

# Cities rethink parking as ride-hailing grows and parking revenue declines

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A California parking lot in 2006. Credit: Wikipedia/CC BY-SA 3.0

As Lyft and Uber race toward IPOs this spring, Americans are relying on the ride-hailing services more than ever, and as a result, city parking garages and airport parking lots are a bit emptier. A new study published in the *Journal of Transportation and Land Use* aims to understand how parking demand is changing as people opt to hitch a ride and leave their

cars at home.

Researchers from the University of Colorado Denver found that people who use [ride-hailing](#) are willing to pay more to avoid driving, including the stress and cost of [parking](#). As a result, cities are seeing a reduction in parking demand, particularly at restaurants and bars, event venues, and airports. That reduction could push cities to reconsider and replace parking infrastructure, leading to more vibrant cities and, one day, less dependency on cars.

"We wanted to understand how these new services, Uber and Lyft, are impacting a city in regards to how people shift travel behavior, overall congestion and changes in landscape," said lead author Alejandro Henao, former CU Denver Ph.D. student and current mobility researcher with the National Renewable Energy Laboratory (NREL). For the study, he teamed up with Wes Marshall, Ph.D., PE, associate professor in the College of Engineering, Design and Computing.

Last fall, the pair published [a study](#) in *Transportation* examining how rideshare services impact the transportation system. Their research found ride-hailing increased deadheading (drivers circulating around without passengers), congestion and vehicle miles traveled while luring passengers away from more sustainable travel options like walking, biking and public transportation. Parking, researchers realized, may be one upside.

A lack of public data from the ride-hailing companies—and tenuous cooperation when courts have ordered them to share—required the researchers find a workaround. In fall 2016, Henao became a driver for both Uber and Lyft and drove a 2015 Honda Civic around Metro Denver for 14 weeks.

Logging hundreds of rides and gathering 311 surveys from his

passengers, Henao collected a "driver dataset," containing the GPS tracking of date, time of day, travel times, and travel distance of the rides; and a "passenger dataset," containing information gathered by surveying his passengers during the ride about car ownership, reason for travel and if parking was a reason for leaving their cars at home. By combining the [ethnographic research](#) with interviews and the technology-based data, researchers were able to assess the shift in parking demand and how much of that was contributed to parking stress.

Results suggest that 26.4 percent of Uber/Lyft riders would have driven and needed a parking space if the ride-hailing services did not exist. While the same service replaced more sustainable forms of transportation by a third, a third of respondents stated that they are driving less when asked about general travel behavior. Parking stress was the second most cited reason for ordering a car, even if researchers found that the relative time and cost of parking was negligible compared to the cost of their ride.

"We found that the stress of the uncertainty of finding a parking spot downtown was enough to discourage people from driving themselves and made them willing to pay more to avoid it," said Marshall.

Researchers believe their findings could provide insight for cities to set parking rates and manage supply and demand. In fact, Henao said cities should rethink and better manage curb space by allocating more space to walking, biking, and transit; and monetize car trips (private cars and ride-hailing) to meet sustainable goals. Some airports are already charging a pick-up and drop-off fee for the curb space allotted to ride-hailing companies, allowing them to collect revenue lost to parking.

"Historically, cities have relied upon parking minimums," said Marshall. "But too much parking is just as bad as – if not worse than – too little parking. Parking lots don't make for great places. If you are a city, you'd

see more bang for the buck from another land use, and having options like ride-hailing available should make doing so easier."

Marshall sees this research as a push cities may need to reduce parking considering the growing list of transportation options, including autonomous cars.

"We need to make the technology fit our cities, not the other way around," said Marshall. "If we focus on the fundamentals of walking and biking, the [city](#) will be livable on a human scale, and the technology will adapt to that."

**More information:** Alejandro Henao et al. The impact of ride hailing on parking (and vice versa), *Journal of Transport and Land Use* (2019). [DOI: 10.5198/jtlu.2019.1392](https://doi.org/10.5198/jtlu.2019.1392)

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