

Shared-Use Mobility Services Can Improve Access and Reduce Costs in Rural Disadvantaged Communities

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POLICY BRIEF

Issue

Low-income rural residents, especially those who do not own a car, have limited transportation options for accessing jobs, health care, education, healthy food, and other basic services. Rural transit service is often expensive, infrequent, and hard to access because of long travel distances and low development densities. Transit providers face very high operating costs of fixed-route and dial-a-ride transit services because of low farebox recovery rates.

Shared-use mobility services such as ridehailing and carsharing largely serve major metropolitan areas. However, rural governments are beginning to consider whether these types of services may be able to augment existing transit services while providing cost-effective transportation access to rural residents.

In this study, researchers at UC Davis compared the cost-effectiveness of existing

inter-city transit service in rural disadvantaged communities in California's San Joaquin Valley to hypothetical ridesharing and carsharing services. The researchers also reviewed existing shared-use mobility pilots and consulted with experts in shared mobility and local transportation planning to develop concepts for future shared mobility pilot programs in the San Joaquin Valley.

Key Research Findings

Carsharing and split-carsharing show the greatest cost savings potential for riders relative to current transit service.

Carsharing (short-term car rentals via website or app) was estimated to be cheaper than transit for riders in about 90% of the census tracts in the study area, while split-carsharing (short-term rentals shared among multiple users) was estimated to be cheaper in every instance (Figure 1). Average cost savings ranged from \$25 to \$28 per trip. Carsharing also appeared to be cheaper

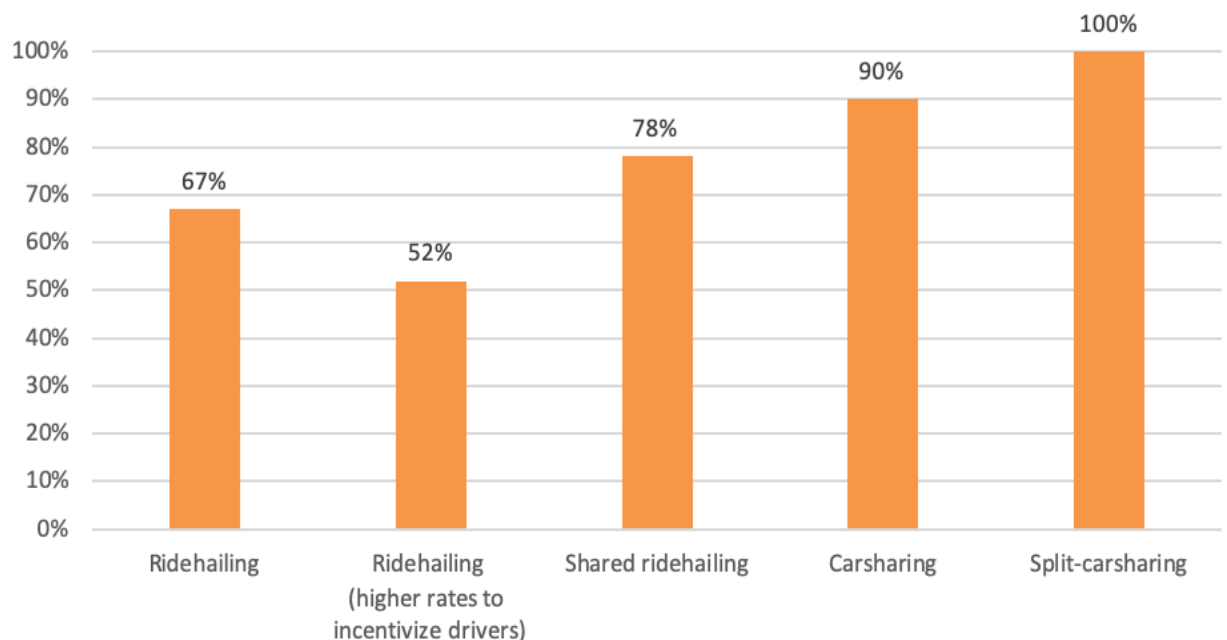


Figure 1. Percentage of rural disadvantaged census tracts in which shared use mobility services would be less expensive than current transit service.

than ridehailing (ordering a ride through a service like Uber or Lyft) and shared ridehailing (being paired with other riders through a service like UberPool) in more remote areas.

Ridehailing services could also replace or augment existing rural transit services in some areas, although subsidies may be necessary. Researchers estimated that ridehailing could be more cost effective than transit in slightly more than half the census tracts in the study area. However, low population densities mean that current ridehailing fares are unlikely to attract enough drivers to serve remote rural disadvantaged areas of the San Joaquin Valley. Counties looking to form public-private partnerships with ridehailing companies to provide services in more remote rural areas should factor in the need to provide increased financial compensation to drivers to attract enough participation.

Policy Implications

Shared-use mobility business models and new technologies have potential to reduce costs to users and transit operators. If shared-use mobility services replaced and/or augmented underperforming transit routes, transit costs could be reduced, and the resulting savings reinvested in expanded shared-use mobility services or transit where appropriate.

Demonstration projects will be important to test whether these services improve access in rural disadvantaged communities. Furthermore, demonstrations will present opportunities to overcome barriers to implementing shared-use mobility services, including finding ways to accommodate users without smart phones, credit cards, or bank accounts, who don't speak English, and who have disabilities. The researchers are working with regional governments in the San Joaquin Valley to evaluate several ongoing pilot projects.

More Information

This policy brief is drawn from “Opportunities for Shared-Use Mobility Services in Rural Disadvantaged Communities in California’s San Joaquin Valley: Existing Conditions and Conceptual Program Development,” a research report from the National Center for Sustainable Transportation, authored by Caroline Rodier of the University of California, Davis, and Laura Podolsky, of the University of California Institute of Transportation Studies. The full report can be found on the NCST website at <https://ncst.ucdavis.edu/research-product/opportunities-shared-use-mobility-services-rural-disadvantaged-communities>.

For more information about the findings presented in this brief, please contact Caroline Rodier at cjrodier@ucdavis.edu.

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