

Describing the users: Understanding adoption of and interest in shared, electrified, and automated transportation in the San Francisco Bay Area - APPENDICES

Appendix A: WholeTraveler Transportation Behavior Study Background

This research is a part of the WholeTraveler Transportation Behavior Study. This study is a part of the U.S. Department of Energy's (DOE) Energy Efficient Mobility Systems (EEMS) program. This program envisions an affordable, efficient, safe, and accessible transportation future in which mobility is decoupled from energy consumption. The EEMS Program conducts early-stage research and development at the vehicle, traveler, and system levels, creating new knowledge, tools, insights, and technology solutions that increase mobility energy productivity for individuals and businesses.

The SMART Mobility Consortium (Consortium) is a multi-year, multi-laboratory collaborative dedicated to further understanding the energy implications and opportunities of advanced mobility solutions. The Consortium is the EEMS Program's primary effort to create tools and generate knowledge about how future mobility systems may evolve and identify ways to reduce their energy intensity. It also identifies research and development gaps that the EEMS Program may address through its advanced research portfolio and generate insights that will be shared with mobility stakeholders. The Consortium consists of five focused pillars of research; Connected and Automated Vehicles, Mobility Decision Science, Multi-Modal Transport, Urban Science, and Advanced Fueling Infrastructure. This research was developed as part of the Mobility Decision Science Pillar that aims to identify the transportation energy impacts of potential travel and lifestyle decisions and understand the human role in the mobility system.

National (e.g., the U.S. National Household Travel Survey) and regional (e.g., California Household Travel Survey) travel surveys have well-acknowledged limitations with respect to

documenting consumer acceptance of emerging transportation technologies, but in the absence of access to propriety data, surveys are often the only option to study questions of interest. Primary among these limitations is the fact that their geographic scope tends to include areas across which emerging technologies do not have a consistent presence. A secondary limitation is that they tend to provide a static snapshot of current user demand and/or expected demand for transportation technologies, which frequently update their consumer-facing attributes as business models change; more longitudinally-oriented research designs are likely to have higher utility for researchers interested in the energy impacts of emerging transportation technologies. In coping with these and other data inadequacies, simulation models tend to rely on heuristics of consumer demand or other behavioral parameters.

The WholeTraveler survey grapples with the same challenges faced by other travel surveys, but confronts this challenge of assessing consumer demand for technologies with rapidly changing attributes in a novel fashion. Rather than rely on being able to resurvey participants or capture the before/after of adoption and/or usage behavior through a longitudinal structure – both of which apply to the contrast between people’s current and future travel decisions – the WholeTraveler survey instead focuses on the contrast between people’s current and past travel decisions. It does this by incorporating a “life-history” calendar, in which respondents reflect on the periods in their lives at which they made choices to use different transportation modes. Such calendars have been used in several recent transportation behavior studies, particularly in Europe and Japan (e.g., Beige and Axhausen 2012; Oakil et al. 2014; Schoenduwe et al. 2015; Zhang, Yu and Chikaraishi 2014), but not yet in the United States, to our knowledge. The WholeTraveler survey further distinguishes itself with respect to its treatment of time by focusing on people’s formative influences, which research suggests can

significantly influence transportation behavior later in life (Smart and Klein 2017). As different strata of the population of any given geographic area are undergoing similar life events at any given time, these life-history and formative influence data should provide insights into market segmentation for certain emerging transportation technologies (e.g., the relatively higher value for reliable transportation options for families with young children). In addition, the WholeTraveler survey collects data on formative influences including personality traits, as laid out in the Big Five Inventory (Rammstedt and John 2007), and consumer risk and time preferences, as revealed by the Certainty Equivalent and Multiple Price list approach used in many studies (e.g., Bostic et al. 1990; Holt and Laury 2002; Plott and Zeiler 2005; Andersen et al. 2008; Harrison and Ruström 2008; and Meier and Sprenger 2009).

The overarching objective of the WholeTraveler Transportation Behavior Study is to understand travel choice patterns, preferences, and decision-making processes with the advent of new mobility technologies. In addition, an aim is to understand how these patterns interrelate with multiple dimensions of heterogeneity across the population. The WholeTraveler Transportation Behavior Study implements a two-phased survey of the transportation behaviors, attitudes, and preferences with a focus on the San Francisco Bay Area region.

Phase 1 of the survey is the source of data for this analysis. It consisted of a web-based survey with questions related to: (1) demographic and household characteristics; (2) formative influences, which research suggests can significantly influence transportation behavior later in life (Smart and Klein 2017); (3) personality traits and individual characteristics, including the Big Five Inventory 10 (Rammstedt and John 2007), and elicitation of risk and time preferences, based on the Certainty Equivalent and Multiple Price list approach used in many studies (e.g., Bostic et al. 1990; Holt and Laury 2002; Plott and Zeiler 2005; Andersen et al. 2008; Harrison

and Ruström 2008; and Meier and Sprenger 2009); (4) a “Life History Calendar,” which identifies an individual’s significant life changes and patterns of transportation mode use over time and has been used in several recent transportation behavior studies in Europe and Japan (e.g., Beige and Axhausen 2012; Oakil et al. 2014; Schoenduwe et al. 2015; Zhang, Yu and Chikaraishi 2014); and (5) current transportation needs, constraints, and choices, including commute distance, routing options, car ownership, transportation mode use, e-commerce/home delivery behavior, and awareness and use of new mobility technologies and services.

Participants were offered the option to enroll in Phase 2 of the survey after they completed Phase 1. Phase 2 involved voluntary collection of one week’s worth of Google Location History GPS time stamped data. Completion of Phase 2 was reimbursed with an additional \$20 Amazon gift card.

Appendix B: SAE Levels of Automation

The following definitions were taken directly from the American National Standards Institute (ANSI) blog entitled “SEA Levels of Driving Automation,” which does a nice job of summarizing the relevant context, and can be accessed here: <https://blog.ansi.org/?p=158517>.

- Level 0 – No Driving Automation
 - The performance by the driver of the entire dynamic driving task (DDT).
Basically, systems under this level are found in conventional automobiles.
- Level 1 – Driver Assistance
 - A driving automation system characterized by the sustained and operational design domain (ODD)-specific execution of either the lateral or the longitudinal vehicle motion control subtask of the DDT. Level 1 does not include the

execution of these subtasks simultaneously. It is also expected that the driver performs the remainder of the DDT.

- Level 2 – Partial Driving Automation
 - Similar to Level 1, but characterized by both the lateral and longitudinal vehicle motion control subtasks of the DDT with the expectation that the driver completes the object and event detection and response (OEDR) subtask and supervises the driving automation system.
- Level 3 – Conditional Driving Automation
 - The sustained and ODD-specific performance by an automated driving system (ADS) of the entire DDT, with the expectation that the human driver will be ready to respond to a request to intervene when issued by the ADS.
- Level 4 – High Driving Automation
 - Sustained and ODD-specific ADS performance of the entire DDT is carried out without any expectation that a user will respond to a request to intervene.
- Level 5 – Full Driving Automation
 - Sustained and unconditional performance by an ADS of the entire DDT without any expectation that a user will respond to a request to intervene. Please note that this performance, since it has no conditions to function, is not ODD-specific.

Appendix C: WholeTraveler Phase 1 Survey Instrument



WholeTraveler
TRANSPORTATION BEHAVIOR STUDY

Any notes in this light blue italic font below are descriptions of the survey design and function only and are not visible to survey respondents.

WHOLETRAVELER TRANSPORTATION BEHAVIOR STUDY

PURPOSE AND BACKGROUND

You are being asked to participate in a research study lead by Anna Spurlock, PhD at Lawrence Berkeley National Laboratory (LBNL). The Department of Energy (DOE) sponsors this study. It is a part of the DOE SMART (Systems and Modeling for Accelerated Research in Transportation) Mobility Initiative.

The purpose of the WholeTraveler study is to learn about four main topics. First, what types of transportation options people living in the Bay Area are using. Second, why those choices may change over time. Third, opinions about newer technologies like electric vehicles, apps like Uber and Lyft, online shopping, and self-driving cars. Finally, how significant life circumstances (moving, finishing school, living with a partner or spouse, having children, etc.) and personality characteristics relate to preferences for different transportation options. This information will be used to improve transportation system models. It may also inform policies to improve transportation system efficiency.

PROCEDURES: If you agree to be in this study, the following will happen:

The study happens in two phases. You are invited to take part in both. Both phases are entirely voluntary. However, if you do not complete Phase 1 you cannot participate in Phase 2.

Phase 1: The first phase is an online survey. If you choose to participate you will answer questions about: your transportation decisions, your life history, and some other characteristics. The survey will take about 20 minutes to complete. You may stop part way through and return to complete the survey at any time. Resource Systems Group, INC (RSG) is running the online survey for LBNL. RSG is very experienced in transportation survey research.

Phase 2: If you complete the online survey you will be offered the option to join the second phase of the study. In the second phase you will follow some simple steps to provide a week's worth of your GPS location data. Google collects these data using your smartphone while you go about your normal day-to-day activities. These Google Location History data are collected through any Google smartphone apps linked to your Google Account (such as Google Maps). The research team will not have direct access to your smartphone in any way. First, you will follow simple set-up steps. Then at the end of a week you will download a single file with your data, confirm the date range of data you are willing to submit, and upload the data. You will also be asked to answer a short set of questions about the transportation options you used during the selected week. All told, this will take 10-30 minutes.

PARTICIPANT REQUIREMENTS

You must be a San Francisco Bay Area resident to participate. In addition you must be 18 years or older. To respond to the Phase 1 online survey you must have Internet access and be able to use a laptop or desktop computer. If you choose to participate in Phase 2 of the study, you must additionally have an iOS or Android smartphone that you do not share with any other individual. Finally, you must either have or be willing to obtain a Google Account and have the Google Maps app installed on your smartphone.

RISKS/DISCOMFORTS

If you take the online survey, your survey responses will be linked to your residential address. Because of this there is a risk that your identity could be linked to the information you provide. If you choose to take part in the second phase of the study there could be additional risks. In particular, through your GPS location data your common destinations, transportation patterns, or daily schedule could be observed. The primary risk to you would be unauthorized access to your data. There may also be other risks that we cannot predict.

Steps will be taken to ensure data security in order to minimize these risks. Data transfer and storage will follow industry best practices for security. In addition, access to the survey and GPS location-linked data will be highly controlled. An LBNL cyber security specialist has approved all data transfer, storage and access protocols.

BENEFITS

We do not anticipate that you will experience any direct benefits from taking part in the study other than the incentive payments described below. There is a potential benefit to society. In particular, the information we collect may inform policies to improve transportation system efficiency.

FINANCIAL CONSIDERATIONS

If you complete the Phase 1 online survey you will receive a \$10 payment in the form of an Amazon Gift Card. The gift card will be emailed to you. If there are questions in the survey that you do not want to answer you may skip them. However, if you do not answer any required questions marked with an asterisk (*) you will not receive the payment.

If you submit one week's worth of Google Location History data for the second phase of the study, you will receive an additional \$20 payment. This payment will also be in the form of an emailed Amazon Gift Card.

There will be no cost to you to participate in this study.

CONFIDENTIALITY

We will do everything we can to keep information about you protected. Any of the location-linked data you provide to us will only be accessible by authorized personnel. These data will only be transferred using encrypted secure methods. These data will be stored on a dedicated secure server at LBNL. These original address- and location-linked data will only be maintained for use in this study. Addresses, email addresses, and other location data will be deleted once the study is completed.

A de-identified version of the dataset will be shared with other researchers contributing to the SMART Mobility Initiative. This de-identified version will be stripped of all email address, residential address, common destination, and GPS location information so that all survey responses are anonymous. It will include the Census Block Group associated with: your residential address, any common destinations you indicate in the survey, and any GPS locations in the data from Phase 2. A Census Block Group is a geographic area that generally includes between 600 to 3000 residents. Unaltered responses to all other questions will be included in the de-identified version of the data. This de-identified version of the data will be made publicly available through the Transportation Secure Data Center (TSDC) at the National Renewable Energy Laboratory. You can find out more about the TSDC here: : <https://www.nrel.gov/transportation/secure-transportation-data.html>.

Results from analyses of the data may be published, but only in aggregated form. Your individual data will not be published.

If you participate in Phase 2 of this study and choose to provide your Google Location History data, be aware that Google collects those data and uses them for their own purposes. Google does not share those data with any companies, organizations or individuals outside of Google except under specific circumstances (with consent, with domain administrators, for external processing, or for legal reasons). While you need to allow Google to store your Location History over the course of a week if you want to participate in Phase 2 of this study, you can delete your Location History in-part or entirely, and turn off the preferences allowing Google to access or store your location, at any time. We will provide you with instructions for how to do this after completing Phase 2. More information about Google's privacy policy can be found here: : https://static.googleusercontent.com/media/www.google.com/en/intl/en/policies/privacy/google_privacy_policy_en.pdf.

QUESTIONS

Any further questions you have about taking part in this study will be answered by:

Dr. Anna Spurlock at (510) 495-2072 or wholotraveler@lbl.gov.

Any questions you have about technical aspects of the Phase 1 online survey (login, website, or technical difficulty responding to any of the questions) will be answered by:

Resource Systems Group, INC (RSG) at wholotraveler@rsginc.com.

Any questions you have about your rights as a research subject will be answered by:

Lawrence Berkeley Lab Human Subjects Committee at (510) 486-5399

PARTICIPATION IN RESEARCH IS VOLUNTARY

You have the right to not take part in this study or to stop taking part at any time. If you would like a copy of this consent form to keep, you can print it out now, or access it at wholotraveler.lbl.gov at any time that is convenient. If you wish to participate, you should click "Start the Survey," below

AUTHORIZATION

I understand that by clicking "Start the Survey," below I am stating that: I have read this consent form; all of the questions I asked have been answered to my satisfaction; and I volunteer to participate in this research. I understand that my participation signifies consent for the researchers to use any data I provide as described above.

If you were given a password for this survey, please enter it below and click the "Start the Survey" button...

e.g., password123

Start the Survey



Welcome to the WholeTraveler Transportation Behavior Study online survey. The survey has four sections. Throughout this survey, please use the following definitions for the terms "Household" and "Vehicle":

- **Household:** people you live with and regularly coordinate transportation with (e.g., carpooling, purchasing/sharing a car, planning commute schedule).
- **Vehicle:** car, truck, SUV, van, or other passenger vehicle. Motorcycles or electric bicycles are not considered vehicles for the purposes of this survey.

Required questions are indicated with an asterisk "*" .

Please click "Next" to begin.

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Section 1 : In this section we will ask you questions about your current transportation needs and choices.

Please click "Next" to continue.

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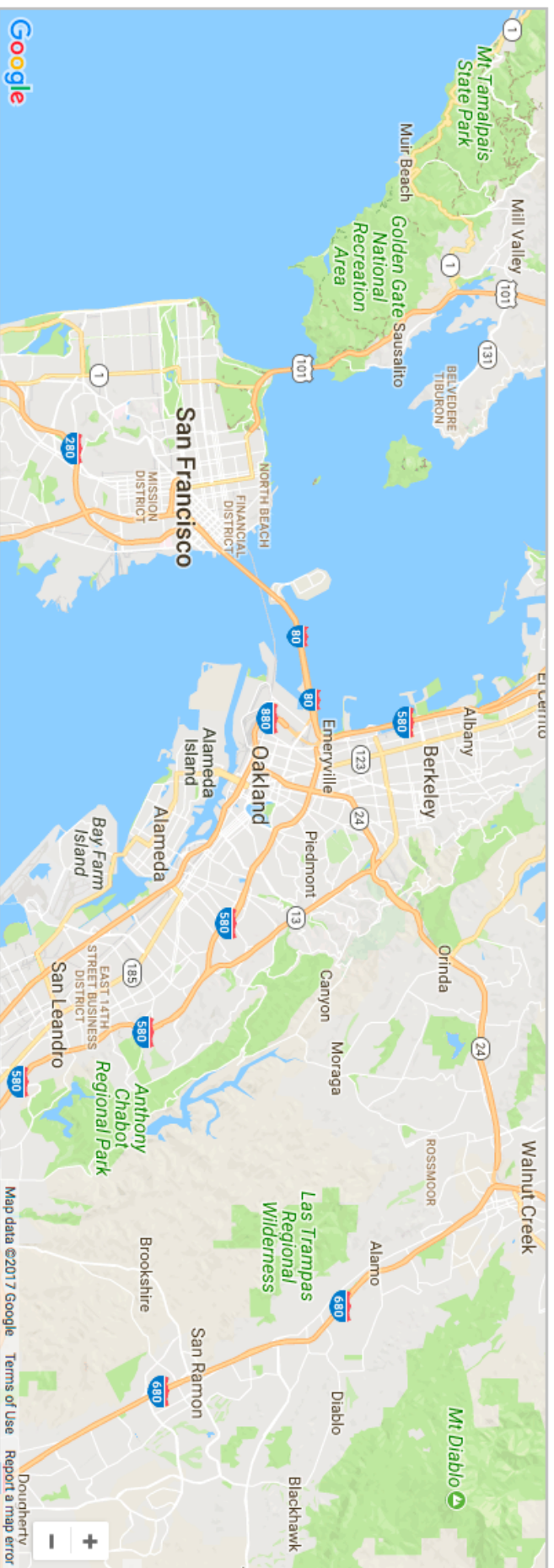
WholeTraveler

TRANSPORTATION BEHAVIOR STUDY

*Enter the address or cross streets of the place you commute to outside your home the most frequently in your typical day-to-day activities. We will refer to this as your "primary destination" for the remainder of this survey.

