

UTC Project Information	
Project Title	Understand usage patterns of e-scooter sharing and policy implications
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: \$90,000 USF: \$45,000
Total Project Cost	\$135,000
Agency ID or Contract Number	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
Start and End Dates	<ul style="list-style-type: none"> ▪ Start date: 4/1/2020 ▪ End date: 3/31/2021
Brief Description of Research Project	<p>Background: Since the debut of e-scooter sharing in 2017, hundreds of cities worldwide embraced this transportation mode because e-scooter sharing offers a faster way and can serve longer-range trips than bike sharing. However, e-scooter sharing programs have been criticized due to improper parking and interference with other street users (pedestrian and vehicles). Meanwhile, some surveys show that many users ride e-scooters to replace walking or taking public transit. Such mode shift does not bring environmental benefit and even worse, the reduced exercises may negatively impact human health. E-scooter sharing was introduced to the City of Tampa at the end of May 2019 as a one-year pilot program. The city is interested in understanding the performance of the program and public opinions towards e-scooter sharing.</p> <p>Research Objectives: In this study, taking the e-scooter sharing program in the City of Tampa as an example, we designed survey questionnaire to obtain data from both users and non-users. By analyzing the survey data, we attempt to understand user behaviors, including the main factors leading to the use of the program, the users' habit of using active transportations after riding shared e-scooters, and mode shift due to the introduction of e-scooter sharing program. The research outcomes will answer some of the open questions in existing literature and help city managers better regulate and enforce e-scooter sharing programs.</p>

	<p>Data: In later November 2019, 5 months after the launch, a survey was disseminated to general public. For e-scooter sharing users, they are asked to answer questions regarding using experience, safety concern, mode shift, collision experience, and sociodemographic information. For non-users, besides sociodemographic information, they are asked about the reasons for them not using e-scooters and concerns towards the program. To address our research interests, we specifically asked users the frequency of using e-scooters, and how has the use of active transportation (including walking, use of bike share and use of private bike) change since first using shared e-scooter, and if the e-scooter program was not available, what other modes they would have used for their e-scooter trips.</p> <p>Methods: We will computer descriptive statistics of survey responses to provide an overview of user’s riding behaviors and change of using active transportations. To gain a deeper understanding, random-parameter ordered probit models will be estimated with dependent variables of the usage of e-scooters, usage of active transportations after using e-scooters respectively, and mode shift responses. The explanatory variables include sociodemographic characteristics, e-scooter experience and behavior, and trip purposes.</p> <p>Expected Results: The estimated models are expected to identify several significant factors that contribute to higher e-scooter usage, use of active transportation, and mode shift. Similar analysis has performed before on bike sharing systems. We will compare the results of e-scooter sharing and bike sharing to see if the major factors are different and if the models performs different for these two types of sharing modes.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project website 	<p>http://ctech.cee.cornell.edu/final-project-reports/</p>