Social Ties and Residential Choice: Micro Evidence and Equilibrium Implications

Martin Koenen and Drew Johnston

July 25, 2025

Introduction

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- **Today:** Social networks (friends and family) help explain these facts

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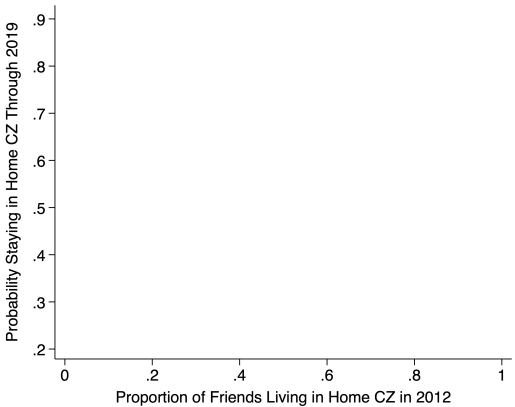
- Focus on active U.S. users, born 1985-1997 ($\approx$ 85% coverage)

Residential Mobility, Social Networks and Wage Growth



Employment growth | Other CZs | Sprung-Keyser et al.

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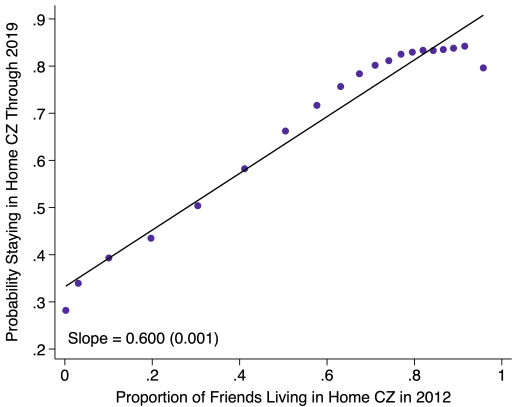

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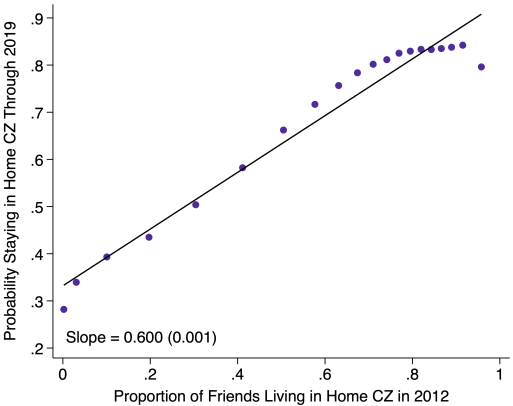

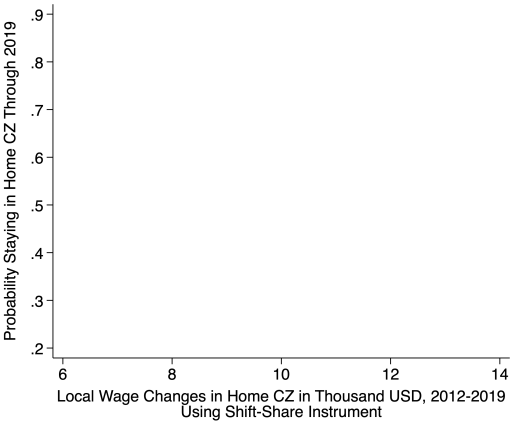

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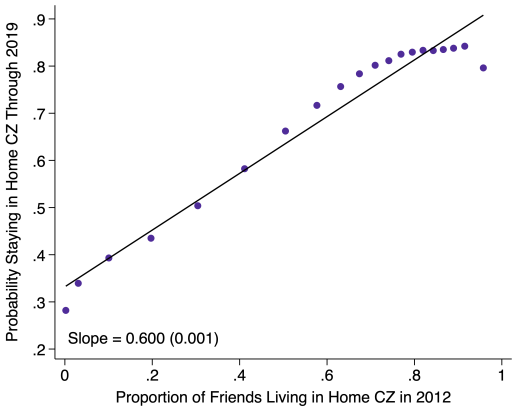

