



Travel Behavior of Generation Y: Preliminary Results from the California Millennials Survey

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Mobility of Millennials in California




Interest in better understanding:

- The relationships among *millennials' personal attitudes, lifestyles* and *actual behaviors*
...do they behave differently from previous generations?
- Impact of *classical* (economic and non-economic) variables vs. *specific factors affecting millennials' choices* (e.g. adoption of technology, etc.)
- Their *aspirations for/opinions about life and future mobility* (e.g. major life changes, purchase and use of cars vs. use of other modes)



(2)

Potential Factors Affecting the Mobility of Millennials

<p><u>Economic</u></p> <ul style="list-style-type: none"> • Recession • Unemployment 	<p><u>Auto Costs</u></p> <ul style="list-style-type: none"> • Gasoline • Auto insurance • Driver's education • Auto repairs • Other fees 	<p><u>Technology</u></p> <ul style="list-style-type: none"> • Communication technology • Transportation technology (Über) 	<p><u>Demographic Change</u></p> <ul style="list-style-type: none"> • Delayed marriage • Fewer children • Boomerang 
<p><u>Residential Location</u></p> <ul style="list-style-type: none"> • More likely to move to and live in cities 	<p><u>Cultural</u></p> <ul style="list-style-type: none"> • Environmentalists • Less materialistic 	<p><u>Regulatory Changes</u></p> <ul style="list-style-type: none"> • Graduated Driver's Licensing • Texting while driving laws 	<p><u>Alternative Modes</u></p> <ul style="list-style-type: none"> • Better transit • Improved infrastructure for walking/biking

(Source: Blumenberg, 2014)

Common Limitations of Previous Studies

Lack of information on key variables:

- e.g. *personal attitudes and preferences* for studies based on the analysis of National Household Travel Survey data

Use of non-random samples:

- e.g. *convenience samples* for studies on university students

California Millennial Study

- Statewide study in California
- Design of a [detailed online survey](#) to collect information from millennials
- Survey distributed through an opinion panel to a sample of [Millennials](#) and [Generation X](#)
- Quota sampling by [geographic region](#) and [neighborhood type](#)
- Focus on [personal attitudes](#), [lifestyles](#), [living arrangements](#), and [adoption of technology](#), among other factors controlled in the study



Survey Content

Focus on:

- A. *Individual Attitudes and Preferences (general, environmental, technology, lifestyles, etc.)*
- B. *Online Social Media and Adoption of Technology*
- C. *Residential Location and Living Arrangements*
- D. *Employment and Work/Study Activities*
- E. *Transportation Mode Perceptions*
- F. *Current Travel Behavior*
- G. *Emerging Transp. Services (e.g. car-sharing, Uber, Lyft, etc.)*
- H. *Driver's License and Vehicle Ownership*
- I. *Previous Travel Behavior and Residential Location*
- J. *Aspirations for/Opinions about Future Mobility*
- K. *Sociodemographic Traits*

Individual Attitudes and Preferences

Section A: Your Opinions on Various Topics

To begin, we'd like to learn more about your opinions on various issues related to transportation, residential location and lifestyles. This will give us a more complete context for understanding your answers to later questions. We want your honest opinion on each statement contained in the next three tables (or your best guess, for topics you are not very familiar with) – **there are no “right” or “wrong” answers in this survey!**

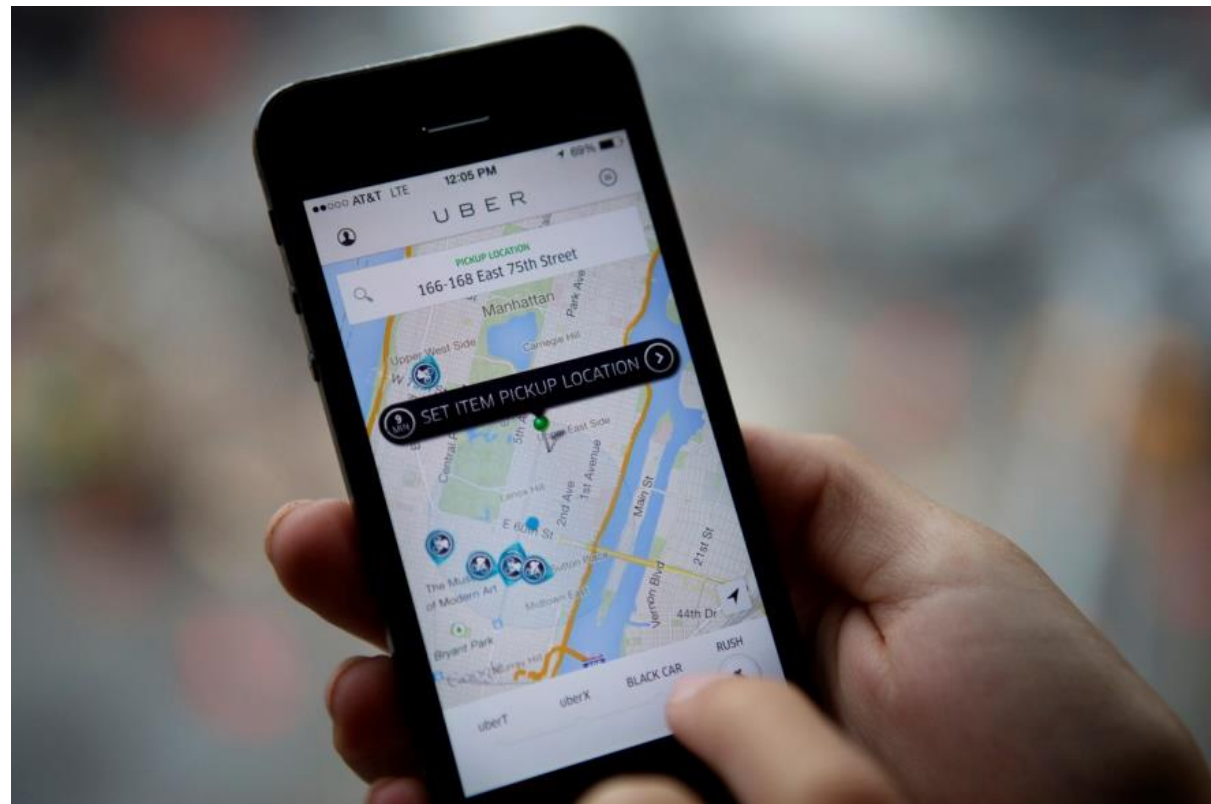
Please choose the response that most closely fits your reaction to each of the following statements.

