The Effect of Flood Zoning Policies on Housing Markets

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October 3, 2023

Major Comment: Emphasis of the Paper

Focus of current draft: Housing prices (discount or premium)

- Flood risk is used to validate the use of RD ex-post

Focus of previous draft: Flood risk

- Combining the First Street Foundation data with floodplains is the novel contribution of the paper
- Main result: no discontinuous change in flood risk
  - Market failures: externalities, information, rationality
    - Emphasize this and use it as motivation for housing market changes (age of building stock, density of building stock, housing prices)!
    - This impacts other markets (e.g., insurance)

Major Comment: External Validity

No discontinuous change in flood risk at the floodplain boundaries

- Is this a byproduct of geography?
  - Texas is flat!

- Would we observe a discontinuous change in other hilly/mountainous regions (e.g., New England and West Coast)?

Major Comment: Property Assessment Data

"Housing price" = "Improvement Value" + "Land Value"

- Improvement value and land value are determined by tax assessor

Property assessment data vs transaction data

- Do tax assessors ***really*** incorporate risk into valuation?
- Assessor value $\neq$ market value
  - Local market dynamics (i.e., supply/demand) should not influence assessor value
    - Market dynamics (e.g., supply constraints) were used to explain housing price results
    - In previous draft, there is no discontinuous change in the density of the building stock $\rightarrow$ no supply constraints
- Results are not comparable to studies with transaction data

If you had transaction data, you could merge it with HMDA data to obtain demographic and socioeconomic characteristics of buyers

Major Comment: Dynamics

The 2014 and 2021 floodplains can be used to study dynamic changes

Garnache (2023) has a paper on dynamic fire risk in California

- RD: no effect
- Difference-in-Discontinuities: no effect
- Difference-in-Differences: negative effect (i.e., price discount)

Similar design could be used in this setting:

- Control: houses in 2014 floodplain and 2021 floodplain
- Treatment: houses not in 2014 floodplain but in 2021 floodplain
- Additional differences?
  - Houses not in 2014 or 2021 floodplain
  - Houses in 2014 500-year floodplain

May require transaction data or assessment data at two time periods

Minor Comments

- Be careful with terminology
  - Both of the estimating equations are hedonic price models that use a regression discontinuity design
    - Suggested change: Standard RD vs Robust RD
- More explanation is needed for procedural steps and theory
- Other outcomes?
  - Building permits and demolitions
- Correlated amenities (with flood risk)?
  - National Land Cover Database: greenspace, trees, and water
- Demographic and socioeconomic controls?
- Inland counties have more missing data than coastal counties
- 100-year vs 500-year floodplains
  - Why focus on 100-year floodplains?
  - Adjacent 100-year and 500-year floodplains?