

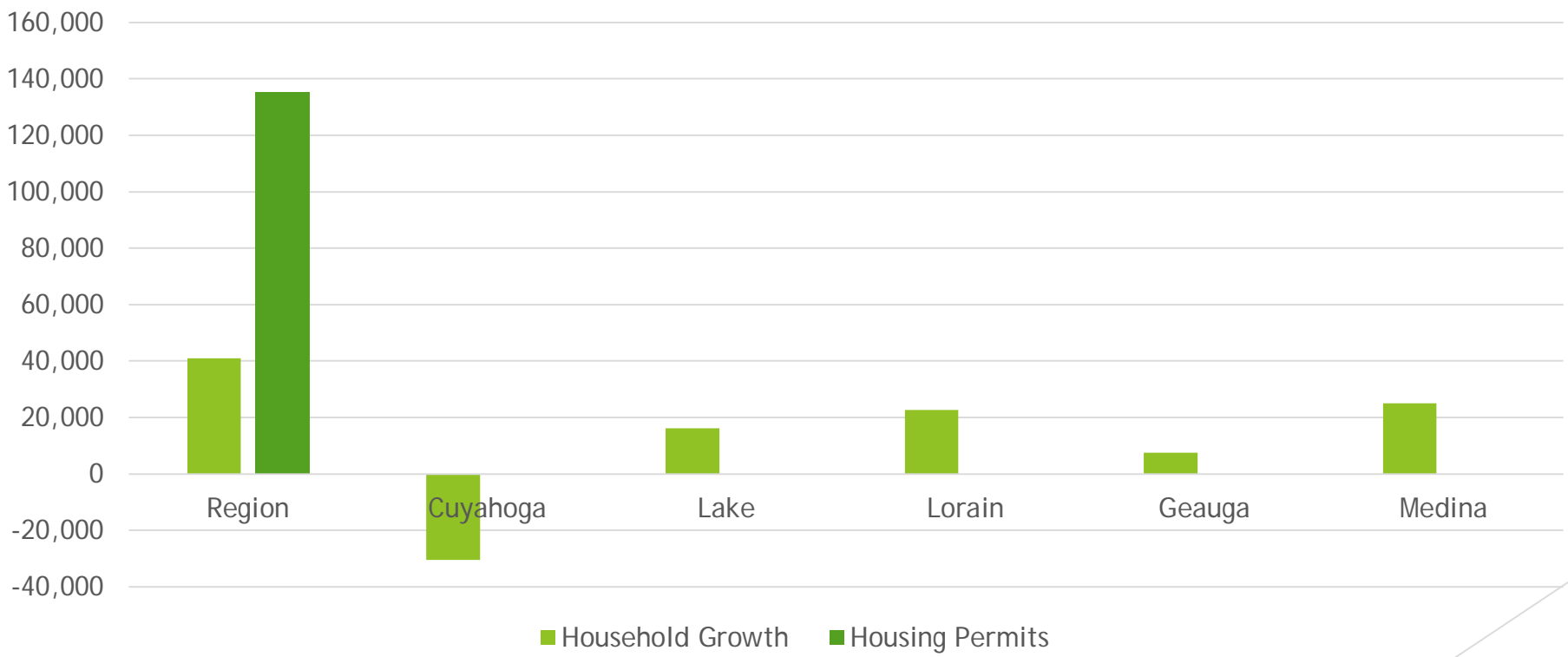
The Suburbanization of Jobs in US Shrinking Cities

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Introduction

Change in Households vs New Housing Units, 1990-2015, Cleveland Metro



Data source: HUD and Census Bureau, analysis by J. Ganning

Introduction

Does the context of urban decline challenge job accessibility for central city residents?

If so, does this seem to happen because of the movement of jobs away from the core *without* regional growth?

Background

Non-shrinking Principal Cities of MSAs: 17.6% African American
Percent of MSA: 12.7%

Shrinking Principal Cities of MSAs: 41.6%.
Percent of MSA: 15.8%

Table A1 Shrinking cities as identified by Ganning and Tighe (2018).

