Comments on Yao: “Land and the Rise in the Dispersion of House Prices and Rents across U.S. Cities

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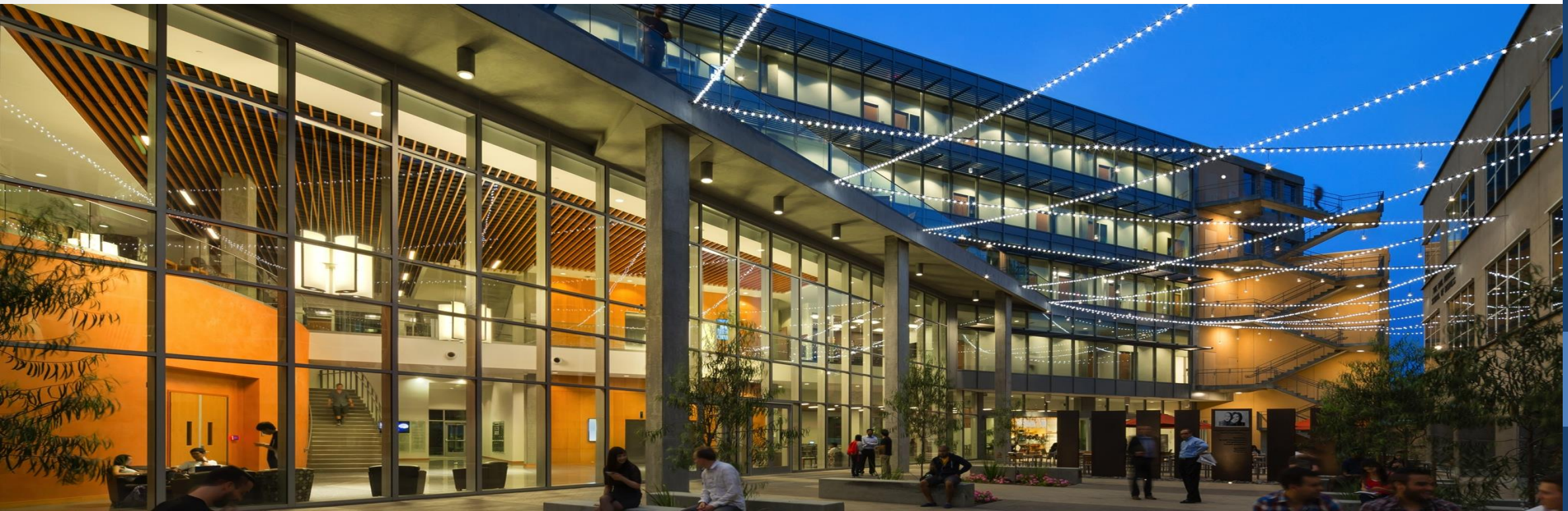

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Home prices and rents

- The paper compares the behavior and dispersion of prices and rents.
- Takes some standard data (census, AHS) on price and rent
  - These are not comparable data
  - It’s like comparing Apple dividends and Amazon stock price
- So there are two empirical pieces
  - Comparison of R and P of identical properties
  - Comparison of R of different properties

What should we be modeling?

- We would normally model R and P *of the same asset.*
- Theory is governed by the Gordon growth model
  - R/P =r-g (g= expected appreciation rate)
  - We do have empirical investigations of this
    - Bracke (*REE,* 2015); Baltagi and Li (*RSUE,* 2015) use rents and prices of same properties.
    - Bracke finds systematic variation in R/P attributable to variation in g.

- This paper ignores this piece. No variation in discount rate.
- Both R and P are tied to construction costs, hence differences are strictly due to land and capital differences.

$$h^O = L^\alpha M^{1-\alpha} s.t. \quad L \geq \bar{L_k}$$

$$h^R = AL^\rho M^{1-\rho}$$

"A captures the fact that a rental apartment uses less material and less land compared to a standard house due to the physical difference between these two types of dwellings." (A>1, but why?)

Constant discount rate

$$\frac{(1-\delta_r-\tau)R(h^R)}{r} = \frac{f(\rho)q_k^\rho \phi_k^{1-\rho} h^r}{A}$$

$$P_k(h^o) = f(\alpha)q_k^\alpha \phi_k^{1-\alpha} h^o$$

Prices = construction cost

- So this is not about rent and price, but about large/small or more/less dense, (and not even about multi/single family).
- We also know about the price dispersion caused by different land values:
  - Bostic, Longhofer and Redfearn (*REE,* 2007); Bourassa et al (*RSUE,* 2011)
  - See also Xu et al (*JREFE,* 2018)
- So we need a better sense of what this model brings to the table

Other unclear things

- Tenure choice
- Housing transitions
- Comparability of h in different modes
  - Housing consumption is

$$s = \begin{cases} h & \text{if Rent} \\ \theta_k h \mathbb{1}_{j \geq j_o} \zeta & \text{if Own} \end{cases}$$

"Θk is supposed to capture the quality difference between a standard owner-occupied house and a standard rental apartment and how residents on an island evaluate this quality difference."

  - How does this square with the higher productivity of capital and land in *rental* production? (Footnote on separate identification of these two parameters)