(1 of 3) Your opinions and preferences about personal lifestyles and residential location

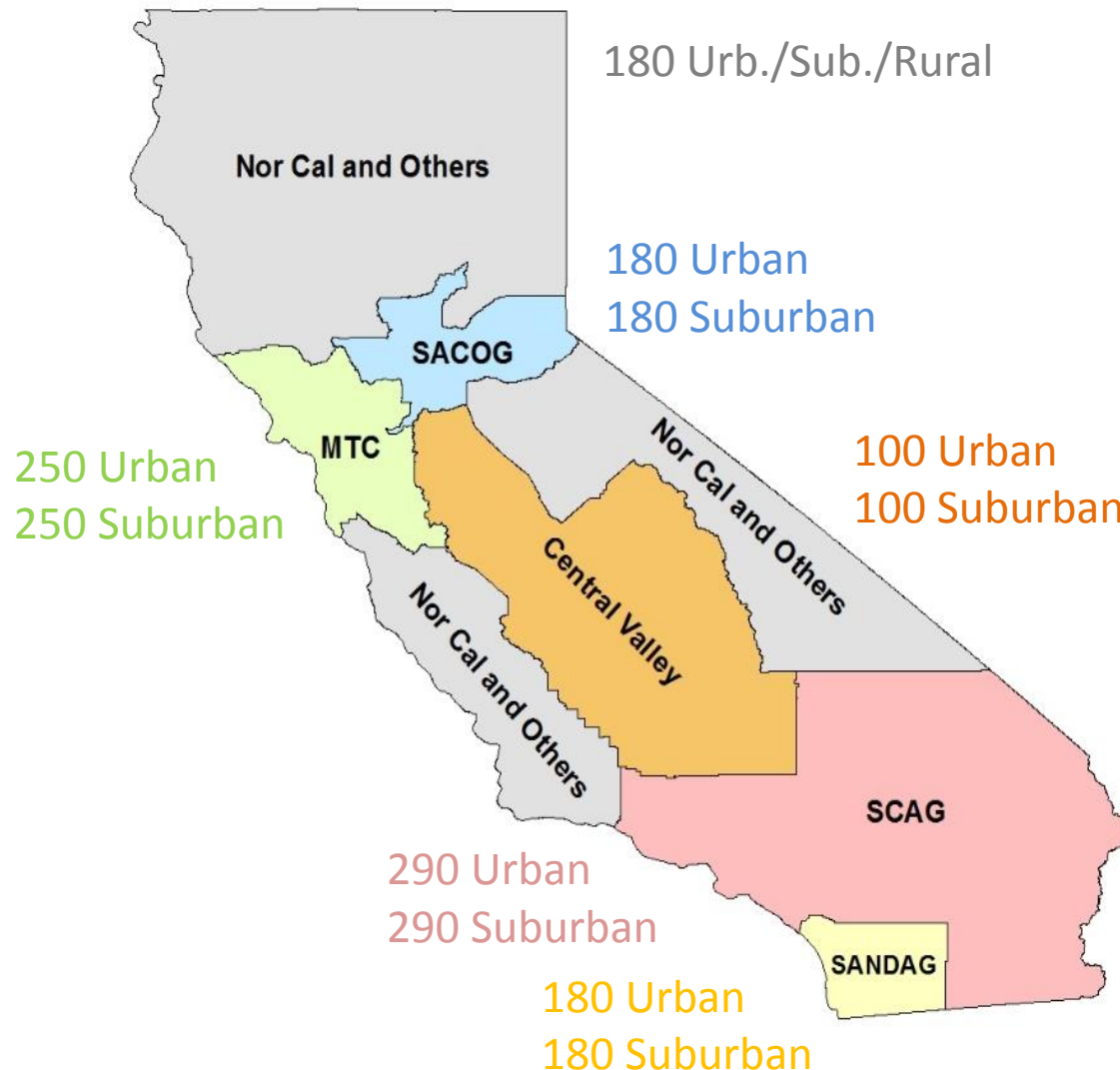
	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
I prefer to live close to transit, even if it means I'll have a smaller home and live in a more crowded area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting regular exercise is very important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like sticking to a routine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer to live in a spacious home, even if it is farther from public transportation and most destinations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individuals should generally put the needs of the group ahead of their own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doing two or more activities at the same time is the most efficient way to use my time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like the idea of having different types of businesses (such as stores, offices, post office, bank, library) mixed in with the homes in my neighborhood.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The importance of exercise is overrated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Car Ownership vs. Shared Mobility

U B E R



California Millennial Dataset



+270 Rural (All California)

Control for demographic targets:

- Age
- Gender
- Income
- Race and Ethnicity
- Presence of Children (Y/N)

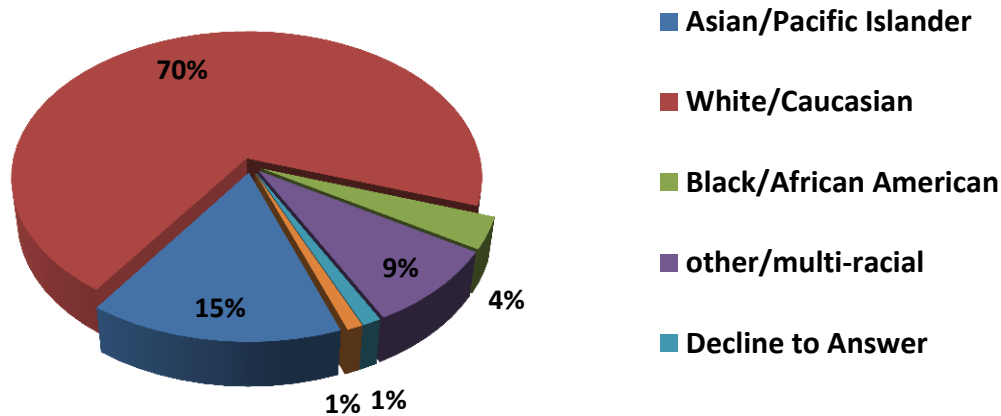
Data collection in Fall 2015

*Target of:
1400 Millennials
1000 "Gen Xers"*

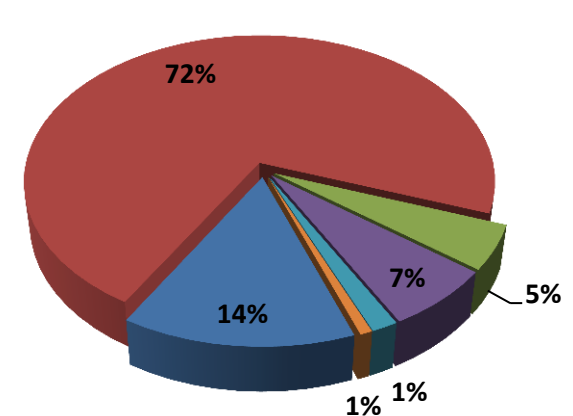
N = 2400 Total sample size

Sample Characteristics (N=2160)

