



The Effects of Ride-hailing on Parking Demand and Revenues: the Case of Seattle

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URBANISM NEXT

This project was funded by the National Institute for Transportation and Communities (NITC; grant number 1174 - 2452A0), a U.S. DOT University Transportation Center. Funding support was also provided by the University of Oregon's Urbanism Next Research Center.

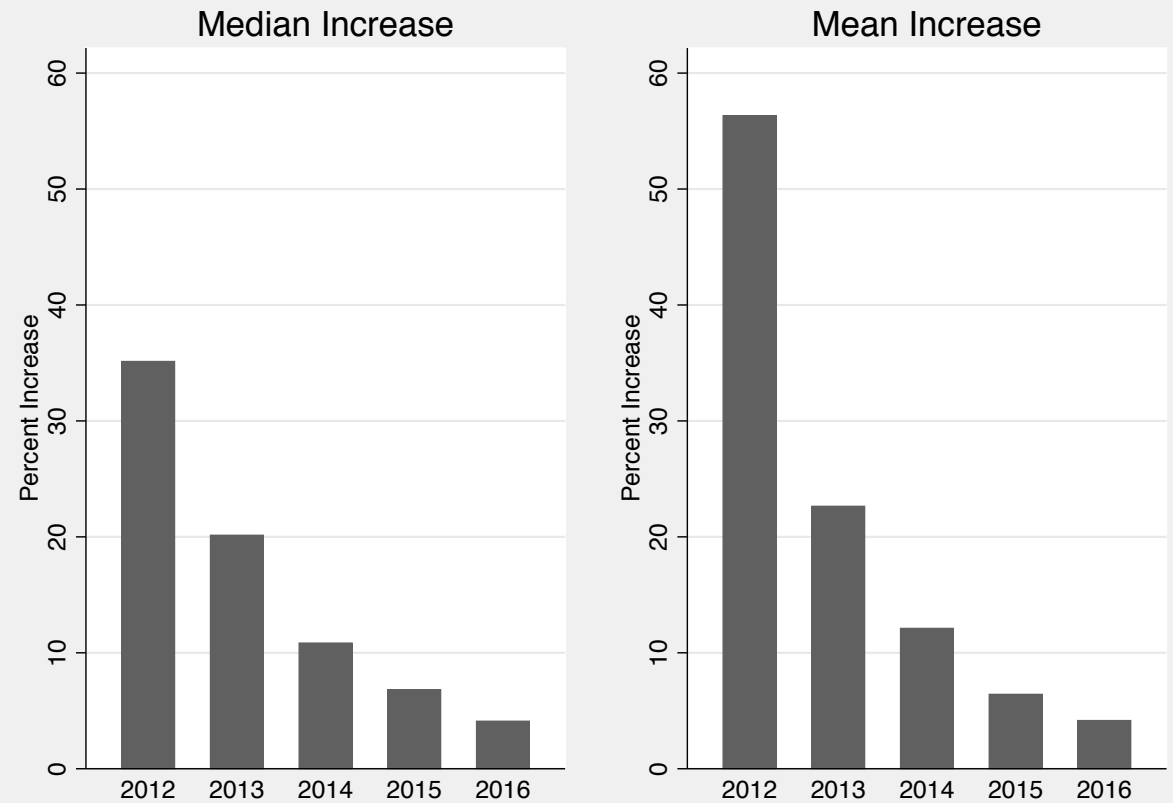