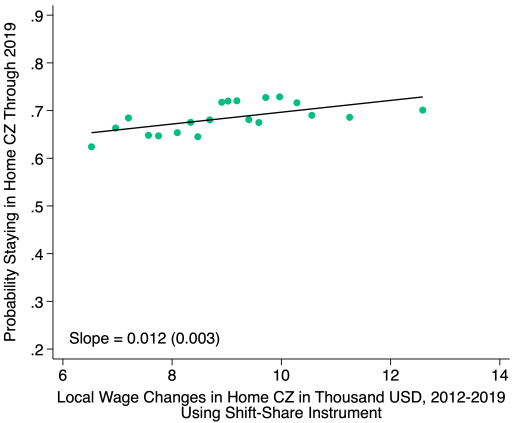

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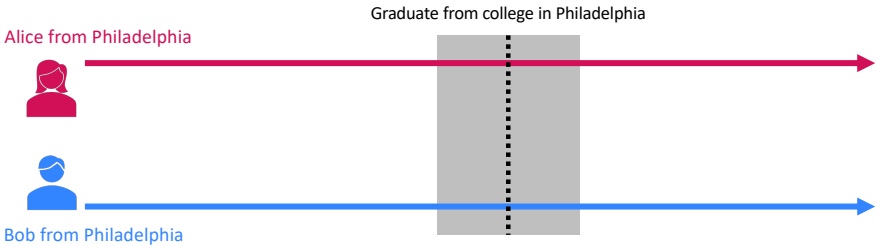

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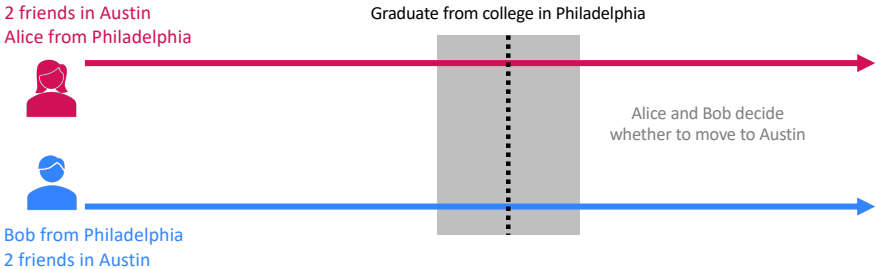

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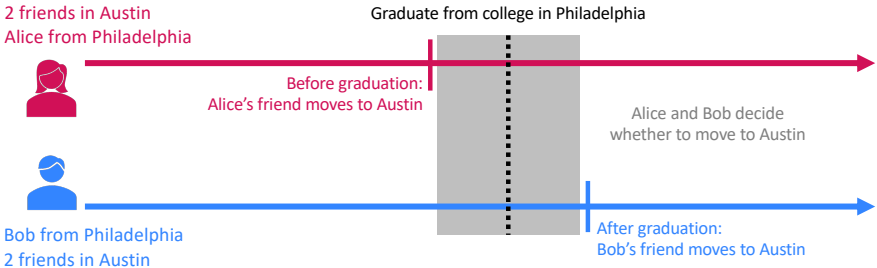

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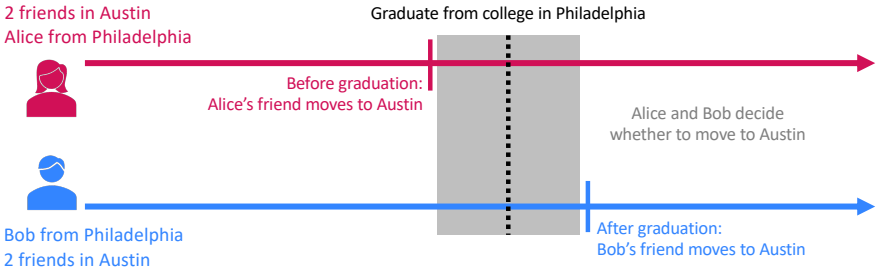

