Micro-mobility and ridehailing services: current use and perceptions
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Georgia Institute of Technology
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Full citation (APA style)

TOMNET D-STOP Transformative Technologies in Transportation Survey (T4 Survey)

- Phoenix, Atlanta, Austin, and Tampa metro areas
- Summer and Fall 2019
- Random address-based sample with online instrument
- Comprehensive attitudinal survey on MaaS and AV
- Weighted to better represent Census distributions

<table>
<thead>
<tr>
<th>Location</th>
<th>Sample Size</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix, AZ</td>
<td>1,027</td>
<td>30.6%</td>
</tr>
<tr>
<td>Atlanta, GA</td>
<td>944</td>
<td>28.1%</td>
</tr>
<tr>
<td>Austin, TX</td>
<td>1,127</td>
<td>33.6%</td>
</tr>
<tr>
<td>Tampa, FL</td>
<td>260</td>
<td>7.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,358</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Survey Instrument

- Attitudes and Preferences
- Vehicles You Have and Where You Live
- Current Travel Patterns
- Mobility on Demand and Shared Mobility Services
- Autonomous Vehicles
- Background Information
How often do you use bikesharing? (weighted)

- No car/driver: Not familiar 23%, Familiar but never 61%, Weekly 13%
- Fewer than one car/driver: Not familiar 27%, Familiar but never 64%, Rarely 5%
- One car/driver: Not familiar 40%, Familiar but never 53%, Rarely 5%
- More than one car/driver: Not familiar 46%, Familiar but never 47%

How often do you use e-scooter sharing? (weighted)

- No car/driver: Not familiar 20%, Familiar but never 63%, Weekly 13%
- Fewer than one car/driver: Not familiar 16%, Familiar but never 66%, Rarely 14%
- One car/driver: Not familiar 20%, Familiar but never 65%, Rarely 11%
- More than one car/driver: Not familiar 23%, Familiar but never 64%, Rarely 8%, Monthly 6%
When did you use it?

**Bikesharing**
- Weekend night time: 10%
- Weekend daytime: 21%
- Weekday night time: 17%
- Weekday daytime: 52%

**E-scooter sharing**
- Weekend night time: 23%
- Weekend daytime: 22%
- Weekday night time: 11%
- Weekday daytime: 44%
How long was the trip?

**Bikesharing**
- 3-4 miles: 24%
- 1-2 miles: 43%
- Less than a mile: 20%
- 5 miles or more: 12%

**E-scooter sharing**
- Less than a mile: 32%
- 1-2 miles: 54%
- 3-4 miles: 10%
- 5 miles or more: 4%
What was the primary purpose of the trip?

**Bikesharing (n=92)**
- Work/school-related: 25%
- Shopping/errands: 13%
- Eating/drinking: 14%
- Social/recreational: 37%
- Transit-bound: 1%
- Just for fun: 10%

**E-scooter sharing (n=342)**
- Work/school-related: 25%
- Shopping/errands: 7%
- Eating/drinking: 11%
- Social/recreational: 44%
- Transit-bound: 1%
- Just for fun: 13%
### How would you have traveled differently?

<table>
<thead>
<tr>
<th>Density</th>
<th>Private vehicle</th>
<th>Use Uber/Lyft</th>
<th>Public transit</th>
<th>Active modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Densest</td>
<td>21%</td>
<td>17%</td>
<td>14%</td>
<td>48%</td>
</tr>
<tr>
<td>Denser</td>
<td>33%</td>
<td>13%</td>
<td>13%</td>
<td>33%</td>
</tr>
<tr>
<td>Less dense</td>
<td>42%</td>
<td>17%</td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>Least dense</td>
<td>42%</td>
<td>17%</td>
<td></td>
<td>33%</td>
</tr>
<tr>
<td>Densest</td>
<td>16%</td>
<td>12%</td>
<td></td>
<td>61%</td>
</tr>
<tr>
<td>Denser</td>
<td>16%</td>
<td>16%</td>
<td></td>
<td>54%</td>
</tr>
<tr>
<td>Less dense</td>
<td>21%</td>
<td>12%</td>
<td></td>
<td>52%</td>
</tr>
<tr>
<td>Least dense</td>
<td>18%</td>
<td>12%</td>
<td></td>
<td>47%</td>
</tr>
</tbody>
</table>

- **n=30**
- **n=25**
- **n=11**
- **n=11**
- **n=118**
- **n=81**
- **n=64**
- **n=50**

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**TOMNET Transportation Center**
**Teaching Old Models New Tricks**
### How often do you use *private* ridehailing? (weighted)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rarely</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>72%</td>
<td>18%</td>
<td>9%</td>
</tr>
<tr>
<td>25-44</td>
<td>65%</td>
<td>21%</td>
<td>11%</td>
</tr>
<tr>
<td>45-64</td>
<td>75%</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>65 or older</td>
<td>78%</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>

### How often do you use *shared* ridehailing? (weighted)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Not familiar</th>
<th>Familiar but never</th>
<th>Rarely</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>21%</td>
<td>33%</td>
<td>23%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>25-44</td>
<td>17%</td>
<td>40%</td>
<td>29%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>45-64</td>
<td>19%</td>
<td>57%</td>
<td>19%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65 or older</td>
<td>33%</td>
<td>43%</td>
<td>18%</td>
<td></td>
<td>6%</td>
</tr>
</tbody>
</table>

*Image source: Georgia Tech*
How long did you wait?

