Examining the Relationship Between Ride-hailing, Active Travel (Bike, Walk, and Transit), and Health Status: Implications for Metropolitan Statistical Areas (MSAs) Served by Different Transit Systems

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Research Motivation & Objective

Shared mobility innovations, including ride-hailing, have the potential to transform the operation of today’s transportation systems and can affect people’s health.

Examines the relationship between travel behavior of frequent ride-hailing users, bike users, pedestrians, and transit users and their health status in two MSA, using multivariate probit models.

Multivariate Probit Model Results

Chicago, IL

Indianapolis, IN

The transportation options considered herein are complementary to each other in both MSAs.

- The patterns of travel modes and health status vary within both MSAs depending on the mode.
- Results show that high income population in both areas were more likely to use ride-hailing compared to lower-income population.

Empirical Setting

<table>
<thead>
<tr>
<th>Chicago, IL</th>
<th>Indianapolis, IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Reported Health Status</td>
<td>Self-Reported Health Status</td>
</tr>
<tr>
<td>47%</td>
<td>30%</td>
</tr>
<tr>
<td>49%</td>
<td>35%</td>
</tr>
<tr>
<td>80%</td>
<td>66%</td>
</tr>
<tr>
<td>35%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Frequency of transportation modes used in the year prior to the 2017 NHTS survey.

Conclusions and Future Work

Respondents from areas served by smaller transit agencies (Indianapolis) may not view ride-hailing as a means to improve their overall health status.

Collaboration among transit agencies, TNCs, and companies which promote active travel can lead to an increase in multimodality in both MSAs.

This research can inform policy makers of the health-related factors associated with ride-hailing services.

Ride-hailing users’ behavior can also serve as a proxy to measure the impact that AVs could have on our health.

Acknowledgments

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