



Getting to Work on Time: Equitable Public Transit and the Geography of Opportunity

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NEPA Equitable Transit Summit

Tuesday, October 17, 2017



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Research Disclaimer



All figures presented here are preliminary
and are subject to change.



Three Pieces of the Transit and Job Access Puzzle



Research Questions

1. What is the geography of opportunity employment?
2. Who has access to transit?
3. What percent of the region's total employment and opportunity employment are accessible by transit?



Data Sources

- **Transit Network:** General Transit Feed Specification (GTFS) files from COLTS, LCTA, and HPT
- **Roads:** Open Street Map (OSM)
- **Opportunity Employment by Industry:** American Community Survey (ACS) Public Use Microdata Sample (PUMS), 2010-2014
- **Job Location:** Longitudinal Employer-Household Dynamics (LEHD), 2014 Primary Jobs
- **Demographics:** U.S. Decennial Census, 2010; ACS, 2010-2014



Opportunity Employment by Industry in Pennsylvania

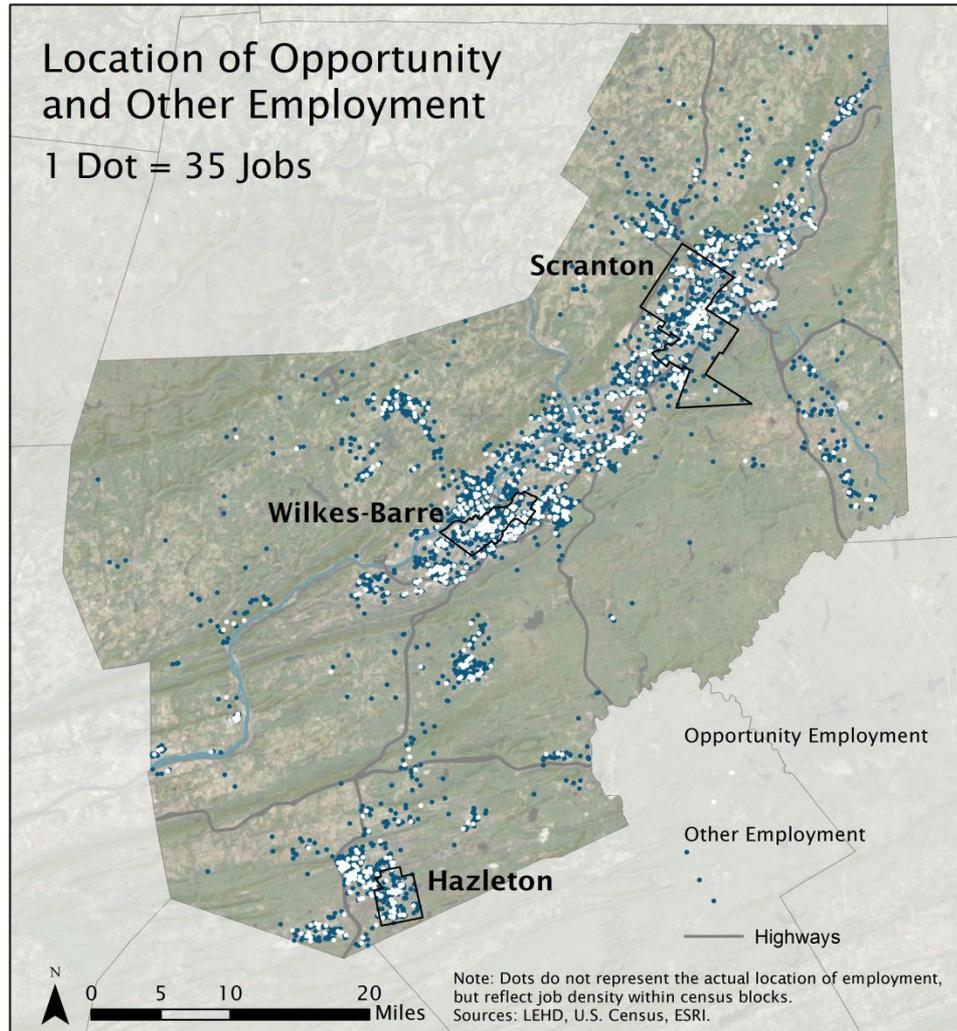


Industry	Opportunity Employment	Total Employment	Percent Opportunity
Manufacturing	60,141	186,738	32%
Health Care and Social Assistance	38,998	227,086	17%
Construction	37,307	86,929	43%
Retail Trade	32,926	149,278	22%
Public Administration	23,037	63,766	36%
Transportation and Warehousing	21,039	48,219	44%
Finance and Insurance	16,108	86,367	19%
Professional, Scientific, and Technical Services	16,011	107,913	15%
Wholesale Trade	13,877	44,007	32%
Other Services (except Public Administration)	13,271	58,531	23%

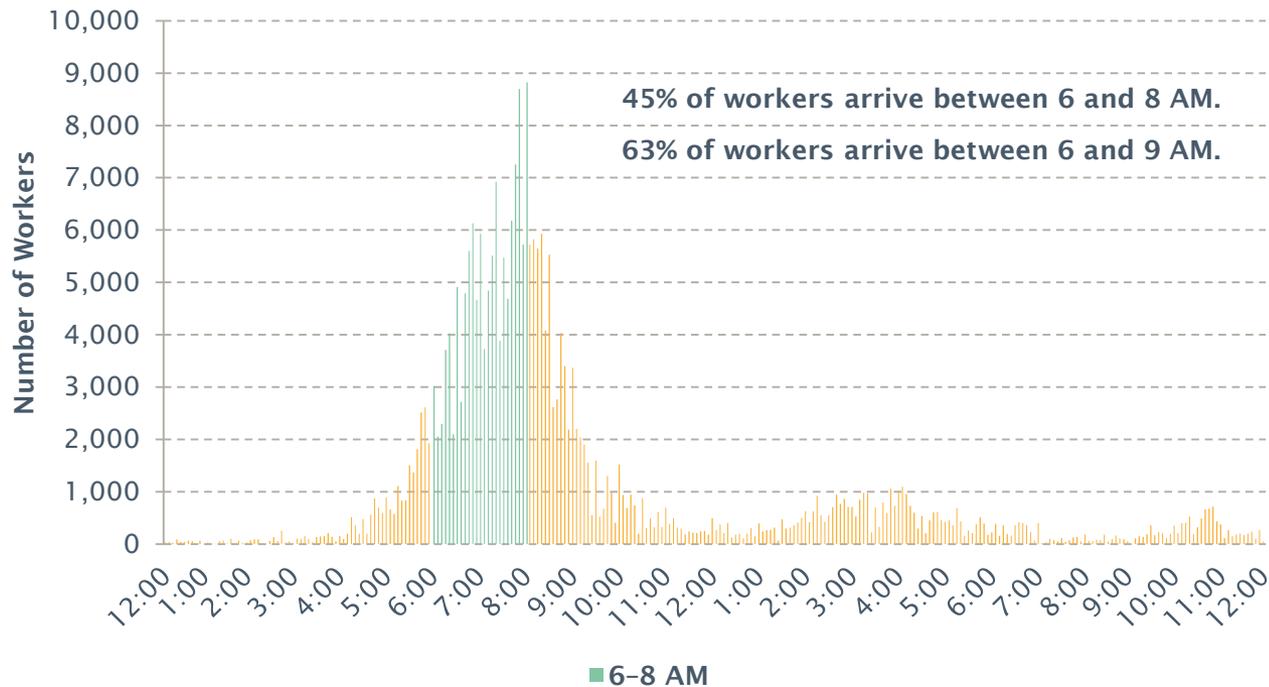
Source: Author's calculations using the ACS PUMS, 2010-2014.



