

Grant Deliverables and Reporting Requirements for UTC Grants

UTC Project Information	
Project Title	Pooling or not Pooling: the role of matching cost on mixed mode equilibria and VMT
University	University of California, Davis
Principal Investigator	Michael Zhang
PI Contact Information	hmzhang@ucdavis.edu 530-754-9203
Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: \$116,257 UCD: \$58,129
Total Project Cost	\$ 174,386
Agency ID or Contract Number	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
Start and End Dates	■ Start date: 10/01/2019 ■ End date: 03/31/2021
Brief Description of Research Project	While various incentives have been provided to promote car-pooling, the share of car-pooling has remained flat over the years. In this project, we quantify various factors that affect car-pooling in a measure called matching cost, and study how matching cost affects the commuting patterns in a mixed mode corridor with both drive-alone and various forms of car-pooling modes. Measures of commuting cost, Vehicle-Miles-Traveled (VMT), and equity will be obtained from the developed model to assess the effectiveness of various policies towards car-pooling.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	Although car-pooling is widely believed to be an eco-friendly mode and help reduce congestion, the arrival of for-profit ridesharing platforms has made this less certain. Our research reveals that under certain demand and HOV-lane configurations, platform supported car-pooling can actually reduce the overall social-welfare (measured by the negative of all commuter costs), and points to the need to regulate ridesharing platforms in order to achieve socially desirable outcomes under these conditions. We are reaching out to Caltrans to discuss the policy implications of our research.

Impacts/Benefits of Implementation (actual, not anticipated)	We are talking to Caltrans' High-Occupancy Vehicle (HOV) Systems Office about the potential effects of platform supported carpooling on HOV lane planning in California.
Web Links <ul style="list-style-type: none">• Reports• Project website	http://ctech.cee.cornell.edu/final-project-reports/