supply Restrictions

- Zoning regulations, which are housing supply restrictions, shape the personal portfolios of millions of individuals.
- A small percentage of the country's population sits on a large amount of housing wealth: the rise in housing wealth is concentrated in major coastal markets and among the richest members of the older cohorts — those who bought homes several decades ago, before binding constraints on new housing construction were imposed.
- In effect, the changes in housing wealth reflect a **redistribution** from buyers to a select group of sellers. Because homeowners tend to be older while renters are younger, the limited growth in housing supply has created an **intergenerational transfer** to currently older people.

# The Impact of Housing Supply Restrictions

- Housing wealth is different from other forms of wealth because rising prices both increase the financial value of an asset and the cost of living<sup>1</sup>.
- When housing prices rise, those who already own housing are essentially hedged against a higher cost of housing. Renters, conversely, experience the rising housing costs directly and become poorer in real terms.

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<sup>1</sup>This explains why home-rich New Yorkers or Parisians may not feel privileged: if they want to continue living in their homes, high housing values do them little good (unless they own multiple units), while they have to pay for the high prices of local non-traded goods.

# Housing Net Worth (2013 dollars)

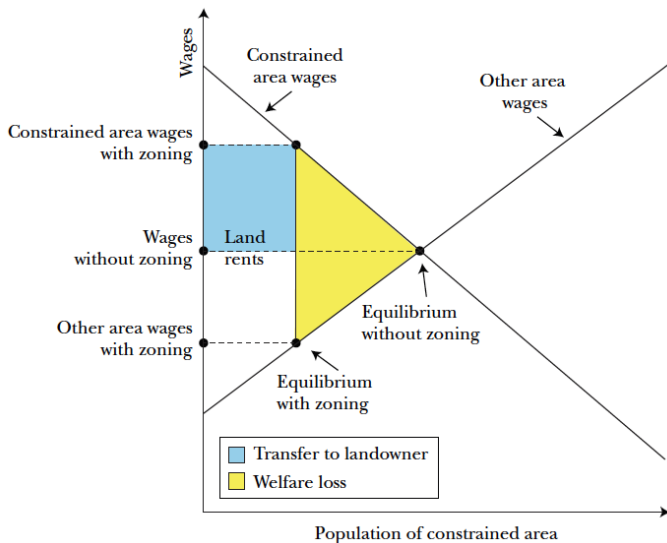
<i>Percentile</i>	<i>1983</i>		<i>2013</i>	
	<i>18–24 year-olds</i>	<i>45–54 year-olds</i>	<i>18–24 year-olds</i>	<i>45–54 year-olds</i>
50	\$0	\$87,120	\$0	\$30,000
75	\$0	\$152,159	\$0	\$109,000
90	\$24,803	\$248,818	\$5,500	\$250,000
95	\$47,488	\$353,190	\$43,000	\$400,000
99	\$141,808	\$862,359	\$95,000	\$1,000,000
<i>Percentile</i>	<i>25–34 year-olds</i>	<i>55–64 year-olds</i>	<i>25–34 year-olds</i>	<i>55–64 year-olds</i>
50	\$0	\$94,184	\$0	\$60,000
75	\$45,352	\$161,886	\$21,000	\$167,000
90	\$91,827	\$255,361	\$74,000	\$350,000
95	\$123,135	\$353,190	\$140,000	\$543,000
99	\$230,751	\$760,380	\$256,000	\$1,500,000
<i>Percentile</i>	<i>35–44 year-olds</i>	<i>65–74 year-olds</i>	<i>35–44 year-olds</i>	<i>65–74 year-olds</i>
50	\$55,799	\$82,411	\$6,000	\$100,000
75	\$118,660	\$150,136	\$58,200	\$225,000
90	\$180,763	\$279,972	\$168,000	\$440,000
95	\$247,349	\$426,936	\$300,000	\$701,000
99	\$531,198	\$941,840	\$1,025,000	\$2,000,000



# The Impact of Housing Supply Restrictions

- Housing supply restrictions also have profound impact on urban labor markets and productivity.
- High housing prices prevent people from moving into more desirable metropolitan areas – areas with high productivity and high wages, resulting in a misallocation of labor that could have a serious adverse effect on productivity.
- If there exists productivity spill-over effect, or if the rate of innovation is positively correlated with the size of the local population, then such adverse effect will only be magnified.
- Hsieh and Moretti (2017) estimated that real GDP could be nearly 9 percent higher if there were plentiful new construction in just the three high productivity markets of New York, San Francisco, and San Jose.

# Welfare Consequences of Restricting Development in a Productive Market



## Why Restricting Housing Supply?

- Existing homeowners do not want more affordable homes: they want the value of their asset to cost more, not less. One obvious way to protect asset value is to restrict new supply<sup>2</sup>.
- More housing supply creates **negative externalities**: new construction can lead to more crowded schools and roads, and it is costly to create new infrastructure to lower congestion.
- However, empirical investigations of the local costs and benefits of restricting building generally conclude that the negative externalities are not nearly large enough to justify the costs of regulation.

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<sup>2</sup>They also may not like the idea that new housing will bring in more people, including those from different socioeconomic groups.

# Reference

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-  Glaeser, E., Gyourko, J., and A. Saiz. 2008. "Housing Supply and Housing Bubbles." *Journal of Urban Economics*, 64(2).
-  Hsieh, C. and E. Moretti. 2017. "Housing Constraints and Spatial Misallocation." NBER Working Paper 21154.