

TOMNET and D-STOP USDOT Tier 1 University Transportation Centers present
The ABCs (Attitudes – Behaviors – Choices) of Future Mobility

Willingness to Share Ridehailing Trips: Revealed and Stated Preference Analysis

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D-STOP



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AT AUSTIN



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SOUTH FLORIDA



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Full citation (APA style)

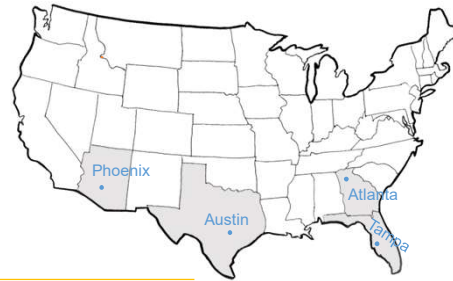
Kang, S., Mondal, A., & Bhat, C. (2020). *Willingness to Share Ridehailing Trips: Revealed and Stated Preference Analysis*. The ABCs (Attitudes – Behaviors – Choices) of Future Mobility. Available at <https://www.tomnet-utc.org/leadership-webinar-series.html>.



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TOMNET D-STOP Transformative Technologies in Transportation Survey (T4 Survey)

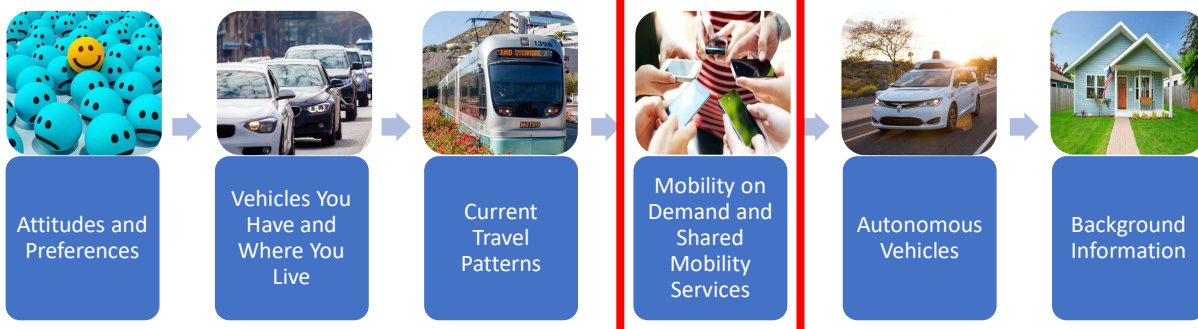
- Phoenix, Atlanta, Austin, and Tampa metro areas
- Summer and Fall 2019
- Random address-based sample with online instrument
- Comprehensive attitudinal survey on MaaS and AV
- Weighted to better represent Census distributions



	Phoenix, AZ	Atlanta, GA	Austin, TX	Tampa, FL	Total
Sample Size	1,027	944	1,127	260	3,358
%	30.6%	28.1%	33.6%	7.8%	100%

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Survey Instrument



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Study Objective

- Shared vs Private ridehailing service
 - Familiarity
 - Use
 - Frequency of use
- Joint revealed and stated preferences



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Background

- Why should we encourage shared ridehailing?
 - Potential decrease in VMT
 - Reduction in traffic congestion
- UberPOOL was launched in San Francisco, September 2014
- Pooled rides accounted for 20% of all Uber rides worldwide, 2016
- Launch dates
 - Atlanta, 2015
 - Austin, 2016
- Shared RH not available
 - Phoenix
 - Tampa



TNC Shared Ridehailing Services

Pros :	Cons :
<input type="checkbox"/> Cost	<input type="checkbox"/> Journey time
<input type="checkbox"/> Safety	<input type="checkbox"/> Seating restriction
<input type="checkbox"/> Convenience	<input type="checkbox"/> Locked route

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Survey Question: Are you familiar with RH?

