TNC Impacts

Some indications that auto ownership is decreasing BUT overall, ride-hailing has increased VMT and GHG emissions from:

• Trips that would not otherwise have been taken;
• Network travel;
• Substituting walking, bicycling, or taking public transit.
Desired Survey Outcomes

- Achieve a representative dataset
  - 12,500 travel days for SANDAG
  - 10,000 travel days each for MTC
  - 10,000 travel days each for SCAG
- Collect TNC driver data in San Diego region
  - Deadheading versus in-service VMT
- Incorporate data in the regional modeling tools
- Data analysis
- Maximize research using data set
Oversampling Approach

• Use oversampling approach to capture TNC users and TNC travel

Model where TNC users live → Heavy Oversampling

Darker-shaded Block Groups had higher expected TNC use and received higher invitation rates.

Obtains more participants who live in those Block Groups

As expected, more participants are coming from the oversampled areas.
Recruitment

SAN DIEGO REGIONAL TRANSPORTATION STUDY

Mail and E-mail Invitation Materials

• Address-based sample
• Invitation Letter / FAQ
• One reminder postcard

San Diego Regional Transportation Study

REMINDER: You still have time to participate.

Help improve transportation in the San Diego region! Receive a $25 gift card as thanks for your time.

SAN DIEGO REGIONAL TRANSPORTATION STUDY
401 E St, Ste 400
San Diego, CA 92901

FREQUENTLY ASKED QUESTIONS

What is this study all about?
This study collects information about your daily transportation habits. How do you travel? How far do you go? How much does it cost? Our goal is to get a complete picture of regional transportation patterns to better plan for future improvements in our community.

Why should I participate?
Your participation assures that residents like you are fairly represented in our regional transportation plans. Traffic congestion and travel times are changing quickly, and we want your help now to plan for the future.

How was I selected to participate?
Your address was selected at random from across the San Diego region. Random sampling is an important part of making sure the study represents the entire region.

Can other members of my household participate?
Valid household members (who live with you in your home) are encouraged to participate with the same password. Just list their names when you sign up in Infusio. If they do not complete Infusio and complete the study in the same time, they will not receive a $25 gift card.

How much time does it take to participate?
It takes three minutes to get started and about five minutes per day for seven days to complete the full study. The mobile app helps to minimize the effort required to capture your travel data.

Can I use the mobile survey smartphone app outside of California?
Once it is installed and working, Infusio will remind your phone. A few minutes after you stop traveling, Infusio will ask you about the duration of your trip. Infusio will collect a few questions at the end of each day. You can answer these questions anytime during the day, but please do not answer them while driving.

How is my personal information protected?
Your data is connected to your phone and is safely transmitted. To read the full privacy policy, visit sandag.org/privacy.

Do I have to have a smartphone?
In some situations you will be required to maximize the effort required to participate, this is a smartphone-based study. If another adult in your household owns a compatible smartphone, they are strongly encouraged to participate in the study.

What do I get for participating?
You will receive a $25 gift card after you’ve completed the study, while also ensuring that residents like yourself are fairly represented in our regional transportation plans.

What if I don’t travel much?
No matter how much you travel; information about your transportation habits will help improve regional transportation planning. Remember to include short trips you make by walking, biking, or using any other mode of travel, even if you don’t drive.

What if my transportation habits during the study aren’t “typical” habits?
That’s no problem – we still encourage you to participate. We also ask how you typically travel.

Who is sponsoring this survey?
This survey is sponsored by the San Diego Association of Governments ( SANDAG), with additional support from Caltrans.
Survey Method

PARTICIPATION

By Smartphone

- rMove travel survey app
- 7 consecutive days, starting the day after download of app
- Person-based, but do allow multiple adults per household
- Extensive reminders in-app and by email
- Incentive upon completion
Trip Survey Data

- Detailed trip purpose
- Travel companions
- Mode

**Auto:**
- Driver/passenger
- Vehicle used
- Parking location

**Bicycle:**
- Owned/shared
- Regular/electric
- Parking location

**Taxi/Ridehailing:**
- Pooled/regular/premium
- Trip scheduled/decided in advance
- Wait time
- Who paid
- Fare
- Mode shift/induced demand

**Transit:**
- Type: bus, rail, etc.
- Access/egress
- Fare type

**Scooter:**
- Owned/shared
- Parking location
Capturing TNC Trip Data

What type of taxi or smartphone-based app car service did you use? Select all that apply.

- Regular taxi (e.g., Yellow Cab)
- Uber
- Lyft
- Other smartphone-based app car service (e.g., Arro, Summon, Wingz)
- Other hired car service (e.g., black car, limo)

What Lyft service did you use?

