Ohio Long-Distance Travel

- Ohio Long-Distance Stats
  - 4th largest interstate lane-miles (8,100)
  - 5th highest VMT (200M)
  - Within 1 day (600 miles) of 60% of US and Canadian population
  - 7 commercial airports
    (176 total public airports)
  - 6.5M jobs
  - 8th largest economy in US
    (484B GSP)
Ohio’s Statewide Long-Distance Model

• Disaggregate tour-based travel demand model
  – Population is microsimulated
    > Daily activity pattern
  – Long-Distance travel is prioritized
    > Half-day: AM or PM
    > Full-Day
    > Away on Travel
  – Short-distance trips are then simulated if the traveler has time available
Ohio’s Annual Household Travel Survey

Diary Design: 7-Day Smartphone or 1-Day Online/Telephone

Recurrent: Annual survey in 1 of 10 regions

<table>
<thead>
<tr>
<th>YEAR</th>
<th>DATA COLLECTION</th>
<th>TARGET SAMPLE</th>
<th>FINAL SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbus Area</td>
<td>Fall ‘16–Spring ‘17</td>
<td>2,300 HHs</td>
<td>3,100 HHs</td>
</tr>
<tr>
<td>Rural Counties</td>
<td>Fall ‘17–Spring ‘18</td>
<td>2,300 HHs</td>
<td>2,500 HHs</td>
</tr>
<tr>
<td>Dayton Area</td>
<td>Fall ‘18–Spring ‘19</td>
<td>1,600 HHs</td>
<td>1,735 HHs</td>
</tr>
</tbody>
</table>

Key Elements

• **Mode:** Share of smartphone participants increasing year-over-year
  - From 57% of HHs to 71% of HHs

• **Households:** Very high agreement to be re-contacted for follow-on surveys
  - 95% in urban areas, 85% in rural counties
Ohio’s Long-Distance Smartphone Survey Subsample

Long-Distance Diary Methodology:

- Invite smartphone owners (18+) who complete HTS to participate in 6-month long-distance diary
- Sample plan ensures even sample size across all 12 months
- rMove App only collects trips of 50+ miles
  - Trip survey, end of day survey
  - Highly similar UI to HTS
- Monthly “mini-survey” maintains engagement
Long-Distance Survey: effectively a low-cost 12-month panel

Recruitment, retention, and completion rates are very high

- 26% response rate to survey invite
- 89% retention across the 6 months
- 95% completion of LD trip surveys

1,450 persons and 21,500 LD trips

* Preliminary results
LD participant demographics are similar to HTS

Study participants are younger (<45) and higher income (100K+) than HTS
- Unweighted Y1 sample shown below

*Preliminary results*
Total Trips by Month: Higher in Summer and Fall

Typically, 50-70% of the panel had an LD trip in the given month

- 90% made at least one LD trip
- ~50% of panel had 10 or more LD trips
  - 54% in Y1
  - 45% in Y2

* Preliminary results
**Mode by Trip Distance: Driving Still Rules**

**Personal vehicle: 75% of all LD trips**
- 13%: other vehicle
- 10%: air
- 2%: other (bus/rail/ship/bike)

**46% of trips are <100 miles**
- Rural counties 53%
- Columbus 42%

**10% of trips are >500 miles**
- Same in rural and urban

*Preliminary results*
LD Survey: Purpose by Trip Distance

Trip Purpose is consistent across Year 1 and Year 2

- More long commutes in the rural counties in Year 2
## Lodging used overnight on LD trip: Year 2 Data

### Year 2

<table>
<thead>
<tr>
<th>MILES</th>
<th>50-99</th>
<th>100-149</th>
<th>150-499</th>
<th>500+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>72%</td>
<td>62%</td>
<td>41%</td>
<td>35%</td>
</tr>
<tr>
<td>Home of family/friend/partner</td>
<td>17%</td>
<td>20%</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>Hotel/motel/inn/B&amp;B</td>
<td>5%</td>
<td>13%</td>
<td>31%</td>
<td>38%</td>
</tr>
<tr>
<td>Peer-to-peer rental (e.g., Airbnb, VRBO)</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Second/vacation home</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Camping/RV</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Other (includes military, medical)</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Traveling overnight</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>4%</td>
</tr>
</tbody>
</table>

*Preliminary results*
What’s Next: LD Survey

Upcoming project elements

• Launched Year 3 long-distance survey for Dayton area
  - Participation remains consistent

• Weight combined Y1 and Y2 long-distance dataset
  - Weight combined HTS dataset and characterize long-distance trips in the 7-day HTS dataset (includes non-smartphone HHs) -> want to know long-distance trip making in the representative, full population
  - Apply key-variables to the combined LD dataset to inform weighting
  - Ensure process automated for future years of data

• Now conducting LD survey projects elsewhere
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