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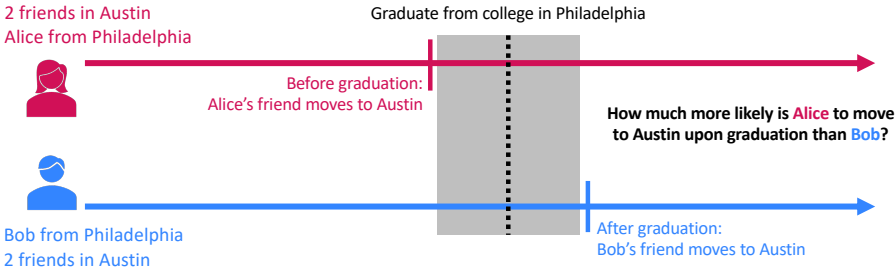

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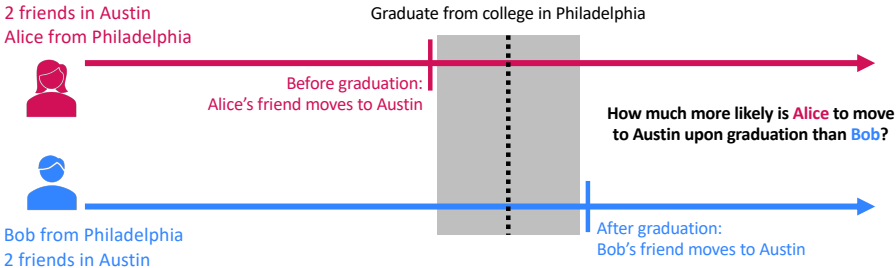

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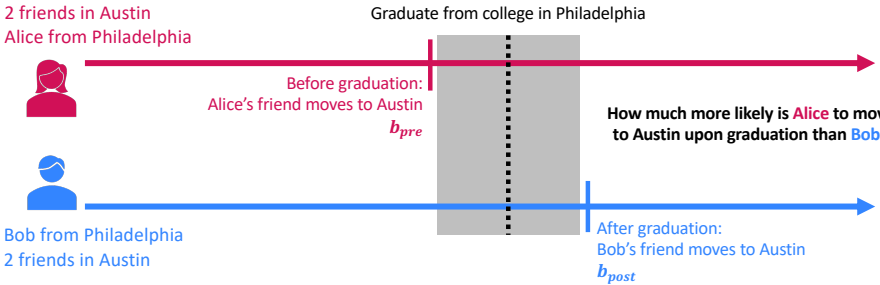

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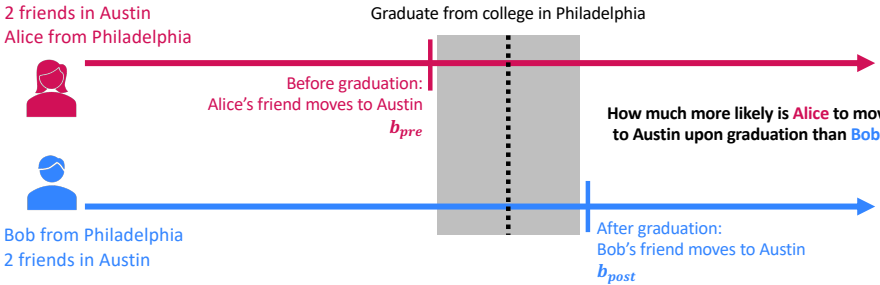
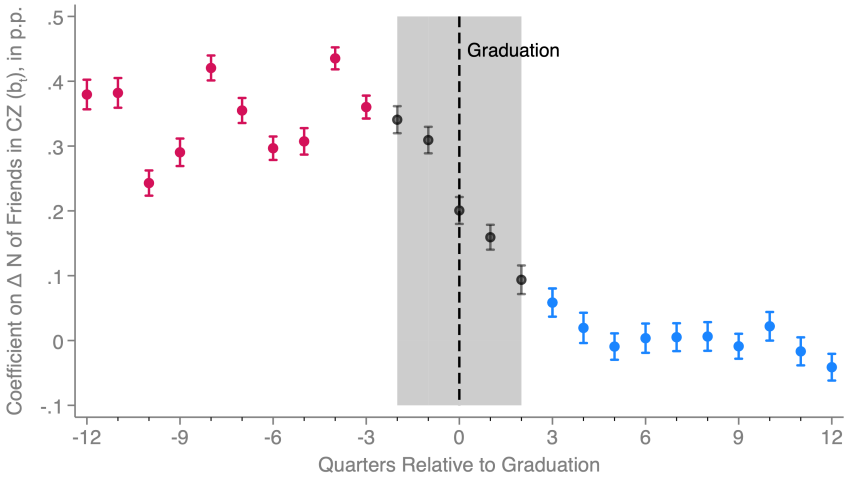