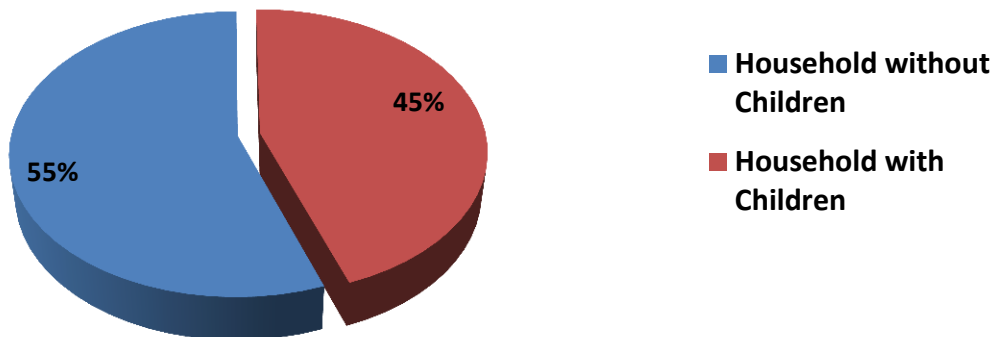
Millennials



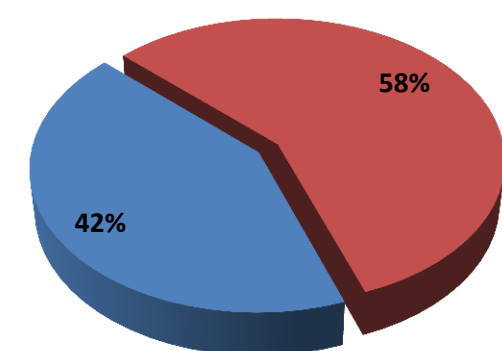
Generation X



Millennials

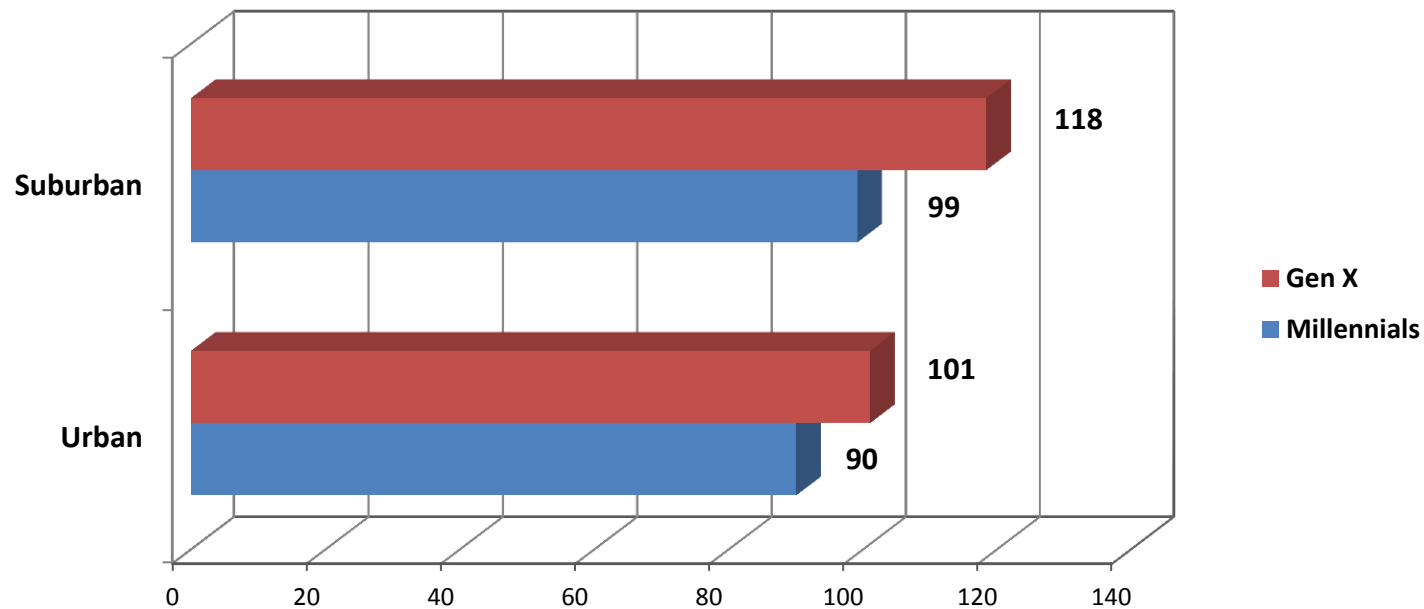


Generation X



Vehicle Miles Traveled

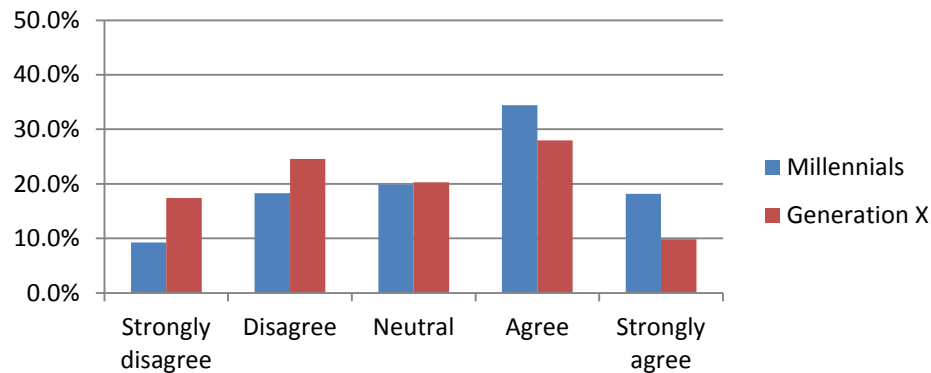
Average Weekly VMT by Neighborhood Type



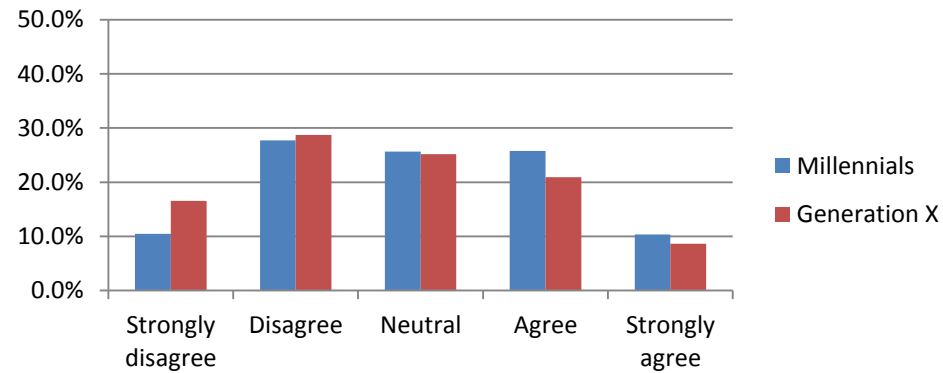
N=2110, unweighted sample

A Transient, Green Generation

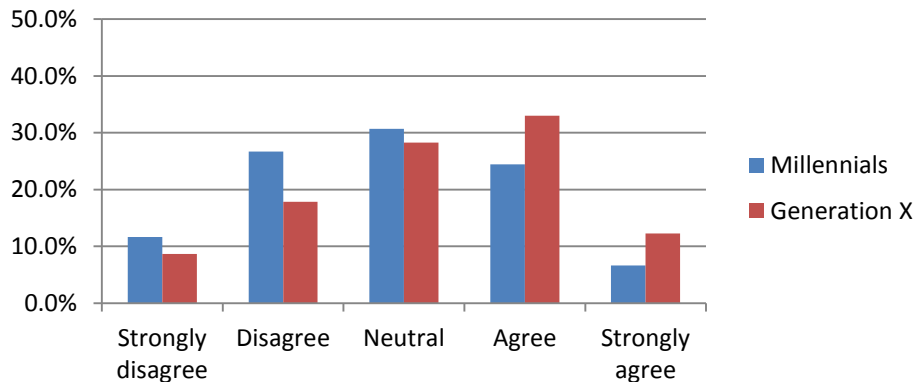
