OPPORTUNITIES FOR SHARED-USE MOBILITY SERVICES IN THE SAN JOAQUIN VALLEY

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ABOUT THE SAN JOAQUIN VALLEY

- Central California
  - Extremely poor air quality
- Bigger cities are Stockton, Modesto, Fresno and Bakersfield
- Large share of 4M residents live in rural or urban fringe areas
  - Low income
  - Agricultural Workers
PROBLEM: PROVING HIGH QUALITY TRANSIT IN RURAL AREAS

- Conventional transit efficient in dense corridors.
- In SJV, like other rural areas, travel distances long and densities low.
- Transit service expensive, infrequent, hard to access.
- High poverty levels lead to low auto availability.
- Many unable to access jobs, health care, education, healthy food, and other basic services.
Where might shared-use mobility services expand accessibility in rural disadvantaged communities at a cost at or below currently available transit services?

To answer this question, operationalized:
- Definition of rural disadvantaged community
- Quality existing transit service
- Relative cost of transit and shared-use modes for key destinations
RURAL DISADVANTAGED COMMUNITIES

- Census Tracts
- Disadvantaged = Top 25% Cal EnviroScreen
- Rural = Meets one or more state/federal definition
**Ridesourcing**: Commercial taxi-like service, in which a single passenger uses a smart-phone application to order a ride at the time it is needed and to make payment. Examples: Uber and Lyft.

**Ridesplitting**: Commercial or private service, in which multiple passengers use a smart-phone application to be paired in real time with others traveling a similar route. Private drivers are reimbursed for some costs, such as tolls and gas. Examples: UberPool, Lyft Line, and Waze Carpool.

**Round-Trip Carsharing**: Commercial service that offers short-term (typically less than a day) car rentals via website or phone app, in which the car is checked out and returned at the same location. (Some services have begun allowing returns at a different location.) Example: Zipcar.

**Round-Trip “Split”-carsharing**: Commercial service, in which a car renter uses website or phone app to pick up others traveling a similar route.
Ridesourcing services are located in cities where activities are typically concentrated in smaller geographic areas:
- Shorter trip distances
- Decent chance of securing a return trip passenger

Opposite demand characteristics rural areas:
- Low population densities and long distances to activities
- Much lower chance of securing a return trip passenger
WHAT IS IN IT FOR THE RIDESOURCING DRIVER?

- **Net Driver Revenue:**
  - 80% Fresno Uber Fare
    - One-Way Origin and Destination Time Cost (@ $0.10 per minute) and Distance Cost (@ $0.80 per mile) plus $1 (minimum $5.75)
  - Minus “Full” Costs
    - Round-trip (no return passenger) Origin and Destination Time Cost (CA minimum wage @ $0.18 per minute) and Distance Cost (Federal reimbursement rate @ $0.54 per mile)
Not much. Current fares don’t pencil out for ridesourcing drivers in rural disadvantaged areas.
RELATIVE COST OF TRAVEL BETWEEN RURAL DISADVANTAGED AREAS TO CLOSEST MAJOR ACTIVITY DESTINATIONS

- **Transit**: Full transit operator passenger trip cost
- **Low ridesourcing**: Uber’s current base fare in Fresno
- **High ridesourcing**: Round trip distance @ $0.54 per mile and time @ $10.50 per hour
- **Ridesplitting**: Low ridesourcing cost minus $5
- **Carsharing**: Three-hour trip @ $4.50 per hour
- **“Split” Carsharing**: Half of carsharing cost
## Valley-Wide Relatively Cost-Effectiveness of Transit and Shared-Use Modes

<table>
<thead>
<tr>
<th>Rural Disadvantaged Census Tracts</th>
<th>High Ride-sourcing (driver makes money)</th>
<th>Low Ride-sourcing (driver may not make money)</th>
<th>Ride-splitting</th>
<th>Car-sharing</th>
<th>Split-Carsharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit is Less Expensive than Shared-Use Alternative</td>
<td>48%</td>
<td>33%</td>
<td>22%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Average Increase in Cost with Shared-Use Mode (population weighted)</td>
<td>+$31</td>
<td>+$11</td>
<td>+$11</td>
<td>+$4</td>
<td>$0</td>
</tr>
<tr>
<td>Shared-Use Less Expensive than Current Transit Service</td>
<td>52%</td>
<td>67%</td>
<td>78%</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>Average Savings over Transit with Shared-Use Mode (population weighted)</td>
<td>-$19</td>
<td>-$27</td>
<td>-$27</td>
<td>-$28</td>
<td>-$25</td>
</tr>
</tbody>
</table>
COST-EFFECTIVENESS RESULTS BY CENSUS TRACT LOCATIONS

Ridesourcing & Ridesplitting vs. Fixed Route Transit

Ridesourcing & Ridesplitting vs. DAR Transit

Carsharing vs. Fixed Route & DAR Transit
I need to take my child to a medical appointment. How will I get there?

- Ridesourcing $25?
- Carsharing $15?
- Ridesourcing & Transit $5?
I. Influential Pilot Concepts

- **Carsharing in Rural Areas**
  - Needles (CA) with Victor Valley Transit Authority (*on-going since August 2016*)

- **Carsharing and Affordable Housing**
  - Denver Housing Authority and Boulder Housing Partners with eGo (*since 2014*)
  - Launched Sacramento CarShare (*just started*)

- **Transit Gap Ridesourcing Pilots**
  - Direct Connect in Pinellas (Fla): Subsidies per ride to and from designated bus stops via app promo code; expanded from two stops to eight stops (*on-going*)
  - Rides for late-shift workers in St. Petersburg (Fla) Pinellas County Suncoast Transit Authority (*on-going*)
  - Centennial First/Last Mile (Denver): Free Lyft Line ride to and from the Dry Creek LRT station (*temporarily stopped—outreach and education challenges*)
THANK YOU!

QUESTIONS?

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