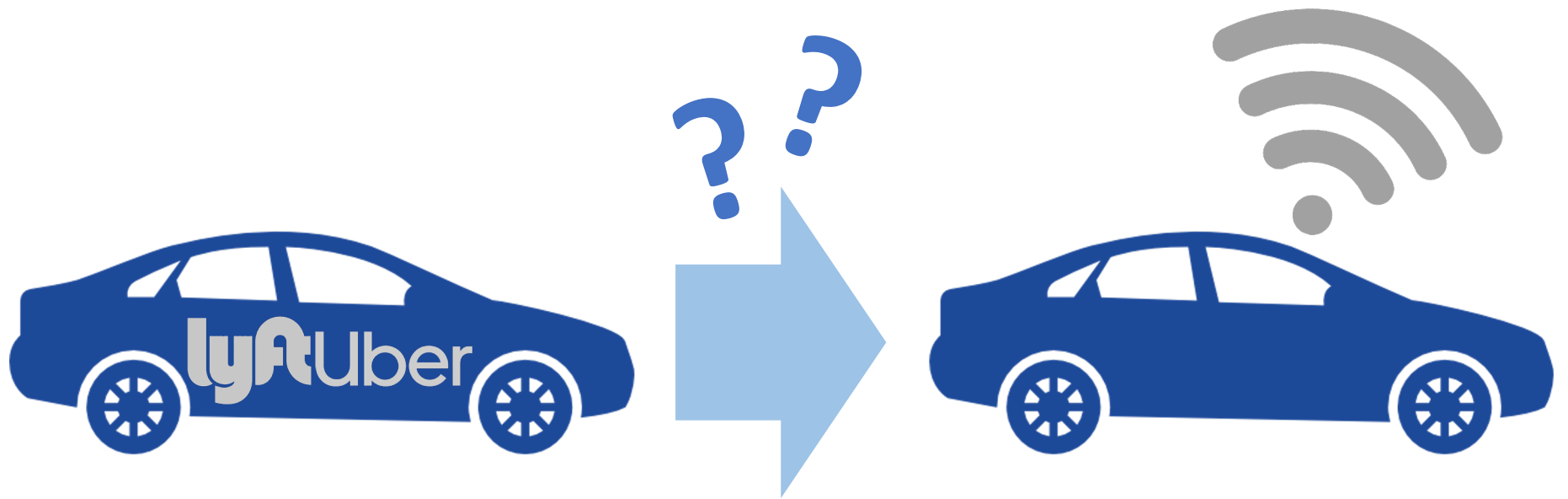
UBER

lyft

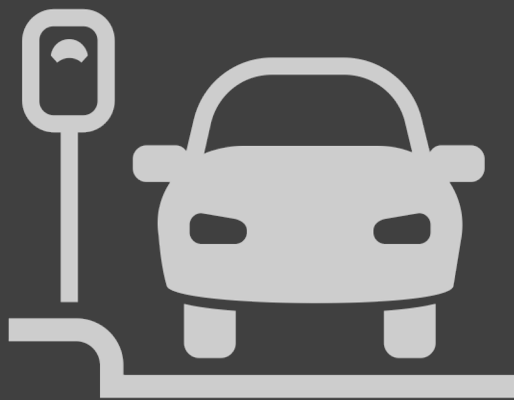
Rapid Growth of ride-hailing in Seattle

Month-Over-Month Percent Increases In Rides Taken





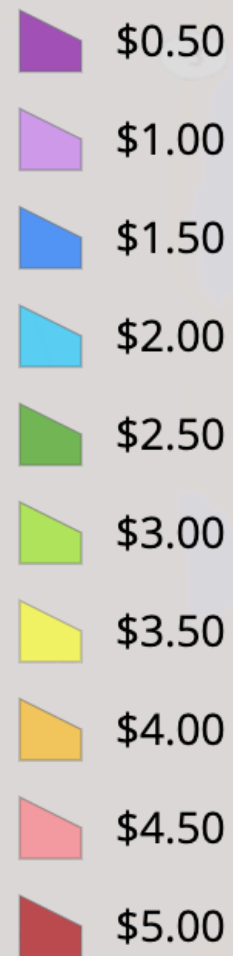
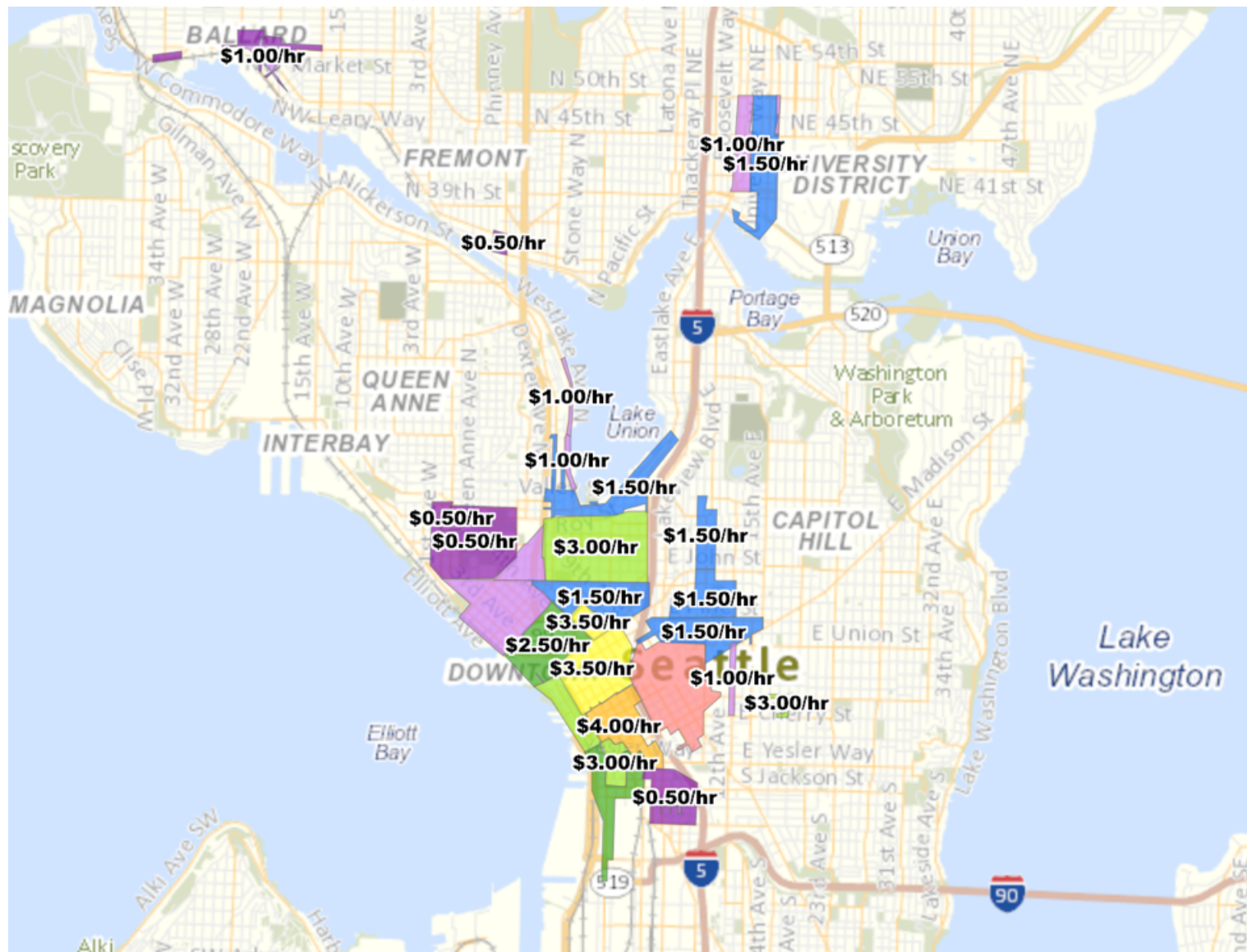




What is the link
between ride-hail trips
in a neighborhood and
parking revenue?



Context & Methods



How do we measure ride-hailing and parking revenue?

- 2013-2016
 - Ride-hailing Pickup/Dropoff (both Uber and Lyft)
 - Parking revenue + occupancy + avg \$/hour



What else do we measure?

- Neighborhood characteristics
 - Number of motor vehicles
 - Number of parking spaces
 - Number of beer/wine selling establishments
 - Median household income
 - Population density
 - Land use (residential, industrial, commercial, mixed-use, other uses)
- Average cost per gallon of gas



What is the unit of analysis?

Geography—Census Tracts in
Seattle with paid on-street parking
(33 in total)

