The Economic Implications of Housing Supply

Glaeser and Gyourko (2018)

ECON 490 | Taylor Mackay | tmackay@fullerton.edu

Slides Overview

1. Paper's key question and framework
2. How to measure whether housing is "too expensive"
3. What the data show across U.S. cities
4. The economic consequences of restricted supply
5. Why this problem is hard to fix

The Central Question

Why are some cities so expensive while others aren't?

- Glaeser and Gyourko's answer = **regulation-constrained supply**.

Paper provides:

- A way to measure how housing markets are performing
- An analysis of the consequences of housing markets failing to perform well

---

Tobin's q for Housing

Intuitively, measure value of assets relative to replacement cost:

$$\text{P/MPPC} = \frac{\text{Housing Price}}{\text{Minimum Profitable Production Cost}}$$

- **MPPC** = what it actually costs to build a house (land, materials, labor, etc.)
- **P/MPPC > 1** suggests something is preventing new construction

If prices exceed costs but builders aren't building, something's wrong

---

What Goes Into MPPC?

Physical construction costs:

- RS Means data: roughly $70–90$/sq ft depending on market (economy-quality homes)
- Varies some by region, but not dramatically

Land costs:

- Vacant land sales rarely observed; imputed as 20% of (land + construction) via builder surveys

Normal profit margin:

- Builders need ~17% markup to stay in business

A Useful Benchmark

In a **competitive, unregulated market**, we'd expect:

$$\text{P/MPPC} \approx 1$$

Prices should hover around the cost of building new units

- If they exceed that, builders enter, supply increases, prices fall back
- If P/MPPC stays well above 1 for years, supply is constrained

What Do the Data Show?

National data from 2013 show ~74% of U.S. homes are priced at or below MPPC

- These are "cheap" markets where building isn't constrained
- Some markets, however, have higher P/MPPC ratios

Metro Area	P/MPPC Ratio
San Francisco–Oakland–Hayward	2.84
LA–Long Beach–Anaheim	> 2
Oxnard–Thousand Oaks–Ventura	> 2

3 Types of Housing Markets

Glaeser and Gyourko define 3 types of housing markets

- We can map this classification to ranges of P/MPPC values

Market Type	Example	P/MPPC	What's Happening
Declining	Detroit	< 1	Prices below construction cost
Elastic	Atlanta	≈ 1	Supply responds to demand
Inelastic	San Francisco	>> 1	Regulation blocks supply

California as a Special Case

Coastal metros — especially California — dominate the high P/MPPC list

What constrains supply?

- **Zoning**: Density limits, single-family requirements
- **Local Permitting**: Slow, expensive, uncertain
- **Community opposition**: NIMBYism

The authors call the gap between price and MPPC the **regulatory tax**

The Regulatory Tax

The regulatory tax is the implicit cost of all the barriers to building

How big is it? For the median SF home (2013):

- MPPC = $281,690 (construction + imputed land + 17% profit margin)
- Market price = $800,000
- The "regulatory tax" ≈ $518K

A Caveat

The authors note that the optimal tax on housing construction is **positive**

- Don't we want more housing?!
- In Orange County, yes, we should be building more

In general, however, construction imposes negative externalities

- Traffic disruption, noise, etc. during building
- Changes to built environment and service demand in longer run
- In principle, tax on building gets producers to internalize these costs

Paper argues that implicit regulatory tax is much larger than likely value of these negative externalities

Who Wins and Who Loses?

Winners:

- Existing homeowners (their assets appreciate)
- Current residents who value "neighborhood character"

Losers:

- Renters (pay higher rents) and would-be buyers (priced out)
- Workers who'd move to productive areas but can't afford to

This has **distributional consequences**

- Housing wealth becomes concentrated among those who already own

Labor Misallocation

High housing costs hurt the whole economy, not just individuals

- Productive cities (NYC, LA) have high wages *because* workers are productive there
- But workers can't afford to move there
- So they stay in less productive places
- Overall economic output is lower than it could be

How Big Is This Cost?

The paper cites research estimating GDP losses from housing constraints:

- **Hsieh and Moretti (2017):** 9% of GDP lost due to spatial misallocation
- That's potentially **trillions of dollars** in foregone output

Glaeser and Gyourko report a range of estimated losses

- Reflects different assumptions about labor demand elasticity, but even the low end is very large
- Housing regulation in a handful of cities may cost the entire country several percentage points of GDP

A Thought Experiment

Imagine housing costs in coastal California fell to national averages

What would happen?

- More workers could afford to live near high-productivity jobs
- Less time wasted commuting from the Inland Empire
- More startups could afford to locate here
- More service workers could live near their jobs

Barriers to Construction

If restricted supply is so costly, why not just allow more building?

Political Economy Problem:

- Existing homeowners have **concentrated benefits** from high prices
- Costs are **diffuse** = spread across renters, potential movers, the broader economy
- Homeowners vote; future residents don't
- Local governments have strong incentives to restrict supply

What Would Solutions Look Like?

1. **State-level override** of local zoning (e.g., California's SB 9, SB 35)
2. **Streamlined environmental review** for housing
3. **By-right development** that removes discretionary approval
4. **Incentives** for cities to allow more housing

Key Takeaways

1. **P/MPPC ratios** measure whether prices exceed construction costs = a sign of supply constraints
    - Most U.S. housing is priced near construction cost; the expensive markets are outliers
    - **Coastal metros, especially California,** dominate the high P/MPPC list; regulation is the key factor
2. **Large economic costs** from supply restrictions (inequality, labor misallocation, lower GDP)
3. Authors argue **implicit tax exceeds reasonable externality costs**, but note the evidence is suggestive and the optimal tax on building is positive, not zero
4. **Political economy** makes reform difficult