**Private ridehailing**
- n=1,681

- 15 or more: 13%
- Less than 5: 22%
- 10-14 min: 23%
- 5-9 min: 41%

**Shared ridehailing**
- n=244

- 15 or more: 11%
- Less than 5: 21%
- 10-14 min: 20%
- 5-9 min: 48%
How long did you travel?

**Private ridehailing**
- n=1,684

- Less than 10 min.: 10%
- 10-19 min.: 37%
- 20-29 min.: 27%
- 30 or more: 26%

**Shared ridehailing**
- n=241

- Less than 10 min.: 12%
- 10-19 min.: 41%
- 20-29 min.: 22%
- 30 or more: 25%
## Changes after ridehailing use (N=1,540)

<table>
<thead>
<tr>
<th>Method</th>
<th>I have changed usage, but not because of ridehailing</th>
<th>I use it less often</th>
<th>I use it about the same</th>
<th>I use it more often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive private vehicle, alone</td>
<td>253</td>
<td>188</td>
<td>1,032</td>
<td>67</td>
</tr>
<tr>
<td>Drive private vehicle, with passengers</td>
<td>263</td>
<td>202</td>
<td>1,042</td>
<td>33</td>
</tr>
<tr>
<td>Ride in private vehicle, with others</td>
<td>250</td>
<td>235</td>
<td>1,010</td>
<td>45</td>
</tr>
<tr>
<td>Public transit: bus</td>
<td>330</td>
<td>222</td>
<td>933</td>
<td>55</td>
</tr>
<tr>
<td>Public transit: light rail, heavy rail, or subway</td>
<td>363</td>
<td>191</td>
<td>960</td>
<td>26</td>
</tr>
<tr>
<td>Taxi</td>
<td>345</td>
<td>369</td>
<td>816</td>
<td>10</td>
</tr>
<tr>
<td>Bicycle or e-scooter</td>
<td>382</td>
<td>148</td>
<td>977</td>
<td>33</td>
</tr>
<tr>
<td>Walk</td>
<td>313</td>
<td>158</td>
<td>977</td>
<td>92</td>
</tr>
</tbody>
</table>
Changes after ridehailing use (N=1,540)
Changes after ridehailing use (N=1,540)

n=779 (51%)

n=383 (25%)

n=197 (13%)

n=180 (12%)
Attitudes on ridehailing

• 15 attitudinal statements
  • Asked to all respondents
  • 48 cases dropped for missing

• Exploratory factor analysis (EFA)
  • Four attitudinal factors are extracted
  • Factor scores are compared across various segments (e.g., use frequency, age, sex, education, income, access to cars, residential density)
  • Results are weighted
## Attitudes on ridehailing (N=3,310)

<table>
<thead>
<tr>
<th>Attitudinal statement</th>
<th>Factor 1</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridehailing services are good travel options for <em>me</em> when I am <em>away from home</em>.</td>
<td>0.846</td>
<td></td>
</tr>
<tr>
<td>Ridehailing services are good alternatives when <em>my car is temporarily unavailable</em> (e.g., when it is being repaired).</td>
<td></td>
<td>0.738</td>
</tr>
<tr>
<td>Ridehailing services are good options for <em>me</em> when or where <em>public transit</em> is not available.</td>
<td></td>
<td>0.690</td>
</tr>
<tr>
<td>Ridehailing services help <em>me</em> <em>avoid impaired driving</em> (e.g., driving under the influence).</td>
<td></td>
<td>0.594</td>
</tr>
<tr>
<td>Ridehailing services help <em>me</em> save time and money on <em>parking</em>.</td>
<td></td>
<td>0.562</td>
</tr>
<tr>
<td>Ridehailing services help <em>me</em> <em>get to/from</em> public transit stops.</td>
<td></td>
<td>0.358    0.334</td>
</tr>
</tbody>
</table>
## Attitudes on ridehailing (N=3,310)

<table>
<thead>
<tr>
<th>Attitudinal statement</th>
<th>Factor 1</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridehailing services allow me to live with <em>fewer or no cars.</em></td>
<td></td>
<td>0.668</td>
</tr>
<tr>
<td>Ridehailing service availability affects <em>where</em> I choose to live, work, and/or go to school.</td>
<td></td>
<td>0.397</td>
</tr>
<tr>
<td>The lower cost of <em>shared</em> ridehailing (e.g., UberPOOL, Lyft Share) is worth the additional time picking up and dropping off other passengers.</td>
<td></td>
<td>0.390</td>
</tr>
</tbody>
</table>
Key findings

• *Substitution patterns vary* by user and trip characteristics.
  • Micromobility riders living in dense areas and making short trips substitute for transit or active modes.
  • Shares ridehailing service users with limited access to cars substitute for transit or active modes.

• After ridehailing use, 13% of users reported *more sustainable travel behaviors*.

• *High-income* people think ridehailing personally useful, but do not see its potential for less car-oriented lifestyles.
Thank you!

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