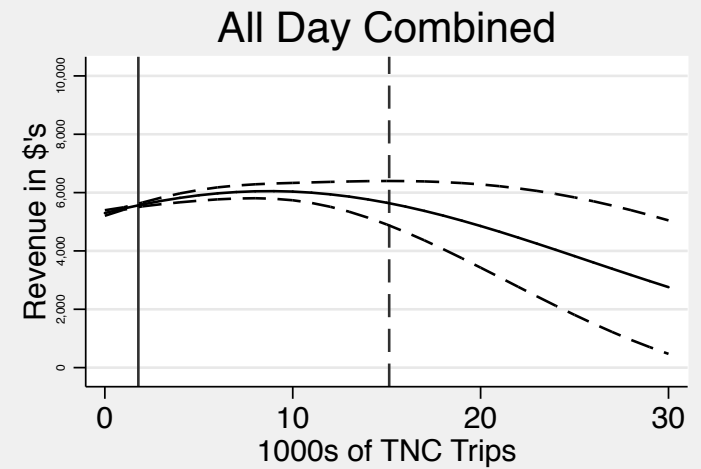
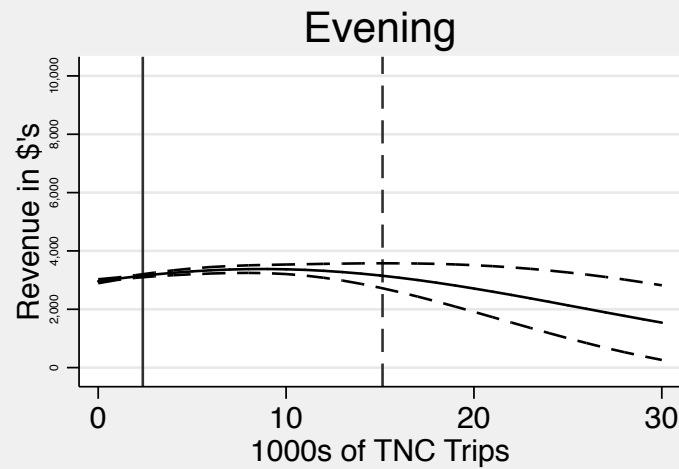
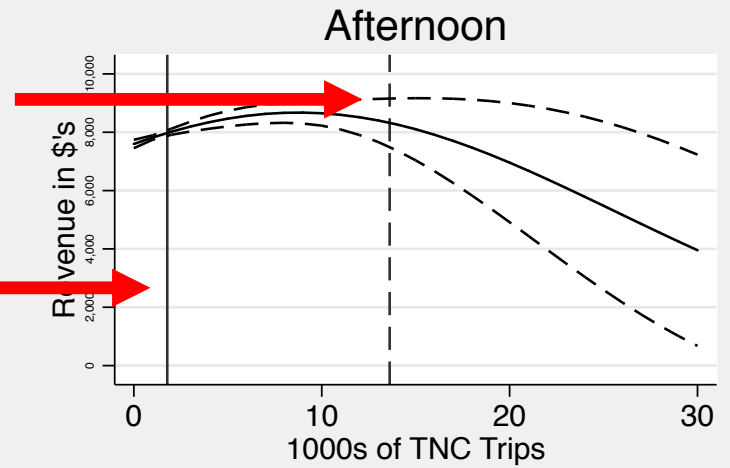
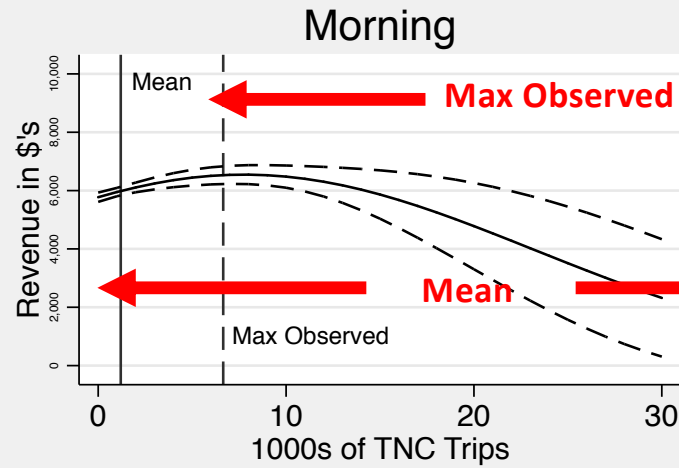
Time—three time blocks
(Morning; Mid-Day; Evening)
Day of week in a month

All Monday mornings in January are
added together for each Tract



Results

Total Revenue



95% Confidence Interval Shown with Dashed Lines

At 2016 mean → \$5,563

2016 Mean = 1,782 trips

At max observed value → \$5,636

\$73 more than mean (or 1.3% ↑)

(Max observed = 15,134 trips)

