

“The Economic Implications of Housing Supply,” by Ed Glaeser and Joseph Gyourko (2018 JEP)

Presented by Ben Pirie

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Do Markets Around the US Efficiently Produce Housing?

1. Are housing prices roughly equal to the cost of production?
 - Land costs
 - Construction costs
 - Entrepreneurial profit
 - Regulatory costs
2. What can this tell us about
 - the distribution of home prices?
 - household wealth?
 - the spatial distribution of people?

Estimating Minimum Profitable Production Costs

$$MPPC = (L + CC) \times EP$$

- L – Industry rule of thumb says at most 20% of total cost
- CC – RSMeans Company Data on material, labor, and equipment
- EP – Use developer gross profit margins and operating costs to back out 17%

⇒ The authors attribute the “gap” between price and MPPC to reflect the influence of regulation.

In Most Markets Production is Efficient

House Price to Minimum Profitable Production Cost Ratio ($P/MPPC$):

Using All the Micro Data

(percent of observations that fall into each category)

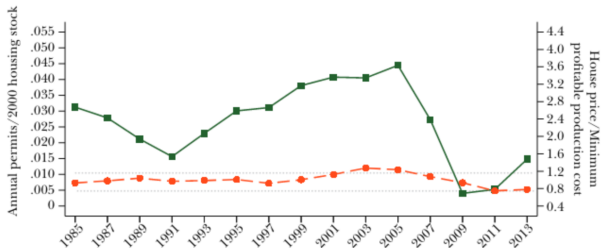
Year	$P/MPPC \leq 0.75$	$0.75 < P/MPPC \leq 1.25$	$1.25 < P/MPPC \leq 2$	$P/MPPC > 2$
1985	38.0%	40.5%	17.9%	3.6%
1987	33.4%	38.3%	21.7%	6.6%
1989	31.8%	34.6%	20.3%	13.3%
1991	31.1%	35.3%	22.5%	11.1%
1993	31.8%	36.1%	23.6%	8.5%
1995	27.4%	37.7%	26.5%	8.4%
1997	31.5%	40.0%	23.0%	5.5%
1999	22.0%	40.1%	26.2%	11.8%
2001	19.4%	38.2%	25.2%	17.1%
2003	16.2%	32.1%	25.9%	25.9%
2005	18.0%	28.7%	25.3%	28.0%
2007	19.9%	28.1%	24.0%	28.0%
2009	31.4 %	33.9%	21.6%	13.1%
2011	37.4%	35.4%	16.0%	11.2%
2013	40.3%	33.3%	16.2%	10.2%

- For a given home size and market, the price listed in the American Housing Survey is matched with the appropriate calculation of the *MPPC*.

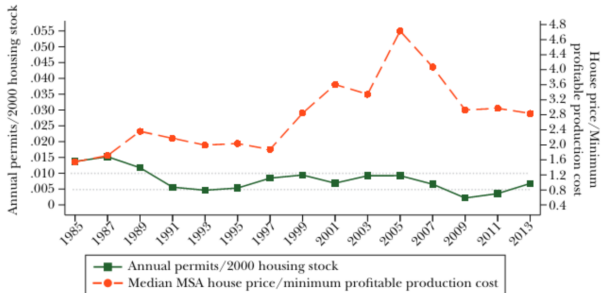
American Cities Fall Into Three Groups

1. Lightly regulated markets with growing populations where the supply curve is flat (i.e. Atlanta)
⇒ The quantity supplied is able to adjust quickly to demand shocks such that prices remain stable.
2. Heavily regulated markets with growing populations where the supply curve is upward sloping (i.e. San Francisco)
⇒ The regulations in place make it difficult for quantity to adjust, leading to very volatile prices.
3. Markets with declining population where the supply curve has a kink (i.e. Detroit)
⇒ It is costly to reduce the quantity of housing, so prices fall dramatically with negative demand shocks.

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



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



Older Buyers Experienced Relatively Large Increases in Housing Equity

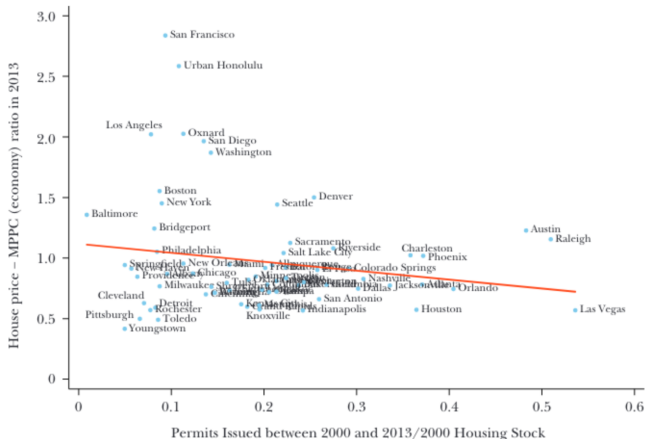
Housing Net Worth—30 Year Changes

(in 2013 dollars)

Percentile	1983		2013	
	18–24 year-olds	45–54 year-olds	18–24 year-olds	45–54 year-olds
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
Percentile	25–34 year-olds		55–64 year-olds	
	25–34 year-olds	55–64 year-olds	25–34 year-olds	55–64 year-olds
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
Percentile	35–44 year-olds		65–74 year-olds	
	35–44 year-olds	65–74 year-olds	35–44 year-olds	65–74 year-olds
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

Regulations Limit Allocation of Labor in High Productivity Areas

Price-to-Cost Ratios and Permitting Intensity, 2000–2013



How Do Regulations Impact Housing Production?

This paper: regulations are implicit

⇒ To properly answer this question, we need to model them explicitly.

Challenge: data on regulations are hard to gather

⇒ Solutions in the literature have been to

- (a) focus on specific regulation at a broad geographic scale
- (b) focus on a broad set of regulations at a fine geographic scale