Gadsden, AL	Covington, KY ^a	Rome, NY	Lima, OH
Birmingham, AL	Monroe, LA	Schenectady, NY	Springfield, OH
Pine Bluff, AR	New Orleans, LA	Utica, NY	Dayton, OH
Inglewood, CA ^a	Holyoke, MA ^a	Troy, NY	Cincinnati, OH
Hartford, CT	Towson, MD	Albany, NY	Scranton, PA
Bridgeport, CT	Baltimore, MD	Syracuse, NY	Erie, PA
Macon, GA	Dundalk, MD ^a	Rochester, NY	Wilkes-Barre, PA
Chicago, IL	Saginaw, MI	Niagara Falls, NY	Reading, PA
Berwyn, IL ^a	Flint, MI	Buffalo, NY	Philadelphia, PA
Cicero, IL ^a	Pontiac, MI	Binghamton, NY	Harrisburg, PA
Rock Island, IL	Detroit, MI	Euclid, OH ^a	Altoona, PA
Decatur, IL	Dearborn, MI	Cleveland Heights, OH ^a	York, PA
East Saint Louis, IL ^a	Dearborn Heights, MI ^a	Cleveland, OH	Pittsburgh, PA
South Bend, IN	Lincoln Park, MI ^a	Lakewood, OH ^a	Chester, PA ^a
Gary, IN	Saint Louis, MO	Warren, OH	Providence, RI
Hammond, IN ^a	Paterson, NJ ^a	Toledo, OH	Galveston, TX ^a
Anderson, IN	East Orange, NJ ^a	Youngstown, OH	Norfolk, VA
Terre Haute, IN	Newark, NJ	Akron, OH	Milwaukee, WI
Evansville, IN	Trenton, NJ	Canton, OH	Charleston, WV
Kansas City, KS	Camden, NJ	Mansfield, OH	Huntington, WV

^aDenotes cities not included in analysis.

Research Limitations


#1: We Know Too Little About Job Accessibility Via Transit

- ▶ Difficulty of estimation
- ▶ Limitations of published, public databases like the EPA's Smart Location Database



We do not know who takes transit in any way that enables cross-sectional or national-scale research.

- ▶ In Ohio, about 95% of *all Census tracts* have low reliability data for Journey to Work via transit.
- ▶ In other words, we can only be confident of the percentage of workers commuting via transit in ~5% of all Ohio Census tracts.



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It's Good but Is It Right? An Under-the-Hood View of the Location Affordability Index

