

**Project Information Form**

Project Title:	Exploring the Relationships Among Travel Multimodality, Driving Behavior, Use of Ridehailing and Energy Consumption
University:	Georgia Institute of Technology
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Total Project Cost:	\$60,000.00
Agency ID or Contract Number:	GT-DOT-310 DTRT13-G-UTC29
Start and End Dates:	September 2017 through February 2018
Brief Description of Research Project:	<p>In the last decade, advances in information and communication technologies and the introduction of the shared economy engendered new forms of transportation options and, in particular, shared mobility. Shared mobility services such as carsharing (<i>e.g.</i>, Zipcar and Car2go), dynamic ridesharing (<i>e.g.</i>, Carma), ridehailing (<i>e.g.</i>, Uber and Lyft), and bike/scooter sharing (<i>e.g.</i>, CitiBike, Jump Bike, Bird, and Lime) have gained growing popularity especially among subgroups in the population including college-educated or urban-oriented young adults (<i>e.g.</i>, millennials). These emerging transportation services have evolved at an unprecedented pace, and new business models and smartphone applications are frequently introduced to the market. However, their fast-changing nature and lack of relevant data have placed difficulties on research projects that aim to gain a better understanding of the adoption/use patterns of such emerging services, not to mention their impacts on various components of travel behavior and transportation policy and planning, and their related environmental impacts.</p> <p>This report builds on an on-going research effort that investigates emerging mobility patterns and the adoption of new mobility services. In this report, the authors focus on the environmental impacts of various modality styles and the frequency of ridehailing use among a sample of millennials (<i>i.e.</i>, born from 1981 to 1997) and members of the preceding Generation X (<i>i.e.</i>, born from 1965 to 1980). The total sample for the analysis included in this report includes 1,785 individuals who participated in a survey administered in Fall 2015 in California. In this study, the researchers focus on the vehicle miles traveled, the energy consumption and greenhouse gas (GHG) emissions for</p>

	<p>transportation purposes of various groups of travelers. They identify four latent classes in the sample based on the respondents' reported use of various travel modes: <i>drivers</i>, <i>active travelers</i>, <i>transit riders</i>, and <i>car passengers</i>. They further divide each latent class into three groups based on their reported frequency of ridehailing use: <i>non-users</i>, <i>occasional users</i> (who use ridehailing less than once a month), and <i>regular users</i> (who use it at least once a month). The energy consumption and GHG emissions associated with driving a personal vehicle and using ridehailing services are computed for the individuals in each of these groups (12 subgroups), and the authors discuss sociodemographics and economic characteristics, and travel-related and residential choices, of the individuals in each subgroup.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented): Place any photos here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated):</p>	
<p>Web Links</p> <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul>	<p><a href="https://ncst.ucdavis.edu/project/exploring-relationships-among-travel-multimodality-driving-behavior-ridehailing-and-energy-consumption/">https://ncst.ucdavis.edu/project/exploring-relationships-among-travel-multimodality-driving-behavior-ridehailing-and-energy-consumption/</a></p> <p><a href="https://escholarship.org/uc/item/31v7z2vf">https://escholarship.org/uc/item/31v7z2vf</a></p>