OBJECTIVES

I am currently working on two research projects. The first focuses on measuring the accessibility of demand responsive transit (DRT) service. This type of transit, which is scheduled daily to transport patrons between specifically requested locations, most commonly serves rural, elderly, and handicapped communities. Measures of accessibility for DRT service are quite different than for fixed route transit; instead of access distance and vehicle frequency, accessibility measures include availability of scheduling a trip at the preferred time/day, travel time on DRT vehicle (compared to driving alone), and wait time/delay. It is also important to note that the level of accessibility is different for each person, and therefore this research looks at the difference in perceptions of accessibility for different population groups. This is an important topic that is growing in interest for a number of reasons. First, transit is becoming an increasingly important mode of transportation, especially in rural communities, due to the increase in cost of gasoline. More cities and communities are considering expanding or building transit systems to meet the new demand, and they need to design these systems to best accommodate the new riders. Accessibility is a very important characteristic for determining if (and how often) people will use transit. Second, many cities have transit-dependent citizens who have no other means of travel. DRT transit systems were first introduced to serve these citizens. And while DRT has expanded to serve entire communities, transit-dependent populations are still given priority. Therefore, accessibility is very important in transit-dependent areas. Third, corridors supported by transit systems have the opportunity to foster economic growth by drawing people to common areas. However, this will only work with accessible transit and corridors that encourage people to use them.

My second research project, which is also my dissertation topic, aims to understand the decision-making process for long distance vacation travel. Long distance vacation trips, defined by leisure travel of 100 miles or more, are considerably different from households’ typical daily trips. Usually, these trips are planned farther in advance and involved different types of discretionary activities. Long-distance vacation travel is also an important topic to many fields, including economics, leisure travel, tourism, air quality, congestion, and sociology for a number of reasons. First, long-distance vacation travel is most commonly associated with two population groups: older adults and young families. These two types of population groups will grow in the near future, so it is important to understand what type of travel these populations will take. Finally, many researchers recognize that household vacation trips have a dramatic impact on family development. Families that travel together and involve the children in the planning process are much more likely to have stronger family cohesiveness and support. No vacation travel demand models currently exist.
that include choice behavior components. My dissertation will include a conceptual framework and supporting models for vacation travel time use, destination choice, and behavior patterns.

Both of these research topics utilize discrete choice models. Discrete choice models are a specific type of model that use different likelihood utility functions to determine the most likely alternative a person will choose from a variety of alternatives. The utility (or level of satisfaction) for each alternative is calculated from alternative-specific and user-specific characteristic variables, and whichever alternative has the largest utility is the most likely alternative for that individual. In the accessibility example, I look at all the possible destinations people might choose for any given trip purpose, and then I identify the most likely destination each population group would choose. I can then use the information from the chosen destination, and subsequent trip characteristics, to determine how accessible an area is. In the long-distance vacation example, my discrete choice models predict everything from how many trips a household will take in a year, to the purposes of those trips, and the other characteristics of those trips (i.e. locations, intermediate stops, time of year, etc.)

**ACCOMPLISHMENTS DURING 2013-2014**

This is my fourth, and final, year at The University of Texas at Austin. I completed my graduate coursework during the '08/09 academic year, which allowed me to use my research credits this past year to focus in on these interesting and challenging research projects. Additionally, I wrote numerous proposals, including ones for the Texas Department of Transportation, the National Science Foundation, and the Transportation Research Board National Cooperative Freight Research Program. Finally, I assistant taught graduate courses in transportation planning methods & techniques and discrete choice models & theory.

One of my significant accomplishments over the past year is the completion of my demand response transit accessibility software tool for the Texas Department of Transportation, for which I have been leading a research team for the past two years. The tool is comprised of a series of linear and discrete choice models that simulate demand response transit patron trips and can be used to evaluate the accessibility of a region. As the leader of the project, I met with the Texas Department of Transportation numerous times during the past year to promote our work, coordinate with their planners, organize workshops, and provide assistance in using our software. At the completion of the project, we revised the tool based on feedback from the city of Brownsville, Texas (who provided us the data used to develop the tool). Additionally, I presented the final product at TxDOT’s annual Texas public transportation meeting. Currently, I am working with transit planners from Minnesota, Connecticut, and England to implement the tool in their regions.

I completed my dissertation this past year as well, which focuses on the time use and activity patterns of household tourism travel. In March, I successfully completed the proposal committee presentation and department exam. My dissertation presents a comprehensive methodological framework for evaluating tourism activity patterns as well as activity-based models for selected framework components. I even
presented my dissertation research at the annual Transportation Research Board conference in Washington DC in the prestigious Doctoral Student Research in Transportation Modeling session. I am currently packaging my dissertation findings into distinct papers that I can submit for publication.

GOALS FOR 2014-2015

My short term goals include defending my dissertation in July, 20xx, and graduating in August, 20xx. I would love to be a professor after I graduate, and I currently have a number of applications pending for academic positions at universities across the country. Alternatively, if no position becomes available, I will continue at this university as a postdoctoral student conducting research with Dr. FacultyFirstName FacultyLastName and acting as a student consultant through the SSC Graduate Fellowship Program.

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