1. How often do you generally use the following transportation services?

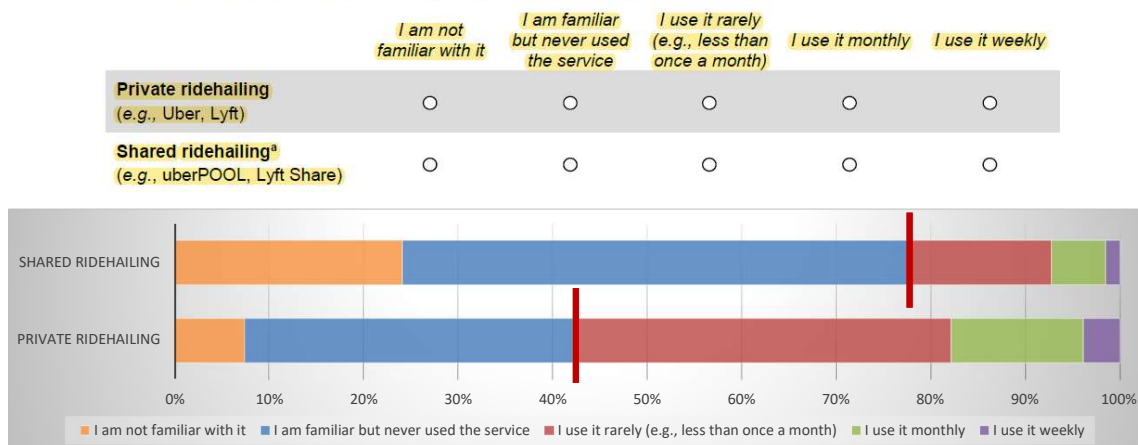
	<i>I am not familiar with it</i>	<i>I am familiar but never used the service</i>	<i>I use it rarely (e.g., less than once a month)</i>	<i>I use it monthly</i>	<i>I use it weekly</i>
Private ridehailing (e.g., Uber, Lyft)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shared ridehailing^a (e.g., uberPOOL, Lyft Share)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carsharing (e.g., Zipcar, Share Now)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bikesharing (e.g., Jump, Grid)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-scooter sharing (e.g., Lime, Bird)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

^a Shared ridehailing is an Uber/Lyft ride which you are sharing with other passengers not in your party.

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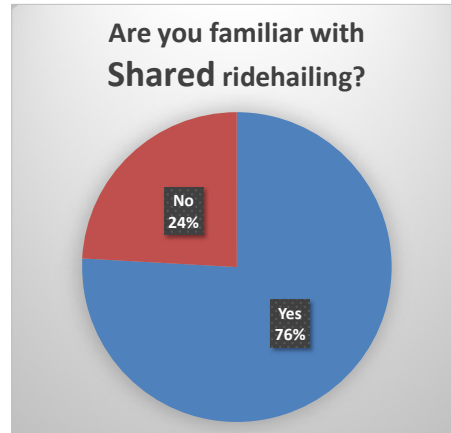
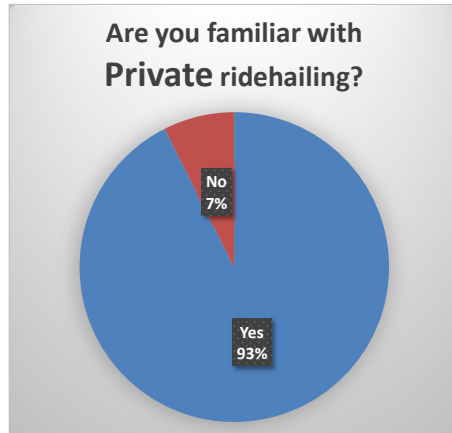
Familiarity with Ridehailing

1. How often do you generally use the following transportation services?



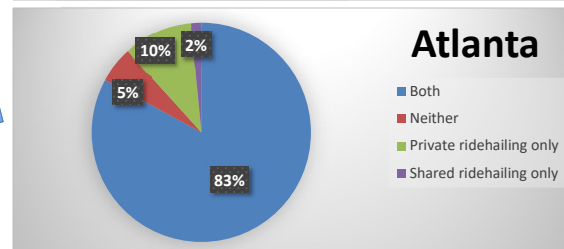
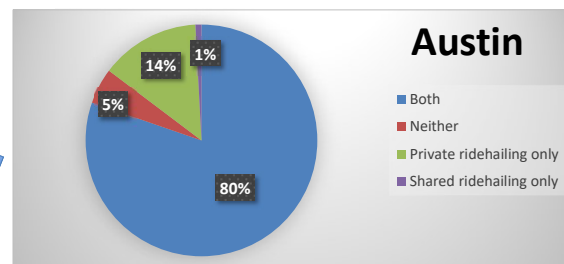
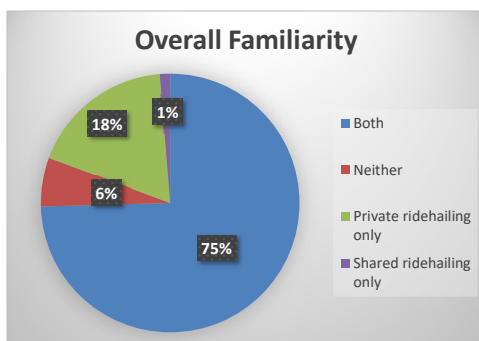
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Familiarity with Ridehailing



