Discussion of "The Geography Channel of House Price Appreciation"

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Main theoretical predictions

Prediction 1: Moving people from regions with elastic housing supply to regions with inelastic housing supply increases the national house prices.

$$\overline{dlogp^h} = -\frac{Cov(dlogp_i^h, \sigma_i)}{\bar{\sigma}}$$

- This means that any income shock that is negatively correlated with the elasticity of housing supply will cause an increase in house prices.
- This is an intuitive and relatively robust result even if the exact formula depends on specific assumptions like constant price to income ratio.

Main theoretical predictions

- Prediction 2: In an environment with constant (across space) price to rent ratio + additive utility a national decline in price to rent ratio is associated with higher house demand for living (as well as higher prices) in inelastic regions and therefore higher national house prices.

$$\overline{dlogp^h} = -\alpha Cov(\frac{1}{r_i^h}, \sigma_i) dlogR$$

  - Intuition: The same decline in price to rent ratio translate to larger dollar "savings" in regions with higher rent.
  - This makes housing in high rent areas relatively cheap and therefore the demand for inelastic regions will increase.
  - Additive utility plays an important role.

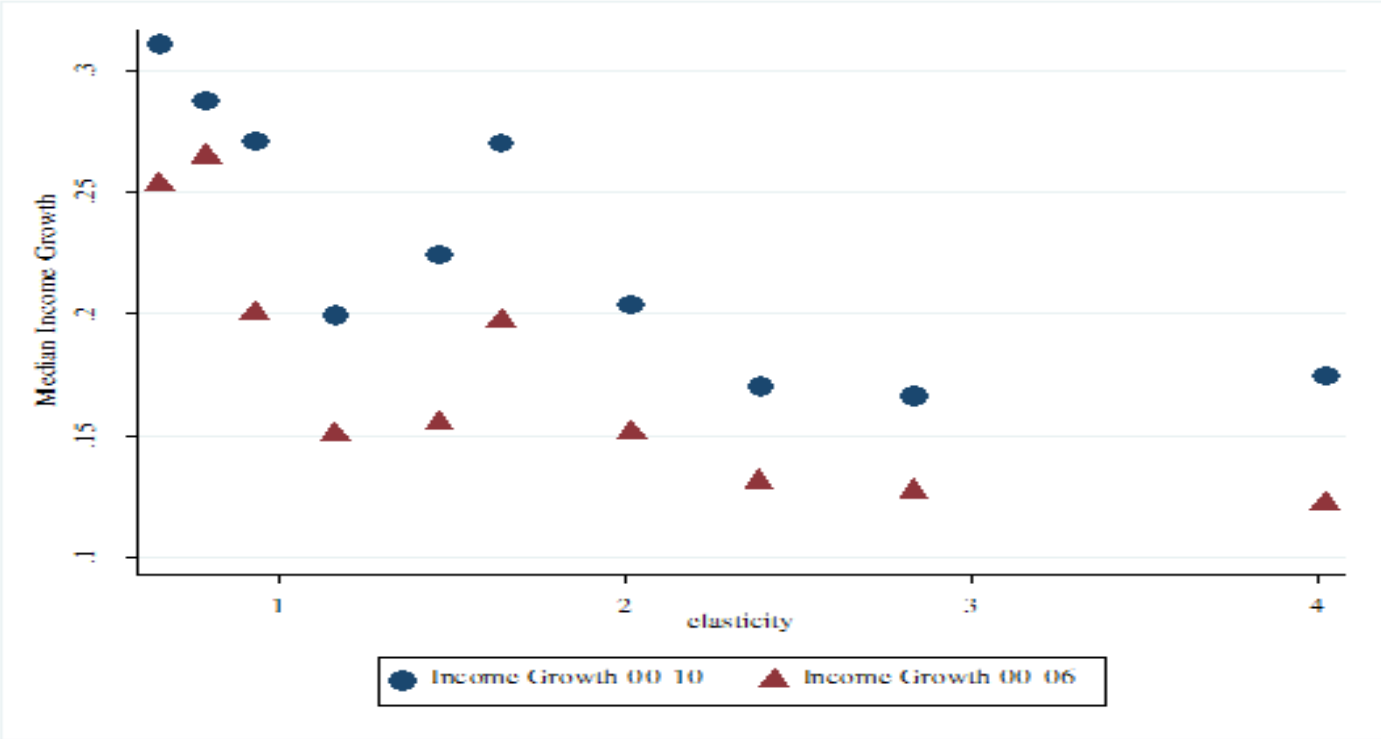
- Both predictions are about the steady-state and not during the transition.