Joanna P. Ganning

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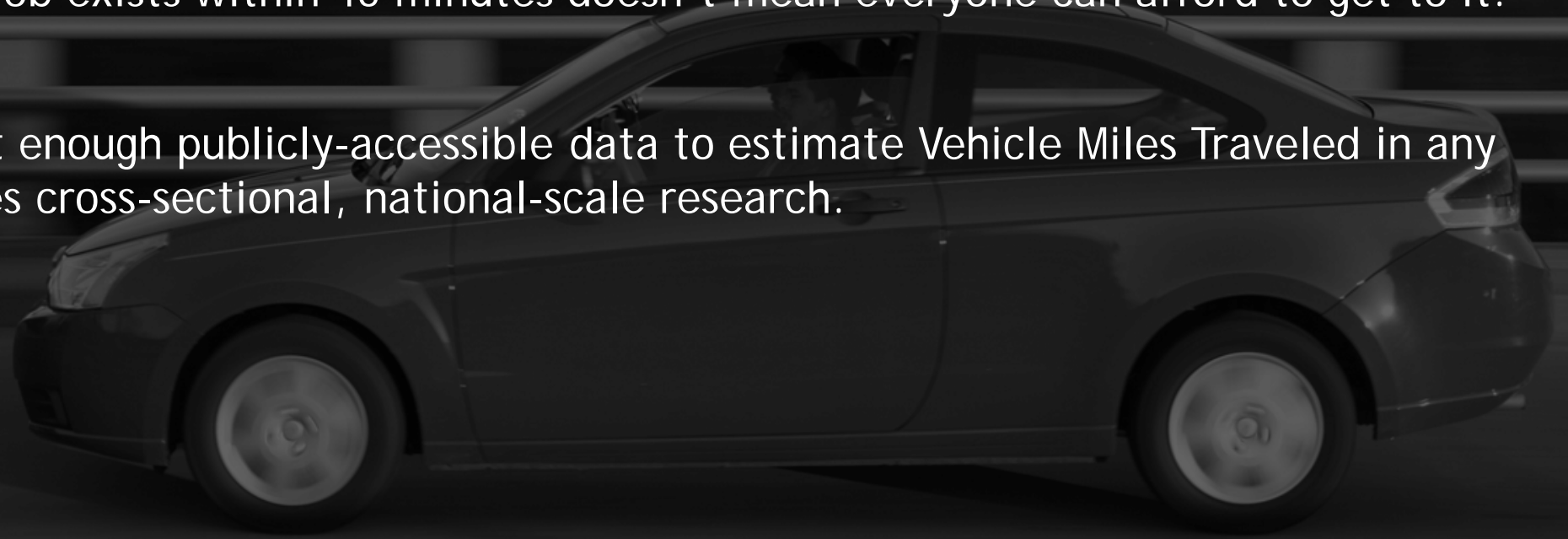


Research Limitations

#2: We Know Too Little About the Costs of Transportation

Just because a job exists within 45 minutes doesn't mean everyone can afford to get to it.

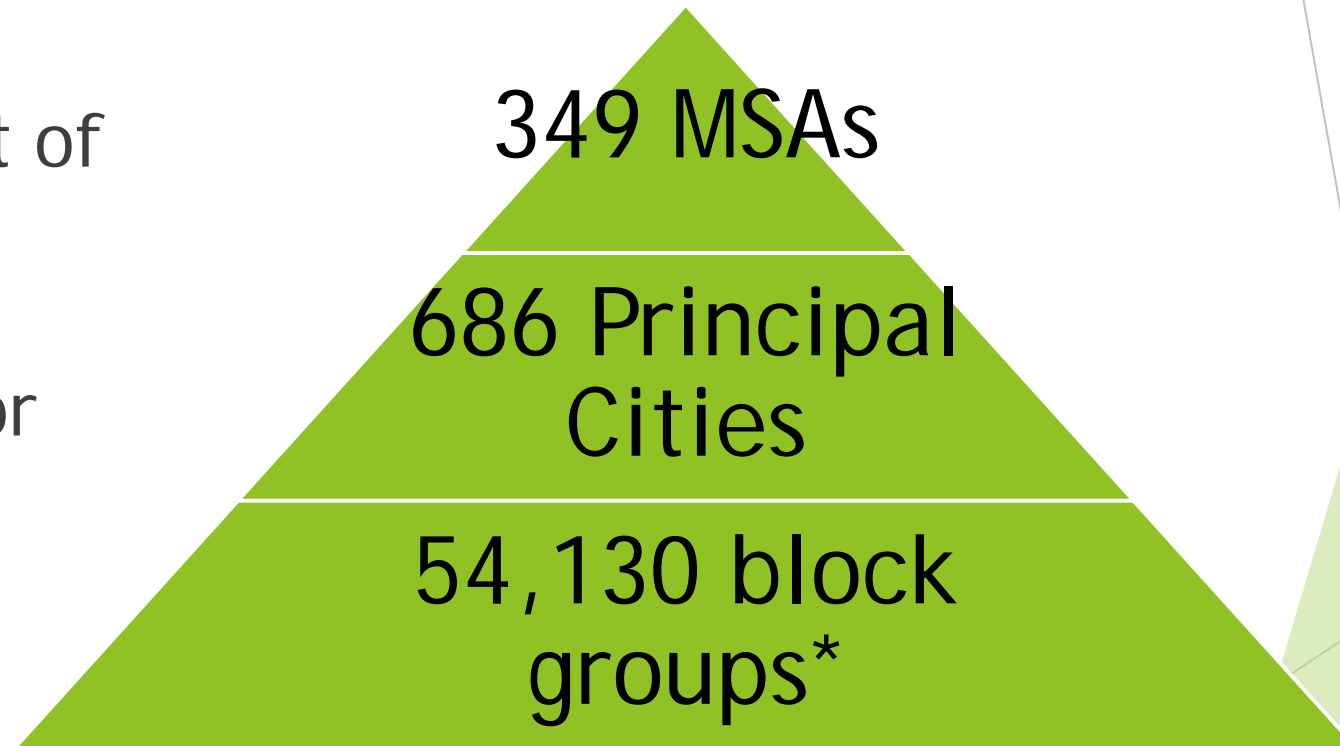
Yet, there is not enough publicly-accessible data to estimate Vehicle Miles Traveled in any way that enables cross-sectional, national-scale research.





