Discussion of "What are the Benefits of a Subway in Mumbai, India?" by Cropper and Suri

Discussion by:
Chris Severen (Federal Reserve Bank of Philadelphia)

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Summary

- DD hedonic analysis of new cross-town subway in Mumbai
  - *Contribution:* Hedonics/capitalization of transit in developing context
  - *Contribution:* Use QSM-lite to explore mechanisms behind price appreciations
  - Complements Suri (2022) estimating VTTS from this subway

- 7%-9% price appreciation w/in 1km of station, relative to 1-3km from station
  - Asset valuations anticipate line opening by 2-3 years
  - Effects relatively consistent across use types: res, com, ind – though land is a bit higher
  - Results robust to alternative control groups (though those are a bit smaller)

- Construct employment market access (RCMA) terms using commuting flows:
  - Somewhat larger price increases in places with greater improvements in RCMA

I. Pre-Trends and Identification

There is no clear pre-period, makes pre-trend tests difficult…

- There may trends in prices along rail, esp bc this reflects some CBD vs non-CBD
- Are prices quality-adjusted? If not, latent quality adjustment could drive price changes…

- Is it possible to use 2006 & 2007 as pre-periods? They are pre-announcement…
  - Also, rents should not show (any? as much?) anticipatory behavior
  - Satellite data and redevelopment?

- If pre-trends are hard to test: Other ways to probe
  - Station-by-year fixed effects – compare tracts near/far by station!
  - Continuous treatment can provide additional confidence, effect → 0 as dist → 3km? 5km?

- Bounding exercises could help as well:
  - Could also use to show robustness to agglomeration (underestimates) or demand spillovers (overestimates)

II. Mechanisms, Market Access, and QSM

Several options for targeting mechanism analysis and QSM-lite section (Sec 4)

- Already – commuting flows/travel surveys to construct many QSM pieces,
- Decompose sources of prices gains: RCMA and other

- Push this further!
  - Connect price in model to hedonic estimating equation. QSM gives housing demand:

$$\gamma_i = -\theta\zeta \ln P_i + Amenities_i$$

  - And housing supply:

$$P_i = \phi \ln Dens_i + ConstCost_i$$

  - Amenities could be further decomposed into consumption access and other terms
  - RCMA term can separate out changes in destination quality from changes in TT
  - Also: instrument changes in RCMA term in hedonic regression with travel-time only variant

- Provide links between hedonic and QSM literature:
  - See, e.g., Wong (2018 JHE), Banzhaf (2021 JPE)

III. More Fréchetland Thoughts

I like this paper because it pushes us to think about structural vs non-structural

- QSMs have issues, especially with labor supply:
  - Gravity may provide a poor representation of commuting (in LA, gravity is pretty weak)
  - "Effective wages" from QSMs reflect labor supply shifters **more** than productivity (*see next*)
  - How broadly representative are the travel surveys? (6000/3000 households) – there may be a lot of noise leading to imprecise FE estimates – similar solution as with AKM?

- Observed wages: use ψ_j to separate wage responses vs other labor supply factors

$$\psi_j = \theta w_j + E_j$$

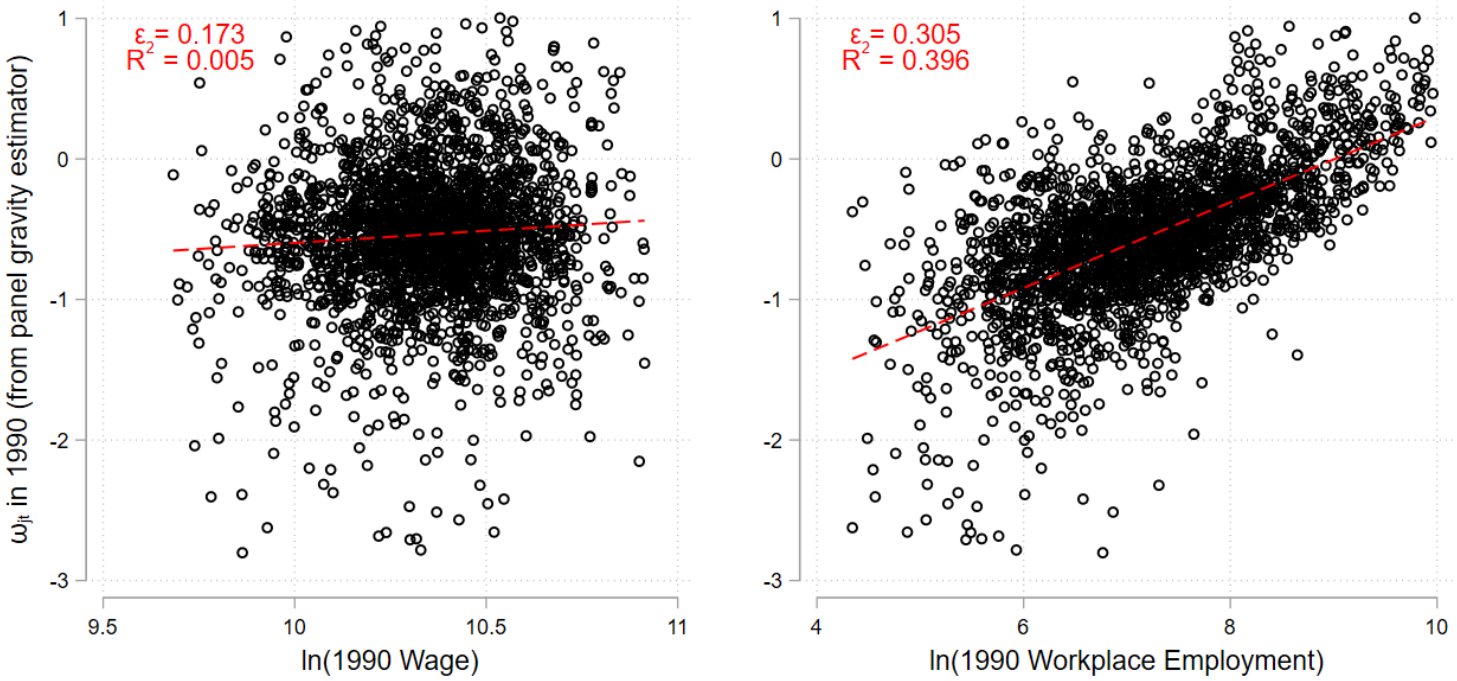
- Flesh out identification of θ: currently requires orthogonality of wages and (latent) workplace amenities (Does $\theta \approx 14$? This seems high)
  - Variance-based method (ARSW 2015) unlikely to work well…

III. More Fréchetland Thoughts (from LA)

"Workplace amenities" are first order

- Implicitly reflect sorting → workplace FEs mainly reflect quantity

Figure D1: Does $\omega = \epsilon w$, and if not, what is it capturing?



Misc

- Table 9 is a good idea, but I expect the gradient wrt change in employment access to be more drastic?
- In Table 8, show specifications without all covariates
- Why renormalize MA terms (especially variance)? Set level using observed wage…
- How fungible is land/building use type? If fungible, may explain why prices responses are similar
- More data info:
  - Are prices per sqm of land or building area? Are they quality adjusted? Are land prices in per sqm of land? Do you have quantity (built area)?
  - Why are errors bars on 2013 data always so much smaller?
  - Is something different about 2016 from other years – in trend figure, deviates from trends