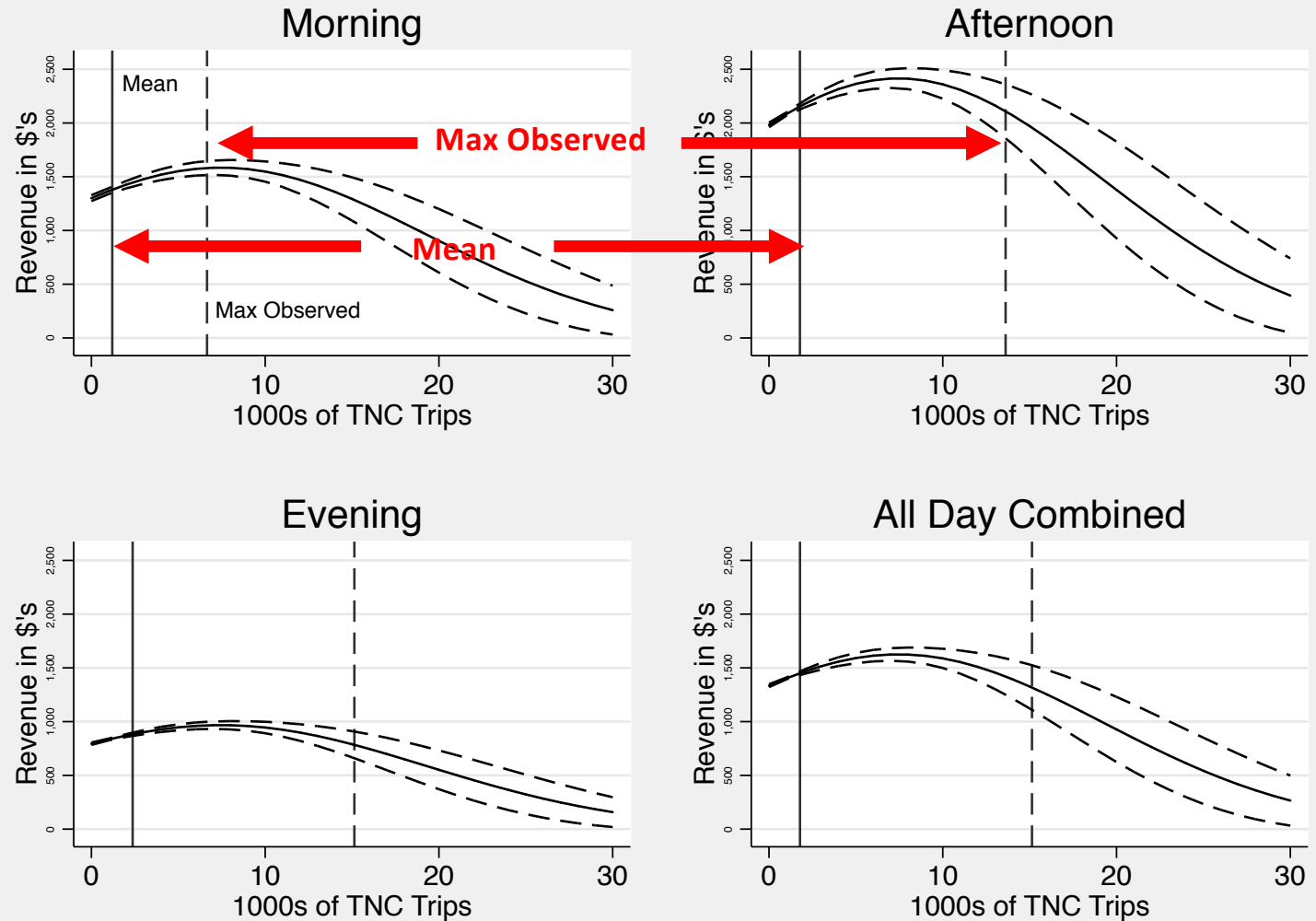
At 30k trips → \$2,759

\$2,877 less (or 51% ↓)

Revenue is predicted to
peak at about 4.8 times
the 2016 ridership

Or about 8,500 trips & \$6,050

Revenue Per Space



95% Confidence Interval Shown with Dashed Lines

At 2016 mean → \$1,450

2016 Mean = 1,782 trips

At max observed value → 1,317

\$133 less (or 9% ↓)