"I'm still trying to figure out my career (e.g. what I want to do, where I'll end up)"



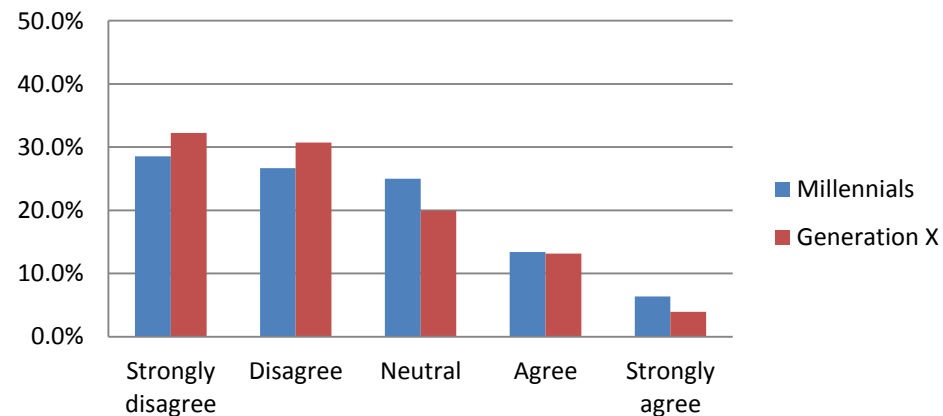
"I prefer to live close to transit even if it means I'll have a smaller home and live in a more crowded area"



"I'm already well-established in my field of work"

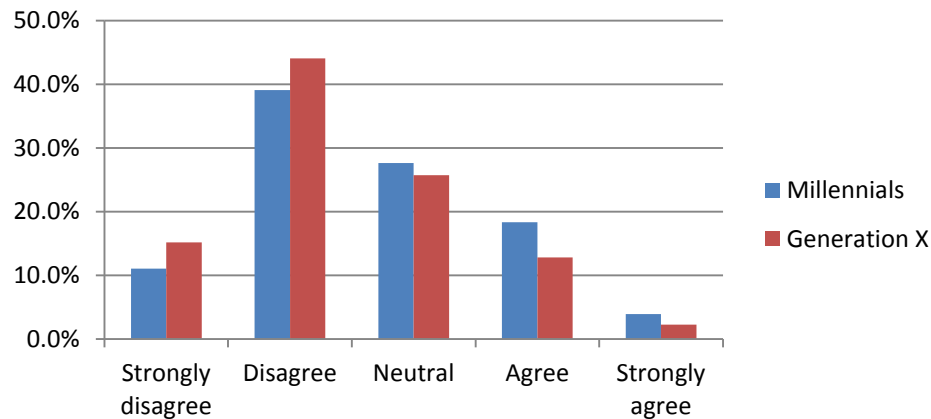


"We should raise the price of gasoline to reduce the negative impacts on the environment"