Research Approach: Question 1

Does the context of urban decline challenge job accessibility for central city residents?



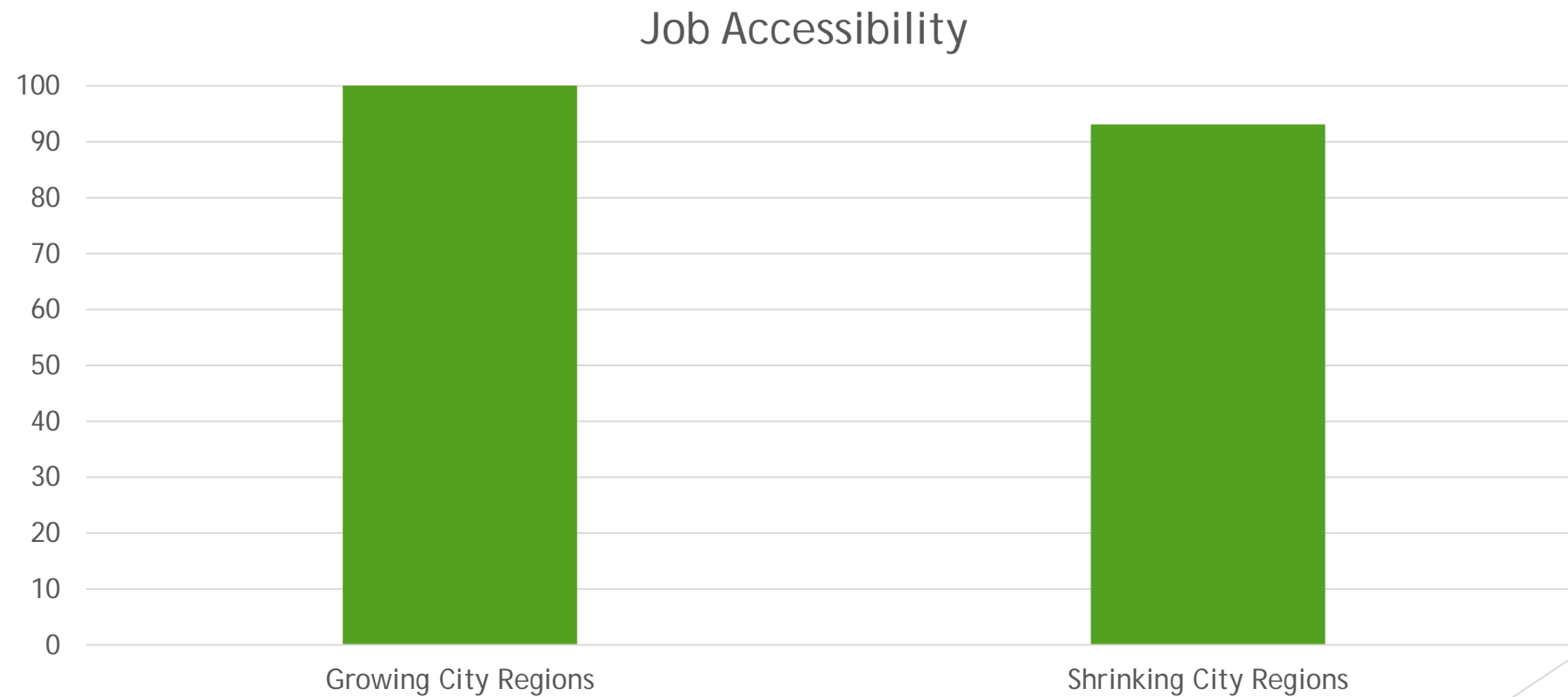


Regression: Modeling Job Accessibility

- ▶ **Sample:** Block groups within the Principal Cities of MSAs
- ▶ **EPA's Smart Location Database:** Jobs available within 45 minutes by car from any given block group.
- ▶ **Modeled as a function of:**
 - ▶ Total employment in the Metropolitan Statistical Area (MSA)
 - ▶ % of the block group's population that is not White Alone (Census data)
 - ▶ % of workers in the block who are low wage (less than \$1250/month)
 - ▶ Shrinking City status: yes/no (as identified by Ganning & Tighe, 2018)



Results: The Context of Decline Lowers Job Accessibility by 6.9%, Other Things Constant



Results: Effects of Low Wages

Table 2 Auto-based job accessibility models.
Dependent variable: Auto-based accessibility

	Model 1			Model 2			Model 3			Model 4		
	Estimate	Std. error	P-value	Estimate	Std. error	P-value	Estimate	Std. error	P-value	Estimate	Std. error	P-value
(Intercept)	57336.550	413.687	***	61122.598	654.384	***	108113.645	2145.805	***	108200.788	2143.473	***
CBSA_EMP	0.076	0.000	***	0.076	0.000	***	0.075	0.000	***	0.074	0.000	***
NWA_PC				-10510.111	1800.809	***	7344.566	1872.439	***	9937.214	1915.460	***
LOWWG							-189173.746	7978.480	***	-186495.317	8016.395	***
SC										-7485.246	762.180	***
R ²	0.7673			0.7716			0.7741			0.7742		

***P-value < 0.01.

Note that the effect of living in a block group with a higher proportion of low wage workers also shows a large and significant impact on job accessibility.