Max = 15,134 trips

At 30k trips → \$265

\$1,185 less (81% ↓)

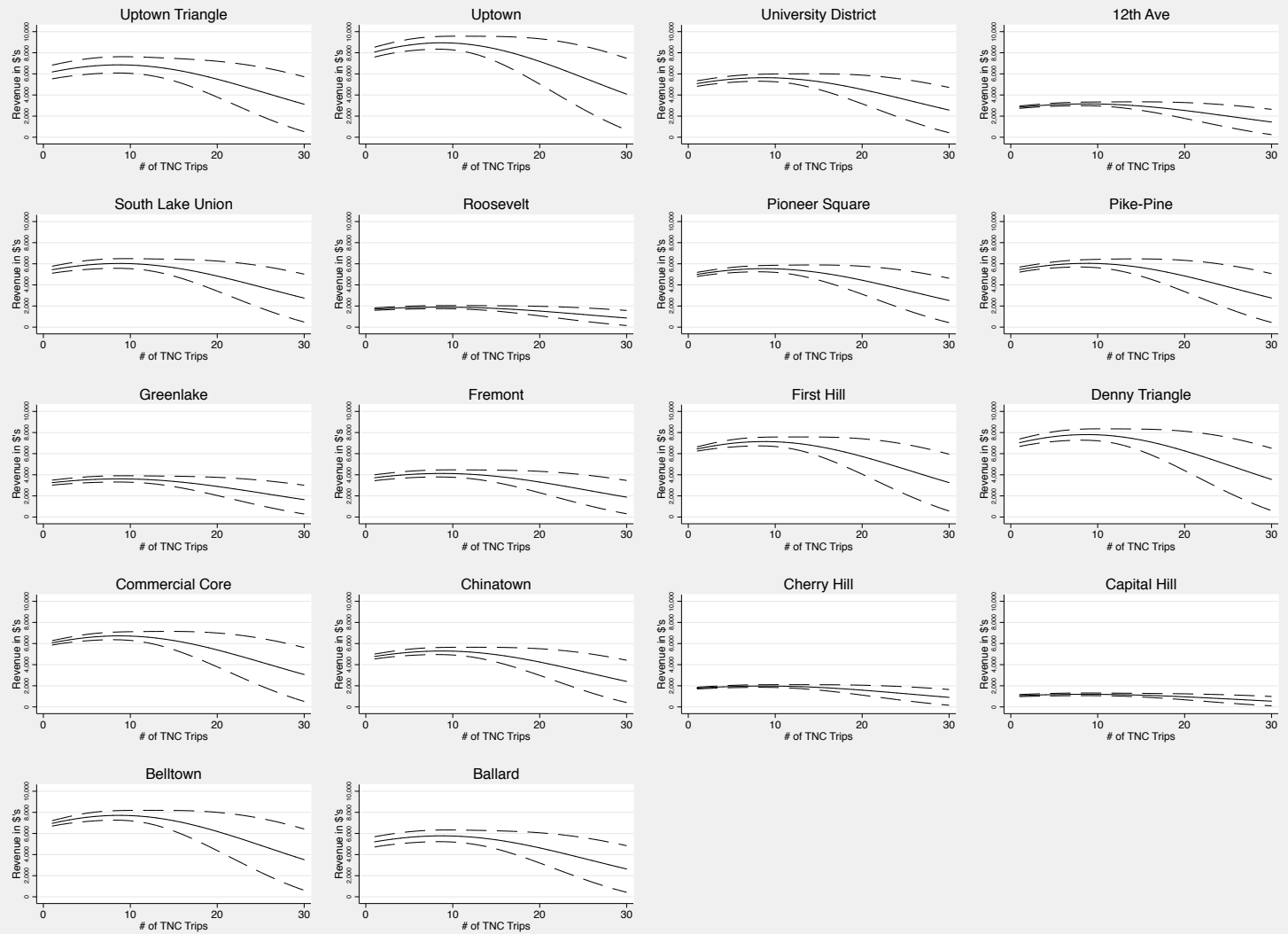
Revenue is predicted
to peak at about half of
current observed max
2016 ridership