You can also double-click to zoom in on the map to select a location.

Enter a location or address



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Address selected as demonstration in this document: 1 Cyclotron Rd, Berkeley, CA 94720, USA
References to this address hereafter show how the address a respondent enters will be referenced further in the survey.



Dropdown options:

- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

*How many days per week on average do you go to your primary destination, **1 Cyclotron Rd, Berkeley, CA 94720, USA?**

Please select... ⌵

*Which of the following options best describes your primary destination, **1 Cyclotron Rd, Berkeley, CA 94720, USA?**

Please select all that apply:

- My work
- My school
- The work or school of a household member
- Other

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QUESTION 1.3 (*Survey will not proceed unless they answer - though they can answer nothing for the "Other" row and still proceed)



*Please indicate the **last time you used** each of the following transportation options either alone or in combination for your current commute to your primary destination, 1 Cyclotron Rd, Berkeley, CA 94720, USA.

	Today	In the past seven days	In the last month	In the last 12 months	At some point, but not in the last 12 months	Never	Not Applicable
Your own vehicle (single occupant)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carpool with a friend, family member, colleague, or through Casual Carpool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public mass transit - city bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public mass transit - other (e.g., BART, MUNI, train, ferry)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private mass transit (e.g., company bus or shuttle)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uber, Lyft, or similar app-based rideshare service (single passenger option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uber Pool, Lyft Line, or similar app-based rideshare service (carpool option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Car-sharing services like Zipcar or Car2Go	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motorcycle, moped, or scooter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bicycle or foot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telecommute	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other <input type="text" value="Please specify..."/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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QUESTION 1.4 (*Survey will not proceed unless they answer)



*Please indicate whether you agree or disagree with the following statements.

	Agree	Disagree	Not Applicable
I have a driver's license	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer not to drive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't drive because of a disability, illness, or other limitation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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*Please indicate whether you would consider each of the items below to be a positive characteristic of a transportation option for you personally, or a negative characteristic.

	Positive	Negative
Ability to interact with people (other than close friends or family members)	<input type="radio"/>	<input type="radio"/>
Minimize environmental impacts	<input type="radio"/>	<input type="radio"/>

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*In this question think about how you decide which transportation option to use for your commute to your primary destination, **1 Cyclotron Rd, Berkeley, CA 94720, USA**. Please rate how important each of the following characteristics of transportation options are to you in this decision on a scale of 1 = Not at all important, to 5 = Very important. If the characteristic is something you have never actually thought about before in the context of transportation, please select that option as well.

	Not at all important (1)	Slightly important (2)	Moderately important (3)	Important (4)	Very important (5)	Not Applicable	I never thought about it before
Short travel time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Shelter from bad weather	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Low cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Predictable arrival time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Ability to engage in activities while traveling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Ability to safely and conveniently transport a child under 8 years of age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Ability to easily make more than one stop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Low hassle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Maximize environmental impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Predictable cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Not having to interact with people (other than close friends or family members)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

Row order randomized

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QUESTION 1.6 (notes)

If respondent selected "Positive" for an option in QUESTION 1.5, that item is given a positive frame in QUESTION 1.6, and if they selected "Negative" for an option in QUESTION 1.5, that item is given a negative frame in QUESTION 1.6.

Positive Frame:

Ability to interact with people (other than close friends or family members)

Minimize environmental impact

Negative Frame:

Not having to interact with people (other than close friends or family members)

Maximize environmental impact

Content of the "info" icons:

Predictable arrival time: "Knowing when you will arrive at your destination"

Ability to engage in activities while traveling: "(e.g., work, reading, entertainment)"

Low hassle: "(e.g., not having to transfer multiple times)"

Predictable cost: "(e.g., cost doesn't vary like it does with Uber surge pricing)"

QUESTION 1.7 (*Survey will not proceed unless they answer)



*Please fill in how many times during a **RECENT TYPICAL WEEK** that you or someone in your household:

	Received a delivery from an online/phone order of...	Took a vehicle (e.g., personal vehicle, taxi, Uber, Lyft) to a store or restaurant to buy primarily...	Walked, biked or used public transit to get to a store or restaurant to buy primarily...	Did not purchase any of these items in a recent typical week
Groceries	0 deliveries	0 trips	0 trips	<input type="checkbox"/>
Clothing, shoes or accessories	0 deliveries	0 trips	0 trips	<input type="checkbox"/>
Household items	0 deliveries	0 trips	0 trips	<input type="checkbox"/>
Prepared meal	0 deliveries	0 trips	0 trips	<input type="checkbox"/>

Dropdown options: 0 deliveries, 1 delivery, 2 deliveries, ..., 10 deliveries, more than 10 deliveries. Dropdown options: 0 trips, 1 trip, 2 trips, ..., 10 trips, more than 10 trips.

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Content of "info" icons (same for both QUESTION 1.7 and QUESTION 1.8):

Groceries: "(e.g., cereal, meat, produce, dairy, beans)"

Household items: "(e.g., paper towels, diapers, cleaning products, sunscreen)"

Prepared meal: "(e.g., restaurant meals, take-out, meal delivery, cooking kit with prepared ingredients such as Blue Apron)"



*We want to understand how home delivery affects how many shopping trips you or others in your household have to take. Imagine, hypothetically, **you could not order anything online and request home delivery**, so that you could not receive the deliveries you reported in the previous question.

Think about the **SAME RECENT TYPICAL WEEK**. Please indicate whether lack of home delivery during that week would require you or someone in your household to take **ADDITIONAL TRIPS** (beyond those you reported in the previous question) in order to make those purchases, or whether you would not make any additional trips (because you would be able to meet your needs by purchasing those items during trips you already reported in the previous question or by foregoing them altogether).

	Number of deliveries you reported in the previous question that you could no longer have delivered	If you could not have them delivered, the number of additional trips you would make to buy these items beyond the trips reported in the previous question		Would not have made any additional trips to buy these items if you couldn't have them delivered
		using a vehicle (e.g., personal vehicle, taxi, Uber, Lyft)	by walking, biking, or using public transit	
Groceries	1 delivery	0 additional trips	0 additional trips	<input type="checkbox"/>
Clothing, shoes or accessories	1 delivery	0 additional trips	0 additional trips	<input type="checkbox"/>
Household items	1 delivery	0 additional trips	0 additional trips	<input type="checkbox"/>
Prepared meal	1 delivery	0 additional trips	0 additional trips	<input type="checkbox"/>

Dropdown options: 0 additional trips, 1 additional trip, 2 additional trips, ..., 10 additional trips, more than 10 additional trips.

Rows only appear in the table for QUESTION 1.8 if the respondent indicated they had one or more deliveries of that item when they answered QUESTION 1.7. If respondent indicated no deliveries in any of these four categories when answering QUESTION 1.7, then QUESTION 1.8 is skipped.

Your responses from the previous question for reference:

	Received a delivery from an online/phone order of...	Took a vehicle (e.g., personal vehicle, taxi, Uber, Lyft) to a store or restaurant to buy primarily...	Walked, biked, or used public transit to get to a store or restaurant to buy primarily...
Groceries	1	0	0
Clothing, shoes or accessories	1	0	0
Household items	1	0	0
Prepared meal	1	0	0

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*In general, what are the three things you like **MOST** about making purchases online with delivery rather than making purchases in a store?

Select up to three.

- More environmentally friendly
- Saves time
- More convenient
- More options
- Saves money
- Easier to compare options and prices
- Don't have to interact with another person
- Less hassle
- Other:
- Not applicable

Order of rows randomized

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*In general, what are the three things you like **LEAST** about making purchases online with delivery rather than making purchases in a store?

Select up to three.

- Delivery charges
- Having to wait for delivery
- Less environmentally friendly
- Too much packaging to dispose of
- Harder to know exactly what you're getting (e.g., fit, fabric, quality, freshness)
- Less personal (i.e., don't get to interact with another person)
- Having to mail back returns
- Harder to browse and get ideas or get exposed to new items
- Not supporting local businesses
- Other:
- Not applicable

Order of rows randomized

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32%



*In the following table there are technologies listed down the rows on the left, and statements listed across the top. In each cell, please check the box if you would answer "YES" to that statement for that technology. If you would not answer "YES" to any of the statements for that technology, select Not Applicable. Select multiple statements for each technology, if applicable.

	I know of a close friend, coworker, or family member that owns this technology	I have used/ experienced this technology	I currently own or have owned this technology	I am interested in owning or using this technology in the future	I have never heard of this technology before now	Not Applicable
Hybrid vehicle (gasoline-electric)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plug-in electric vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smart phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rooftop solar panels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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*In the following table there are automated or self-driving vehicle technologies listed down the rows on the left, and statements listed across the top. In each cell, please check the box if you would answer "YES" to that statement for that technology. If you would not answer "YES" to any of the statements for that technology, select Not Applicable. Select multiple statements for each technology, if applicable.

	I know of a close friend, coworker, or family member that has used/experienced this technology	I have used/experienced this technology	I currently own or have owned this technology	I am interested in owning or using this technology in the future	I have never heard of this technology before now	Not Applicable
Adaptive cruise control - brakes and accelerates to match the speed of the vehicle in front (only on highways), but requires driver to steer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partially automated - automatically brakes and accelerates, and additionally steers itself sufficiently to stay in a lane (only on highways), but requires the driver to be paying attention, to change lanes and be available to override (e.g., Tesla "Autopilot").	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fully automated - vehicle drives itself and does not require a driver to be paying attention (i.e., rider could sleep, read, work, or otherwise not pay attention to the road).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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WholeTraveler
TRANSPORTATION BEHAVIOR STUDY

*In the following table there are services listed down the rows on the left, and statements listed across the top. In each cell, please check the box if you would answer "YES" to that statement for that service. If you would not answer "YES" to any of the statements for that service, select Not Applicable. Select multiple statements for each service, if applicable.

	I know of a close friend, coworker, or family member that has used this service	I have used this service	I currently regularly use this service	I am interested in using this service in the future	I have never heard of this service before now	Not Applicable
Uber, Lyft, or similar app-based rideshare service (single passenger option)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uber Pool, Lyft Line, or similar app-based rideshare service (carpool option)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigation or trip-planning apps (e.g., Google Maps, Apple Maps, WAZE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amazon Prime Account	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Car-sharing services like Zipcar or Car2Go	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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WholeTraveler
TRANSPORTATION BEHAVIOR STUDY

*How many vehicle(s) (car, truck, SUV, van, or other passenger vehicle) are currently owned or leased by your household?

Please select...

Dropdown options:

- 0
- 1
- 2
- 3
- 4
- 5 or more

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42%

QUESTION 1.15 (They can click "Next" and proceed without responding)



Please fill out the following information for the vehicle (car, truck, SUV, van, or other passenger vehicle) that you drive most frequently. If you don't generally drive, then fill in the information of the vehicle that is driven the most frequently by anyone in your household.

Year

Make

Model

Fuel Type

What year was this vehicle purchased/acquired?

*Dropdown options for "Year": 2018, 2017, ..., 1981, 1980 or older
Dropdown options for "Make" and "Model" auto-populate from a database makes and models. Once "Make" is filled in, "Model" narrows down to just models of that make.
Dropdown options for "Fuel Type": Gasoline; Diesel; Gasoline-Electric Hybrid; Plug-in Electric Hybrid; Plug-in all Electric; Ethanol; Hydrogen; Other
Dropdown options: 2018, 2017, ..., 1981, 1980 or earlier*

The number of days per week on average this vehicle is driven:

Dropdown options: 0 days, 1 day, 2 days, ..., 7 days.

This vehicle is most often driven by:

Dropdown options: me; someone else in my household

This question is skipped if respondent entered "0" in QUESTION 1.14.

QUESTION 1.16 (*Survey will not proceed unless they answer)

The prompt for this question is randomized across respondents. The following are the four treatments, corresponding to the two statements in green in the prompt:

- TREATMENT 1: with certainty it would cost you \$0.2 per mile; a cost of \$[0.2*distance]
- TREATMENT 2: with certainty it would cost you \$0.7 per mile; a cost of \$[0.7*distance]
- TREATMENT 3: with certainty it would cost you \$1.2 per mile; a cost of \$[1.2*distance]
- TREATMENT 4: there would be a 50% chance that it would cost you \$0.5 per mile, and a 50% chance that it would cost you \$0.9 per mile; a 50% chance of it costing \$[0.5*distance] and a 50% chance of it costing \$[0.9*distance]



WholeTraveler
TRANSPORTATION BEHAVIOR STUDY

*Imagine that you recently learned that **with certainty it would cost you \$0.70 per mile** to take a ride-hailing service, such as Uber or Lyft. This would mean a **cost of \$0.00** to take Uber or Lyft from your home to your primary destination, **1 Cyclotron Rd, Berkeley, CA 94720, USA**.

Given the above information about the cost of Uber or Lyft, please indicate for what amount of your commute to your primary destination you would choose to take each of the following modes on a typical day:

	The whole trip	Part of the trip
Your own vehicle	<input type="checkbox"/>	<input type="checkbox"/>
Public mass transit – other (e.g., BART, MUNI, train, ferry)	<input type="checkbox"/>	<input type="checkbox"/>
Walk (more than 5 minutes) or bike	<input type="checkbox"/>	<input type="checkbox"/>
Uber, Lyft, or similar app-based rideshare service	<input type="checkbox"/>	<input type="checkbox"/>
Public mass transit – city bus	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

Order of rows is randomized.

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47%

Respondent cannot select “The whole trip” for more than one option, and cannot select “The whole trip” for one option and “Part of the trip” for another.



Section 2: In this section we ask you some questions that let us understand more about your personality. The questions in this section may seem like they don't have much to do with your transportation decisions. However, research has shown that these types of questions do provide meaningful information that helps explain people's transportation choices.

Please click "Next" to continue.

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50%

QUESTION 2.1 (*Survey will not proceed unless they answer)



*Please rate your agreement with the following statements about your personality.

I see myself as someone who...	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
... is reserved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is generally trusting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... tends to be lazy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is relaxed, handles stress well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... has few artistic interests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is outgoing, sociable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... tends to find fault with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... does a thorough job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... gets nervous easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... has an active imagination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is considerate and kind to almost everyone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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*In each of the following hypothetical choices, please indicate whether you would prefer a **certain prize amount for sure (Option A)**, or whether you would rather **take the 50-50 chance at getting a higher prize amount (Option B)**. These choices are purely hypothetical.

	Option A	Option B
	(These are all the same)	
Choice 1	\$1 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 2	\$10 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 3	\$20 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 4	\$30 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 5	\$40 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 6	\$50 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 7	\$60 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 8	\$70 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 9	\$80 for sure	50% chance of winning \$100, 50% chance of winning \$0
Choice 10	\$90 for sure	50% chance of winning \$100, 50% chance of winning \$0

"Rationality" is enforced; for example if respondent selects "\$50 for sure" it is enforced that they also select the sure option of anything more than \$50. And if they take the 50-50 chance instead of \$60 for sure, it is enforced that they are also willing to take the 50-50 chance over anything less than \$60 for sure.

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*In each of the following hypothetical choices, please indicate whether you would prefer **a prize amount today (Option A)**, or whether you would rather **wait for a higher prize amount in 3 months (Option B)**. These choices are purely hypothetical.