Main empirical findings

1. Population growth and change in housing quantities are almost perfectly correlated.
2. Manufacturing share in 2000 is associated with decline in population and in house prices in subsequent years.
3. House price growth and population growth is positively correlated with the level of rents in 2000.
4. Construct a new index for rents based on NOI from CMBS deals.
5. 10% change in house prices between 2000 and 06 is associated with almost the same change in rents.
    - Therefore higher house prices in inelastic regions was associated with higher demand for living in those regions.

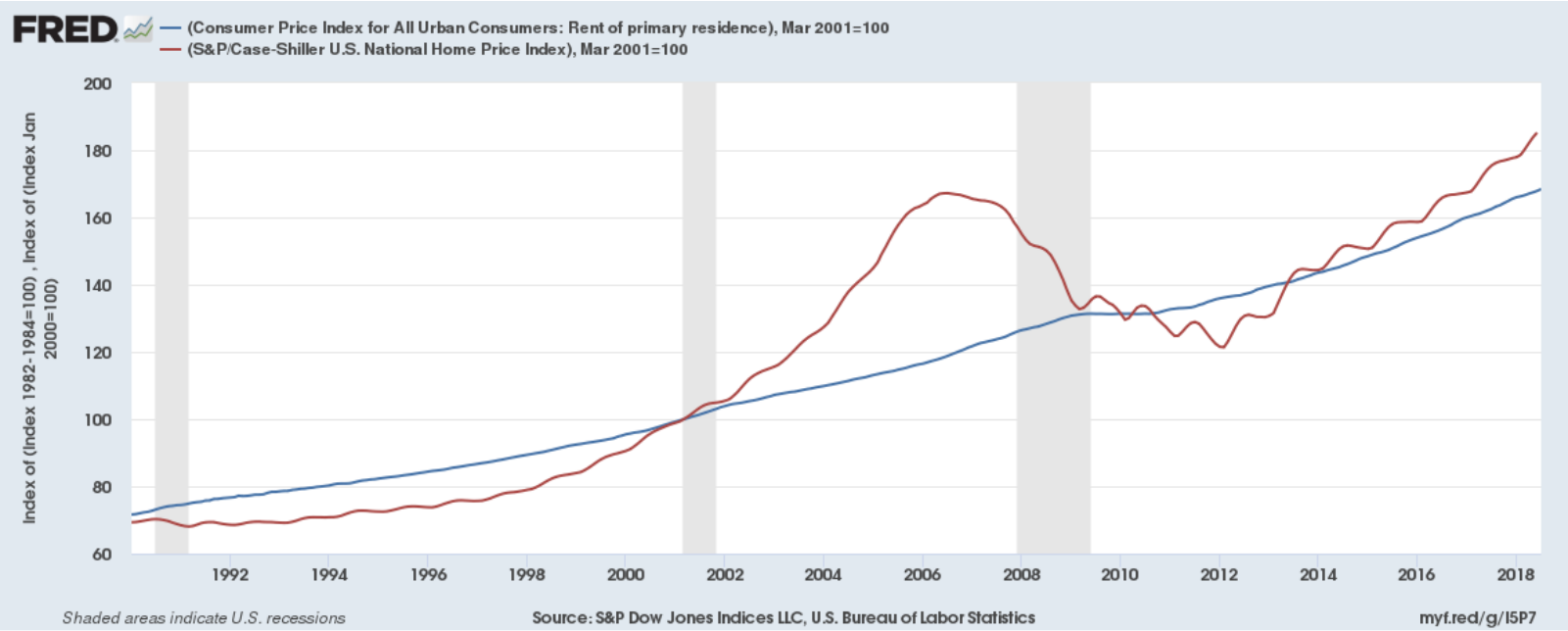
Comment I: Further evidence on the importance of geography channel

- In recent years economic activity has been shifting toward inelastic regions seems very interesting and supported in the data.
- Decline in manufacturing seems to be a small part of it. Boom in Finance and Tech seems to be more important.



