Collaborative Sciences Center for ROAD SAFETY

RESEARCH BRIEF

Associating Ridesourcing with Road Safety Outcomes: Insights from Austin, Texas

The advent of transportation network companies (or TNCs) offering ridesourcing expands mobility options in cities and may impact road safety outcomes. This study analyzes the effects of ridesourcing use on road crashes, injuries, fatalities, and driving while intoxicated (DWI) offenses in Travis County (Austin), Texas.

This research leverages real-time ridesourcing data to explain variation in road safety outcomes. Researchers used origin-destination data from the TNC RideAustin, to examine the effect of ridesourcing exposure on road safety outcomes, including crashes, injuries, fatalities, and DWI offenses. Spatial panel data models with fixed effects were deployed to examine whether the use of ridesourcing was significantly associated with these safety metrics.

The results found that for every 10 percent increase in ridesourcing trips, there was an expected 0.12 percent decrease in road crashes, a 0.25 percent decrease in road injuries, and a 0.36 percent decrease in DWI offenses in Travis County. Ridesourcing use was not significantly associated with road fatalities. While positive, the magnitude of these effects is quite small.

The key finding from this research is that increases in ridesourcing were not associated with decreases in safety. This analysis augments existing work in the field by accounting for spatial distributions of ridesourcing use, road safety outcomes, and other socioeconomic characteristics in the given region. Contributions include developing a data-rich approach for assessing the impacts of ridesourcing use on transportation system safety, which may serve as a template for future analyses for other cities.

Future research should also focus on which populations and subpopulations road safety outcomes can be improved through ridesourcing use by (a) exploring the relationship of ridesourcing and road safety outcomes for different household income and employment percentage panels and (b) identifying critical drivers of where potential public health benefits of ridesourcing utilization can be the greatest.

PRINCIPAL INVESTIGATOR

Noreen McDonald,
UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL

LEARN MORE
www.roadsafety.unc.edu/research/projects

This project was supported by the Collaborative Sciences Center for Road Safety, www.roadsafety.unc.edu, a U.S. Department of Transportation National University Transportation Center promoting safety.