Or about 7,500 trips & \$ 1,625



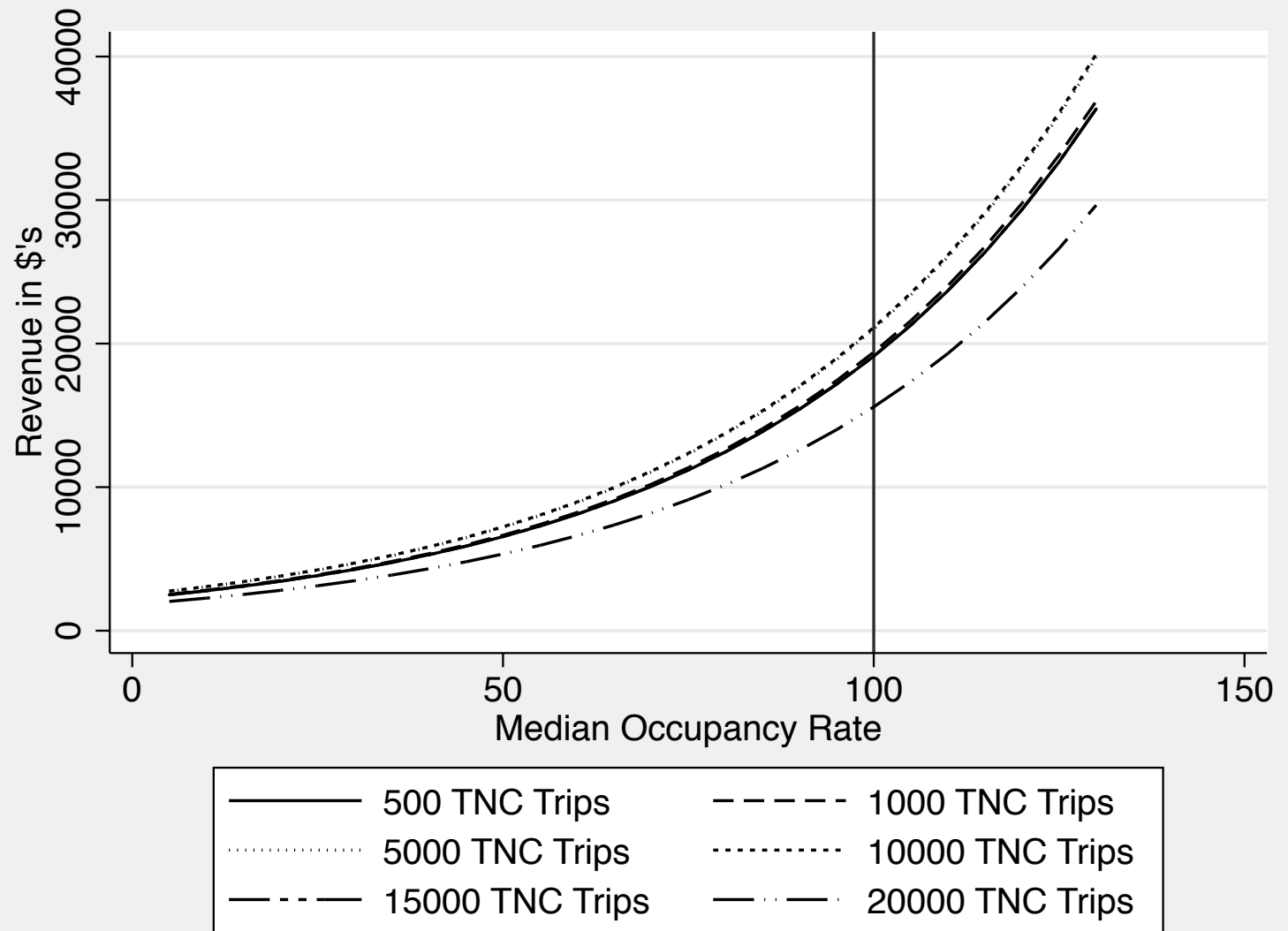
Each neighborhood is unique

Total Revenue



95% Confidence Interval Shown with Dashed Lines

Total Revenue By Parking Occupancy & # of Trips



Note: Rate exceed 100% because people pay for more parking than they use



What's next for cites?

Managing parking for
occupancy—the Seattle Policy—
will result in lower revenues.

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.

Use this opportunity to
reshape public rights-of-way
for new or different uses.

Covid-19 caveat:

We don't know how the
pandemic will change habits in
the future



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