Comment II: Geography channel seems to be about long-run not short-run

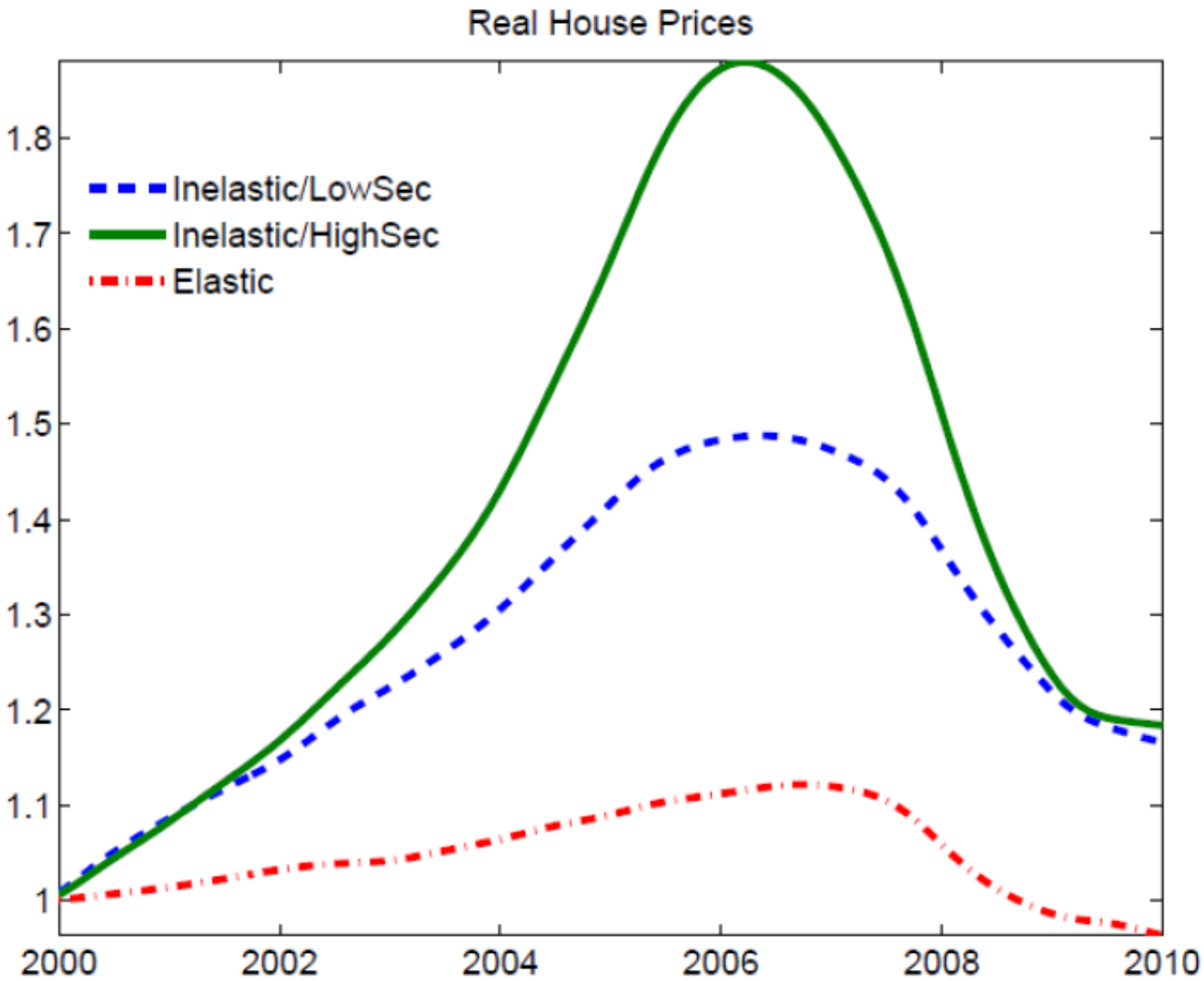
- But the change in price-to-rent ratio was short-lived and not that much related to the decline in interest rates per se.
- Better to focus on long-run changes in house prices and general trends in the labor market.



