The Role of Transportation Networking Companies in Mega-Region Mobility

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Background

• Transportation Network Companies (TNCs) are on-demand, app based services that connect private drivers with passengers

• Examples include Uber, Lyft, Didi
Research Questions

• How are TNCs being used in the Texas Triangle?

• Why are people choosing TNCs over other transportation options?

• Are TNCs enhancing mobility for Texas citizens?
Survey

- Administered a panel survey using QuestionPro platform
- Obtained 1000 complete responses (250 from each Metro area)
- 991 Valid Responses
- Also conducted supplemental snowball survey
Age

Age

Percent

15.1% 10.0% 16.0% 21.5%

Age

16.7% 7.7%
Sex

- Male: 28.6%
- Female: 71.4%
Ethnicity

- White: 52.4%
- A-A/Black: 14.6%
- Hispanic/Latino: 23.6%
- Asian/P-1: 6.1%
- Other: 2.5%
- Prefer Not to Say: 0.8%
Income and Education

Income

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$25k</td>
<td>26.6%</td>
</tr>
<tr>
<td>$25,000 - $49,999</td>
<td>15.2%</td>
</tr>
<tr>
<td>$50,000 - $64,999</td>
<td>11.8%</td>
</tr>
<tr>
<td>$65,000 - $74,999</td>
<td>13.2%</td>
</tr>
<tr>
<td>$75,000 - $99,999</td>
<td>10.4%</td>
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<tr>
<td>$100,000 - $149,999</td>
<td>8.8%</td>
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<tr>
<td>$150K+</td>
<td>4.0%</td>
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</table>

Education

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>27.3%</td>
</tr>
<tr>
<td>HS/GED</td>
<td>18.8%</td>
</tr>
<tr>
<td>Some College</td>
<td>15.0%</td>
</tr>
<tr>
<td>Associates or Vocational Degree</td>
<td>24.3%</td>
</tr>
<tr>
<td>B/AS</td>
<td>7.0%</td>
</tr>
<tr>
<td>MA/MS</td>
<td>2.7%</td>
</tr>
<tr>
<td>Doctoral or Professional Degree</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Vehicle Access

Have Regular Vehicle Access

- Yes: 87.7%
- No: 12.3%
Frequency of Use
Days Used

Most Frequent Day of the Week

- Work Days: 33.5%
- Non-work Days: 58.9%
- Holidays: 7.6%
Length of Trip

Length of Average Trip

- 36.6% for 11-15 Mins
- 25.3% for 16-20 Mins
- 22.0% for 5-10 Mins
- 12.7% for 21+ Mins
- 3.3% for <5 Mins
Trip Purpose

Purpose of TNC Usage

Usage Purpose of TNCs
- Use for Commuting
- Use to Go to Bars/Restaurants etc
- Use for Errands/Personal Business
- Use to Connect to Other Transport Service
- Use for Emergency Situations
- Other
Motivation

Primary Motivation

- Cost: 11.7%
- Convenience: 59.0%
- Travel Time: 4.4%
- Safety: 19.7%
- Other: 5.1%
Compared to Public Transport

Opinion of TNCs Compared to Public Transport

- More Convenient: 79.7%
- Less Convenient: 4.1%
- More Expensive: 28.1%
- Less Expensive: 11.7%
- More Reliable: 27.1%
- Less Reliable: 1.9%
Compared to Taxis

Opinion of TNCs Compared to Conventional Taxis

- More Convenient: 69.1%
- Less Convenient: 4.6%
- More Expensive: 10.5%
- Less Expensive: 39.7%
- More Reliable: 30.1%
- Less Reliable: 2.3%
Multi-Modal Connections

How Often Do You Use TNCs to Connect to Other Transport

- Never: 41.7%
- Once/Month: 35.3%
- Few Times/Month: 13.1%
- Once/Week: 3.6%
- 2-3/Week: 3.7%
- Daily: 1.8%
- 2+/Day: 0.7%

Most Frequent Mode Connected To

- Bus: 37.0%
- Rail Line: 27.3%
- Parked Personal Vehicle: 12.6%
- Bicycle: 13.3%
- Airport: 5.7%
- Other: 0.9%
- N/A: 3.1%
More Trips

Do You Believe You Make More Trips B/C of TNCs

<table>
<thead>
<tr>
<th>Percent</th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>47.4%</td>
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<td></td>
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</tr>
<tr>
<td>32.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.7%</td>
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</tr>
</tbody>
</table>
Access

More Places

Help to Get More Places
- Yes
- No
- Unsure

Percent

60.5%

27.0%

12.4%
Interesting Emerging Findings

• Men appear to use TNCs with higher frequency than women
• Women appear to be slightly more motivated by convenience
• No difference in length of trips between men and women
Future Research

• Further analyze this data

• Extend this type of research to bikesharing, e-scooters etc.