URBAN STRUCTURE, LAND PRICES AND VOLATILITY

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Discussion by: **LI, Qiang**, NUS

IMPRESSION OF THE PAPER

- I enjoyed reading the paper.

- The paper is well-written and easy to follow.

- For me personally, it is good to refresh my understanding of monocentric city models
  - I also learned about a parsimonious way to make the model dynamic.

- The paper is fairly complete, but a bit long.
  - Some parts, e.g. section 3, may require some polishing.

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SUMMARY OF THE PAPER

- The authors build upon classical monocentric city models and make them dynamic
  - An open city with workers and firms with standard Cobb-Douglas utility and production functions
  - Allow agglomeration effects and congestion
  - Alternative specifications: fixed CBD, flexible city boundary; flexible CBD, fixed city boundary; capital mobile vs non-mobile.
  - Match the model with data on land rents and price-to-rent ratios in a calibration exercise

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SUMMARY OF THE PAPER

- Two major innovations
  - Parametrized model of congestion: rail vs car

$$f(j, N) = \beta_0 + \beta_1 j + \beta_2 j N \qquad (2)$$

  - TFP depends on lagged population size to make the model dynamic

$$A = \tilde{A} N^\lambda \qquad (20)$$

$$\log \tilde{A}_t = \log \tilde{A}_{t-1} + \epsilon_t,$$

- Questions: How to link these innovations to contributions of the paper?

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QUESTIONS AND SUGGESTIONS

- The contributions of the paper can be sharpened

- Suggestion 1: more comparisons with papers by Glaeser and others, in terms of policy implications, model generality, data fitting, etc.

- Suggestion 2: do the results resolve any outstanding questions in urban theory or match well-known empirical patterns of the data?

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QUESTIONS AND SUGGESTIONS

- The model setup is fairly clear and reasonable
  - The model implications and simulation exercises are dense
- Perhaps, the authors may want to write down a few special cases/examples to build the reader's understanding step by step.
  - Extensions can apply to a simplified model.
  - Polish the writing may also help.

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QUESTIONS AND SUGGESTIONS

- Static monocentric models assume that the city is malleable, i.e. city configurations can be altered freely.

    – Reasonable for data over a few decades, not reasonable for annual data in this paper

- Consult the literature on durable housing and urban growth

    – Brueckner (2000), Glaeser & Gyourko (2001)

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QUESTIONS AND SUGGESTIONS

- Fix CBD and city boundaries can be a solution to the previous dilemma
  - Density will have to adjust
  - The amount of undevelopable land (Λ) will become a state variable: exogenous or controlled by an authority?
  - Is the city closed or open, i.e. population adjusts or not?

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MINOR ISSUES

- Page 2, para 1 last sentence may not be entirely clear.
- Page 2, para 4, first two sentences may be contradictory, please check.
- Page 10, table 1 may belong to the Appendix
- Page 7 – 13, section 2.4 may be too long compared with the more succinct sections 2.1-2.3. Equilibrium concept may be explained better.
- Section 3 may require some polishing. It may be a little too long. Some graphs may help.
- Writings in section 4 may require further polishing.

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THANK YOU

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