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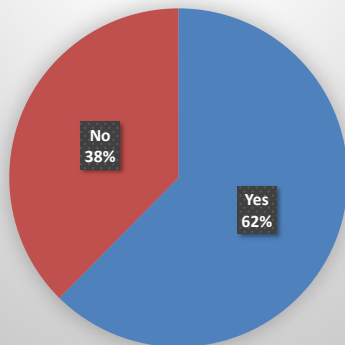
Familiarity with Ridehailing: Geographic



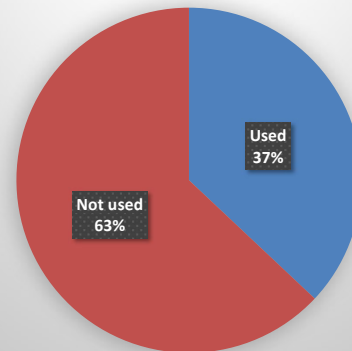
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Use of Ridehailing

Have you used **Private** ridehailing?



Have you used **Shared** ridehailing?*

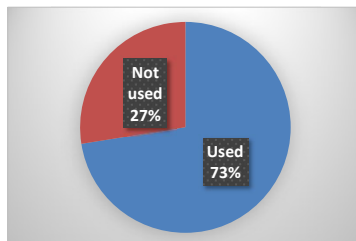


*Shared ridehailing only for Austin and Atlanta

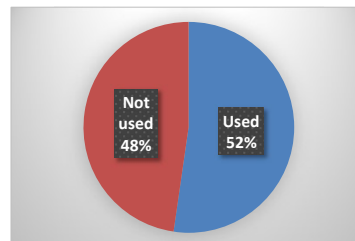
11

Use of Private Ridehailing: Geographic

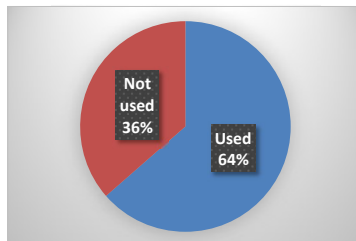
Austin



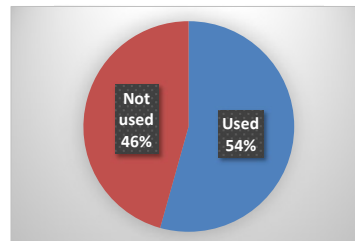
Phoenix



Atlanta



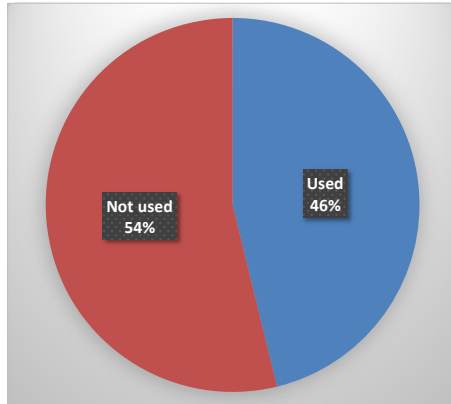
Tampa



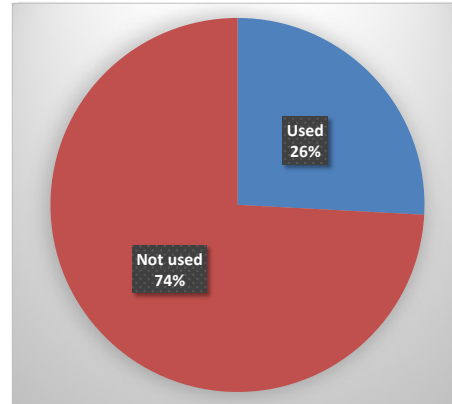
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Use of Shared Ridehailing: Geographic

Austin



Atlanta



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Survey Question: Your last RH trip