- Regress graduates' location choices upon graduation on friends' moves at different t $\rightarrow$ Obtain series of b_t estimates$\rightarrow$ $b_{pre} - b_{post} = \beta$ causal effect of friend

- ID assumption: Conditional on having a friend move to given CZ around graduation, timing of move orthogonal to potential outcomes

Effect of Friends' Moves on Residential Choice



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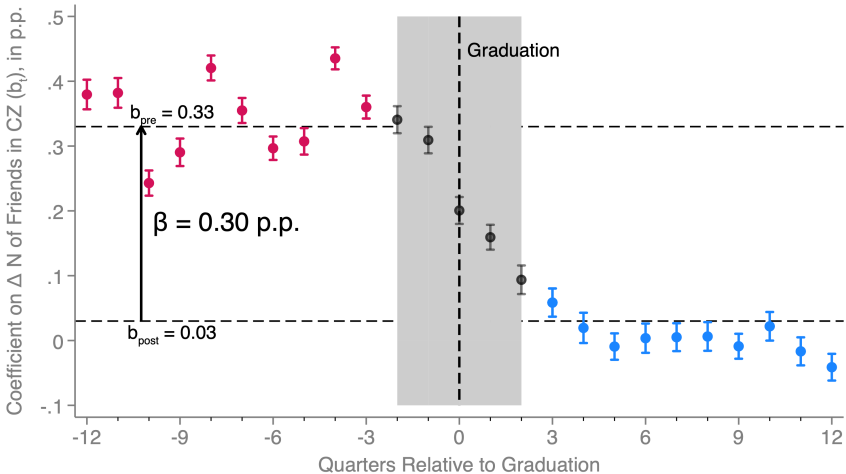

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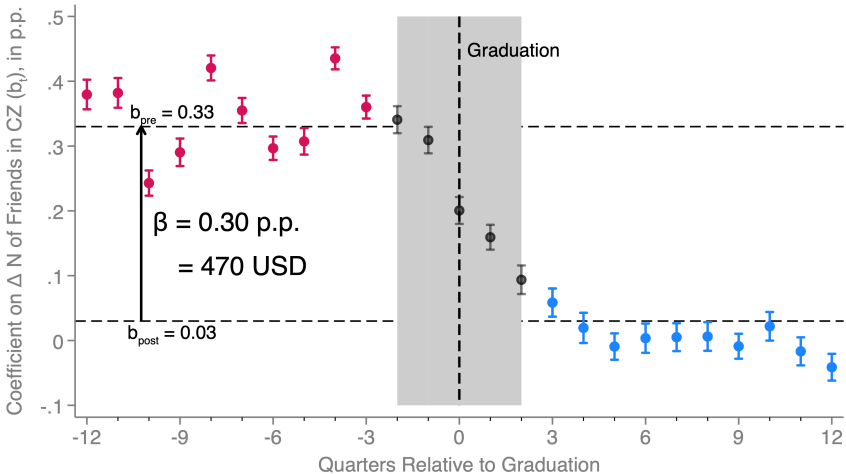