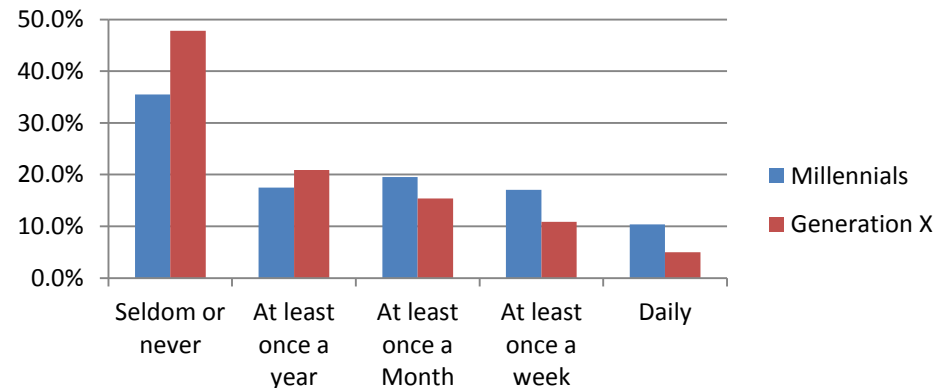


Tech-Savvy, Smartphone-Oriented

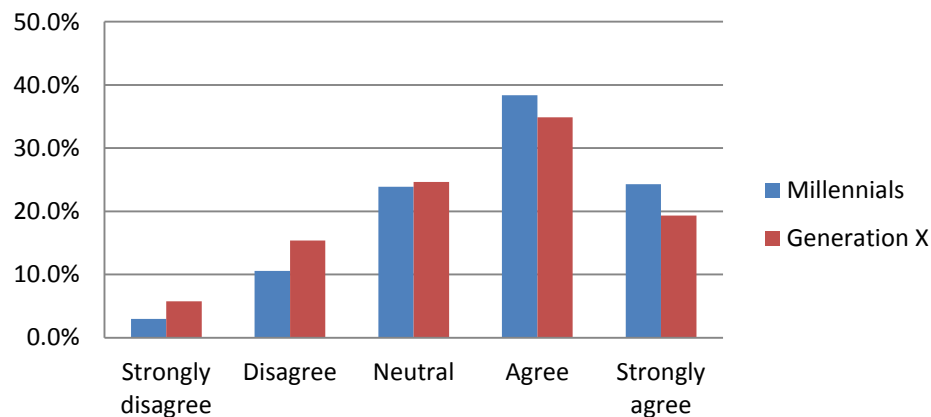
"I avoid doing things that I know my friends would not approve"



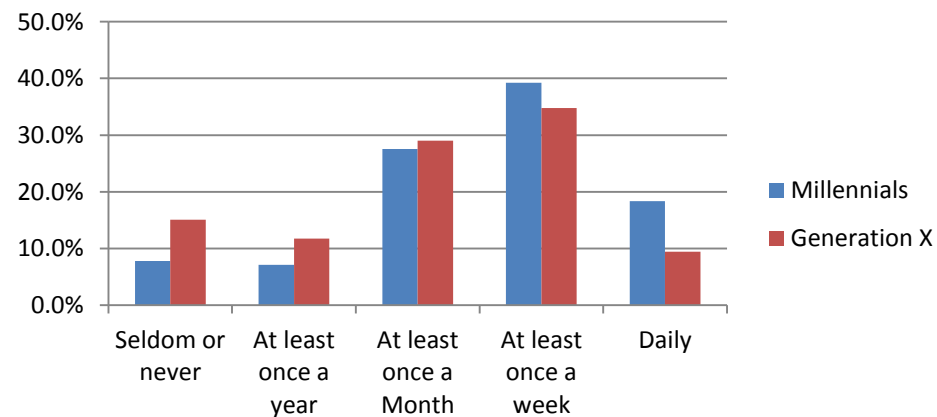
Use smartphones to "decide which means of transportation, or combinations of multiple means, to use for a trip"



"Having Wi-Fi and/or 3G/4G connectivity everywhere I go is essential to me"

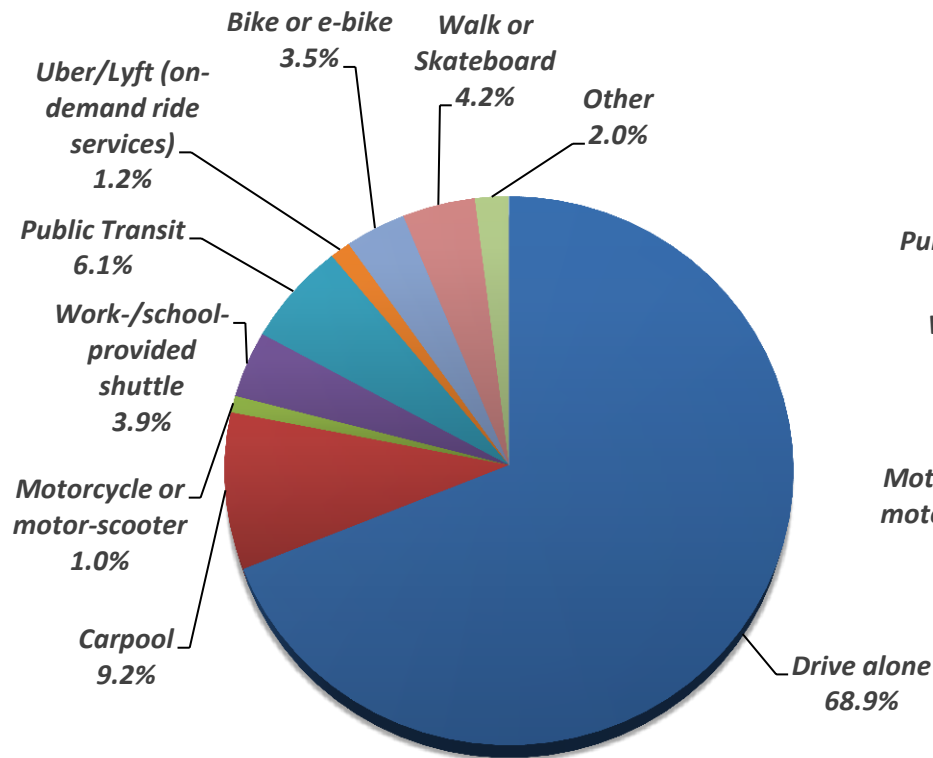


Use smartphones to "identify possible destinations (e.g. restaurant, café, etc.)"