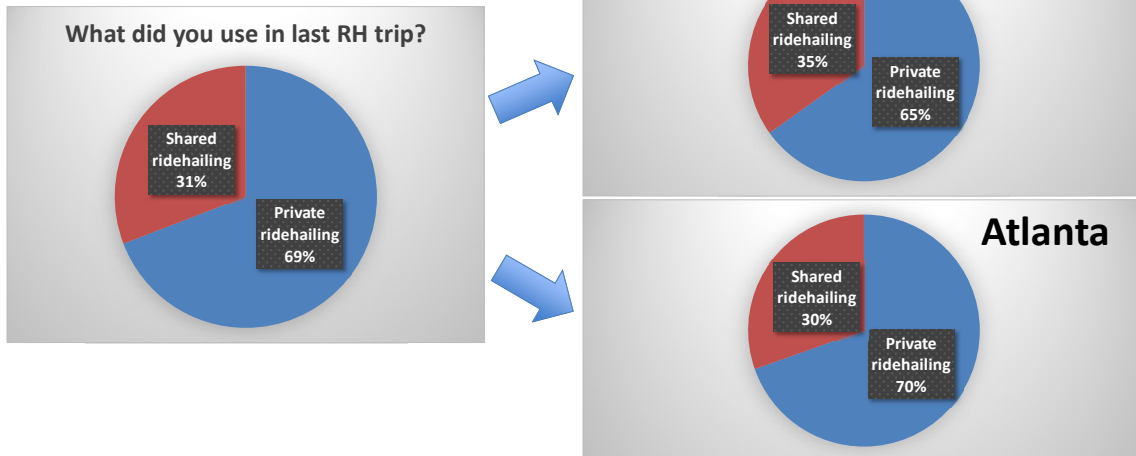
Revealed Preference

“Considering the **last trip** you recall using ridehailing services, please answer the following questions. If you don’t remember all of the information precisely, your best guess is fine. You can also refer to your app to see trip details. ”

What type of ridehailing service did you use?	<input type="radio"/> Private ridehailing (e.g., Uber, Lyft) <input type="radio"/> Shared ridehailing (e.g., UberPOOL, Lyft Share)
Where did you travel using this service? Provide address or major cross-streets and city name.	From: _____ To: _____
When did you use it?	<input type="radio"/> Weekday daytime <input type="radio"/> Weeknight (excluding Friday night) <input type="radio"/> Weekend daytime <input type="radio"/> Weekend night time (including Friday night)
About how long was the wait time for this trip?	_____ minutes
About how long was the travel time in the vehicle?	_____ minutes
About how much did the trip cost?	\$ _____ OR <input type="checkbox"/> I don't know because someone else called the ride.
What was the primary purpose of the trip? Please check the best answer .	<input type="radio"/> Work/school <input type="radio"/> Shopping/errands <input type="radio"/> Eating/drinking <input type="radio"/> Social/recreational <input type="radio"/> To access airport <input type="radio"/> To access public transit <input type="radio"/> Medical/dental <input type="radio"/> Going/returning home from another location <input type="radio"/> Other (please, specify): _____
How many other passengers traveled with you?	<input type="radio"/> I was the only passenger OR <input type="radio"/> Family members, friends or colleagues <input type="radio"/> Other passengers matched via the app (for shared ridehailing)

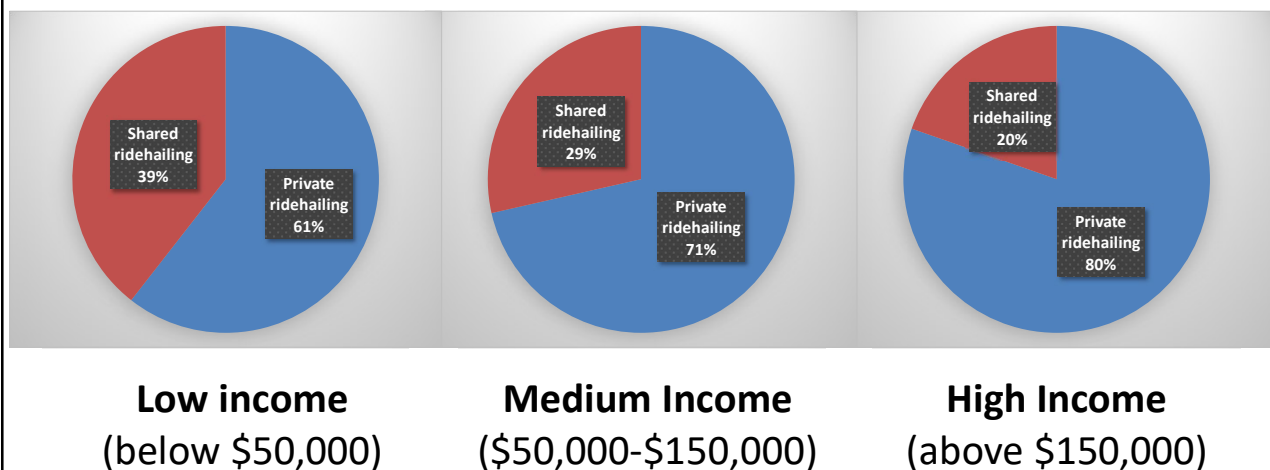
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Last RH Trip Mode: Geographic Variation



