

The Impact of Bus Transit on Employee Turnover: Evidence from Quasi-Experimental Samples

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Research Question

- Does public transit reduce employee turnover?
 - Employee turnover (churning) is rate at which employees enter and leave jobs.
 - Turnover is the sum of voluntary and involuntary separations between and employee and his or her company (HBE).
 - Turnover costs estimated to be 16 to 20+ percent of earnings (Boushey and Glynn 2012).

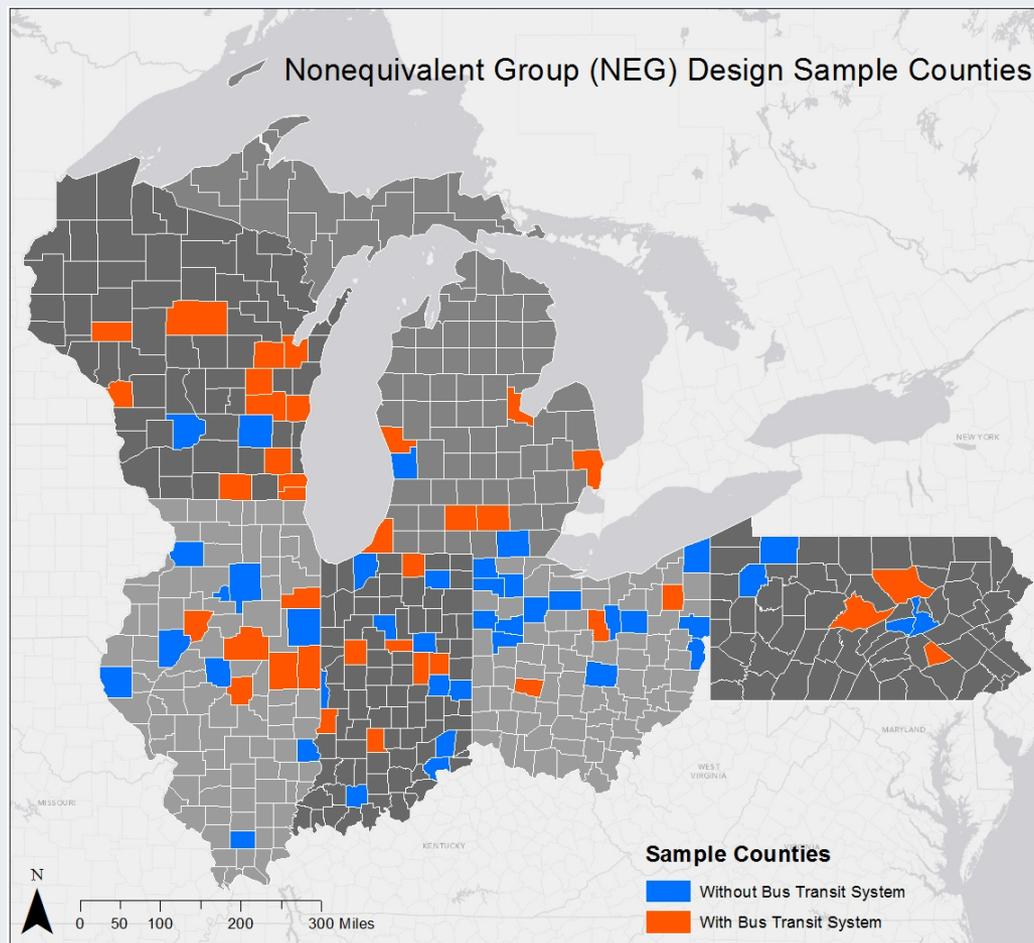
Literature

- Literature in Planning, Management and Social Services points to both supply and demand side effects of transit