Comment II: Inverse Rent vs Elasticity of Housing Supply

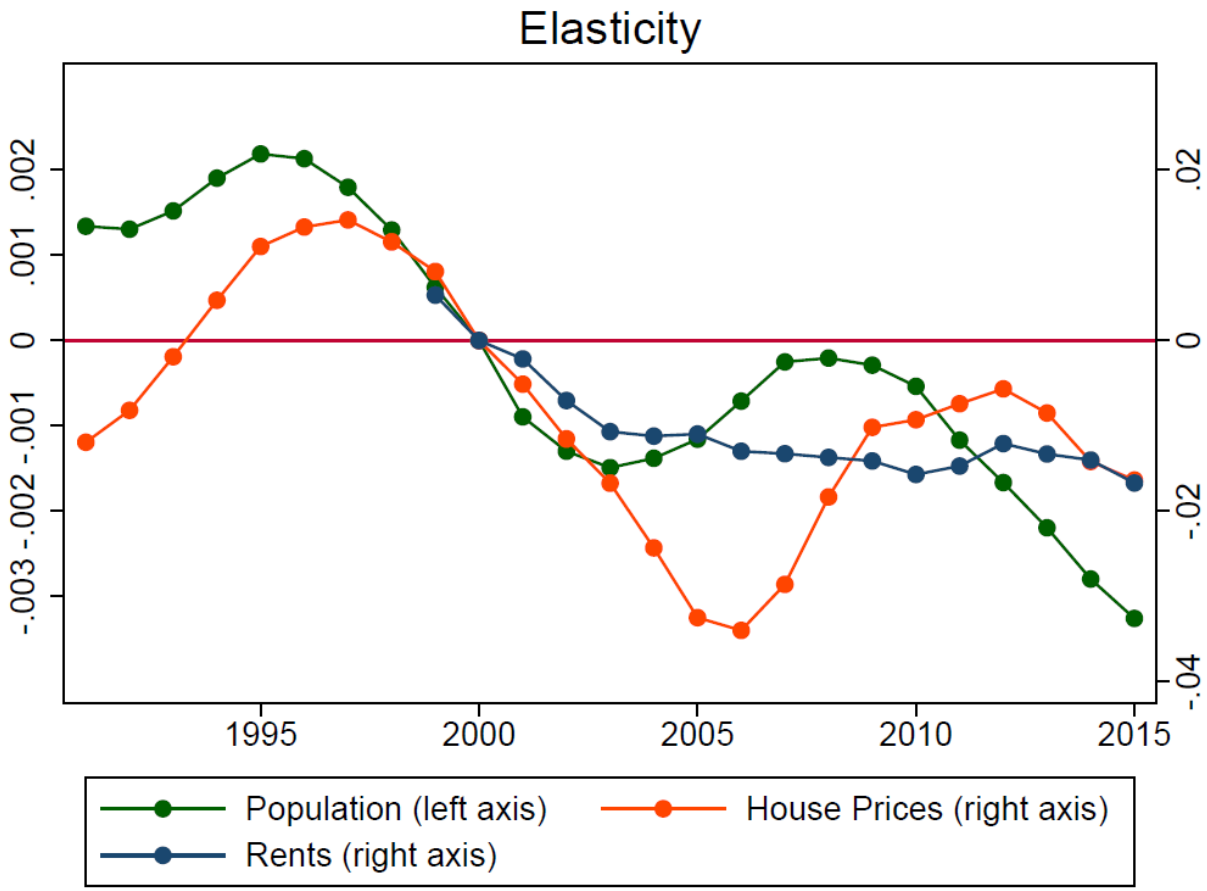
- Any increase (decrease) in demand for housing (for example due to shocks to expectations about future income) is associated with significantly higher increase (decrease) in house prices of regions with inelastic supply of housing.
- Inelastic housing supply also means higher level of rent in equilibrium.
- Horse race between rents and the elasticity measure does not help. Saiz measure (or measures based on land availability) is an IV not the actual measure of elasticity.
  - Cross-section variation in long-run rents by themselves are a better measure of elasticity of housing supply.
- In general the prediction of the model for the relation between rents and house prices requires:
  - It is a steady state prediction + Requires additive utility.
  - Source of decline in P/R ratio has to be change in interest rates.
    - My strong guess is that this logic does not work for the change in P/R that is induced by change in the collateral value of housing.
  - Does it hold if households own their house?

Comment III: Credit induced boom-bust



Comment III: Credit induced boom-bust

- Even the result of the paper shows that between 2004 and 2008 there is disconnect between correlation of house prices and housing elasticity and rent prices/population growth and elasticity.



Comment IV: Pros and cons of the rent index

- Pros:
  - "we believe net operating income of newer buildings is more likely to reflect the desirability of living in a specific location."
  - Broader geographic coverage.
- Cons:
  - Concerns about NOI of CMBS deals being overstated especially in places that experienced increase in property prices.
    - This is because with high prices and low P/R DSCR becomes binding. Borrowers have to inflate NOI.
    - See Ashcraft et al (2018) for evidence on moral hazard in CMBS.
  - Would be good to check consistency of rent estimates with estimates from multi-family REITs.
  - Spatial separation of multi-family unites from single-family owner occupied houses.
  - Why rents are two times more responsive to house prices than what Ambrose et al. (2015) found?

Other Comments

- Is the fact on strong correlation between population and housing units growth surprising?
  - unless there is a change in vacancy rates this should hold. No?
  - Value of house structure seems a more relevant measure of housing demand.
- To what extent the results depends on households being myopic and renter?
- Overall:
  - This is a really interesting combination of empirical facts and a simple geography choice model.
  - I encourage the authors to refocus their empirical facts on long-terms trends (00-15) in house prices and labor market and not the short-term ones.