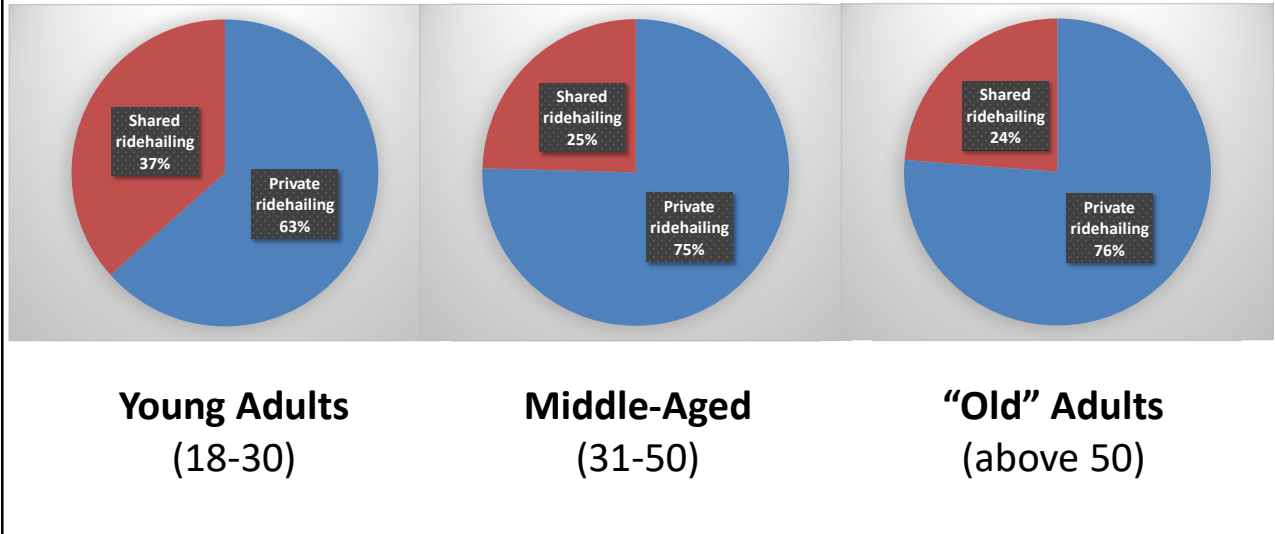
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Last RH Trip Mode: Income Effect



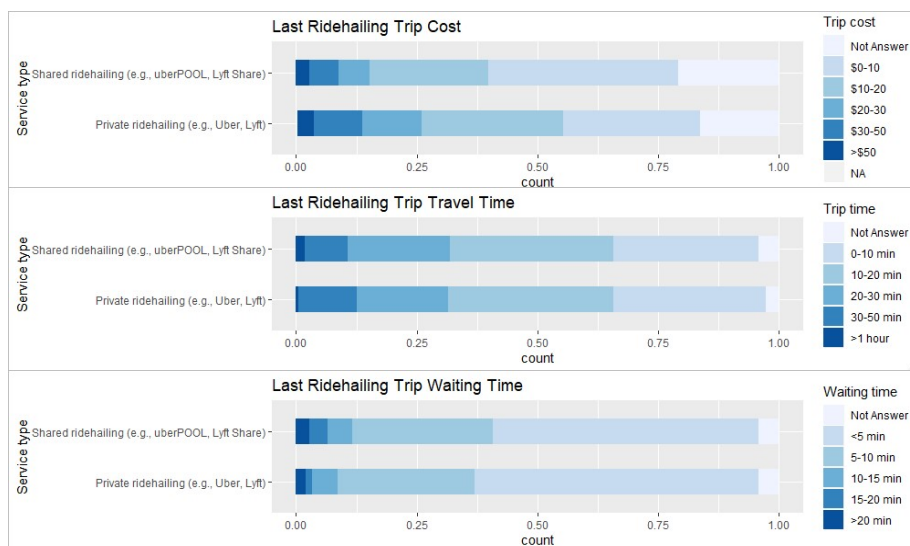
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Last RH Trip Mode: Age Effect