Geography of Opportunity Employment



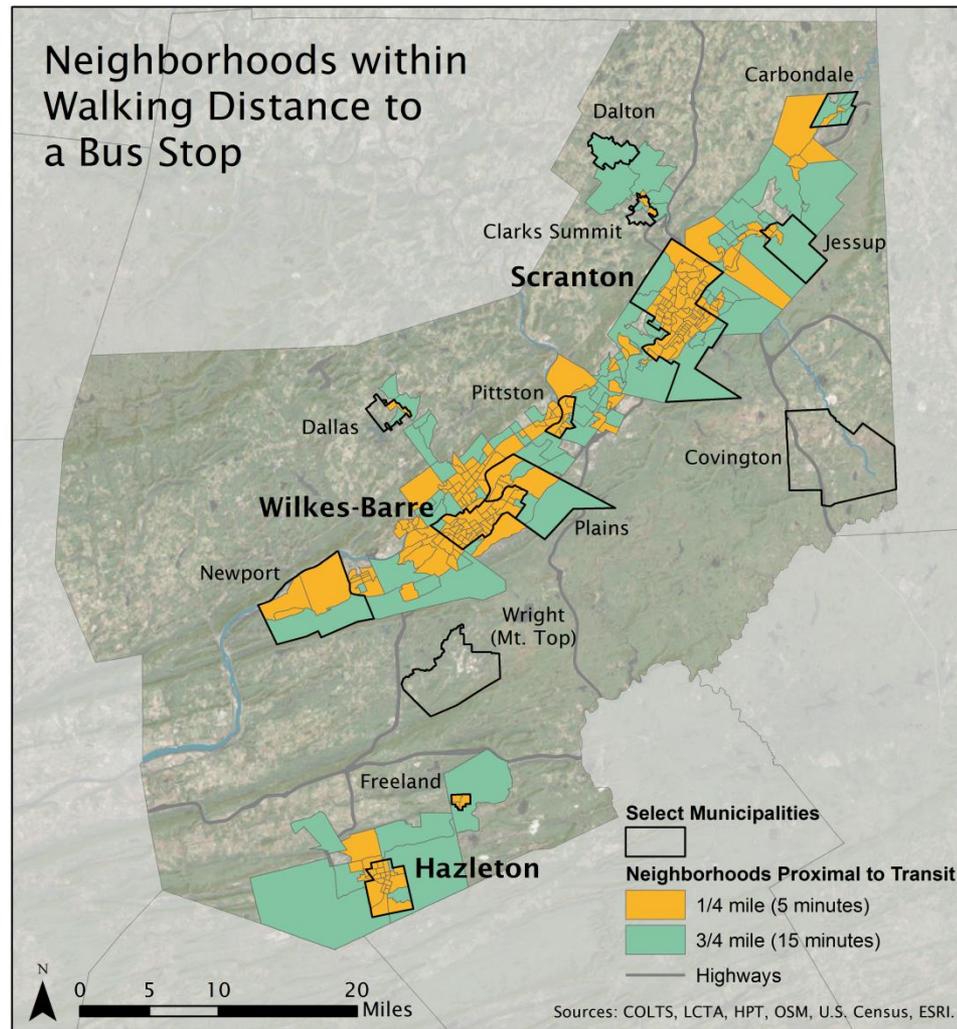
Time of Arrival at Work, Northeastern PA



Source: Author's calculations using the ACS PUMS, 2010-2014.