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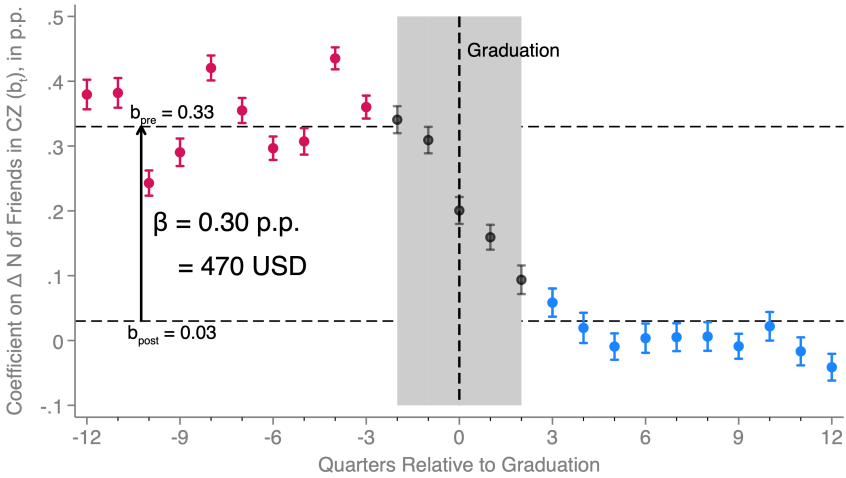

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- Use individual-level Facebook data on social networks and locations to show that:

  1. Social networks drive residential choices [Partial Equilibrium]
     - Reduced form evidence on effects of social networks on residential choice

  2. **Networks explain patterns of migration [General Equilibrium]**
     - Incorporate results from (1) into spatial equilibrium model
       $\rightarrow$ explain why people live in places with limited economic opportunities

Spatial Equilibrium Model with Social Ties

- Generalize Rosen-Roback style spatial equilibrium model to incorporate social ties
- Model comprises local production Details, local housing market Details, and workers

Spatial Equilibrium Model with Social Ties – Workers

Basic Model

$$U_{ij} = \alpha_w \ln(w_j) - \alpha_h \ln(r_j) + A_j + \epsilon_{ij}$$

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- Find α_w, α_h, A_j as well as $\tilde{\alpha}_w$, $\tilde{\alpha}_h$, $\tilde{A}_j$ so that both models match data wrt ...
  - ... populations, wages, rents, observed wage elasticity (+ networks for network model)

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  - A_j and $\tilde{A}_j$: residuals so that model implied pop. match observed pop.

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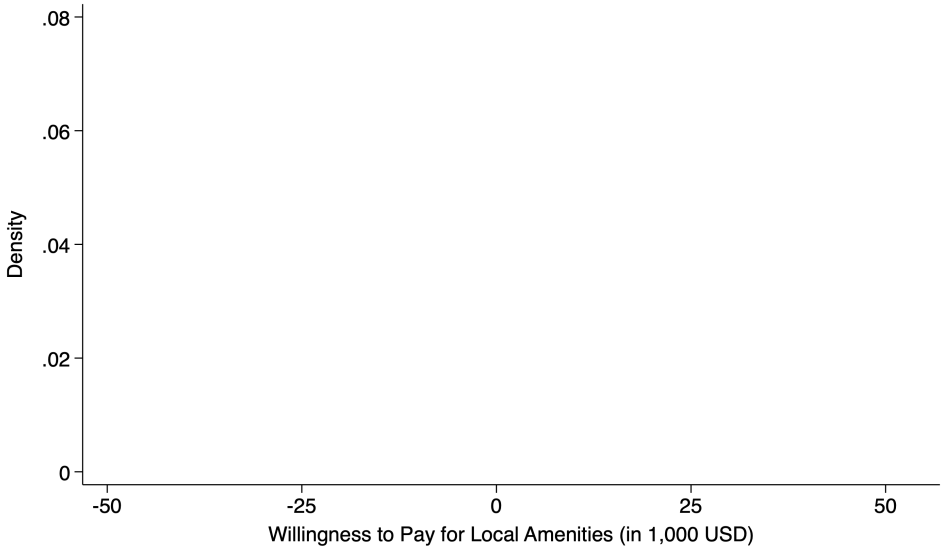
Distribution of WTP for A_j, $\tilde{A}_j$