	Option A (These are all the same)	Option B
Choice 1	\$100 today	\$101 in 3 months
Choice 2	\$100 today	\$105 in 3 months
Choice 3	\$100 today	\$110 in 3 months
Choice 4	\$100 today	\$115 in 3 months
Choice 5	\$100 today	\$120 in 3 months
Choice 6	\$100 today	\$125 in 3 months
Choice 7	\$100 today	\$130 in 3 months
Choice 8	\$100 today	\$140 in 3 months
Choice 9	\$100 today	\$150 in 3 months
Choice 10	\$100 today	\$160 in 3 months

"Rationality" is enforced; for example if respondent selects "\$115 in 3 months" it is enforced that they also select to wait 3 months for anything over \$115. And if they take the \$100 today instead of \$125 in 3 months, it is enforced that they would also select \$100 today over anything less than \$125 in three months.

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Section 3: In this section we will ask you some basic demographic and household information.

Please click "Next" to continue.

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60%

QUESTION 3.1 (*Survey will not proceed unless they answer)



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TRANSPORTATION BEHAVIOR STUDY

*In what year were you born?

Year

Please select...

Dropdown options: 1999, 1998, 1997, ..., 1900

Note: they can only take the survey if they are 18 or over. The field year of the survey is 2017, so they can't have been born any more recent than 1999.

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62%



What is your gender?

- Male
- Female
- Other
- Prefer not to answer

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QUESTION 3.3 (They can click "Next" and proceed without responding)



Which categories best describe you?

Select one or more boxes.

- White
- Hispanic, Latino, or Spanish origin
- Black or African American
- Asian
- Middle Eastern or North African
- American Indian or Alaska Native
- Native Hawaiian or Other Pacific Islander
- Some other race or origin
- Prefer not to answer

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QUESTION 3.4 (They can click "Next" and proceed without responding)



What is the highest level of education you've completed?

- 12th grade or less, no diploma
- High school diploma/GED
- Some college
- Associate's degree
- Bachelor's degree
- Master's degree
- Professional degree (for example: MD, DDS, DVM, JD)
- Doctoral degree (for example: PhD, EdD)
- None of the above
- Prefer not to answer

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QUESTION 3.5 (They can click "Next" and proceed without responding)



What is your annual household income before taxes?

- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 to \$299,999
- \$300,000 to \$399,999
- \$400,000 or more
- Prefer not to answer

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QUESTION 3.6 (They can click "Next" and proceed without responding)



Do you speak another language other than or in addition to English at home?

- No
- Yes
- Prefer not to answer

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QUESTION 3.7 (They can click "Next" and proceed without responding)



Which of the following best describes your employment status?

Please select all that apply.

- Employed for wages
- Self-employed
- Out of work and looking for work
- Out of work but not currently looking for work
- A homemaker
- A student
- Military
- Retired
- Unable to work
- Prefer not to answer

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QUESTION 3.8 (They can click "Next" and proceed without responding)



Including yourself, how many people (including all adults and children) currently live in your household?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 or more

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WholeTraveler
TRANSPORTATION BEHAVIOR STUDY

How many of the 5 people that live in your household are children under 8 years of age?

- 0
- 1
- 2
- 3
- 4

If they answered "1" to QUESTION 3.8, this question is skipped all together.

The set of options available in the first part of this question is their response to QUESTION 3.8 minus 1. So, for example, if they selected 5 in QUESTION 3.8, they can select between 0 and 4 of those household members being children. If they selected "10 or more" in QUESTION 3.8, the set of options in the first part of this question are: 0, 1, 2, 3, ..., 8, 9 or more.

How many of the 5 people that live in your household currently have driver's licenses?

- 0
- 1
- 2
- 3
- 4
- 5

The set of options available in the second part of this question between 0 and their response to QUESTION 3.8. If they selected 5 in QUESTION 3.8, the response options for the second part of this question are 0, 1, 2, 3, 4, 5. If they selected "10 or more" in QUESTION 3.8, the set of options in the second part of this question are: 0, 1, 2, ..., 8, 9, 10 or more.

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*Which of the following transportation options did your **parent(s)** or **guardian(s)** use most frequently when you were in high school (14 – 18 years old)?

Select up to three.

- Public mass transit (e.g., train, tram, bus, ferry)
- Telecommute
- Private mass transit (e.g., company bus or shuttle)
- Drive own vehicle (single occupant)
- By bicycle or foot
- Carpool with at least one other person (including another adult household-member)
- Other

Order of rows is randomized.

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85%

Section 4. In this last section of the survey we are going to ask you questions about life events and things that may have affected your transportation needs, options, and choices in your past. You will be shown a timeline of your life between the ages of 20 and up to age 50. You will be asked to indicate with a checkmark, or by selecting a time range, when various events occurred.

Click on the following video if you would like to see some more detailed instructions about how to fill in this portion of the survey.

Transcript of instruction video:

This video will show you how to fill out the life history section.

Each row represents an event or detail about your household. Each column represents one year. To make your selection, click directly on a box. The box will turn green once selected. To select multiple boxes at once, click one box, hold, drag your cursor, and release. To unselect a box, click the box again. To unselect multiple boxes at once, click one box, hold, drag, and release "Next" to continue.

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TRANSPORTATION BEHAVIOR STUDY

Please fill in the chart to the best of your recollection. Do your best to be accurate, but if you don't remember exactly, it is preferable that you make your best guess, rather than leaving an item blank. As we indicated for the rest of the survey, please use the following definitions when filling out your timeline:

- **Household:** People you live with and regularly coordinate transportation with (e.g., carpooling, purchasing/sharing a car, planning commute schedule)
- **Vehicle:** Car, truck, SUV, van, or other passenger vehicle. Motorcycles or electric bicycles are not considered vehicles for the purposes of this survey.

Significant Events Affecting Travel Needs

The individual years in which each of the following types of events occurred. If you do not know, please leave the box blank.

Children were born, adopted, or joined your household
You moved or your place of work or school changed
You completed a level of education (e.g., secondary, college, etc.)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Not Applicable	Prefer not to answer
Household	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All the years when your household included the following: A partner, spouse or significant other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All the years when: At least one child 7 years old or younger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If a pointer appears instead, click the icon to view frequently asked questions. Click the info icon again to close text.



Transcript of instruction video (continued):

Info icons contain additional helpful information. Hover your cursor over any info icon to view text. If a pointer appears instead, click the icon to view frequently asked questions. Click the info icon again to close text.

Please fill in the chart to the best of your recollection. Do your best to be accurate, but if you don't remember exactly, it is preferable that you make your best guess, rather than leaving an item blank.

You may also select Not Applicable or Prefer not to answer.

If you have questions, email wholotraveler@rsginc.com.

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87%

QUESTION 4. 1 (continued) (*Survey will not proceed unless they answer)

Content of "Info" icons:

- You moved or your place of work or school changed:

"Frequently Asked Question: There were times when I moved multiple times in one year, how do I count that in the timeline?"

Answer: Regardless of how many times you moved in a year, simply indicate with a checkmark that you moved during that year."

- You completed a level of education: "(e.g., bachelor's, master's, PhD, etc.)"

- All the years when your household size....:

"Frequently Asked Question: I lived with my roommate at one point, is my roommate part of my household?"

Answer: If you and your roommate regularly coordinated on transportation decisions, like deciding to purchase a car together, carpooling, etc., then yes. Otherwise, no.

Frequently Asked Question: My living situation changed three times in one year with different combinations of people. Who do I say I lived with that year?"

Answer: Choose whatever answer you think best describes your living situation for the majority of that year."

Vehicle ownership	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Not Applicable	Prefer not to answer
No vehicle																																	
1 vehicle																																	
2 vehicles																																	
3 vehicles																																	
4 vehicles																																	
5 or more vehicles																																	

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90%

Content of "Info" icons (continued):

- You were enrolled in school or a training program: "(e.g., college, trade school, internship, medical school, law school, city college, etc.)"

- All the years when public mass transit was AVAILABLE...:

"Frequently Asked Question: It would have taken me two hours to get to work on the bus so it wasn't even close to an option for me, does that still mean it was available or not?"

Answer: Even if the mode option was really inconvenient, we still want to know that it technically existed, so please indicate that it was available."

- Public mass transit: "(e.g., bus, BART, MUNI, train, ferry)"

- All the years when your household had each of the indicated numbers of vehicles:

"Frequently Asked Question: It's my wife's car, does that mean I should say I own it?"

Answer: We are interested in all vehicles in your household, so include your wife's car."

(They can click "Next" and proceed without responding)



Please provide your email address so we can send you the \$10 Amazon Gift Card for completing this survey:

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92%



Thank you for completing the first phase of the WholeTraveler Transportation Behavior Study. You will be sent an email with your \$10 Amazon Gift Card to the email address you provided as soon as possible.

You now have an opportunity to volunteer for Phase 2 of the study. Participation in Phase 2 is entirely voluntary.

A reminder of what's involved in Phase 2 of the study:

In the second phase you will follow some simple steps to provide a week's worth of your GPS Google Location History data. Google will collect these data using your smartphone through Google apps linked to your Google Account (such as Google Maps) while you go about your normal day-to-day activities for one week. The research team will not have direct access to your smartphone in any way. First, you will follow simple set-up steps. Then at the end of the week you will upload the data and answer a short set of questions about the transportation options you used during the week. All told, this will take 10-30 minutes.

In order to participate in Phase 2 of the study, you must meet the following requirements: (i) have personally participated in the Phase 1 online survey; (ii) be 18 years old or older; (iii) have access to a desktop or laptop computer; (iv) have an iOS or Android smartphone that you do not share with any other individual; and (v) either have or be willing to obtain a Google Account and have the Google Maps app installed on your smartphone (we will provide you with instructions for how to do both of these things). You will also need access to a desktop or laptop computer with Internet access to complete the final Google Location History data upload step.

If you submit one week's worth of GPS Google Location History data for this second phase of the study, you will receive a \$20 payment. This is in addition to the \$10 you will receive for having completed the Phase 1 survey. This payment will be in the form of an emailed Amazon Gift Card.

Risks and Confidentiality

By participating in Phase 2 there is a risk that your identity could be linked to the information you provide. In particular, through your GPS location data your common destinations, transportation patterns, or daily schedule could be observed. The primary risk to you would be unauthorized access to your data. There may also be other risks that we cannot predict.

Steps will be taken to ensure data security in order to minimize these risks. Data transfer and storage will follow industry best practices for security. In addition, access to the survey and GPS location-linked data will be highly controlled. An LBNL cyber security specialist has approved all data transfer, storage and access protocols.

If you participate in Phase 2 of this study and choose to provide us with your Google Location History data, be aware that Google collects those data and uses them for their own purposes. Google does not share those data with any companies, organizations or individuals outside of Google except under specific circumstances (with consent, with domain administrators, for external processing, or for legal reasons). While you need to allow Google to store your Location History over the course of a week if you want to participate in Phase 2 of this study, you can delete your Location History in-part or entirely, and turn off the preferences allowing Google to access or store those data, at any time. We will provide you with instructions for how to do this at the end of Phase 2. More information about Google's privacy policy can be found here:

https://static.googleusercontent.com/media/www.google.com/en/intl/en/policies/privacy/google_privacy_policy_en.pdf

Would you like to participate in Phase 2 of the WholeTraveler Transportation Behavior Study?

- Yes
 No

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(They can click "Next" and proceed without responding)



Thank you for volunteering for Phase 2. We will email you some simple instructions for what to do next. Please confirm the email address where you would like us to send these instructions (Note: if you have a Gmail account, we suggest you provide that email address as it will simplify the set-up and data upload steps for Phase 2):

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97%



Thank you for taking the time to complete this survey. All of your responses have been saved, so you may now exit your browser. For more information go to wholetraveler.lbi.gov.

Appendix D: Full OLS, Logistic Regression, and Alternate Approach Results

This appendix provides results tables for each of the technologies and services included in the paper body providing additional reporting of primary results, and including alternative OLS models and logistic regression specifications. The first set of tables present results from the primary regression reported in the table, but including all coefficients and reporting standard errors (the second OLS column under adoption and interest headings in Tables D1 – D8). The first OLS column reported in Tables D1 – D8 exclude P'_i variables described in Section 3 of the paper. The Logit column in Tables D1 – D8 report results from a logistic regression that parallels the specification for the linear probability models in the paper body.

In addition, Tables D9 – D11 report results are generated when the primary OLS regression specification is re-run but having omitted observations for which a respondent chose “not applicable” for at least one preference-over-mode-attribute variable. Finally, Table D12-D14 re-run this same primary OLS regression specification, but replacing instances in which a respondent chose “not applicable” in one of the preference-over-mode-attribute variables with the value 3.

Appendix Table D1: Adopted and Interested in Adopting for Ride-Hail Single Services

	Adopted			Interested in Adopting		
	OLS	OLS	Logit	OLS	OLS	Logit
<u>Demographic variables</u>						
Born 1930s	0.0818 (0.57)	0.1238 (0.87)	0.7068 (0.78)	0.0916 (0.66)	0.1478 (1.05)	0.6600 (0.84)
Born 1940s	-0.0821 (-1.46)	-0.0730 (-1.29)	-0.7740 (-1.41)	0.0828 (1.04)	0.0920 (1.12)	0.5253 (1.28)
Born 1950s	-0.0055 (-0.11)	-0.0055 (-0.10)	-0.1307 (-0.36)	0.0046 (0.07)	-0.0218 (-0.33)	-0.0728 (-0.20)
Born 1970s	0.0632 (1.24)	0.0622 (1.21)	0.3710 (1.19)	0.0028 (0.05)	-0.0048 (-0.08)	-0.0175 (-0.05)
Born 1980s	0.2063*** (4.21)	0.2001*** (3.98)	1.0786*** (3.70)	0.1115* (1.82)	0.1038* (1.65)	0.5481* (1.74)

Born 1990s	0.2543*** (4.18)	0.2515*** (4.00)	1.3866*** (4.05)	0.1332* (1.71)	0.1382* (1.69)	0.7689* (1.88)
Any Children < 8yrs	-0.0654 (-1.40)	-0.0526 (-1.11)	-0.2503 (-0.98)	-0.0629 (-1.12)	-0.0649 (-1.15)	-0.3333 (-1.11)
HH Income \$75-150K	0.0345 (0.89)	0.0341 (0.86)	0.2074 (0.83)	0.0545 (1.11)	0.0311 (0.61)	0.1921 (0.72)
HH Income \$150-200K	0.0635 (1.27)	0.0654 (1.25)	0.3741 (1.24)	-0.0081 (-0.13)	-0.0429 (-0.66)	-0.1989 (-0.56)
HH Income ≥ \$200K	0.2032*** (4.23)	0.1833*** (3.62)	0.9916*** (3.59)	0.0751 (1.21)	0.0312 (0.50)	0.1870 (0.58)
> 4yr College Ed.	0.0331 (1.01)	0.0392 (1.18)	0.2514 (1.33)	0.0190 (0.47)	0.0184 (0.46)	0.1072 (0.53)
Female	0.0111 (0.36)	0.0090 (0.27)	0.0553 (0.30)	-0.0290 (-0.76)	-0.0216 (-0.52)	-0.1230 (-0.58)
<u>Location-based variables</u>						
Contra Costa County	0.0123 (0.23)	0.0239 (0.45)	0.1566 (0.48)	-0.0211 (-0.34)	-0.0210 (-0.33)	-0.1167 (-0.33)
Marin County	0.1213 (1.28)	0.1360 (1.42)	0.8071 (1.54)	0.1875 (1.48)	0.1943 (1.60)	0.9207* (1.72)
Napa County	0.0859 (0.62)	0.0928 (0.66)	0.5574 (0.75)	0.0097 (0.05)	0.0093 (0.05)	0.0316 (0.03)
San Francisco County	0.1960*** (3.29)	0.2001*** (3.31)	0.9722*** (3.22)	0.0635 (0.82)	0.0517 (0.66)	0.2462 (0.62)
San Mateo County	0.0290 (0.47)	0.0393 (0.62)	0.1560 (0.42)	0.1070 (1.31)	0.1202 (1.43)	0.5885 (1.52)
Santa Clara County	0.0295 (0.65)	0.0440 (0.97)	0.2207 (0.88)	0.0388 (0.68)	0.0517 (0.91)	0.2626 (0.94)
Solano County	-0.0576 (-0.85)	-0.0406 (-0.60)	-0.3373 (-0.62)	-0.0052 (-0.06)	0.0171 (0.19)	0.0846 (0.17)
Sonoma County	-0.0098 (-0.15)	-0.0022 (-0.03)	-0.0866 (-0.18)	-0.0933 (-1.25)	-0.0942 (-1.29)	-0.6508 (-1.29)
Res. Pop. Density	0.0003 (0.16)	0.0004 (0.26)	0.0015 (0.19)	-0.0020 (-0.99)	-0.0019 (-0.96)	-0.0101 (-0.85)
P.D. Pop. Density	-0.0007 (-0.55)	-0.0007 (-0.54)	-0.0032 (-0.48)	-0.0001 (-0.08)	0.0000 (0.02)	0.0003 (0.05)
Walk Score	0.0006 (0.83)	0.0005 (0.62)	0.0031 (0.69)	0.0006 (0.64)	0.0008 (0.85)	0.0047 (0.93)
Dist. to P.D. (10,20]	-0.0170 (-0.45)	-0.0032 (-0.08)	0.0050 (0.02)	0.1351*** (2.67)	0.1506*** (2.94)	0.7665*** (3.15)
Dist. to P.D. (20,50]	0.0306 (0.74)	0.0252 (0.59)	0.1344 (0.57)	0.0365 (0.70)	0.0503 (0.96)	0.2837 (1.04)
Dist. to P.D. > 50mi	0.0654 (0.67)	0.0574 (0.57)	0.4260 (0.73)	0.0237 (0.21)	0.0363 (0.33)	0.2553 (0.43)
<u>Preference-over-mode-attribute variables</u>						
Safety		0.0151 (0.99)	0.0900 (0.97)		-0.0033 (-0.16)	-0.0142 (-0.14)
Low Cost		-0.0130 (-0.81)	-0.0825 (-0.86)		-0.0381* (-1.86)	-0.2095* (-1.96)
Low Hassle		-0.0207 (-1.11)	-0.1287 (-1.18)		0.0205 (0.92)	0.1331 (1.05)
Short Time		0.0102 (0.53)	0.0661 (0.58)		0.0445* (1.93)	0.2486* (1.88)
Predict. Time		0.0097 (0.55)	0.0810 (0.73)		-0.0089 (-0.36)	-0.0660 (-0.50)