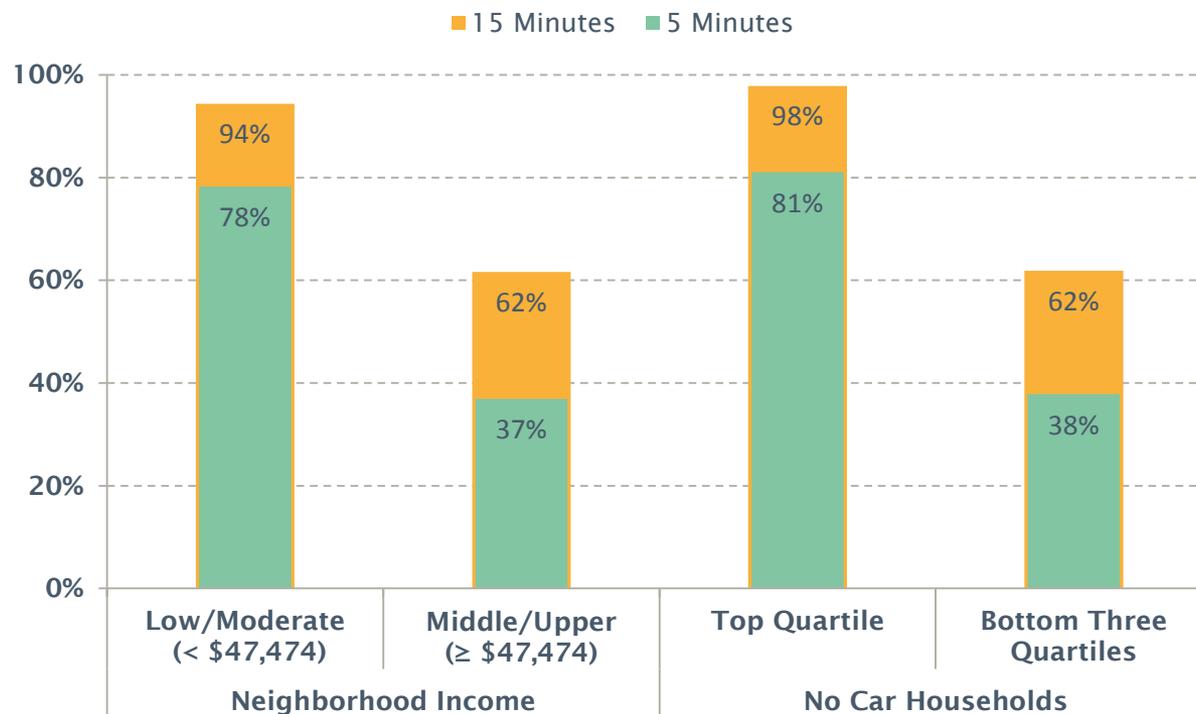


Access to Transit in Luzerne and Lackawanna Counties



Access to Transit in Luzerne