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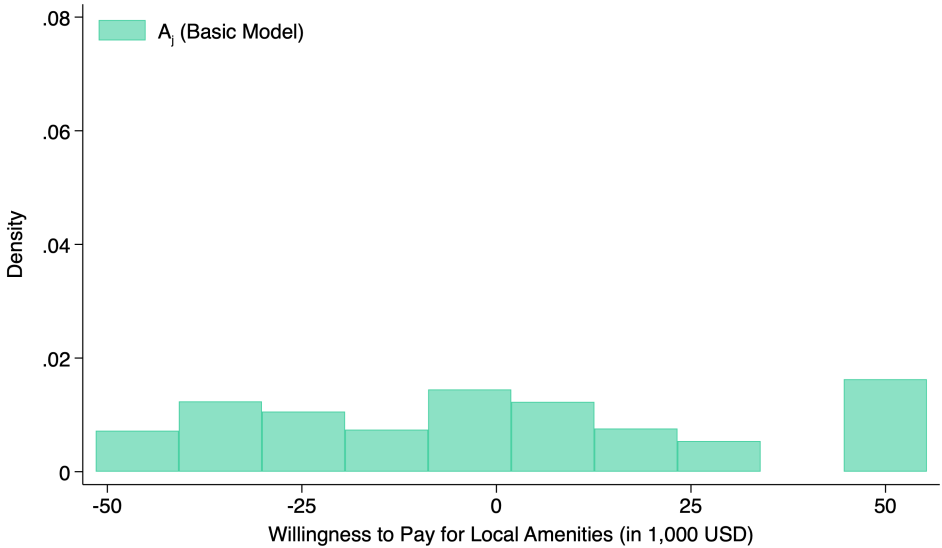