- Pooled (e.g., Lyft Line)
- Regular or economy (e.g., Lyft)
- Premium (e.g., Lyft Plus, Lyft Premier, Lyft Lux, Lyft Lux SUV)
- I don't know

How many people were part of your Pooled trip?

Please indicate the number of other paying passengers who were also on the Pooled trip (regardless of whether they got in or out of the vehicle). Please do NOT include the driver. Please do NOT include anyone you met at your destination.

0
1
2
3
4
5+

Previous  Next
Daily Survey Data

- Telecommute
- Package delivery
- Employment and Student Related Data
  - Number of jobs
  - Work location
  - Commute benefits
  - Amenities
  - Parking
  - School type
- Vehicle
  - Household vehicle types
  - Fuel type
  - Toll transponder
  - Home parking cost
- Residence
  - Rent/own
  - Duration
  - Type of residence
  - Benefits/amenities
- Demographics
  - Ethnicity
  - Age
  - Income
  - Disability
- Online shopping
- Autonomous Vehicles
  - Propensity to use AVs
  - Induced demand
## Sampling Response Rates

<table>
<thead>
<tr>
<th>Region</th>
<th>Invited</th>
<th>Recruited</th>
<th>Completed</th>
<th>Recruit Rate</th>
<th>Conversion Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay Area</td>
<td>249,109</td>
<td>6,416</td>
<td>4,540</td>
<td>2.58%</td>
<td>70.8%</td>
</tr>
<tr>
<td>San Diego</td>
<td>67,439</td>
<td>2,997</td>
<td>2,382</td>
<td>4.44%</td>
<td>79.5%</td>
</tr>
<tr>
<td>Los Angeles &amp; Orange Counties</td>
<td>57,555</td>
<td>1,817</td>
<td>1,361</td>
<td>3.16%</td>
<td>74.9%</td>
</tr>
</tbody>
</table>
Sampling Results

• Exceeded the project’s overall goal of 50,500 complete person-days of travel
• Larger than the sample size for California in the 2017 National Household Travel Survey

<table>
<thead>
<tr>
<th>Region</th>
<th>Complete Person-Days</th>
<th>Trips</th>
<th>TNC trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay Area</td>
<td>30,170</td>
<td>174,922</td>
<td>5,140</td>
</tr>
<tr>
<td>San Diego</td>
<td>17,340</td>
<td>101,004</td>
<td>1,578</td>
</tr>
<tr>
<td>Los Angeles &amp; Orange Counties</td>
<td>9,901</td>
<td>56,006</td>
<td>1,099</td>
</tr>
</tbody>
</table>
Privacy Policy

The raw survey data may be shared with other public agencies and research institutions for planning and research purposes only. SANDAG, SCAG and MTC will continue to own and control raw data shared with third parties.
Potential Data Grant Timeline

- Assess interest from academia: March 2020
- Define formal data grant process
- Request for proposals
- Research completed: ~February 2021 or later

Timeline:
- April - May 2020
SANDAG Research Interests

• Potential research questions include:
  • Mode choice/travel behavior – pooled & non-pooled
  • Vehicle occupancy – pooled & non-pooled
  • TNC use related to land use
  • Curb space and safety impacts
  • Price elasticity of demand
  • Air quality impacts
  • Equity impacts
  • Impacts on transit ridership
  • Growth rate of TNC modeshare

• Planning/policy recommendations: land use, housing, infrastructure investments, curb management, pooled rides incentives
MTC Research Interests

• MTC/SFCTA Research Topics
  • Regional Profile
  • Transit & TNC’s
  • Equity Analysis Report
  • Traveler Behavior & Travel Model Estimation

• Possible Academic Research Topics
  • New Mobility in the Bay Area
  • Goods Movement (packages, food delivery)
    • Impacts on VMT & GHG
  • TNC’s & SB743
  • Employer Benefits & TNC’s
SCAG Research Interests

- TNC substitution for non-auto modes such as Transit & Active Transportation
- TNC use and Connect SoCal land use strategy layers:
  - High Quality Transit Areas (HQTAs)
  - Neighborhood Mobility Areas (NMAs)
  - Urban v. Suburban
- TNC use and other Connect SoCal topic areas such as:
  - Disadvantaged Communities
  - Environmental Justice
  - High Injury Network
- Impacts on congestion, additional VMT, curb space management & blocking auto, bike or transit lanes, and correlation with auto ownership levels
- How ADA accessibility issues are/are not addressed (not directly in dataset)
Next Steps

• Use feedback to develop data grant parameters
• Submit expression of interest to Krystal Ayala, krystal.ayala@sandag.org by March 20, 2020.

• Presentation, expression of interest form, and project information available at www.sandag.org/study
Data Grant Q & A

Please type in your questions using the chat box feature in WebEx.

• Level of interest?
• Combine with other datasets?
• New research project, or part of an existing effort?
• Collaborative Effort?