and Lackawanna Counties

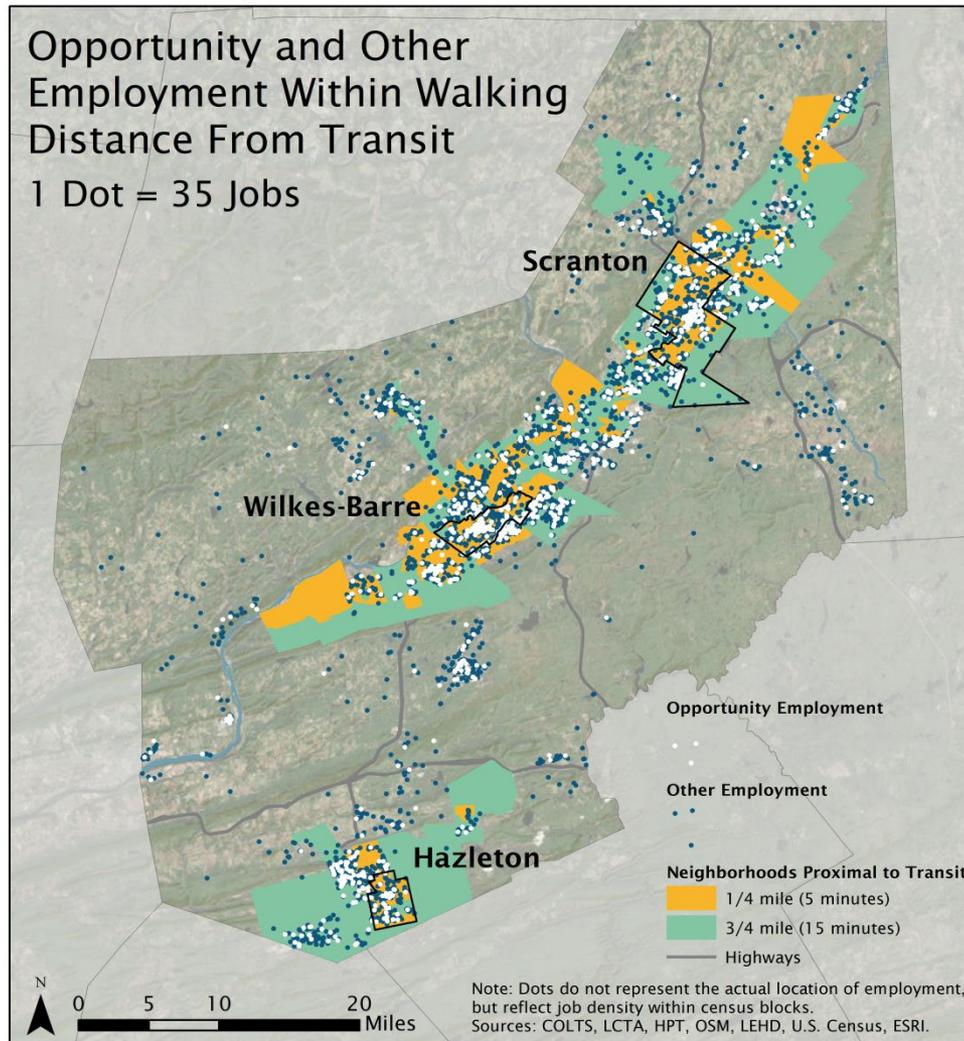
Percent of Population within Walking Distance to a Bus Stop