Predict. Cost		0.0076 (0.49)	0.0298 (0.34)		-0.0007 (-0.03)	0.0017 (0.02)
Multiple Stops		-0.0148 (-1.31)	-0.0803 (-1.27)		0.0006 (0.05)	0.0065 (0.09)
Min. Env. Impact		0.0260*** (3.35)	0.1983*** (3.00)		-0.0018 (-0.16)	-0.0042 (-0.07)
Social Interaction		-0.0058 (-1.03)	-0.0341 (-1.06)		-0.0086 (-1.17)	-0.0470 (-1.23)
<u>Personality and risk variables</u>						
BFI Extraversion		0.0410** (2.47)	0.2153** (2.28)		0.0252 (1.21)	0.1256 (1.18)
BFI Agreeableness		0.0210 (0.91)	0.1101 (0.82)		-0.0062 (-0.22)	-0.0387 (-0.27)
BFI Conscientiousness		-0.0143 (-0.69)	-0.0855 (-0.71)		-0.0179 (-0.69)	-0.0850 (-0.65)
BFI Neuroticism		-0.0020 (-0.12)	-0.0223 (-0.23)		-0.0138 (-0.64)	-0.0656 (-0.60)
BFI Openness		0.0151 (0.85)	0.0974 (0.98)		0.0116 (0.47)	0.0600 (0.48)
Risk Averse (\$1-20)		-0.0124 (-0.29)	-0.0558 (-0.23)		-0.0752 (-1.37)	-0.4003 (-1.36)
Risk Averse (\$30-40)		-0.0420 (-1.06)	-0.2620 (-1.18)		-0.0078 (-0.15)	-0.0027 (-0.01)
Risk Loving (\$60+)		-0.0346 (-0.73)	-0.1982 (-0.75)		-0.0051 (-0.09)	-0.0014 (-0.00)
Constant	0.0304 (0.42)	-0.2291 (-1.27)	-4.1011*** (-3.74)	0.1574* (1.75)	0.1162 (0.53)	-2.0743* (-1.76)
Observations	826	826	826	587	587	587
Adjusted R ²	0.11	0.12		0.01	0.01	
Observations Y=1	239	239	239	170	170	170

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. T-statistics reported in parentheses. ‘OLS’ models report results generated using a linear probability model, while ‘logit’ results were produced using logistic regression. The dependent variable = 1 in ‘Adopted’ models when the respondent has adopted the technology. ‘Interested in Adopting’ uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each section excludes P'_i variables described in Section 3 of the paper, while the remaining columns include both X'_{igc} and P'_i .

Appendix Table D2: Adopted and Interested in Adopting for Pooled Ride-Hail Services

	Adopted			Interested in Adopting		
	OLS	OLS	Logit	OLS	OLS	Logit
<u>Demographic variables</u>						
Born 1930s	0.0476 (0.42)	0.1106 (1.00)	1.0679 (1.01)	-0.1872*** (-3.72)	-0.1638** (-2.23)	
Born 1940s	-0.0461 (-1.01)	-0.0580 (-1.22)	-0.8209 (-1.14)	-0.0859 (-1.43)	-0.0925 (-1.45)	-0.7040 (-1.34)
Born 1950s	-0.0407 (-1.15)	-0.0455 (-1.25)	-0.7408 (-1.45)	-0.0485 (-0.97)	-0.0552 (-1.05)	-0.4149 (-1.12)
Born 1970s	0.0024 (0.06)	-0.0023 (-0.06)	-0.1565 (-0.37)	0.0212 (0.42)	0.0071 (0.14)	0.0200 (0.06)

Born 1980s	0.1694*** (3.99)	0.1615*** (3.76)	1.1528*** (3.22)	0.0898* (1.70)	0.0714 (1.33)	0.3715 (1.24)
Born 1990s	0.2483*** (4.45)	0.2305*** (4.05)	1.4512*** (3.63)	0.1056 (1.43)	0.0997 (1.29)	0.5372 (1.31)
Any Children < 8yrs	-0.0605 (-1.56)	-0.0605 (-1.52)	-0.4466 (-1.32)	-0.0910* (-1.95)	-0.0875* (-1.83)	-0.5535* (-1.79)
HH Income \$75-150K	0.0491 (1.42)	0.0556 (1.58)	0.3969 (1.38)	0.0225 (0.51)	0.0085 (0.19)	0.0614 (0.21)
HH Income \$150-200K	0.0322 (0.77)	0.0562 (1.29)	0.3615 (1.04)	0.0304 (0.56)	0.0086 (0.15)	0.0557 (0.16)
HH Income ≥ 200K	0.0269 (0.67)	0.0198 (0.47)	0.1248 (0.36)	0.0276 (0.55)	0.0011 (0.02)	0.0244 (0.07)
> 4yr College Ed.	-0.0166 (-0.62)	-0.0115 (-0.43)	-0.1128 (-0.50)	-0.0138 (-0.40)	-0.0178 (-0.51)	-0.1238 (-0.57)
Female	0.0069 (0.26)	-0.0010 (-0.04)	-0.0457 (-0.20)	-0.0306 (-0.91)	-0.0403 (-1.10)	-0.2542 (-1.10)
<u>Location-based variables</u>						
Contra Costa County	-0.0529 (-1.41)	-0.0433 (-1.13)	-0.6117 (-1.36)	-0.0055 (-0.10)	-0.0047 (-0.09)	-0.0286 (-0.09)
Marin County	0.1000 (1.21)	0.0847 (1.04)	0.6364 (0.95)	-0.0638 (-0.72)	-0.0742 (-0.81)	-0.4956 (-0.70)
Napa County	-0.0929** (-2.31)	-0.0734* (-1.67)		-0.2349*** (-4.99)	-0.2412*** (-4.56)	
San Francisco County	0.0840 (1.49)	0.0838 (1.45)	0.4521 (1.25)	-0.0156 (-0.23)	-0.0132 (-0.19)	-0.1286 (-0.32)
San Mateo County	-0.0105 (-0.21)	0.0023 (0.04)	0.0367 (0.08)	-0.0438 (-0.71)	-0.0367 (-0.58)	-0.2361 (-0.58)
Santa Clara County	0.0078 (0.20)	0.0256 (0.67)	0.1542 (0.52)	-0.0209 (-0.43)	-0.0047 (-0.10)	-0.0414 (-0.15)
Solano County	-0.0426 (-0.78)	-0.0280 (-0.50)	-0.3134 (-0.47)	-0.0323 (-0.42)	-0.0239 (-0.30)	-0.1243 (-0.23)
Sonoma County	-0.0460 (-0.98)	-0.0405 (-0.84)	-0.7253 (-0.98)	-0.0944 (-1.55)	-0.0836 (-1.37)	-0.7462 (-1.42)
Res. Pop. Density	0.0028 (1.58)	0.0024 (1.33)	0.0084 (0.74)	-0.0026 (-1.60)	-0.0029* (-1.70)	-0.0175 (-1.42)
P.D. Pop. Density	0.0003 (0.29)	0.0003 (0.25)	0.0020 (0.26)	-0.0001 (-0.05)	0.0002 (0.16)	-0.0001 (-0.02)
Walk Score	0.0005 (0.88)	0.0007 (1.09)	0.0088 (1.45)	0.0016** (2.20)	0.0016** (2.13)	0.0107** (2.11)
Dist. to P.D. (10,20]	-0.0002 (-0.01)	0.0050 (0.15)	0.0360 (0.14)	0.0048 (0.12)	0.0020 (0.05)	0.0347 (0.14)
Dist. to P.D. (20,50]	-0.0195 (-0.58)	-0.0314 (-0.93)	-0.2575 (-0.81)	-0.0616 (-1.52)	-0.0675 (-1.64)	-0.4441 (-1.57)
Dist. to P.D. > 50mi	0.0208 (0.29)	0.0107 (0.15)	0.2824 (0.38)	0.0242 (0.25)	0.0277 (0.29)	0.2557 (0.42)
<u>Preference-over-mode-attribute variables</u>						
Safety		-0.0088 (-0.65)	-0.0749 (-0.62)		-0.0077 (-0.45)	-0.0435 (-0.41)
Low Cost		-0.0060 (-0.44)	-0.0256 (-0.21)		0.0038 (0.23)	0.0140 (0.13)
Low Hassle		-0.0050 (-0.33)	-0.0450 (-0.34)		-0.0034 (-0.18)	-0.0225 (-0.17)
Short Time		-0.0073 (-0.47)	-0.0737 (-0.53)		0.0103 (0.54)	0.0691 (0.50)

Predict. Time		-0.0047 (-0.31)	-0.0507 (-0.37)		-0.0028 (-0.13)	-0.0113 (-0.08)
Predict. Cost		0.0339*** (2.65)	0.2837** (2.43)		-0.0029 (-0.19)	-0.0225 (-0.23)
Multiple Stops		-0.0124 (-1.32)	-0.0952 (-1.25)		-0.0025 (-0.22)	-0.0184 (-0.27)
Min. Env. Impact		0.0124* (1.93)	0.1384* (1.65)		0.0136* (1.80)	0.1098* (1.72)
Social Interaction		-0.0003 (-0.07)	0.0029 (0.07)		-0.0080 (-1.34)	-0.0487 (-1.30)
<u>Personality and risk variables</u>						
BFI Extraversion		0.0449*** (3.23)	0.3622*** (3.08)		0.0239 (1.40)	0.1488 (1.44)
BFI Agreeableness		0.0464** (2.50)	0.3933** (2.46)		0.0176 (0.72)	0.1063 (0.71)
BFI Conscientiousness		0.0004 (0.02)	0.0216 (0.15)		0.0090 (0.40)	0.0510 (0.34)
BFI Neuroticism		0.0024 (0.16)	0.0472 (0.39)		0.0073 (0.39)	0.0481 (0.43)
BFI Openness		-0.0028 (-0.19)	-0.0402 (-0.34)		-0.0185 (-0.92)	-0.1286 (-1.03)
Risk Averse (\$1-20)		-0.0052 (-0.14)	-0.0589 (-0.20)		-0.0480 (-1.05)	-0.3354 (-1.11)
Risk Averse (\$30-40)		-0.0317 (-0.96)	-0.2465 (-0.92)		0.0365 (0.84)	0.1984 (0.81)
Risk Loving (\$60+)		-0.0526 (-1.36)	-0.4301 (-1.30)		-0.0468 (-0.99)	-0.3216 (-1.03)
Constant	0.0249 (0.42)	-0.2659* (-1.76)	-5.5402*** (-3.94)	0.1928*** (2.62)	0.0772 (0.40)	-2.2143* (-1.71)
Observations	826	826	816	675	675	657
Adjusted R ²	0.13	0.15		0.02	0.01	
Observations Y=1	151	151	151	145	145	145

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. T-statistics reported in parentheses. ‘OLS’ models report results generated using a linear probability model, while ‘logit’ results were produced using logistic regression. The dependent variable = 1 in ‘Adopted’ models when the respondent has adopted the technology. ‘Interested in Adopting’ uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each section excludes P'_i variables described in Section 3 of the paper, while the remaining columns include both X'_{igc} and P'_i .

Appendix Table D3: Adopted and Interested in Adopting for Car-Sharing

	Adopted			Interested in Adopting		
	OLS	OLS	Logit	OLS	OLS	Logit
<u>Demographic variables</u>						
Born 1930s	0.0060 (0.47)	0.0230 (0.95)	--	-0.1328 (-1.27)	-0.1290 (-1.04)	-0.7808 (-0.70)
Born 1940s	-0.0037 (-0.31)	0.0020 (0.15)	--	-0.0451 (-0.69)	-0.0563 (-0.85)	-0.3635 (-0.85)
Born 1950s	0.0128 (0.77)	0.0122 (0.72)	0.6034 (0.49)	-0.0132 (-0.24)	-0.0098 (-0.18)	-0.0467 (-0.14)

Born 1970s	-0.0031 (-0.20)	-0.0009 (-0.05)	0.1206 (0.11)	-0.1189** (-2.51)	-0.1234*** (-2.62)	-0.8358*** (-2.60)
Born 1980s	0.0152 (0.89)	0.0172 (0.98)	0.7704 (0.74)	-0.1005** (-2.18)	-0.1055** (-2.30)	-0.6124** (-2.25)
Born 1990s	0.0295 (1.24)	0.0390 (1.59)	1.7789 (1.53)	-0.0857 (-1.46)	-0.0892 (-1.46)	-0.5180 (-1.40)
Any Children < 8yrs	0.0240 (1.16)	0.0235 (1.09)	1.1517 (1.46)	0.0234 (0.56)	0.0257 (0.59)	0.1807 (0.57)
HH Income \$75-150K	0.0132 (1.10)	0.0161 (1.33)	1.0277 (1.22)	0.0726* (1.86)	0.0787** (2.00)	0.4941* (1.95)
HH Income \$150-200K	0.0091 (0.49)	0.0134 (0.68)	0.9737 (0.82)	0.0572 (1.19)	0.0729 (1.50)	0.4835 (1.52)
HH Income ≥ \$200K	0.0325* (1.75)	0.0352* (1.87)	1.7439* (1.96)	0.0179 (0.43)	0.0323 (0.76)	0.2031 (0.68)
> 4yr College Ed.	0.0154 (1.23)	0.0163 (1.27)	0.8860 (1.41)	-0.0479 (-1.58)	-0.0433 (-1.42)	-0.2724 (-1.34)
Female	-0.0127 (-1.10)	-0.0125 (-0.99)	-0.5254 (-1.02)	-0.0760** (-2.56)	-0.0634** (-2.01)	-0.4239** (-2.00)
<u>Location-based variables</u>						
Contra Costa County	0.0141 (0.78)	0.0148 (0.76)	1.3459 (1.17)	0.0037 (0.07)	0.0294 (0.59)	0.2121 (0.66)
Marin County	-0.0010 (-0.09)	0.0017 (0.12)	--	-0.1129 (-1.52)	-0.0870 (-1.23)	-0.7596 (-1.21)
Napa County	-0.0008 (-0.05)	-0.0026 (-0.16)	--	-0.1071 (-1.02)	-0.0478 (-0.47)	-0.5384 (-0.50)
San Francisco County	0.0267 (0.86)	0.0312 (0.97)	0.7403 (0.80)	-0.0315 (-0.52)	0.0063 (0.10)	0.0432 (0.12)
San Mateo County	0.0117 (0.49)	0.0094 (0.38)	0.2767 (0.29)	-0.1055** (-1.98)	-0.0855 (-1.52)	-0.5855 (-1.25)
Santa Clara County	-0.0070 (-0.52)	-0.0068 (-0.49)	-0.0913 (-0.11)	-0.0752* (-1.85)	-0.0501 (-1.21)	-0.3465 (-1.20)
Solano County	0.0002 (0.01)	-0.0023 (-0.18)	--	0.0647 (0.76)	0.0740 (0.87)	0.4591 (0.93)
Sonoma County	0.0083 (0.76)	0.0033 (0.25)	--	-0.0457 (-0.73)	-0.0395 (-0.64)	-0.2361 (-0.49)
Res. Pop. Density	0.0004 (0.46)	0.0003 (0.40)	-0.0005 (-0.04)	0.0024 (1.41)	0.0021 (1.21)	0.0105 (1.13)
P.D. Pop. Density	-0.0003 (-0.87)	-0.0004 (-0.98)	-0.0153 (-0.75)	0.0000 (0.00)	-0.0003 (-0.30)	-0.0019 (-0.29)
Walk Score	0.0006** (2.38)	0.0006** (2.50)	0.0499*** (3.40)	0.0011 (1.59)	0.0008 (1.14)	0.0057 (1.16)
Dist. to P.D. (10,20]	-0.0080 (-0.63)	-0.0046 (-0.36)	-0.3090 (-0.37)	-0.0036 (-0.10)	0.0036 (0.10)	0.0475 (0.21)
Dist. to P.D. (20,50]	0.0097 (0.63)	0.0112 (0.68)	0.3081 (0.50)	-0.0563 (-1.57)	-0.0467 (-1.29)	-0.3760 (-1.37)
Dist. to P.D. > 50mi	-0.0173* (-1.72)	-0.0078 (-0.63)	--	0.0048 (0.05)	0.0108 (0.11)	0.1366 (0.22)
<u>Preference-over-mode-attribute variables</u>						
Safety		0.0049 (1.19)	0.3853* (1.77)		0.0041 (0.30)	0.0076 (0.08)
Low Cost		-0.0006 (-0.09)	-0.1266 (-0.39)		0.0041 (0.28)	0.0278 (0.28)
Low Hassle		-0.0144* (-1.94)	-0.4673** (-2.41)		0.0013 (0.07)	-0.0023 (-0.02)