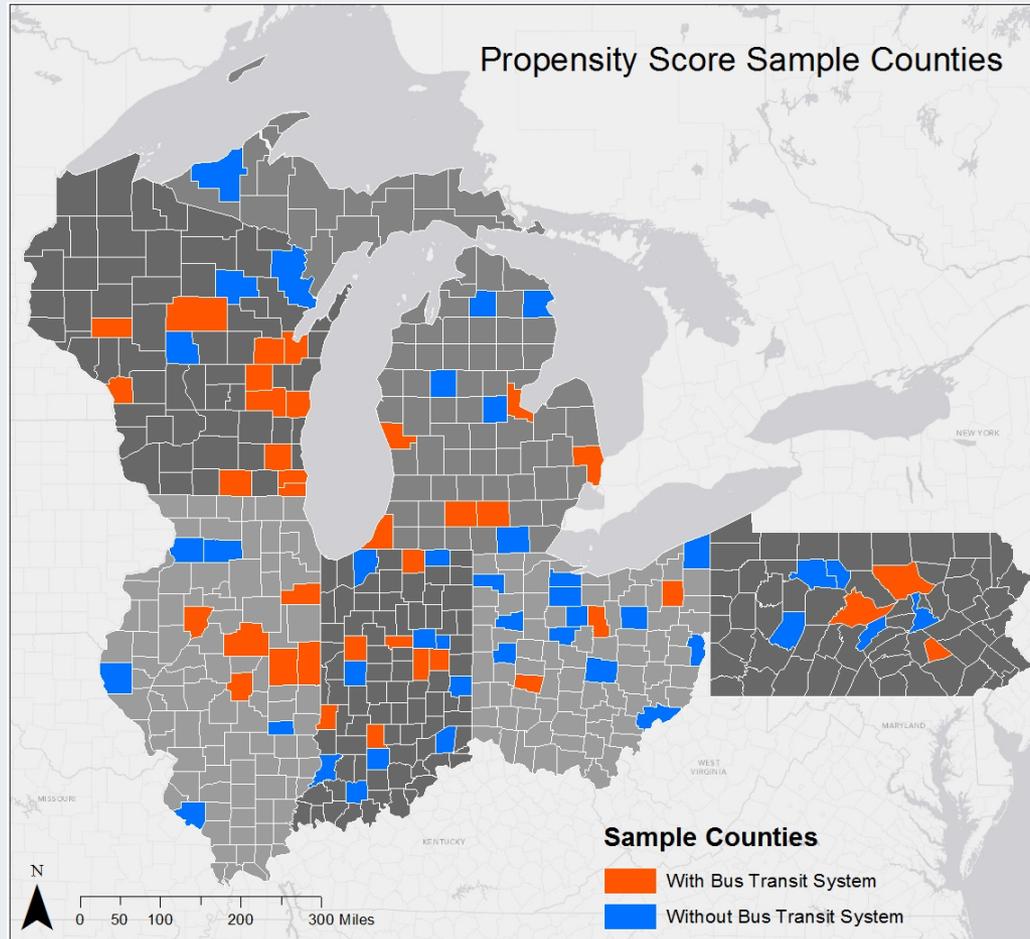
Data and Sampling Method

- Unbalanced panel (1998-2010)
- Nonequivalent group (NEG) design sample
- Propensity score sample
- 78 small cities (counties)
- 6 states (IL, IN, MI, OH, PA, WI)

Nonequivalent Group Design Sample



Propensity Score Sample



Modeling Strategy

- Quasi-experimental approach, with two samples of cities
- Few econometric concerns with space (non-conterminous)
- Controls are unemployment, and industry measures (manufacturing and retail), fixed effects and AR(1)
- Proxy size of bus system with per capita operating expenses

Results

- Employee turnover rates are negatively related to access to bus transit.
- A dollar increase in per capita operating expenditures for bus systems decreases employee turnover by 0.029 to 0.033 percentage points.
- Turnover is negatively related to the unemployment rate and manufacturing share of employment and positively related to retail employment in county.

Impact on Turnover Cost

■ Manufacturing

■ Transit reduced

- turnover by 1,100 to 1,200 jobs and
- turnover costs by \$5.3 to \$6.1 million in sample counties with transit.

■ Retail

■ Transit reduced

- turnover by 900 to 1,000 jobs and
- turnover costs by \$1.7 to \$1.9 million

Conclusions and Implications

- Businesses benefit from public bus systems.
- Fixed-route bus transit should be a component of the economic and community development strategy for low income communities not only for the access to jobs that it provides low-income workers but also for the benefit provided to businesses.