Source: Author's calculations using COLTS, LCTA, and HPT GTFS, OSM, 2010 U.S. Decennial Census, and the 2010-2014 ACS.

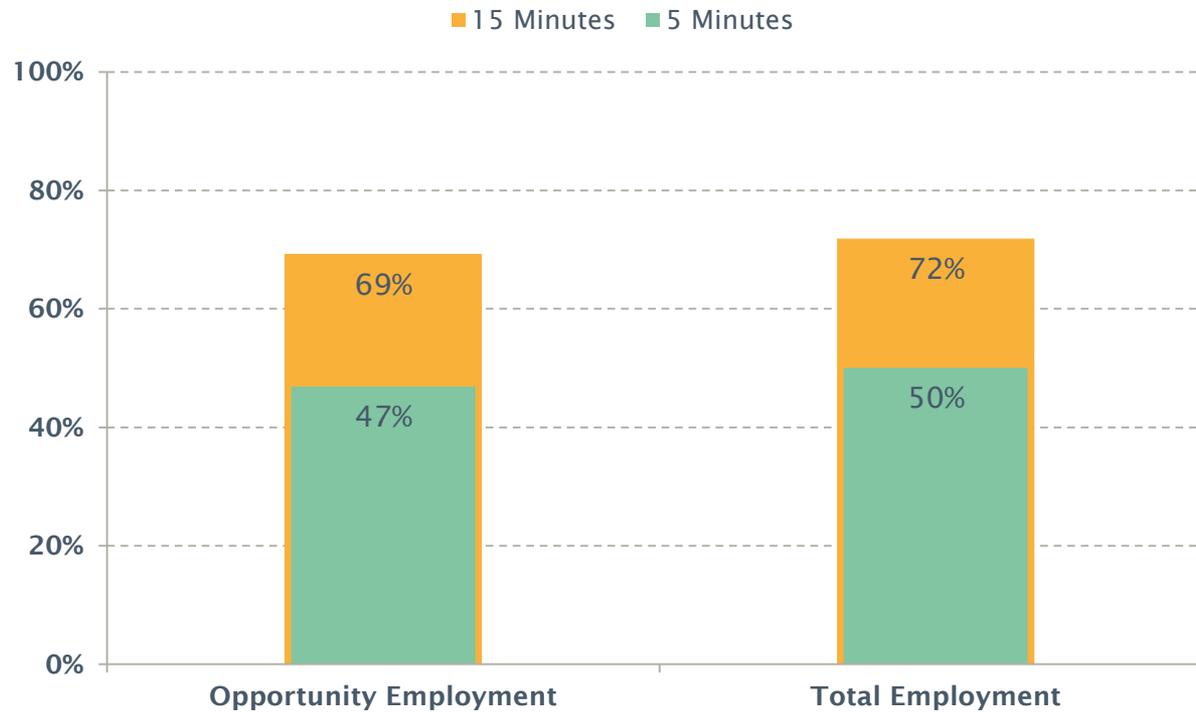


Employment Proximal to Transit in Lackawanna and Luzerne Counties



Employment Proximal to Transit in Lackawanna and Luzerne Counties

Percent of Jobs within Walking Distance to a Bus Stop



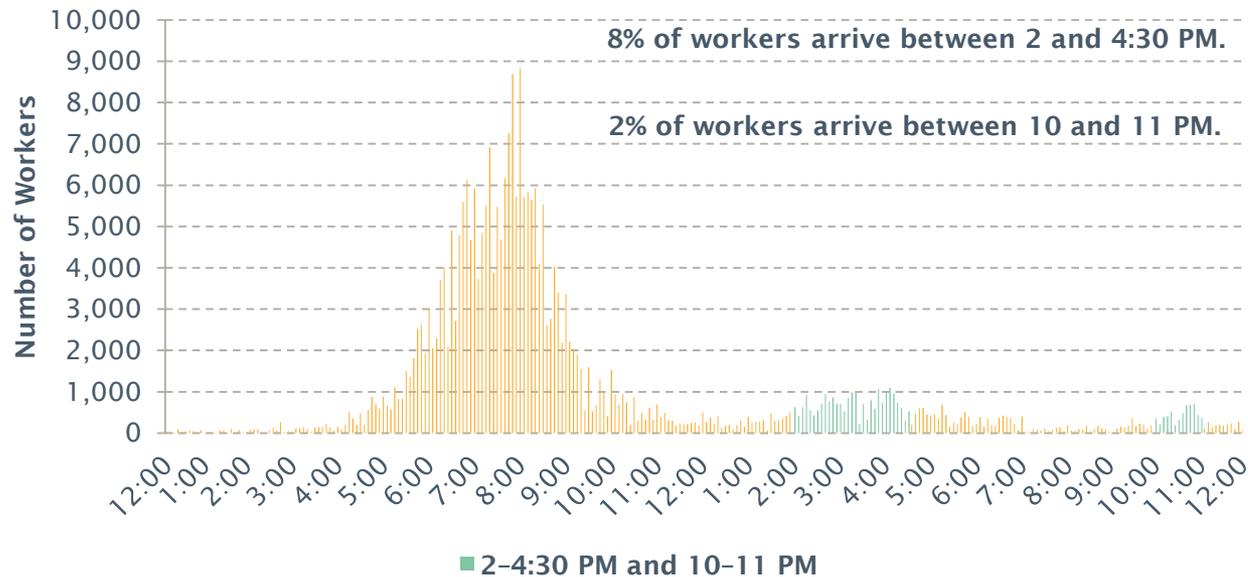
Source: Author's calculations using LEHD, OSM, and COLTS, LCTA, and HPT GTFS.



Hours of Operation and Time of Arrival at Work

- In general, bus service is available between 5am and 7pm. As a result:
 - Second-shift workers cannot rely on a bus home.
 - Third-shift workers cannot rely on a bus to work.

Time of Arrival at Work, Northeastern PA



Source: Author's calculations using the ACS PUMS, 2010-2014.



Next Steps

- Incorporate 2015 employment and demographic data
- Identify neighborhoods “stranded” from employment
- Publish a report for the Scranton/Wilkes-Barre/Hazleton region
- Publish a report comparing transit and job access in the context of the small city



Thank You

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