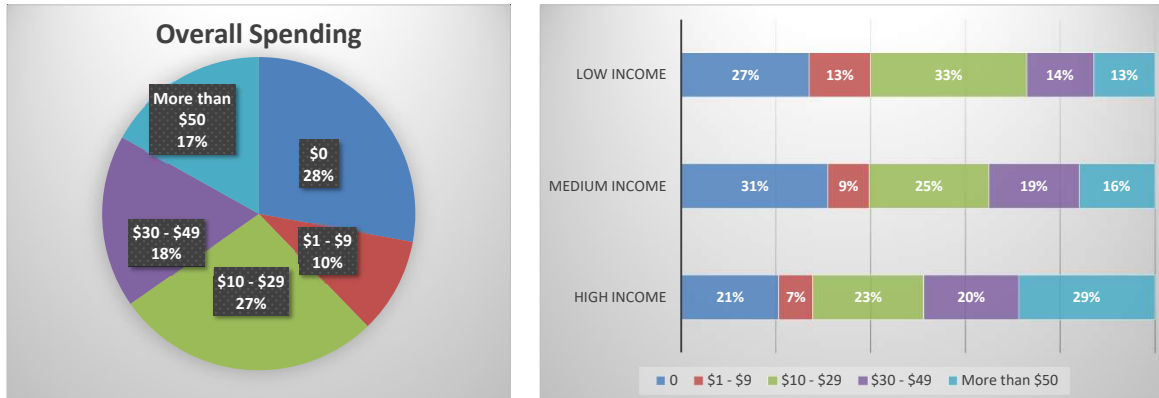
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Last RH Trip: Trip Cost, Travel Time, Waiting Time



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How much did you spend on RH last month?



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Survey Question: Which mode would you choose?

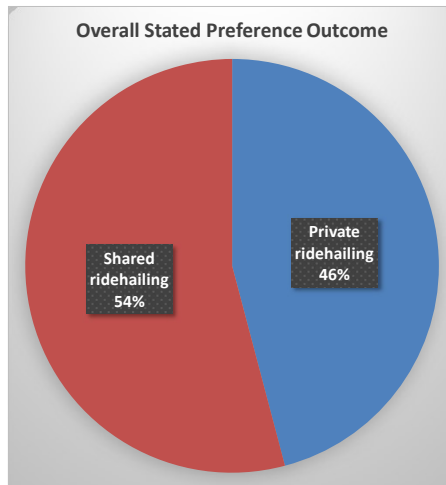
Stated Preference

Imagine that you call a ride through a smartphone app. For each of **the trip purposes** below, check whether you would choose the **private** (Option 1) or **shared** (Option 2) ridehailing option based on the trip features presented (trip cost, travel time, and the presence of additional passengers). *Select only one option in each row. Note that the travel times for shared ridehailing include both your waiting time and the extra time picking up/dropping off other passengers.*

	Option 1: Private ridehailing (e.g., Uber and Lyft)	Option 2: Shared ridehailing (e.g., uberPOOL and Lyft Share)
Social/Leisure	<input type="radio"/> \$ 18.00/ 20 minutes	<input type="radio"/> \$ 12.00/ 35 minutes/ three additional passengers
Shopping	<input type="radio"/> \$ 13.00/ 15 minutes	<input type="radio"/> \$ 10.00/ 25 minutes/ two additional passengers
Work/School	<input type="radio"/> \$ 8.00/ 10 minutes	<input type="radio"/> \$ 6.00/ 15 minutes/ one additional passenger

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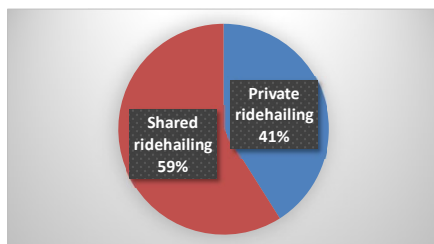
Stated Preference



