How are Uber/Lyft Shaping Municipal On-Street Parking Revenue?

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AIMS

Autonomous vehicles (AVs) will likely disrupt more than just travel behavior: they could reshape municipal budgets and cities' bottom lines through affected parking revenues. The challenge for cities is that, without AVs on city streets, the potential effects on parking revenues remains unknown. Ride-hailing can serve as a proxy for an uncertain future.

Research Question

What is the association between ride-hail trips in a neighborhood and parking revenue?

DATA & METHODS

This research uses Uber and Lyft trip data, specifically the number of trips serving neighborhoods in the City of Seattle every day, at different times of the day, from 2013-2016.

Study Areas: census tracts with paid on-street parking in the City of Seattle

Parking revenue data from the City of Seattle based on transaction & parking occupancy

Neighborhood data provides context

- American Community Survey: Car ownership, population density, car ownership, median household income
- State of Washington: beer/wine/liquor licenses
- US Energy Administration: fuel price data

RESULTS

In a nutshell, effects vary by time horizon.

In the near term, and at current (or even higher) ride-hailing use, don’t expect parking revenues to fall.

In long-term, revenue will decline over time with no policy change.

Projected revenue by parking space

Revenues are predicted to peak at about 4.8 times 2016 ride-hail trip volumes.

Projected parking revenue by neighborhood

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Factors associated with projected revenue by parking space

- Uber/Lyft pickups & drop-offs
- Census median parking occupancy rate
- Average parking cost ($/time bin, on-street, 8-10am)
- Percentage change in retail
- Median household income
- American Community Survey

Methods

Controlling for built environment and resident characteristics, estimated two Poisson regression models:

1. Total tract revenue per time period
2. Average revenue per parking space per time period

POLICY IMPLICATIONS

- Consider policy aims of on-street parking in the future
- Use this opportunity to reshape public rights-of-way for new or different uses.

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