Short Time	0.0050 (1.01)	0.0652 (0.22)	0.0179 (1.06)	0.1460 (1.27)		
Predict. Time	0.0077 (1.47)	0.3648 (1.24)	-0.0460** (-2.22)	-0.2701** (-2.19)		
Predict. Cost	-0.0000 (-0.00)	-0.0275 (-0.10)	0.0025 (0.18)	0.0089 (0.09)		
Multiple Stops	0.0035 (1.00)	0.1732 (0.94)	-0.0050 (-0.46)	-0.0395 (-0.56)		
Min. Env. Impact	0.0011 (0.38)	0.1683 (0.92)	0.0263*** (3.88)	0.2462*** (3.31)		
Social Interaction	0.0010 (0.39)	0.0796 (0.65)	0.0070 (1.30)	0.0501 (1.31)		
<u>Personality and risk variables</u>						
BFI Extraversion	0.0077 (1.06)	0.2129 (0.67)	-0.0117 (-0.77)	-0.0948 (-0.90)		
BFI Agreeableness	-0.0029 (-0.42)	-0.1302 (-0.35)	0.0356* (1.68)	0.2294* (1.66)		
BFI Conscientiousness	-0.0036 (-0.53)	-0.3283 (-0.93)	-0.0355* (-1.74)	-0.2423* (-1.77)		
BFI Neuroticism	-0.0061 (-0.96)	-0.3287 (-1.19)	0.0033 (0.20)	0.0265 (0.23)		
BFI Openness	0.0037 (0.52)	0.3178 (0.84)	0.0340** (2.01)	0.2524** (2.06)		
Risk Averse (\$1-20)	0.0006 (0.03)	0.2017 (0.35)	-0.0013 (-0.03)	0.0234 (0.08)		
Risk Averse (\$30-40)	-0.0106 (-0.70)	-0.6361 (-1.00)	0.0606 (1.59)	0.4152* (1.70)		
Risk Loving (\$60+)	-0.0302** (-2.22)	-2.1574** (-2.12)	-0.0283 (-0.69)	-0.1652 (-0.57)		
Constant	-0.0412** (-2.17)	-0.0638 (-1.00)	-10.5306*** (-3.15)	0.2484*** (3.40)	0.1332 (0.77)	-2.3974** (-2.15)
Observations	826	826	645	804	804	804
Adjusted R^2	0.02	0.01		0.03	0.05	
Observations Y=1	22	22	22	167	167	167

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ report statistical significance for robust standard errors. T-statistics reported in parentheses. ‘OLS’ models report results generated using a linear probability model, while ‘logit’ results were produced using logistic regression. The dependent variable = 1 in ‘Adopted’ models when the respondent has adopted the technology. ‘Interested in Adopting’ uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each section excludes \mathbf{P}'_i variables described in Section 3 of the paper, while the remaining columns include both \mathbf{X}'_{igc} and \mathbf{P}'_i .

Appendix Table D4: Adopted and Interested in Adopting for Hybrid Vehicles

	Adopted			Interested in Adopting		
	OLS	OLS	Logit	OLS	OLS	Logit
<u>Demographic variables</u>						
Born 1930s	-0.0323 (-0.29)	-0.0574 (-0.48)	-0.5547 (-0.45)	0.0713 (0.40)	0.1586 (0.89)	0.7398 (0.99)
Born 1940s	0.0732 (1.08)	0.0576 (0.86)	0.4749 (1.12)	-0.0701 (-0.79)	-0.0557 (-0.64)	-0.2524 (-0.62)

Born 1950s	0.1631*** (3.13)	0.1626*** (3.06)	1.0500*** (3.43)	0.0216 (0.29)	0.0475 (0.65)	0.2140 (0.67)
Born 1970s	-0.0615 (-1.45)	-0.0645 (-1.53)	-0.5636 (-1.62)	0.0089 (0.14)	0.0105 (0.17)	0.0313 (0.11)
Born 1980s	-0.0958** (-2.51)	-0.0940** (-2.43)	-0.9108*** (-2.61)	0.0420 (0.72)	0.0400 (0.68)	0.1849 (0.71)
Born 1990s	-0.0629 (-1.51)	-0.0803* (-1.79)	-0.7583 (-1.51)	0.1794** (2.53)	0.1880*** (2.59)	0.8261*** (2.60)
Any Children < 8yrs	-0.0055 (-0.16)	-0.0037 (-0.10)	0.0078 (0.02)	-0.0421 (-0.79)	-0.0103 (-0.19)	-0.0528 (-0.22)
HH Income \$75-150K	0.0485 (1.56)	0.0545* (1.72)	0.6523* (1.95)	0.0484 (0.96)	0.0213 (0.43)	0.0865 (0.40)
HH Income \$150-200K	0.0764* (1.95)	0.0841** (2.07)	0.9073** (2.29)	-0.0807 (-1.28)	-0.1216* (-1.87)	-0.5556* (-1.90)
HH Income ≥ \$200K	0.1258*** (3.41)	0.1316*** (3.36)	1.2323*** (3.41)	-0.1024* (-1.75)	-0.1583*** (-2.62)	-0.7234*** (-2.65)
> 4yr College Ed.	0.0849*** (3.24)	0.0933*** (3.54)	0.7763*** (3.39)	0.0403 (1.01)	0.0241 (0.60)	0.1151 (0.65)
Female	0.0219 (0.85)	0.0382 (1.35)	0.3418 (1.41)	0.0348 (0.89)	0.0334 (0.80)	0.1586 (0.87)
<u>Location-based variables</u>						
Contra Costa County	-0.0252 (-0.62)	-0.0168 (-0.40)	-0.1680 (-0.47)	0.0158 (0.24)	0.0451 (0.70)	0.2025 (0.73)
Marin County	-0.1201* (-1.86)	-0.1059* (-1.78)	-1.0711 (-1.50)	0.1689 (1.43)	0.1848 (1.52)	0.8152 (1.54)
Napa County	0.1719 (1.17)	0.2049 (1.41)	1.1656 (1.57)	-0.0597 (-0.29)	-0.1539 (-0.85)	-0.7045 (-0.87)
San Francisco County	-0.0931** (-2.09)	-0.0873* (-1.90)	-0.7325 (-1.56)	-0.1464** (-2.15)	-0.1137 (-1.62)	-0.5404* (-1.68)
San Mateo County	0.0406 (0.72)	0.0492 (0.88)	0.3572 (0.92)	0.0082 (0.10)	0.0346 (0.42)	0.1490 (0.42)
Santa Clara County	-0.0317 (-0.88)	-0.0320 (-0.86)	-0.3279 (-1.03)	-0.0233 (-0.42)	0.0144 (0.26)	0.0584 (0.24)
Solano County	0.0415 (0.61)	0.0550 (0.80)	0.4728 (0.94)	0.1390 (1.37)	0.1780* (1.75)	0.7824* (1.79)
Sonoma County	0.0320 (0.51)	0.0351 (0.54)	0.2934 (0.62)	0.0468 (0.47)	0.0986 (0.97)	0.4410 (0.99)
Res. Pop. Density	0.0009 (1.04)	0.0010 (1.11)	0.0095 (1.15)	-0.0005 (-0.32)	-0.0004 (-0.27)	-0.0017 (-0.24)
P.D. Pop. Density	-0.0012 (-1.52)	-0.0015* (-1.74)	-0.0161 (-1.44)	-0.0024* (-1.79)	-0.0021 (-1.54)	-0.0105 (-1.39)
Walk Score	0.0004 (0.66)	0.0003 (0.55)	0.0019 (0.40)	0.0015 (1.64)	0.0011 (1.19)	0.0050 (1.24)
Dist. to P.D. (10,20]	0.0055 (0.18)	0.0081 (0.26)	0.0564 (0.20)	0.0059 (0.12)	0.0099 (0.20)	0.0596 (0.28)
Dist. to P.D. (20,50]	0.0459 (1.25)	0.0455 (1.23)	0.3447 (1.25)	0.0209 (0.39)	0.0227 (0.43)	0.1019 (0.44)
Dist. to P.D. > 50mi	-0.0320 (-0.43)	-0.0529 (-0.67)	-0.5007 (-0.69)	-0.0052 (-0.05)	-0.0172 (-0.15)	-0.0606 (-0.12)
<u>Preference-over-mode-attribute variables</u>						
Safety		0.0023 (0.18)	0.0317 (0.28)		-0.0130 (-0.67)	-0.0609 (-0.71)
Low Cost		0.0036 (0.27)	0.0102 (0.09)		0.0130 (0.66)	0.0532 (0.60)

Low Hassle		0.0185 (1.22)	0.1444 (1.02)		0.0149 (0.69)	0.0705 (0.70)
Short Time		-0.0209 (-1.25)	-0.1623 (-1.28)		0.0414* (1.84)	0.1942* (1.86)
Predict. Time		-0.0258 (-1.47)	-0.2133 (-1.62)		0.0105 (0.42)	0.0489 (0.44)
Predict. Cost		0.0066 (0.54)	0.0786 (0.69)		-0.0423** (-2.27)	-0.1882** (-2.26)
Multiple Stops		-0.0071 (-0.77)	-0.0721 (-0.90)		-0.0198 (-1.44)	-0.0881 (-1.47)
Min. Env. Impact		-0.0012 (-0.14)	-0.0342 (-0.49)		0.0192* (1.68)	0.0942* (1.68)
Social Interaction		0.0003 (0.07)	0.0073 (0.17)		-0.0046 (-0.66)	-0.0218 (-0.70)
<u>Personality and risk variables</u>						
BFI Extraversion		-0.0048 (-0.38)	-0.0539 (-0.48)		-0.0418** (-2.00)	-0.1929** (-2.05)
BFI Agreeableness		0.0220 (1.17)	0.1850 (1.11)		0.0240 (0.80)	0.1156 (0.87)
BFI Conscientiousness		-0.0325** (-2.03)	-0.2887** (-2.25)		0.0390 (1.52)	0.1779 (1.54)
BFI Neuroticism		-0.0122 (-0.83)	-0.1002 (-0.75)		0.0004 (0.02)	-0.0012 (-0.01)
BFI Openness		0.0102 (0.69)	0.0941 (0.74)		0.0253 (1.07)	0.1130 (1.07)
Risk Averse (\$1-20)		0.0026 (0.07)	0.0744 (0.23)		-0.0899* (-1.67)	-0.4070* (-1.73)
Risk Averse (\$30-40)		-0.0050 (-0.16)	-0.0497 (-0.17)		-0.0321 (-0.66)	-0.1471 (-0.69)
Risk Loving (\$60+)		0.0394 (1.02)	0.3391 (1.04)		-0.1400** (-2.46)	-0.6626** (-2.50)
Constant	0.0560 (0.99)	0.1944 (1.21)	-1.5493 (-1.21)	0.3486*** (3.82)	0.0748 (0.31)	-1.9723* (-1.82)
Observations	826	826	826	699	699	699
Adjusted R^2	0.08	0.07		0.02	0.05	
Observations Y=1	127	127	127	306	306	306

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. T-statistics reported in parentheses. ‘OLS’ models report results generated using a linear probability model, while ‘logit’ results were produced using logistic regression. The dependent variable = 1 in ‘Adopted’ models when the respondent has adopted the technology. ‘Interested in Adopting’ uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each section excludes \mathbf{P}'_i variables described in Section 3 of the paper, while the remaining columns include both \mathbf{X}'_{igc} and \mathbf{P}'_i .

Appendix Table D5: Adopted and Interested in Adopting for Plug-in Electric Vehicles

	Adopted			Interested in Adopting		
	OLS	OLS	Logit	OLS	OLS	Logit
<u>Demographic variables</u>						
Born 1930s	0.0229 (0.20)	0.0083 (0.08)	0.3900 (0.34)	-0.0505 (-0.29)	0.0247 (0.14)	0.1074 (0.14)

Born 1940s	-0.0055 (-0.13)	0.0078 (0.19)	0.3575 (0.62)	0.1246 (1.50)	0.1440* (1.79)	0.6733* (1.84)
Born 1950s	-0.0317 (-0.98)	-0.0259 (-0.79)	-0.3505 (-0.62)	0.1023 (1.59)	0.1028 (1.61)	0.4730 (1.64)
Born 1970s	-0.0137 (-0.39)	-0.0235 (-0.67)	-0.5518 (-1.14)	0.0898 (1.45)	0.0603 (0.99)	0.2760 (1.01)
Born 1980s	-0.0704*** (-2.64)	-0.0835*** (-3.12)	-1.6386*** (-3.51)	0.1119** (2.00)	0.0614 (1.11)	0.2884 (1.18)
Born 1990s	-0.0504* (-1.76)	-0.0644** (-2.12)	-1.3918 (-1.61)	0.1223* (1.75)	0.0792 (1.13)	0.3664 (1.18)
Any Children < 8yrs	0.0449 (1.44)	0.0569* (1.81)	0.9018** (2.04)	-0.0575 (-1.06)	-0.0164 (-0.30)	-0.0985 (-0.40)
HH Income \$75-150K	-0.0089 (-0.51)	-0.0002 (-0.01)	0.1731 (0.29)	0.0508 (1.05)	0.0332 (0.70)	0.1554 (0.74)
HH Income \$150-200K	0.0490* (1.71)	0.0467* (1.65)	0.8835 (1.44)	0.0995* (1.65)	0.0820 (1.30)	0.3641 (1.29)
HH Income ≥ \$200K	0.0655** (2.20)	0.0740** (2.57)	1.5045*** (2.60)	0.1327** (2.36)	0.0928 (1.62)	0.4243* (1.66)
> 4yr College Ed.	0.0314* (1.74)	0.0298 (1.65)	0.5676* (1.65)	0.1038*** (2.71)	0.0974** (2.57)	0.4467*** (2.63)
Female	-0.0268 (-1.41)	-0.0102 (-0.49)	-0.2736 (-0.68)	-0.1104*** (-2.94)	-0.0985** (-2.44)	-0.4481** (-2.51)
<u>Location-based variables</u>						
Contra Costa County	0.0456 (1.34)	0.0495 (1.48)	0.6783 (1.26)	-0.0441 (-0.68)	-0.0095 (-0.15)	-0.0543 (-0.19)
Marin County	0.0039 (0.06)	0.0249 (0.41)	0.5920 (0.66)	0.0356 (0.34)	0.0526 (0.49)	0.2583 (0.53)
Napa County	-0.0800*** (-2.78)	-0.0628** (-2.26)		-0.0137 (-0.10)	0.0290 (0.19)	0.1395 (0.20)
San Francisco County	-0.0056 (-0.19)	0.0125 (0.41)	0.3365 (0.42)	-0.1335** (-1.98)	-0.1126* (-1.70)	-0.5234* (-1.76)
San Mateo County	-0.0043 (-0.12)	-0.0138 (-0.40)	-0.2082 (-0.36)	-0.0798 (-1.08)	-0.0483 (-0.64)	-0.2300 (-0.70)
Santa Clara County	0.0173 (0.65)	0.0146 (0.55)	0.2700 (0.52)	-0.0611 (-1.15)	-0.0192 (-0.36)	-0.0912 (-0.38)
Solano County	0.0252 (0.50)	0.0207 (0.41)	0.7485 (0.94)	-0.0278 (-0.28)	0.0158 (0.17)	0.0922 (0.22)
Sonoma County	-0.0304 (-1.04)	-0.0384 (-1.36)	-1.2622 (-1.29)	0.1457* (1.72)	0.1796** (2.18)	0.8351** (2.14)
Res. Pop. Density	0.0002 (0.40)	-0.0000 (-0.04)	-0.0091 (-0.47)	-0.0003 (-0.18)	-0.0002 (-0.10)	-0.0005 (-0.07)
P.D. Pop. Density	-0.0001 (-0.28)	-0.0003 (-0.60)	-0.0143 (-0.98)	-0.0021 (-1.56)	-0.0020 (-1.57)	-0.0091 (-1.61)
Walk Score	-0.0003 (-0.71)	-0.0005 (-1.05)	-0.0033 (-0.42)	0.0009 (1.09)	0.0004 (0.44)	0.0016 (0.40)
Dist. to P.D. (10,20]	0.0279 (1.23)	0.0325 (1.40)	0.4275 (0.98)	0.0642 (1.46)	0.0779* (1.80)	0.3677* (1.86)
Dist. to P.D. (20,50]	0.0389 (1.44)	0.0426 (1.64)	0.6781* (1.70)	-0.0163 (-0.32)	-0.0218 (-0.44)	-0.1016 (-0.46)
Dist. to P.D. > 50mi	0.0121 (0.22)	0.0255 (0.46)	0.5989 (0.76)	-0.0117 (-0.10)	-0.0178 (-0.15)	-0.0433 (-0.08)
<u>Preference-over-mode-attribute variables</u>						
Safety		-0.0040 (-0.42)	-0.0831 (-0.53)		-0.0162 (-0.85)	-0.0735 (-0.85)