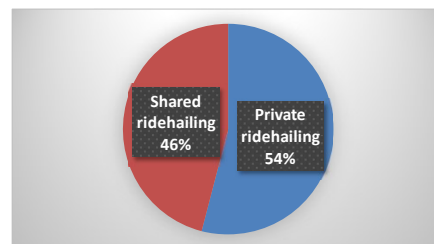
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Stated Preference: Geographic Variation

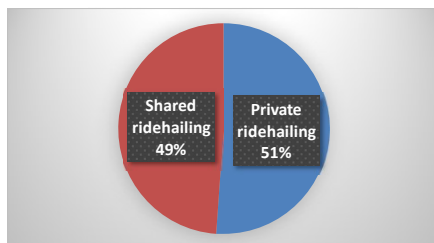
Austin



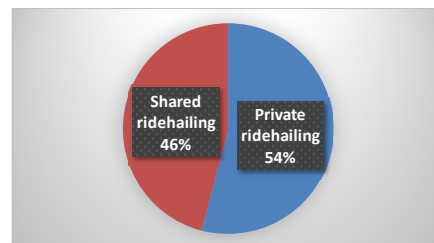
Phoenix



Atlanta

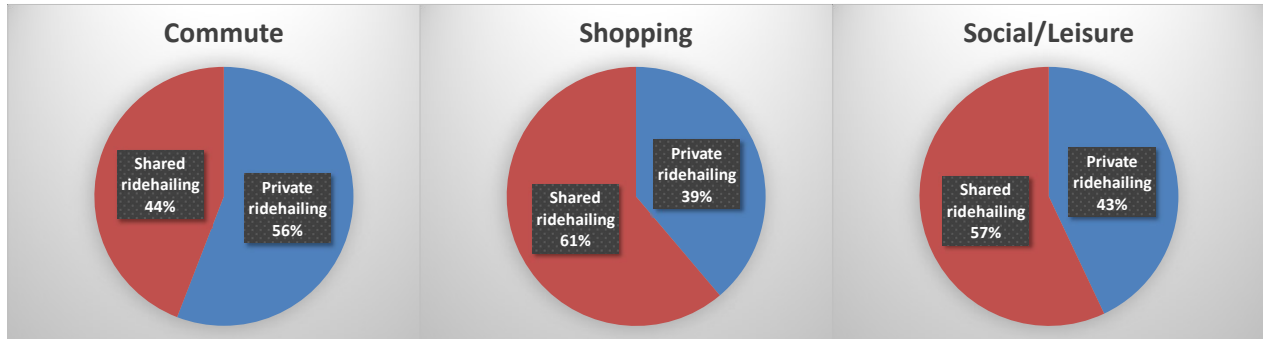


Tampa



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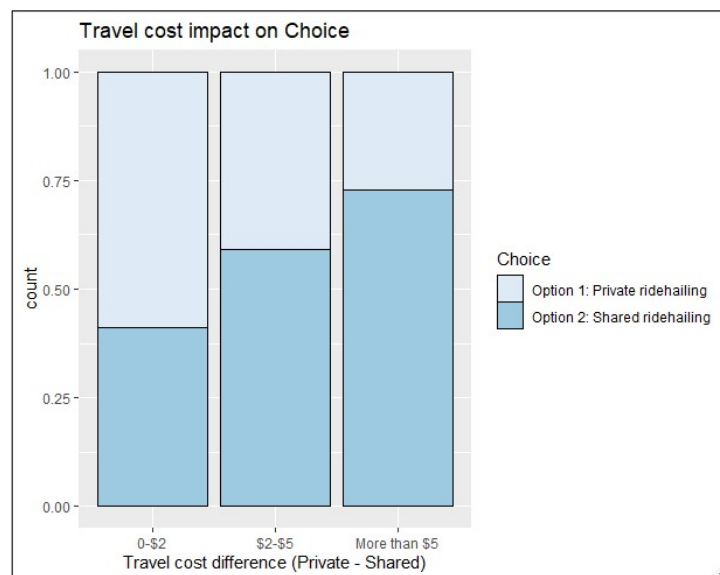
Stated Preference: Trip Purpose Variation



