



Caltrans Division of Research,
Innovation and System Information

Research



Notes

Planning, Policy,
and
Programming

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Project Title:
The Potential for Ride-Matching in
Disadvantaged Communities

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The Potential for Ride-Matching in Disadvantaged Communities

Explore the market for a unique ride-matching service in low income, minority communities

WHAT IS THE NEED?

Mobility is critical for access to jobs, education, medical care and healthy food, yet in many communities of color mobility resources are limited. Low income households have fewer cars, and even in densely populated urban areas public transit is often of poor substitute for the private car. A low-cost ride-matching service has the potential to fill a mobility gap in low income, minority communities.

WHAT ARE WE DOING?

The purpose of this research is to explore the market for a unique ride-matching service in low income, minority communities. The original concept was developed by Dessouky and colleagues (Furuhata et al, 2015) for shuttle services. The ride matching service is conceptualized as a non-profit service that matches an individual seeking a ride with a driver traveling from and to a similar origin and destination. As a non-profit service, the payment simply covers costs of providing the ride. Unlike ridehailing services such as Uber or Lyft, the ride-matching service minimizes deadhead miles, as it seeks to match ride seekers with nearby drivers who have a similar origin and destination.



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The approach for this research is comprised of seven tasks below:

Task 1: Literature Review

A detailed literature review on travel behavior in low income communities of color will be conducted.

Task 2: Research vision group

The research vision group will serve as an advisory panel throughout the research.

Task 3: Focus groups

The researchers will conduct 2 focus groups, one near the beginning and one near the end of the project.

Task 4: Travel Survey Analysis

The analysis will focus on understanding mobility patterns for the SELA population or similar populations.

Task 5: Cellphone data analysis

This task includes data collection, data preparation, and modeling to examine spatial and temporal mobility patterns.

Task 6: Potential ride match services

Task 7: Final report

WHAT IS OUR GOAL?

This research is part of a larger effort to solicit funding for a field demonstration of the ride matching service. In this research, we work with the SELA Collaborative to understand the travel needs of the community – a generally under-studied population that is not well represented in traditional state or national travel surveys. Using that learning, we will design a later proposal for a full demonstration of a ride-matching service (not this proposal), which makes this initial research potentially high impact. It is anticipated that the successful completion of this initial stage will lead to opportunities to generate larger funding pools for a full ride-match demonstration program.

WHAT IS THE BENEFIT?

The proposed research focuses on understanding travel behavior, attitudes, and perceptions within low income communities of color. While the research is aimed at providing missing knowledge for a full demonstration program, this research will fill a notable gap in the travel behavior literature on its own, providing new insights into travel needs of an underserved and often under-studied mobility disadvantaged population.

WHAT IS THE PROGRESS TO DATE?

Task 2 in progress: Research vision group was organized; first meeting held April 19, 2022; introduced project, presented travel behavior findings, first discussion of rideshare concept.

Task 3 in progress: planned and conducted focus group 1 May 4, 2022; debrief for research team; major findings to be shared with research vision group.

Task 4 near completion; used 2012 California HTS. Preliminary results presented at research vision group meeting 1. Remaining results to be presented at vision group meeting 2 in July.

Task 5 cellphone data analysis: completed. Data were used to identify activity clusters that could be potential hubs for rideshare system. Some troubleshooting was necessary due to errors in the GPS data.

Plan For Next Quarter:

Task 2 - meeting 2 of vision group July 13, 2022

Task 3 - no activity next quarter

Task 4 - complete task 4

Task 6 - begin the task