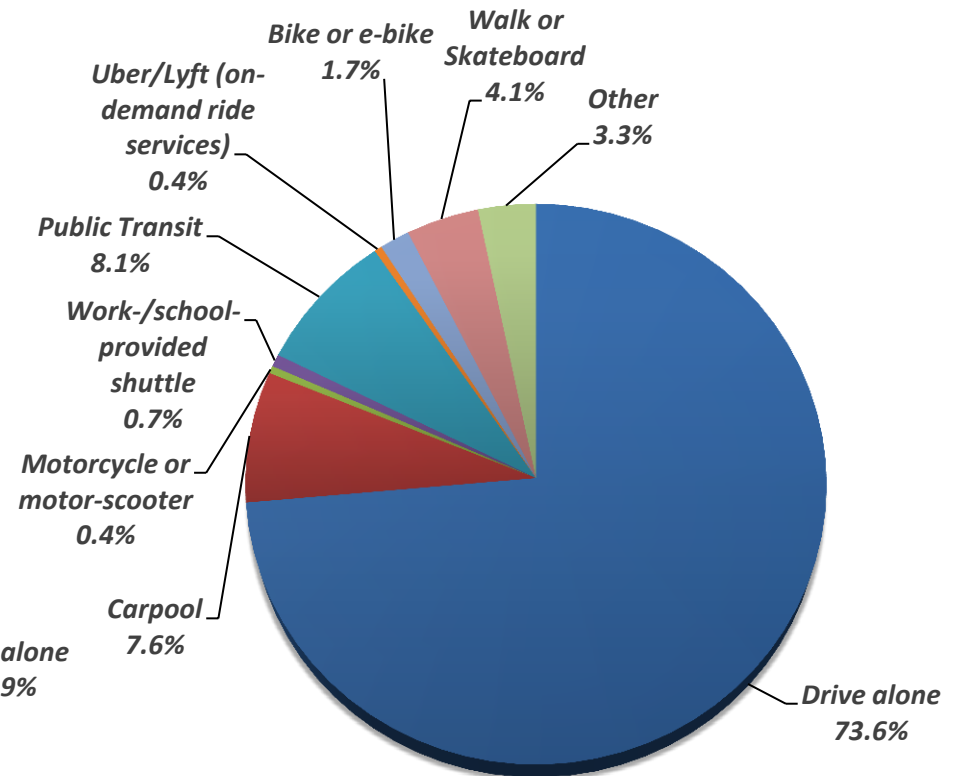


Most Recent Commute - Mode Choice

Millennials

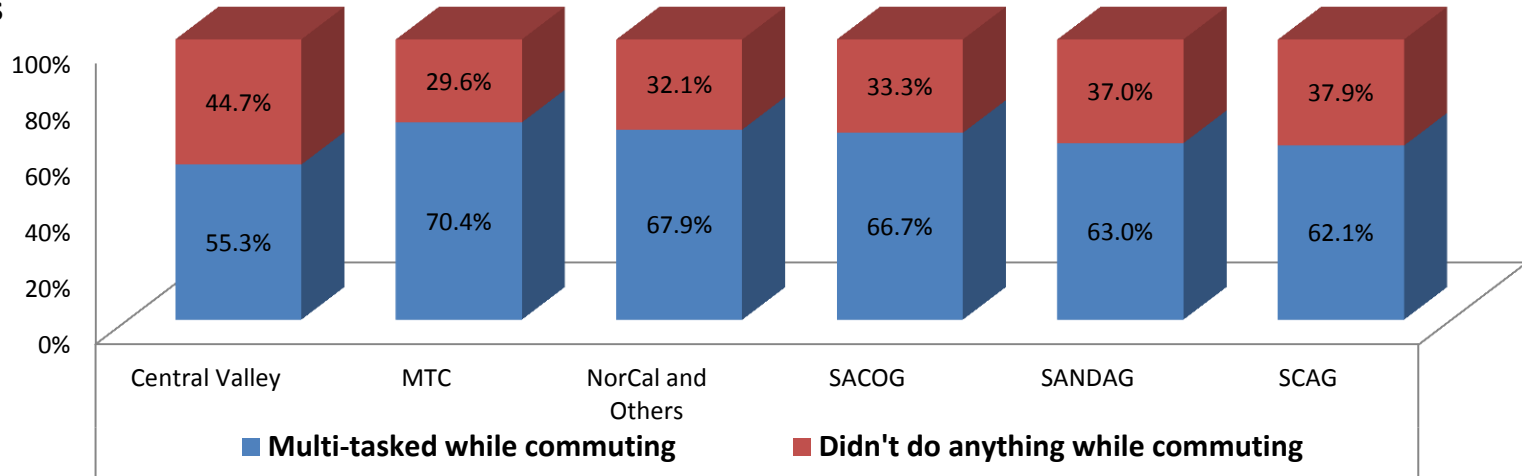


Generation X

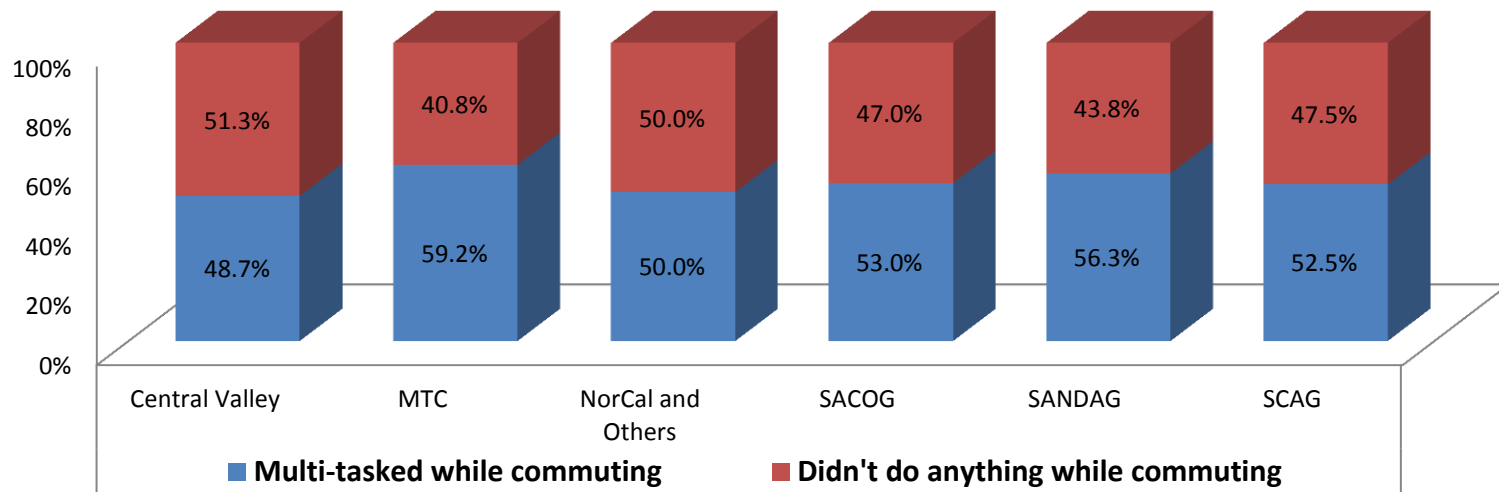


Multitasking while Traveling

Millennials