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Stated Preference

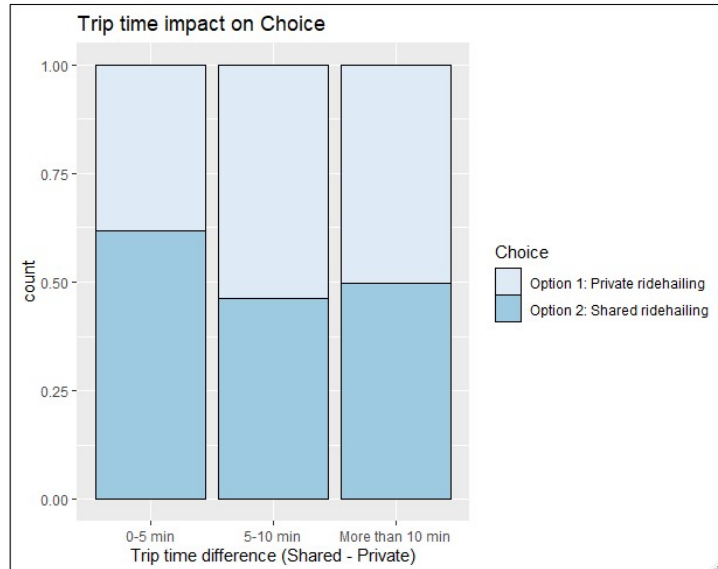
Higher travel cost discourages people from choosing private RH



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Stated Preference

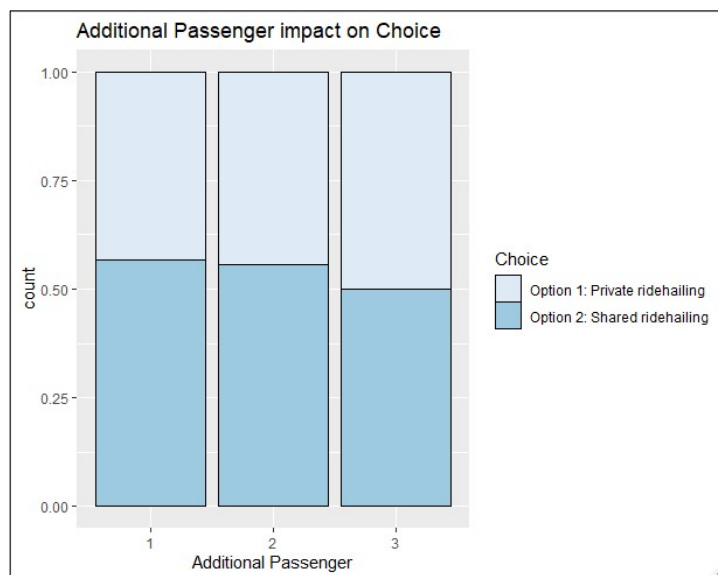
Higher trip time discourages people from choosing shared RH



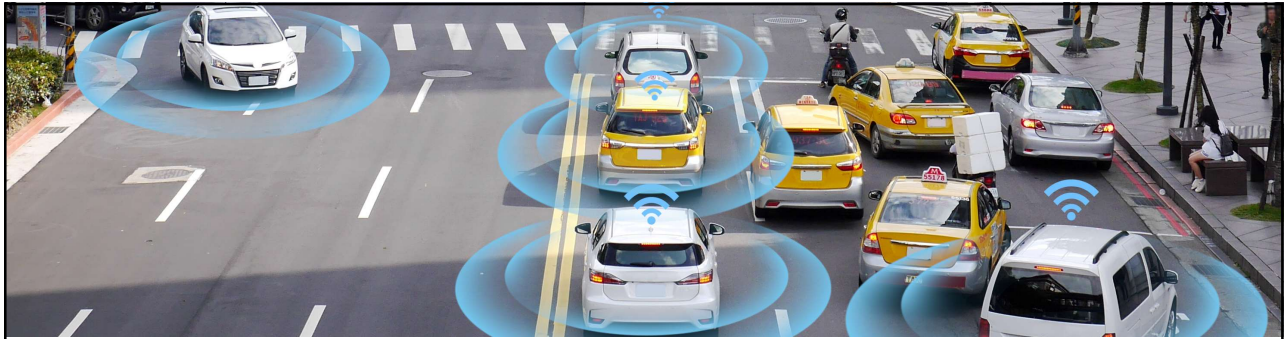
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Stated Preference

- Additional passengers discourage the use of shared RH
- Additional passengers do not appear to influence RH mode choice as much as time and cost



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Thank you!

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