Low Cost	0.0261*** (2.70)	0.5110*** (2.99)	0.0063 (0.33)	0.0253 (0.29)
Low Hassle	-0.0236** (-2.02)	-0.3478** (-2.27)	0.0137 (0.63)	0.0598 (0.61)
Short Time	0.0047 (0.42)	0.0725 (0.43)	0.0412* (1.80)	0.1962* (1.91)
Predict. Time	0.0130 (1.09)	0.3401 (1.55)	0.0068 (0.29)	0.0301 (0.28)
Predict. Cost	-0.0208** (-2.10)	-0.4205** (-2.48)	-0.0281 (-1.46)	-0.1332 (-1.49)
Multiple Stops	0.0032 (0.52)	0.0777 (0.66)	-0.0352*** (-2.63)	-0.1607*** (-2.67)
Min. Env. Impact	0.0055 (0.80)	0.0899 (0.50)	0.0368*** (3.11)	0.1763*** (2.95)
Social Interaction	0.0015 (0.42)	0.0198 (0.28)	-0.0098 (-1.42)	-0.0471 (-1.50)
<u>Personality and risk variables</u>				
BFI Extraversion	-0.0116 (-1.30)	-0.2410 (-1.33)	0.0052 (0.27)	0.0240 (0.28)
BFI Agreeableness	0.0096 (0.76)	0.1745 (0.75)	0.0652** (2.38)	0.3014** (2.39)
BFI Conscientiousness	-0.0408*** (-3.35)	-0.8503*** (-3.98)	-0.0453* (-1.90)	-0.2121* (-1.93)
BFI Neuroticism	-0.0038 (-0.46)	-0.0520 (-0.30)	0.0019 (0.09)	0.0121 (0.13)
BFI Openness	0.0059 (0.63)	0.1381 (0.78)	0.0259 (1.24)	0.1237 (1.30)
Risk Averse (\$1-20)	-0.0421* (-1.74)	-1.0137** (-1.96)	-0.0772 (-1.50)	-0.3578 (-1.58)
Risk Averse (\$30-40)	-0.0329 (-1.34)	-0.5496 (-1.44)	0.0200 (0.42)	0.0833 (0.39)
Risk Loving (\$60+)	-0.0467* (-1.74)	-0.8570* (-1.66)	-0.1561*** (-2.87)	-0.7058*** (-2.94)
Constant	0.0649 (1.49)	0.2318** (2.06)	-0.8619 (-0.43)	0.4183*** (4.82)
Observations	826	826	816	772
Adjusted R ²	0.04	0.06		0.03
Observations Y=1	54	54	54	426

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. T-statistics reported in parentheses. ‘OLS’ models report results generated using a linear probability model, while ‘logit’ results were produced using logistic regression. The dependent variable = 1 in ‘Adopted’ models when the respondent has adopted the technology. ‘Interested in Adopting’ uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each section excludes P'_i variables described in Section 3 of the paper, while the remaining columns include both X'_{igc} and P'_i .

Appendix Table D6: Adopted and Interested in Adopting for Adaptive Cruise Control

Demographic variable	Adopted			Interested in Adopting		
	OLS	OLS	Logit	OLS	OLS	Logit

Born 1930s	-0.0776 (-0.71)	-0.0414 (-0.36)	-0.6891 (-0.59)	0.0428 (0.22)	0.0233 (0.11)	0.0997 (0.11)
Born 1940s	0.0383 (0.57)	0.0271 (0.42)	0.2307 (0.55)	0.0621 (0.69)	0.0698 (0.74)	0.3201 (0.78)
Born 1950s	-0.0788* (-1.72)	-0.0960** (-2.07)	-0.8104** (-2.03)	0.0601 (0.89)	0.0647 (0.92)	0.2927 (0.98)
Born 1970s	-0.0298 (-0.64)	-0.0305 (-0.66)	-0.1767 (-0.54)	0.0116 (0.18)	0.0167 (0.25)	0.0666 (0.23)
Born 1980s	-0.0248 (-0.57)	-0.0160 (-0.36)	-0.1028 (-0.32)	0.0177 (0.29)	0.0046 (0.07)	0.0197 (0.08)
Born 1990s	-0.0582 (-1.25)	-0.0706 (-1.45)	-0.5903 (-1.32)	0.0970 (1.30)	0.1043 (1.37)	0.4667 (1.42)
Any Child < 8yrs	0.0587 (1.36)	0.0356 (0.82)	0.2081 (0.76)	-0.0993* (-1.77)	-0.0739 (-1.29)	-0.3353 (-1.34)
HH Income \$75-150K	0.0435 (1.35)	0.0427 (1.32)	0.4527 (1.53)	0.0643 (1.26)	0.0487 (0.93)	0.2177 (0.97)
HH Income \$150-200K	0.0540 (1.25)	0.0513 (1.18)	0.4876 (1.33)	0.1475** (2.26)	0.1128* (1.67)	0.4964* (1.73)
HH Income ≥ \$200K	0.1112*** (2.76)	0.1131*** (2.83)	0.9417*** (2.91)	0.1694*** (2.90)	0.1115* (1.83)	0.4892* (1.88)
> 4yr College Ed.	0.0173 (0.62)	0.0255 (0.92)	0.1799 (0.85)	0.0520 (1.26)	0.0458 (1.09)	0.2092 (1.18)
Female	0.0022 (0.08)	-0.0070 (-0.25)	-0.0846 (-0.39)	-0.1524*** (-3.86)	-0.1576*** (-3.74)	-0.6842*** (-3.84)
<u>Location-based variable</u>						
Contra Costa County	0.0875* (1.76)	0.0907* (1.80)	0.6445* (1.81)	0.0066 (0.10)	0.0030 (0.04)	0.0114 (0.04)
Marin County	0.0130 (0.17)	-0.0066 (-0.09)	0.0273 (0.05)	0.1509 (1.48)	0.1552 (1.50)	0.7340 (1.48)
Napa County	0.0705 (0.53)	0.0762 (0.57)	0.5619 (0.53)	-0.1242 (-0.76)	-0.1696 (-0.99)	-0.7441 (-0.97)
San Francisco County	-0.0383 (-0.85)	-0.0500 (-1.10)	-0.4042 (-0.96)	0.0096 (0.14)	-0.0075 (-0.10)	-0.0329 (-0.11)
San Mateo County	0.0093 (0.18)	0.0204 (0.40)	0.1989 (0.50)	-0.0255 (-0.32)	-0.0314 (-0.39)	-0.1406 (-0.41)
Santa Clara County	0.0220 (0.56)	0.0169 (0.43)	0.1407 (0.47)	-0.0037 (-0.07)	0.0057 (0.10)	0.0341 (0.14)
Solano County	0.1410* (1.78)	0.1479* (1.89)	1.0916** (2.25)	-0.0328 (-0.31)	0.0048 (0.04)	0.0276 (0.06)
Sonoma County	0.0438 (0.71)	0.0374 (0.59)	0.3359 (0.68)	0.0333 (0.35)	0.0536 (0.56)	0.2417 (0.59)
Res. Pop. Density	-0.0007 (-0.64)	-0.0008 (-0.68)	-0.0096 (-0.71)	-0.0008 (-0.44)	-0.0002 (-0.13)	-0.0010 (-0.13)
P.D. Pop. Density	-0.0009 (-1.07)	-0.0011 (-1.26)	-0.0092 (-1.14)	0.0008 (0.48)	0.0015 (0.94)	0.0066 (1.00)
Walk Score	0.0004 (0.55)	0.0008 (1.17)	0.0069 (1.34)	-0.0003 (-0.29)	-0.0006 (-0.64)	-0.0027 (-0.67)
Dist. to P.D. (10,20]	-0.0045 (-0.13)	-0.0028 (-0.08)	-0.0491 (-0.19)	0.0453 (0.93)	0.0509 (1.02)	0.2375 (1.11)
Dist. to P.D. (20,50]	-0.0050 (-0.13)	-0.0028 (-0.07)	-0.0647 (-0.23)	0.0337 (0.63)	0.0355 (0.66)	0.1614 (0.70)
Dist. to P.D. > 50mi	0.0053 (0.06)	-0.0240 (-0.29)	-0.2529 (-0.47)	0.0283 (0.24)	-0.0056 (-0.05)	-0.0157 (-0.03)
<u>Preference-over-mode-attribute variables</u>						

Safety		-0.0054 (-0.40)	-0.0501 (-0.48)		-0.0059 (-0.29)	-0.0297 (-0.34)
Low Cost		-0.0033 (-0.24)	-0.0300 (-0.27)		-0.0135 (-0.64)	-0.0593 (-0.65)
Low Hassle		0.0151 (0.98)	0.0882 (0.67)		-0.0157 (-0.68)	-0.0670 (-0.69)
Short Time		0.0227 (1.59)	0.2401* (1.81)		0.0188 (0.80)	0.0821 (0.80)
Predict. Time		-0.0146 (-0.88)	-0.1438 (-1.04)		0.0040 (0.16)	0.0164 (0.15)
Predict. Cost		0.0169 (1.25)	0.1512 (1.38)		-0.0212 (-1.07)	-0.0934 (-1.10)
Multiple Stops		0.0130 (1.28)	0.1022 (1.31)		-0.0154 (-1.05)	-0.0698 (-1.11)
Min. Env. Impact		-0.0242*** (-2.67)	-0.1716*** (-3.00)		0.0188 (1.44)	0.0875 (1.45)
Social Interaction		0.0019 (0.38)	0.0173 (0.46)		-0.0168** (-2.23)	-0.0759** (-2.30)
<u>Personality and risk variables</u>						
BFI Extraversion		-0.0053 (-0.37)	-0.0414 (-0.37)		0.0151 (0.73)	0.0684 (0.76)
BFI Agreeableness		0.0448** (2.20)	0.3885** (2.29)		-0.0017 (-0.06)	-0.0101 (-0.08)
BFI Conscientiousness		0.0149 (0.92)	0.1078 (0.85)		0.0251 (0.99)	0.1151 (1.05)
BFI Neuroticism		0.0011 (0.08)	0.0364 (0.32)		0.0080 (0.36)	0.0339 (0.36)
BFI Openness		0.0024 (0.15)	-0.0062 (-0.05)		-0.0040 (-0.17)	-0.0146 (-0.15)
Risk Averse (\$1-20)		-0.0471 (-1.35)	-0.4827 (-1.50)		-0.0628 (-1.17)	-0.2772 (-1.22)
Risk Averse (\$30-40)		-0.0093 (-0.27)	-0.0749 (-0.28)		-0.1060** (-2.09)	-0.4648** (-2.13)
Risk Loving (\$60+)		0.1254*** (2.74)	0.8054*** (2.79)		-0.1198* (-1.96)	-0.5280** (-2.01)
Constant	0.1054 (1.61)	-0.2210 (-1.43)	-5.0199*** (-3.84)	0.4265*** (4.54)	0.4870** (2.06)	-0.0898 (-0.09)
Observations	826	826	826	688	688	688
Adjusted R^2	0.01	0.04		0.03	0.03	
Observations Y=1	138	138	138	329	329	329

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ report statistical significance for robust standard errors. T-statistics reported in parentheses. 'OLS' models report results generated using a linear probability model, while 'logit' results were produced using logistic regression. The dependent variable = 1 in 'Adopted' models when the respondent has adopted the technology. 'Interested in Adopting' uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each section excludes \mathbf{P}'_i variables described in Section 3 of the paper, while the remaining columns include both \mathbf{X}'_{igc} and \mathbf{P}'_i .

Appendix Table D7: Adopted and Interested in Adopting for Partially Automated Vehicle

Technology

	Adopted			Interested in Adopting		
	OLS	OLS	Logit	OLS	OLS	Logit
<u>Demographic variables</u>						
Born 1930s	0.0656 (0.65)	0.0651 (0.66)	1.0430 (0.95)	0.0968 (0.50)	0.1270 (0.63)	0.5780 (0.62)
Born 1940s	0.0336 (0.85)	0.0269 (0.69)	0.6319 (0.85)	0.2132*** (2.66)	0.2159*** (2.61)	0.9733*** (2.59)
Born 1950s	-0.0243 (-1.09)	-0.0300 (-1.31)	-1.1574 (-1.30)	0.0733 (1.19)	0.0615 (0.97)	0.2792 (1.00)
Born 1970s	0.0168 (0.62)	0.0169 (0.62)	0.3374 (0.51)	0.0660 (1.13)	0.0511 (0.86)	0.2219 (0.85)
Born 1980s	0.0017 (0.09)	0.0059 (0.28)	0.0962 (0.18)	0.0837 (1.58)	0.0637 (1.17)	0.2804 (1.17)
Born 1990s	-0.0086 (-0.43)	-0.0115 (-0.52)	-0.5928 (-0.68)	0.2515*** (3.68)	0.2218*** (3.16)	0.9816*** (3.17)
Any Children < 8yrs	-0.0135 (-0.64)	-0.0180 (-0.83)	-0.6360 (-1.00)	-0.0474 (-0.92)	-0.0425 (-0.80)	-0.1859 (-0.81)
HH Income \$75-150K	0.0050 (0.30)	0.0089 (0.52)	0.2597 (0.43)	0.0795* (1.68)	0.0686 (1.41)	0.3134 (1.47)
HH Income \$150-200K	0.0013 (0.07)	0.0024 (0.12)	-0.0318 (-0.05)	0.0859 (1.44)	0.0567 (0.93)	0.2604 (0.98)
HH Income ≥ \$200K	0.0390* (1.82)	0.0434** (2.03)	0.9756* (1.86)	0.1963*** (3.64)	0.1502*** (2.66)	0.6695*** (2.69)
> 4yr College Ed.	0.0036 (0.25)	0.0034 (0.24)	0.0886 (0.21)	0.0312 (0.82)	0.0260 (0.68)	0.1181 (0.71)
Female	-0.0233* (-1.74)	-0.0273* (-1.84)	-0.9513** (-1.99)	-0.1755*** (-4.84)	-0.1579*** (-4.04)	-0.6874*** (-4.12)
<u>Location-based variables</u>						
Contra Costa County	0.0388 (1.53)	0.0364 (1.42)	0.9218 (1.47)	0.0450 (0.71)	0.0413 (0.65)	0.1789 (0.64)
Marin County	0.0401 (0.75)	0.0236 (0.46)	0.3032 (0.33)	0.1998** (2.16)	0.1908** (2.01)	0.8956* (1.91)
Napa County	0.0724 (0.74)	0.0625 (0.62)	1.3404 (0.85)	-0.1422 (-0.91)	-0.1340 (-0.87)	-0.5916 (-0.82)
San Francisco County	-0.0201 (-0.87)	-0.0238 (-0.99)	-0.9304 (-0.97)	-0.0059 (-0.09)	-0.0249 (-0.38)	-0.1118 (-0.39)
San Mateo County	0.0127 (0.43)	0.0103 (0.35)	0.2239 (0.27)	0.0000 (0.00)	-0.0106 (-0.15)	-0.0501 (-0.16)
Santa Clara County	0.0009 (0.05)	-0.0015 (-0.08)	-0.0014 (-0.00)	-0.0215 (-0.42)	-0.0130 (-0.25)	-0.0545 (-0.24)
Solano County	0.0688 (1.42)	0.0723 (1.47)	2.0291** (2.31)	-0.0147 (-0.16)	0.0043 (0.04)	0.0301 (0.07)
Sonoma County	0.0019 (0.08)	0.0001 (0.01)	-0.2609 (-0.25)	-0.0059 (-0.07)	-0.0029 (-0.03)	-0.0253 (-0.07)
Res. Pop. Density	0.0007 (0.87)	0.0005 (0.73)	0.0174 (1.25)	0.0001 (0.07)	0.0004 (0.24)	0.0017 (0.25)
P.D. Pop. Density	0.0000 (0.03)	0.0000 (0.04)	0.0017 (0.11)	-0.0003 (-0.21)	-0.0001 (-0.06)	-0.0004 (-0.06)

