

Cities and Labor Market Dynamics

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Highlights of the paper

▶ **Finite but large number of locations**

- ▶ Increases number of cities by sacrificing other dimensions (assets, housing market)
- ▶ Increases the ability to understand data compared to infinite islands (Lucas & Prescott) or dual city model (Karahan & Rhee)
- ▶ Increases the computational complexity

▶ **Computation of equilibrium**

- ▶ Interesting application of a novel equilibrium computation
- ▶ Oblivious Equilibrium (Weintraub et.al) + State Aggregation (\sim Krusell-Smith) + Parametric Policy Iteration (Sweeting)

▶ **Linkage between labor-urban-migration literature**

Comments I

▶ Relocations costs

- ▶ In this paper, relocation costs m_{jk} enter in a reduced form
- ▶ Worth to model them structurally specially for policy implications
- ▶ Search frictions in the housing market? Non-convexities + credit constraints? Utility losses?

Comments II

► Lock-in effect

- Lock-in effect: cities with declining productivity have low housing prices and induce people to stay (Ex: Detroit)
- Housing demand:
 - This paper: only house rentals, $h_j(w_j, m_j)$
 - Conjecture: Including a rent/buy decision would help quantitatively by amplifying the lock-in effect
- Housing supply:
 - Asymmetric responses to increasing and decreasing demand (in your model, further explore in estimation)
 - Mechanism: Disinvestment costs in construction
 $H_{t+1} = \Phi\left(\frac{I_t}{H_t}\right)H_t + (1 - \delta)H_t$ with $\Phi' > 0$, $\Phi'' < 0$

Comments III

▶ Local matching functions with CRS

▶ local matching: $m_j = av_j^\alpha p_j^{1-\alpha}$

▶ summing up: $M = \underbrace{aV^\alpha P^{1-\alpha}}_{\text{Aggregate CRS}} \underbrace{\left\{ \sum_j \left(\frac{v_j}{V}\right)^\alpha \left(\frac{p_j}{P}\right)^{1-\alpha} \right\}}_{\text{Measure of dispersion?}}$

▶ Implications:

- Under uniform vacancy and population distributions ($\frac{v_j}{V} = \frac{p_j}{P} = N^{-1}$) \Rightarrow aggregate CRS matching (usual assumption)
- With dispersion across cities, the aggregate matching process could exhibit other types of returns

Further work

- ▶ **Model:** Explore further the links between housing and labor markets
 - Endogenize relocation costs by introducing buy/rent decision to amplify lock-in effect
- ▶ **Estimation:** Work on model's fit and robustness checks to provide adequate results
 - Present fit at local level
 - Address second and higher moments too
 - Instrument estimation of housing elasticities and other regressions: $h_j = \gamma_0 + \gamma_1(w_j m_j)$

Further work

- ▶ **Experiments:** Assess policy implications by identifying and quantifying congestion effects:
 1. via housing prices h (lower in national insurance program)
 2. via employment probabilities er (higher in subsidies to relocation)
- ▶ Plausibility of the housing price insurance program

Further work

- ▶ Could the model account for aggregate unemployment and vacancies volatility?
 - ▶ Standard DPM framework cannot match the high volatility of the ratio of unemployment to aggregate vacancies in the data (Shimer, 2005)
 - ▶ Would including the spatial + housing + immobility dimensions be a solution?
 - ▶ Suggestion: Compute implied aggregate statistics of higher order along the business cycle