Research Approach: Question 2

Does urban decline challenge job accessibility because of the movement of jobs away from the core *without* regional growth?

182,021 block groups

Assigned to nearest Principal City

Principal City identified as shrinking or growing

Job accessibility calculated for 2005, 2010, and 2015

Research Approach: Question 2

$$ACC_{it} = JOBS_{j, DIST=0} + \sum_{j=0}^n \frac{JOBS}{DIST/1000}$$

where:

ACC = Job accessibility,

i = Principal City,

t = year (2005, 2010, or 2015),

j = block group for which i is the closest Principal City,

$JOBS$ = total jobs within the block group, by place of work,

$DIST$ = Distance, in meters

Results

Table 3 Median job accessibility and median total jobs from Cities' Central Point, 2005, 2010, and 2015.

	Job accessibility				Total jobs			
	2005	2010	2015	% Change, 2005–2015	2005	2010	2015	% Change, 2005–2015
Shrinking Principal Cities	122,391	108,533	105,926	–13.5%	183,196	163,257	172,074	–6.1%
Non-Shrinking Principal Cities	81,620	82,302	84,153	3.1%	114,661	114,902	120,748	5.3%



Conclusion

“Processes experienced by shrinking cities are not merely the mirror images of those manifested in growing cities”

- George Galster, 2017



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Thank you!

Ganning, J. (2018). Change versus decline: The suburbanization of jobs in US shrinking cities. *Population Loss: The Role of Transportation and Other Issues*, 2, 163.

Questions or comments?

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