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Who Uses Peer-to-Peer Carsharing? Early Exploration

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Who Uses Peer-to-Peer Carsharing?
An Early Exploration

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Anais Mathez
Steve Howland
Nathan McNeil
Peer-to-peer (P2P) carsharing is a system where a facilitating company connects car owners to car renters.

Fast Facts

Timeline:
3 Years, 2012-2015

Overall Objectives:
• Can P2P carsharing reduce overall VMT by marginalizing the cost of driving?
• Can P2P carsharing increase access to jobs and other activities for those without cars?

Sample Size:
• Car Owners: 335 recruited
• Car Renters: 465 recruited
Study Background

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• *Car Renters: 465 recruited*
## Renter Demographics

<table>
<thead>
<tr>
<th></th>
<th>“Renter” Participants</th>
<th>Subset of Participants with Completed Rentals</th>
<th>City of Portland*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adults in Household</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 adult</td>
<td>28%</td>
<td>28%</td>
<td>50%</td>
</tr>
<tr>
<td>2+ adults</td>
<td>72%</td>
<td>72%</td>
<td>51%</td>
</tr>
<tr>
<td><strong>Children in Household</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero</td>
<td>78%</td>
<td>80%</td>
<td>75%</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>79%</td>
<td>74%</td>
<td>77%</td>
</tr>
<tr>
<td>Non-White</td>
<td>13%</td>
<td>16%</td>
<td>23%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8%</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>62%</td>
<td>61%</td>
<td>51%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>40%</td>
<td>41%</td>
<td>24%</td>
</tr>
<tr>
<td>30-34</td>
<td>25%</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>35-39</td>
<td>14%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>40 and over</td>
<td>22%</td>
<td>23%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some college or less</td>
<td>27%</td>
<td>26%</td>
<td>23%</td>
</tr>
<tr>
<td>4 year college degree</td>
<td>69%</td>
<td>70%</td>
<td>26%</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>4%</td>
<td>4%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $35,000</td>
<td>41%</td>
<td>39%</td>
<td>36%</td>
</tr>
<tr>
<td>$35,000-75,000</td>
<td>37%</td>
<td>40%</td>
<td>32%</td>
</tr>
<tr>
<td>More than $75,000</td>
<td>22%</td>
<td>21%</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Vehicles in Household</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>51%</td>
<td>65%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Study Group Typology

Higher-Income Non-Millennials
(n = 113, 25%)

• Most likely to own a car
• May need a different car for certain uses
• Most likely intended purpose was for recreation

Lower-Income Non-Millennials
(n = 46, 10%)

• Less likely to have car than higher-income non-Millennials
• Owning a car is expensive for them
• See other carsharing options as too expensive

Non-Student Millennials
(n = 200, 44%)

• Less flexibility in schedule than students
• Owning a car is expensive for them
• Highly interested in carsharing

Student Millennials
(n = 92, 20%)

• Flexible, irregular, and non-peak-period schedule
• Owning a car is expensive for them
• Target population for carsharing companies
Motivations and Anticipated Use

### Stated Reasons for Joining P2P Carsharing

<table>
<thead>
<tr>
<th>Reason</th>
<th>Higher-Income Non-Millennial</th>
<th>Lower-Income Non-Millennial</th>
<th>Non-Student Millennials</th>
<th>Student Millennials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership is free so I have nothing to lose</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>I like the idea of peer-to-peer car sharing</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>I/we sometimes need a car (or an extra car), but other options (such as traditional rental cars and Zipcar) are too expensive</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>I/we sometimes need a car (or an extra car), but cars are too expensive</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>I/we sometimes need a car (or an extra car) specifically for transporting goods/errands</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>I/we sometimes need a car (or an extra car) for added flexibility in scheduling</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>I wanted to participate in the study</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>I am interested in finding out if we could manage with one fewer car</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>I/we sometimes need a car (or an extra car), but other options (such as traditional rental cars and Zipcar) do not serve my neighborhood</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Motivations and Anticipated Use

Intended Uses, At Least Monthly

- Student Millennials
- Non-student Millennials
- Lower Income Non Millennial
- Higher Income Non Millennial

- Recreation
- Shopping
- Transporting people
- Transporting things/objects
- Work related travel (except commuting)
- Commuting
Primary Trip Purposes for Rentals

Actual Use

Student Millennials
Non-Student Millennials
Lower-Income Non-Millennial
Higher-Income Non-Millennial

- Job seeking/interview
- Recreation (in town) / Special Events
- Transporting Things
- Medical Appointment
- Transporting Pets*
- Transporting Family*
- Transporting Friends
- Visiting Friends*
- Appointments*
- Recreation (out of town)
- Shopping/errands*
- Visiting Family*
- Work Related*

* Significant differences between at least one pair of values for the trip purpose, p < 0.05
Actual Use

Without P2P, how would the trip have been made?

- Other
- On Bicycle*
- My own personal car/motor vehicle*
- I would have asked for a ride from a friend/family member
- Rental car*
- Other carshare*
- I would have borrowed a car from a friend/family member*
- Public transportation*
- I would not have made the trip*

* Significant differences between at least one pair of values for the trip purpose, p<0.05
Key Findings

- **Higher-Income Non-Millennials** were less motivated by economic reasons, and may have been motivated to join in order to test whether they could manage without a car (or with one fewer).

- **Student and Non-Student Millennials** showed a preference for using the service for more discretionary trips;

- **Low-Income Non-Millennials** seemed to make more utilitarian trips, using the service more for errands and work-related trips than other renter types.

  - Early indications are that the service may be expanding mobility options for lower income households, as they are using the service for more essential needs.
This research was funded by the Federal Highway Administration, though all interpretations, conclusions, and errors are those of the authors alone.