Walk Score	-0.0002 (-0.58)	-0.0001 (-0.23)	0.0016 (0.17)	-0.0006 (-0.74)	-0.0008 (-0.98)	-0.0037 (-1.00)
Dist. to P.D. (10,20]	0.0294 (1.42)	0.0291 (1.40)	0.8629* (1.93)	0.0244 (0.54)	0.0322 (0.70)	0.1494 (0.73)
Dist. to P.D. (20,50]	-0.0074 (-0.41)	-0.0038 (-0.21)	0.0499 (0.09)	0.0156 (0.33)	0.0128 (0.27)	0.0582 (0.28)
Dist. to P.D. > 50mi	-0.0183 (-0.48)	-0.0264 (-0.68)	-0.4155 (-0.41)	-0.0147 (-0.13)	-0.0231 (-0.21)	-0.1110 (-0.23)
<u>Preference-over-mode-attribute variables</u>						
Safety		-0.0126 (-1.44)	-0.3069** (-1.97)		-0.0244 (-1.32)	-0.1110 (-1.35)
Low Cost		0.0114 (1.21)	0.3710 (1.54)		-0.0164 (-0.86)	-0.0726 (-0.86)
Low Hassle		0.0082 (0.94)	0.2188 (0.94)		0.0068 (0.32)	0.0340 (0.35)
Short Time		-0.0023 (-0.31)	-0.0169 (-0.08)		0.0276 (1.25)	0.1256 (1.27)
Predict. Time		-0.0021 (-0.21)	-0.1373 (-0.50)		0.0027 (0.12)	0.0137 (0.13)
Predict. Cost		-0.0014 (-0.17)	-0.0832 (-0.45)		-0.0022 (-0.12)	-0.0107 (-0.13)
Multiple Stops		0.0086 (1.50)	0.2625 (1.63)		-0.0077 (-0.57)	-0.0352 (-0.60)
Min. Env. Impact		-0.0122** (-2.07)	-0.3169*** (-3.54)		0.0203* (1.94)	0.0952* (1.90)
Social Interaction		0.0012 (0.38)	0.0353 (0.46)		-0.0038 (-0.57)	-0.0189 (-0.63)
<u>Personality and risk variables</u>						
BFI Extraversion		-0.0020 (-0.31)	-0.0351 (-0.21)		0.0183 (0.95)	0.0839 (1.00)
BFI Agreeableness		0.0048 (0.41)	0.1524 (0.47)		0.0057 (0.21)	0.0303 (0.26)
BFI Conscientiousness		0.0111 (1.22)	0.2291 (0.88)		-0.0151 (-0.64)	-0.0649 (-0.62)
BFI Neuroticism		0.0011 (0.16)	0.0686 (0.31)		-0.0002 (-0.01)	0.0000 (0.00)
BFI Openness		0.0026 (0.28)	-0.0221 (-0.09)		-0.0090 (-0.41)	-0.0407 (-0.42)
Risk Averse (\$1-20)		-0.0232 (-1.20)	-0.7746 (-1.28)		-0.1470*** (-2.87)	-0.6563*** (-2.95)
Risk Averse (\$30-40)		-0.0295 (-1.60)	-0.8502 (-1.45)		-0.1003** (-2.17)	-0.4456** (-2.24)
Risk Loving (\$60+)		0.0065 (0.26)	0.0598 (0.11)		-0.1002* (-1.81)	-0.4425* (-1.87)
Constant	0.0272 (0.94)	-0.0176 (-0.19)	-5.1774* (-1.94)	0.4083*** (5.08)	0.5026** (2.33)	-0.0674 (-0.07)
Observations	826	826	826	793	793	793
Adjusted R ²	0.00	0.01		0.05	0.06	
Observations Y=1	33	33	33	384	384	384

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. T-statistics reported in parentheses. 'OLS' models report results generated using a linear probability model, while 'logit' results were produced using logistic regression. The dependent variable = 1 in 'Adopted' models when the respondent has adopted the technology. 'Interested in Adopting' uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each

section excludes P'_i variables described in Section 3 of the paper, while the remaining columns include both X'_{igc} and P'_i .

Appendix Table D8: Interested in Adopting for Fully Automated Technology

	Interested in Adopting		
	OLS	OLS	Logit
<u>Demographic variables</u>			
Born 1930s	0.0591 (0.33)	0.1024 (0.55)	0.4805 (0.53)
Born 1940s	0.0520 (0.67)	0.0491 (0.62)	0.2194 (0.61)
Born 1950s	0.0137 (0.23)	0.0076 (0.12)	0.0335 (0.12)
Born 1970s	-0.0461 (-0.83)	-0.0554 (-0.98)	-0.2659 (-1.02)
Born 1980s	0.0581 (1.15)	0.0497 (0.97)	0.2285 (0.97)
Born 1990s	0.2359*** (3.73)	0.2297*** (3.48)	1.0942*** (3.41)
Any Children < 8yrs	0.0353 (0.72)	0.0351 (0.69)	0.1574 (0.69)
HH Income \$75-150K	0.1169** (2.56)	0.1083** (2.34)	0.5047** (2.37)
HH Income \$150-200K	0.1416** (2.53)	0.1186** (2.05)	0.5536** (2.11)
HH Income \geq \$200K	0.2216*** (4.38)	0.1934*** (3.64)	0.9089*** (3.67)
> 4yr College Ed.	0.0379 (1.06)	0.0341 (0.95)	0.1549 (0.94)
Female	-0.2635*** (-7.60)	-0.2600*** (-6.91)	-1.1577*** (-6.81)
<u>Location-based variables</u>			
Contra Costa County	-0.0187 (-0.31)	-0.0244 (-0.40)	-0.1088 (-0.39)
Marin County	0.0048 (0.05)	0.0068 (0.07)	0.0475 (0.10)
Napa County	0.0247 (0.17)	0.0108 (0.07)	0.0762 (0.12)
San Francisco County	0.0858 (1.39)	0.0833 (1.34)	0.3968 (1.36)
San Mateo County	0.0038 (0.06)	-0.0070 (-0.11)	-0.0166 (-0.05)
Santa Clara County	0.0279 (0.57)	0.0334 (0.67)	0.1647 (0.72)
Solano County	0.0559 (0.60)	0.0716 (0.74)	0.3384 (0.78)
Sonoma County	0.0827 (0.97)	0.0882 (1.01)	0.4123 (1.00)

Res. Pop. Density	-0.0021 (-1.49)	-0.0020 (-1.39)	-0.0095 (-1.36)
P.D. Pop. Density	0.0018 (1.33)	0.0018 (1.40)	0.0092 (1.43)
Walk Score	0.0004 (0.50)	0.0003 (0.39)	0.0016 (0.43)
Dist. to P.D. (10,20]	0.0079 (0.18)	0.0085 (0.20)	0.0512 (0.26)
Dist. to P.D. (20,50]	-0.0196 (-0.44)	-0.0177 (-0.39)	-0.0706 (-0.34)
Dist. to P.D. > 50mi	-0.0441 (-0.40)	-0.0430 (-0.38)	-0.2087 (-0.40)
<u>Preference-over-mode-attribute variables</u>			
Safety		0.0036 (0.21)	0.0122 (0.15)
Low Cost		-0.0063 (-0.35)	-0.0296 (-0.35)
Low Hassle		0.0173 (0.87)	0.0803 (0.87)
Short Time		-0.0001 (-0.01)	0.0047 (0.05)
Predict. Time		-0.0049 (-0.22)	-0.0243 (-0.24)
Predict. Cost		-0.0114 (-0.66)	-0.0563 (-0.71)
Multiple Stops		0.0026 (0.21)	0.0124 (0.22)
Min. Env. Impact		0.0072 (0.71)	0.0354 (0.75)
Social Interaction		-0.0024 (-0.36)	-0.0098 (-0.32)
<u>Personality and risk variables</u>			
BFI Extraversion		-0.0005 (-0.03)	-0.0013 (-0.02)
BFI Agreeableness		0.0095 (0.37)	0.0449 (0.38)
BFI Conscientiousness		0.0015 (0.06)	0.0119 (0.11)
BFI Neuroticism		0.0044 (0.23)	0.0222 (0.25)
BFI Openness		-0.0052 (-0.25)	-0.0302 (-0.32)
Risk Averse (\$1-20)		-0.1218** (-2.48)	-0.5723** (-2.53)
Risk Averse (\$30-40)		-0.0538 (-1.23)	-0.2512 (-1.25)
Risk Loving (\$60+)		-0.1405*** (-2.75)	-0.6533*** (-2.81)
Constant	0.4482*** (5.72)	0.4693** (2.22)	-0.1889 (-0.19)
Observations	823	823	823
Adjusted R ²	0.11	0.11	
Observations Y=1	438	438	438

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. T-statistics

reported in parentheses. ‘OLS’ models report results generated using a linear probability model, while ‘logit’ results were produced using logistic regression. The dependent variable = 1 in ‘Adopted’ models when the respondent has adopted the technology. ‘Interested in Adopting’ uses the subsample that has not yet adopted, and =1 when the respondent is interested in future adoption. The first OLS column of each section excludes P'_i variables described in Section 3 of the paper, while the remaining columns include both X'_{igc} and P'_i .

Appendix Table D9: Omitting observations with NA responses for determinants of choice variables – Adopted and Interested in Adopting for Shared Services

	Adopted			Interested in Adopting		
	Ride-hail Single	Ride-hail Pooled	Car- Sharing	Ride-Hail Single	Ride-Hail Pooled	Car- Sharing
Born 1930s	0.2135	-0.0604	0.0051	0.3389	-0.1462	0.1230
Born 1940s	-0.0755	-0.0548	0.0018	0.0858	-0.0977	-0.0517
Born 1950s	-0.0201	-0.0529	0.0101	-0.0058	-0.0785	0.0077
Born 1970s	0.0594	-0.0107	-0.0024	0.0020	0.0042	-0.1048**
Born 1980s	0.1890***	0.1488***	0.0176	0.1105*	0.0591	-0.0809*
Born 1990s	0.2427***	0.2233***	0.0383	0.1209	0.0805	-0.0827
Any Child < 8yrs	-0.0426	-0.0622	0.0250	-0.0502	-0.0824*	0.0253
HH Income [75K,150K)	0.0465	0.0484	0.0169	0.0260	0.0035	0.0747*
HH Income [150K,200K)	0.0693	0.0499	0.0129	-0.0505	-0.0068	0.0681
HH Income ≥ 200K	0.1720***	0.0107	0.0358*	0.0159	-0.0075	0.0393
> 4yr College Ed.	0.0434	-0.0140	0.0167	0.0262	-0.0152	-0.0336
Female	-0.0091	-0.0051	-0.0124	-0.0233	-0.0475	-0.0613*
Res. Pop. Density	0.0007	0.0025	0.0003	-0.0016	-0.0024	0.0022
P.D. Pop. Density	-0.0006	0.0004	-0.0004	-0.0002	0.0000	-0.0004
Walk Score	0.0004	0.0006	0.0007**	0.0007	0.0015*	0.0008
Dist. to P.D. (10,20]	-0.0114	0.0104	-0.0059	0.1410***	0.0102	-0.0019
Dist. to P.D. (20,50]	-0.0021	-0.0374	0.0114	0.0417	-0.0565	-0.0342
Dist. to P.D. > 50mi	0.0925	0.0312	-0.0070	0.0045	0.0616	0.0421
Safety	0.0244	0.0000	0.0057	-0.0117	-0.0025	0.0032
Low Cost	-0.0196	-0.0039	-0.0008	-0.0338	-0.0002	0.0012
Low Hassle	-0.0143	-0.0104	-0.0173*	0.0082	0.0097	-0.0009
Short Time	0.0203	-0.0099	0.0061	0.0456*	0.0132	0.0065
Predict. Time	0.0071	-0.0025	0.0098	0.0093	-0.0030	-0.0467**
Predict. Cost	0.0002	0.0345**	-0.0019	-0.0124	-0.0095	0.0058
Multiple Stops	-0.0253*	-0.0136	0.0021	-0.0044	-0.0030	-0.0005
Min. Env. Impact	0.0245***	0.0130*	0.0015	-0.0009	0.0143*	0.0264***
Social Interaction	-0.0082	-0.0014	0.0010	-0.0100	-0.0072	0.0056
BFI-10: Extraversion	0.0421**	0.0369**	0.0094	0.0311	0.0252	-0.0062
BFI-10: Agreeableness	0.0173	0.0464**	-0.0021	0.0040	0.0110	0.0316
BFI-10: Conscientiousness	-0.0048	0.0007	-0.0044	-0.0150	0.0232	-0.0339
BFI-10: Neuroticism	-0.0061	-0.0018	-0.0060	-0.0043	0.0032	0.0104
BFI-10: Openness	0.0159	-0.0011	0.0044	0.0123	-0.0149	0.0357**
Risk Averse (\$1-20)	0.0074	0.0034	0.0010	-0.1034*	-0.0500	0.0125
Risk Averse (\$30-40)	-0.0263	-0.0194	-0.0127	-0.0263	0.0298	0.0802**
Risk Loving (\$60+)	-0.0215	-0.0406	-0.0321**	-0.0014	-0.0562	-0.0114
Observations	770	770	770	546	630	748
Adjusted R ²	0.12	0.14	0.01	0.00	-0.00	0.04
Observations Y=1	224	140	22	158	135	153

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. Results were generated

using a linear probability model and have included all X'_{igc} and P'_i variables and county fixed effects described in Section 3 in the paper. The dependent variable = 1 in 'Adopted' models when the respondent has adopted the technology or service. 'Interested in Adopting' uses the subsample that has not yet adopted, and =1 when they report interest in future adoption. Constant is not reported.