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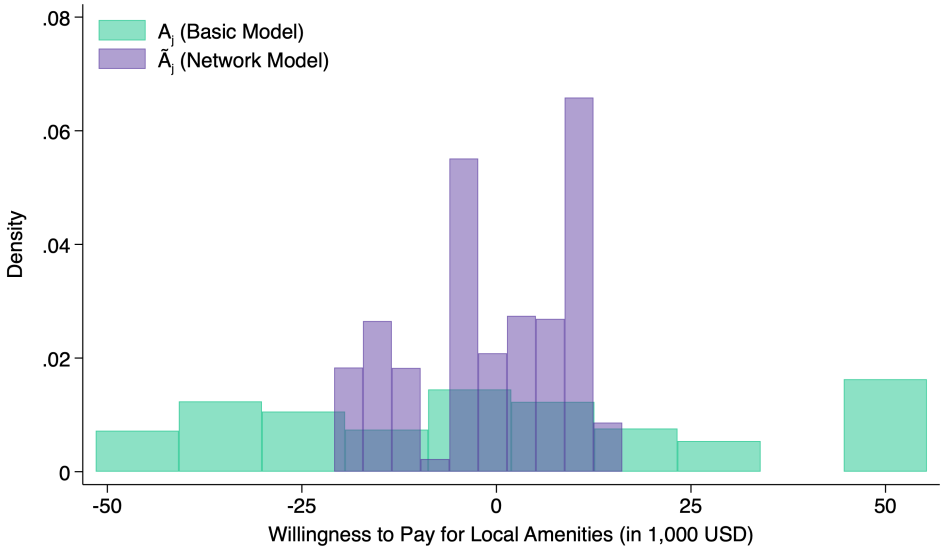
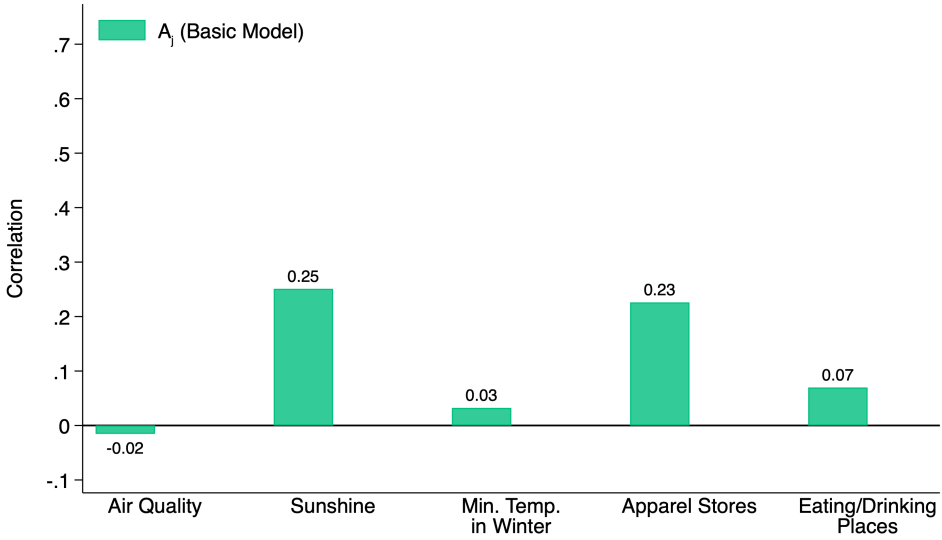


Correlations Between CZ-Covariates and A_j, $\tilde{A}_j$



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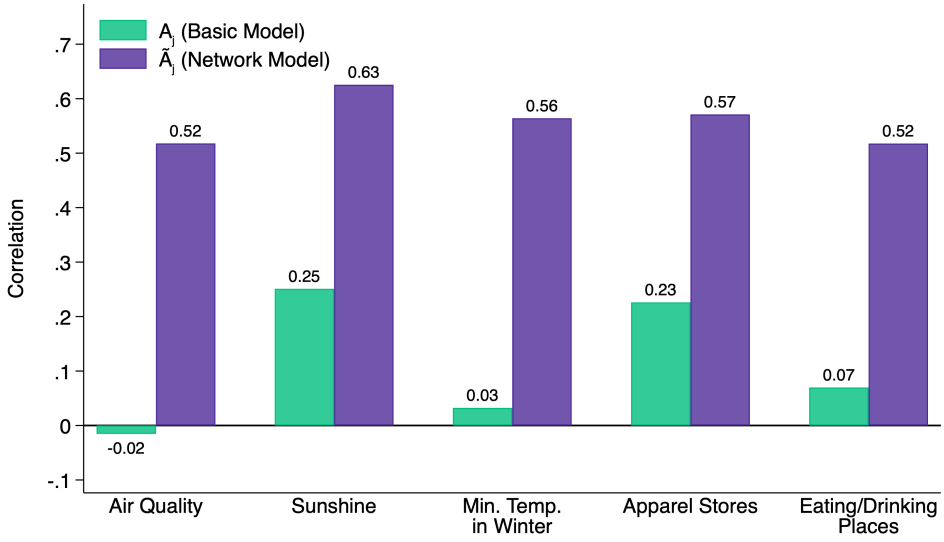

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- One reason: Social networks drive residential choices + networks concentrated locally
  - High "social cost" of leaving places with strong social network
- Social cost higher for less-educated individuals because networks more concentrated
  - $\rightarrow$ Less responsive to local economic shocks