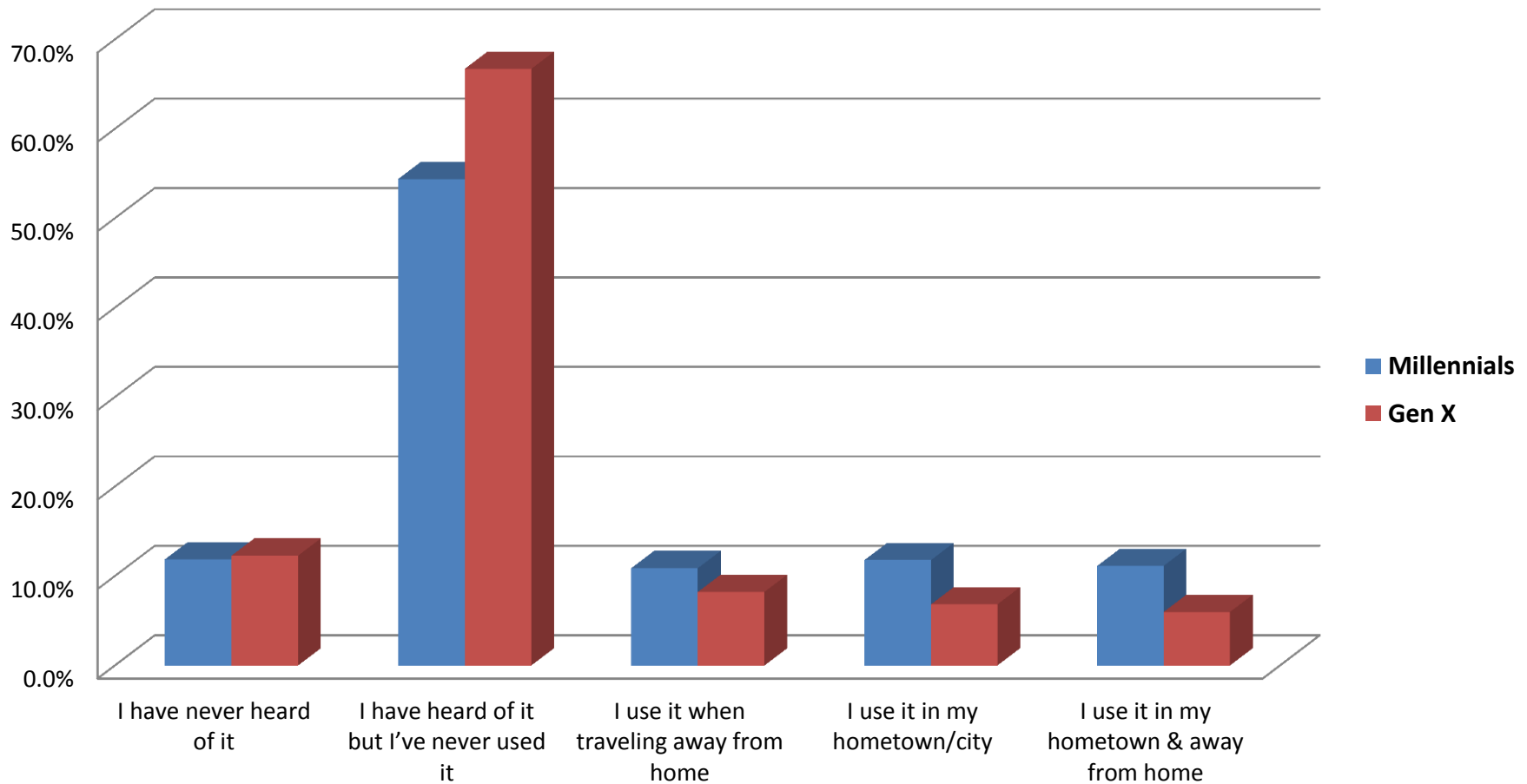
Generation X



N=2160, unweighted sample

A Uber-Friendly Generation?

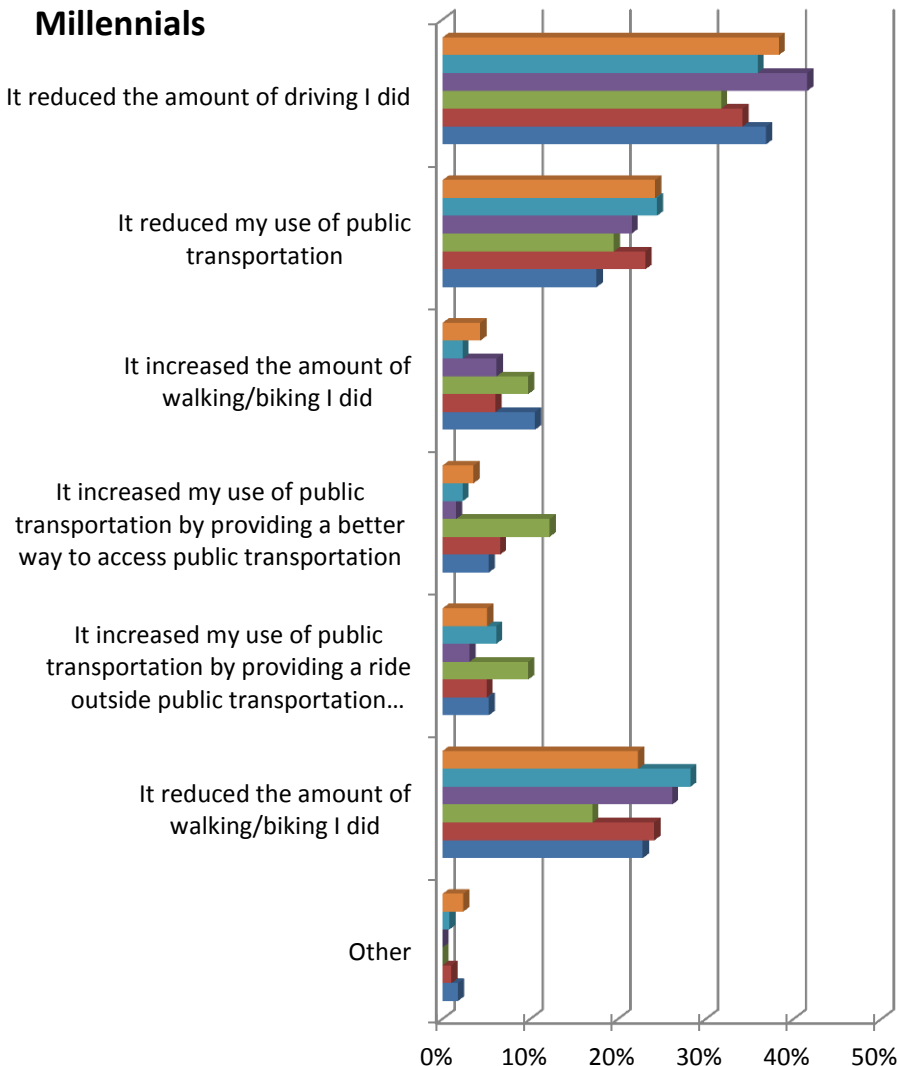
Familiarity with and usage of On-demand ride services (e.g. Uber, Lyft)



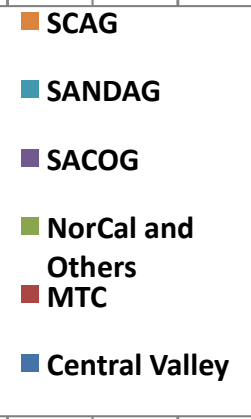
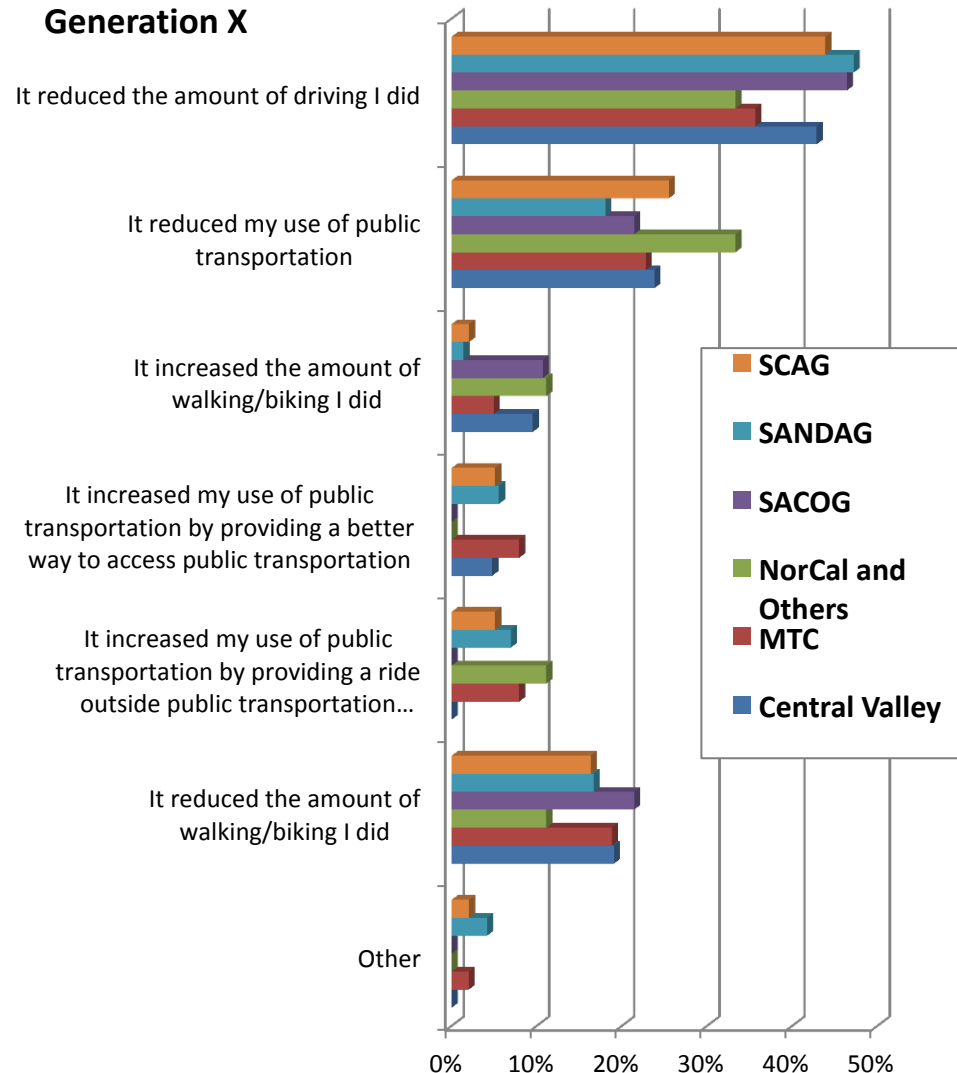
N=2160, unweighted sample

Impact of Last Uber/Lyft Trip on the Use of Other Means of Travel

Millennials



Generation X



Preliminary Findings, and Next Steps

- Consistent with expectations, millennials are found to:
 - Drive less
 - Use ICT devices more often
 - Multitask during their commute
 - Have different personal attitudes (e.g. about the environment, technology...)
 - Adopt share mobility services more often
- How do their behaviors relate to...
 - Stage in life
 - Personal attitudes, lifestyles and living arrangements
 - Adoption of technology and mobility choices
- The study will provide insights into *potential response of millennials to policies*, and effect on future travel demand

Research Question 1

What are the **relationships among travel behavior, personal preferences, adoption of technology and residential location** of millennials?

Estimation of frequency models for the use of various means of travel, segmented respectively for millennials and Gen Xers:

- What factors affect the adoption of modes alternative to cars?
- What is the impact of the adoption of **on-demand ride services** (Uber/Lyft)?
- What is the impact of living arrangements vs. personal preferences?
- How do **level of education, income** and **geographic location** relate to millennials' choices?

Research Question 2

Are the dominant trends of millennials' travel **permanent** or **temporary**?

Estimation of a VMT model, which controls for sociodemographics, personal attitudes, lifestyles, and geographic location:

- What is the impact of stage of life (e.g. being married, presence of children) on millennials' travel?
- What is the impact of major life events (new job, moving out of parents' place, moving in with partner, etc.)?
- What is the impact of personal attitudes and preferences?
- How does the place where somebody grew up affect travel behavior?

Not possible to fully analyze these issues using NHTS, or other currently available travel survey data.

Research Question 3

How many millennials match the stereotype of *urbanite/socialite* common in the media?

Cluster analysis to analyze different profiles of people

Stereotype common in the media:

- Live in urban areas
- Have dynamic lifestyles
- Heavy users of social media
- Own zero (or few) cars
- Use public transportation
- Adopt new technologies



How many millennials vs. members of older generation fit in this profile?

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Thank you for your attention!



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