Appendix Table D10: Omitting observations with NA responses for determinants of choice variables – Adopted and Interested in Adopting for Electrified Vehicle Technologies

	Adopted		Interested in Adopting	
	Hybrid	PEV	Hybrid	PEV
Born 1930s	-0.0884	-0.0847	0.0935	0.0464
Born 1940s	0.0388	0.0058	-0.0219	0.1373*
Born 1950s	0.1944***	-0.0261	0.0550	0.0941
Born 1970s	-0.0437	-0.0225	0.0239	0.0576
Born 1980s	-0.0688*	-0.0823***	0.0451	0.0774
Born 1990s	-0.0591	-0.0627*	0.1923**	0.0685
Any Child < 8yrs	-0.0012	0.0589*	-0.0067	-0.0225
HH Income [75K,150K)	0.0388	0.0008	0.0381	0.0369
HH Income [150K,200K)	0.0749*	0.0494*	-0.0985	0.1132*
HH Income ≥ 200K	0.1309***	0.0719**	-0.1138*	0.1265**
> 4yr College Ed.	0.0912***	0.0337*	0.0173	0.1053***
Female	0.0360	-0.0153	0.0360	-0.0932**
Res. Pop. Density	0.0009	0.0001	-0.0001	-0.0005
P.D. Pop. Density	-0.0016*	-0.0004	-0.0022	-0.0023*
Walk Score	0.0003	-0.0005	0.0009	0.0004
Dist. to P.D. (10,20]	0.0203	0.0335	-0.0093	0.0619
Dist. to P.D. (20,50]	0.0447	0.0361	0.0060	-0.0187
Dist. to P.D. > 50mi	-0.0452	0.0191	0.0293	0.0441
Safety	0.0073	-0.0017	-0.0284	-0.0354*
Low Cost	0.0148	0.0244**	0.0208	0.0153
Low Hassle	0.0231	-0.0211*	0.0077	0.0263
Short Time	-0.0296	0.0090	0.0352	0.0196
Predict. Time	-0.0391**	0.0088	0.0422	0.0297
Predict. Cost	0.0023	-0.0231*	-0.0311	-0.0409*
Multiple Stops	-0.0027	0.0011	-0.0217	-0.0303**
Min. Env. Impact	0.0002	0.0053	0.0204*	0.0412***
Social Interaction	-0.0001	0.0014	-0.0040	-0.0081
BFI-10: Extraversion	0.0026	-0.0087	-0.0398*	0.0186
BFI-10: Agreeableness	0.0189	0.0097	0.0349	0.0742***
BFI-10: Conscientiousness	-0.0297*	-0.0420***	0.0423	-0.0476*
BFI-10: Neuroticism	-0.0079	-0.0034	0.0062	0.0106
BFI-10: Openness	0.0192	0.0098	0.0215	0.0251
Risk Averse (\$1-20)	-0.0094	-0.0542**	-0.0841	-0.0964*
Risk Averse (\$30-40)	-0.0027	-0.0345	-0.0314	0.0242
Risk Loving (\$60+)	0.0269	-0.0436	-0.1250**	-0.1403**
Observations	770	770	652	718
Adjusted R ²	0.08	0.05	0.04	0.08
Observations Y=1	118	52	280	397

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. Results were generated using a linear probability model and have included all X'_{igc} and P'_i variables and county fixed effects described in Section 3 in the paper. The dependent variable = 1 in 'Adopted' models when the respondent has adopted the technology or service. 'Interested in Adopting' uses the subsample that has not yet adopted, and =1 when they report

interest in future adoption. Constant is not reported.

Appendix Table D11: Omitting observations with NA responses for determinants of choice variables – Adopted and Interested in Adopting Automated Vehicle Technologies

	Adopted		Interested in Adopting		
	Adaptive Cruise Control	Partially Automated	Adaptive Cruise Control	Partially Automated	Fully Automated
Born 1930s	0.1315	0.2929	0.1914	0.3735	0.2755
Born 1940s	0.0040	0.0239	0.0877	0.2039**	0.0335
Born 1950s	-0.1062**	-0.0324	0.0792	0.0771	-0.0199
Born 1970s	-0.0425	0.0072	0.0532	0.0673	-0.0545
Born 1980s	-0.0130	0.0011	0.0363	0.0833	0.0370
Born 1990s	-0.0741	-0.0170	0.1405*	0.2399***	0.2093***
Any Child < 8yrs	0.0228	-0.0140	-0.0815	-0.0366	0.0196
HH Income [75K,150K)	0.0375	0.0107	0.0511	0.0672	0.1069**
HH Income [150K,200K)	0.0529	0.0020	0.1435**	0.0720	0.1225**
HH Income ≥ 200K	0.1097***	0.0381*	0.1465**	0.1631***	0.1868***
> 4yr College Ed.	0.0251	0.0047	0.0419	0.0227	0.0377
Female	-0.0127	-0.0252	-0.1518***	-0.1566***	-0.2544***
Res. Pop. Density	-0.0007	0.0006	-0.0005	0.0004	-0.0020
P.D. Pop. Density	-0.0010	0.0001	0.0017	0.0003	0.0018
Walk Score	0.0007	-0.0001	-0.0008	-0.0010	0.0002
Dist. to P.D. (10,20]	-0.0079	0.0264	0.0180	0.0075	-0.0053
Dist. to P.D. (20,50]	-0.0092	-0.0021	0.0258	0.0038	-0.0293
Dist. to P.D. > 50mi	-0.0048	-0.0313	0.0202	0.0301	-0.0399
Safety	-0.0014	-0.0122	-0.0166	-0.0195	0.0021
Low Cost	-0.0081	0.0137	-0.0177	-0.0191	-0.0177
Low Hassle	0.0124	0.0134	-0.0170	0.0196	0.0143
Short Time	0.0230	-0.0061	0.0117	0.0224	0.0202
Predict. Time	-0.0101	-0.0002	0.0031	0.0003	0.0041
Predict. Cost	0.0098	-0.0081	-0.0191	-0.0050	-0.0055
Multiple Stops	0.0125	0.0051	-0.0126	-0.0157	-0.0091
Min. Env. Impact	-0.0234**	-0.0123**	0.0229*	0.0246**	0.0091
Social Interaction	0.0027	0.0014	-0.0171**	-0.0041	-0.0007
BFI-10: Extraversion	-0.0031	-0.0002	0.0120	0.0261	0.0069
BFI-10: Agreeableness	0.0443**	0.0019	0.0013	0.0083	0.0057
BFI-10: Conscientiousness	0.0171	0.0117	0.0292	-0.0180	-0.0099
BFI-10: Neuroticism	0.0056	0.0020	0.0137	0.0056	0.0004
BFI-10: Openness	0.0052	0.0039	-0.0048	-0.0099	-0.0020
Risk Averse (\$1-20)	-0.0576	-0.0345*	-0.0488	-0.1440***	-0.1288**
Risk Averse (\$30-40)	-0.0154	-0.0315	-0.1021*	-0.0979**	-0.0612
Risk Loving (\$60+)	0.1195**	0.0075	-0.1067*	-0.0763	-0.1296**
Observations	770	770	637	738	767
Adjusted R ²	0.03	0.01	0.04	0.06	0.10
Observations Y=1	133	32	302	357	412

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. Results were generated using a linear probability model and have included all X'_{igc} and P'_i variables and county fixed effects described in Section 3 in the paper. The dependent variable = 1 in 'Adopted' models when the respondent has adopted the technology or service. 'Interested in Adopting' uses the subsample that has not yet adopted, and =1 when they report interest in future adoption. Constant is not reported.

Appendix Table D12: When NA responses for determinants of choice variables are replaced with the value 3 – Adopted and Interested in Adopting Shared Services

	Adopted			Interested in Adopting		
	Ride-hail Single	Ride-hail Pooled	Car-Sharing	Ride-hail Single	Ride-hail Pooled	Car-Sharing
Born 1930s	0.1306	0.0844	0.0198	0.1189	-0.1510**	-0.1462
Born 1940s	-0.0715	-0.0503	0.0027	0.0877	-0.0954	-0.0587
Born 1950s	-0.0088	-0.0433	0.0126	-0.0235	-0.0580	-0.0088
Born 1970s	0.0591	0.0006	-0.0024	-0.0098	0.0054	-0.1186**
Born 1980s	0.1995***	0.1631***	0.0156	0.0963	0.0715	-0.0992**
Born 1990s	0.2509***	0.2340***	0.0368	0.1373*	0.1003	-0.0831
Any Child < 8yrs	-0.0489	-0.0602	0.0242	-0.0624	-0.0857*	0.0243
HH Income [75K,150K)	0.0311	0.0579*	0.0139	0.0352	0.0063	0.0808**
HH Income [150K,200K)	0.0614	0.0583	0.0119	-0.0491	0.0050	0.0739
HH Income ≥ 200K	0.1723***	0.0241	0.0328*	0.0252	-0.0049	0.0338
> 4yr College Ed.	0.0378	-0.0125	0.0163	0.0205	-0.0189	-0.0457
Female	0.0112	0.0002	-0.0117	-0.0240	-0.0404	-0.0642**
Res. Pop. Density	0.0006	0.0024	0.0004	-0.0019	-0.0027	0.0021
P.D. Pop. Density	-0.0007	0.0003	-0.0004	0.0001	0.0002	-0.0003
Walk Score	0.0005	0.0007	0.0006**	0.0007	0.0017**	0.0008
Dist. to P.D. (10,20]	-0.0055	0.0052	-0.0047	0.1479***	0.0036	0.0044
Dist. to P.D. (20,50]	0.0231	-0.0327	0.0102	0.0454	-0.0656	-0.0434
Dist. to P.D. > 50mi	0.0532	0.0102	-0.0096	0.0302	0.0282	0.0164
Safety	0.0233	-0.0008	0.0064	-0.0123	-0.0042	0.0034
Low Cost	-0.0188	-0.0034	-0.0008	-0.0370	0.0008	0.0009
Low Hassle	-0.0146	-0.0085	-0.0161*	0.0046	0.0081	-0.0032
Short Time	0.0213	-0.0133	0.0078	0.0494*	0.0115	0.0088
Predict. Time	0.0064	-0.0020	0.0118*	0.0059	-0.0049	-0.0465**
Predict. Cost	-0.0017	0.0349**	-0.0024	-0.0119	-0.0096	0.0049
Multiple Stops	-0.0259**	-0.0142	0.0011	-0.0005	-0.0032	0.0016
Min. Env. Impact	0.0239***	0.0128*	0.0018	-0.0009	0.0146*	0.0251***
Social Interaction	-0.0051	-0.0007	0.0012	-0.0085	-0.0075	0.0069
BFI-10: Extraversion	0.0443***	0.0447***	0.0077	0.0257	0.0241	-0.0117
BFI-10: Agreeableness	0.0198	0.0469**	-0.0033	-0.0092	0.0185	0.0369*
BFI-10: Conscientiousness	-0.0144	-0.0012	-0.0043	-0.0182	0.0086	-0.0351*
BFI-10: Neuroticism	-0.0018	0.0018	-0.0060	-0.0137	0.0065	0.0029
BFI-10: Openness	0.0166	-0.0043	0.0045	0.0132	-0.0184	0.0332*
Risk Averse (\$1-20)	-0.0093	-0.0041	0.0005	-0.0824	-0.0471	-0.0062
Risk Averse (\$30-40)	-0.0424	-0.0322	-0.0119	-0.0145	0.0375	0.0569
Risk Loving (\$60+)	-0.0298	-0.0517	-0.0291**	-0.0059	-0.0456	-0.0346
Observations	826	826	826	587	675	804
Adjusted R ²	0.12	0.15	0.02	0.01	0.01	0.05
Observations Y=1	239	151	22	170	145	167

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. Results were generated using a linear probability model and have included all \mathbf{X}'_{igc} and \mathbf{P}'_i variables and county fixed effects described in Section 3 in the paper. The dependent variable = 1 in 'Adopted' models when the respondent has adopted the technology or service. 'Interested in Adopting' uses the subsample that has not yet adopted, and =1 when they report interest in future adoption. Constant is not reported.

Appendix Table D13: When NA responses for determinants of choice variables are replaced with the value 3 – Adopted and Interested in Adopting Electrified Vehicle Technologies

	Adopted		Interested in Adopting	
	Hybrid	PEV	Hybrid	PEV
Born 1930s	-0.0574	0.0083	0.1586	0.0247
Born 1940s	0.0576	0.0078	-0.0557	0.1440*
Born 1950s	0.1626***	-0.0259	0.0475	0.1028
Born 1970s	-0.0645	-0.0235	0.0105	0.0603
Born 1980s	-0.0940**	-0.0835***	0.0400	0.0614
Born 1990s	-0.0803*	-0.0644**	0.1880***	0.0792
Any Child < 8yrs	-0.0037	0.0569*	-0.0103	-0.0164
HH Income [75K,150K)	0.0545*	-0.0002	0.0213	0.0332
HH Income [150K,200K)	0.0841**	0.0467*	-0.1216*	0.0820
HH Income ≥ 200K	0.1316***	0.0740**	-0.1583***	0.0928
> 4yr College Ed.	0.0933***	0.0298	0.0241	0.0974**
Female	0.0382	-0.0102	0.0334	-0.0985**
Res. Pop. Density	0.0010	-0.0000	-0.0004	-0.0002
P.D. Pop. Density	-0.0015*	-0.0003	-0.0021	-0.0020
Walk Score	0.0003	-0.0005	0.0011	0.0004
Dist. to P.D. (10,20]	0.0081	0.0325	0.0099	0.0779*
Dist. to P.D. (20,50]	0.0455	0.0426	0.0227	-0.0218
Dist. to P.D. > 50mi	-0.0529	0.0255	-0.0172	-0.0178
Safety	0.0023	-0.0040	-0.0130	-0.0162
Low Cost	0.0036	0.0261***	0.0130	0.0063
Low Hassle	0.0185	-0.0236**	0.0149	0.0137
Short Time	-0.0209	0.0047	0.0414*	0.0412*
Predict. Time	-0.0258	0.0130	0.0105	0.0068
Predict. Cost	0.0066	-0.0208**	-0.0423**	-0.0281
Multiple Stops	-0.0071	0.0032	-0.0198	-0.0352***
Min. Env. Impact	-0.0012	0.0055	0.0192*	0.0368***
Social Interaction	0.0003	0.0015	-0.0046	-0.0098
BFI-10: Extraversion	-0.0048	-0.0116	-0.0418**	0.0052
BFI-10: Agreeableness	0.0220	0.0096	0.0240	0.0652**
BFI-10: Conscientiousness	-0.0325**	-0.0408***	0.0390	-0.0453*
BFI-10: Neuroticism	-0.0122	-0.0038	0.0004	0.0019
BFI-10: Openness	0.0102	0.0059	0.0253	0.0259
Risk Averse (\$1-20)	0.0026	-0.0421*	-0.0899*	-0.0772
Risk Averse (\$30-40)	-0.0050	-0.0329	-0.0321	0.0200
Risk Loving (\$60+)	0.0394	-0.0467*	-0.1400**	-0.1561***
Observations	826	826	699	772
Adjusted R ²	0.07	0.06	0.05	0.07
Observations Y=1	127	54	306	426

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. Results were generated using a linear probability model and have included all X'_{igc} and P'_i variables and county fixed effects described in Section 3 in the paper. The dependent variable = 1 in ‘Adopted’ models when the respondent has adopted the technology or service. ‘Interested in Adopting’ uses the subsample that has not yet adopted, and =1 when they report interest in future adoption. Constant is not reported.

Appendix Table D14: When NA responses for determinants of choice variables are replaced with the value 3 – Adopted and Interested in Adopting Automated Vehicle Technologies

	Adopted		Interested in Adopting		
	Adaptive Cruise Control	Partially Automated	Adaptive Cruise Control	Partially Automated	Fully Automated
Born 1930s	-0.0414	0.0651	0.0233	0.1270	0.1024
Born 1940s	0.0271	0.0269	0.0698	0.2159***	0.0491
Born 1950s	-0.0960**	-0.0300	0.0647	0.0615	0.0076
Born 1970s	-0.0305	0.0169	0.0167	0.0511	-0.0554
Born 1980s	-0.0160	0.0059	0.0046	0.0637	0.0497
Born 1990s	-0.0706	-0.0115	0.1043	0.2218***	0.2297***
Any Child < 8yrs	0.0356	-0.0180	-0.0739	-0.0425	0.0351
HH Income [75K,150K)	0.0427	0.0089	0.0487	0.0686	0.1083**
HH Income [150K,200K)	0.0513	0.0024	0.1128*	0.0567	0.1186**
HH Income ≥ 200K	0.1131***	0.0434**	0.1115*	0.1502***	0.1934***
> 4yr College Ed.	0.0255	0.0034	0.0458	0.0260	0.0341
Female	-0.0070	-0.0273*	-0.1576***	-0.1579***	-0.2600***
Res. Pop. Density	-0.0008	0.0005	-0.0002	0.0004	-0.0020
P.D. Pop. Density	-0.0011	0.0000	0.0015	-0.0001	0.0018
Walk Score	0.0008	-0.0001	-0.0006	-0.0008	0.0003
Dist. to P.D. (10,20]	-0.0028	0.0291	0.0509	0.0322	0.0085
Dist. to P.D. (20,50]	-0.0028	-0.0038	0.0355	0.0128	-0.0177
Dist. to P.D. > 50mi	-0.0240	-0.0264	-0.0056	-0.0231	-0.0430
Safety	-0.0054	-0.0126	-0.0059	-0.0244	0.0036
Low Cost	-0.0033	0.0114	-0.0135	-0.0164	-0.0063
Low Hassle	0.0151	0.0082	-0.0157	0.0068	0.0173
Short Time	0.0227	-0.0023	0.0188	0.0276	-0.0001
Predict. Time	-0.0146	-0.0021	0.0040	0.0027	-0.0049
Predict. Cost	0.0169	-0.0014	-0.0212	-0.0022	-0.0114
Multiple Stops	0.0130	0.0086	-0.0154	-0.0077	0.0026
Min. Env. Impact	-0.0242***	-0.0122**	0.0188	0.0203*	0.0072
Social Interaction	0.0019	0.0012	-0.0168**	-0.0038	-0.0024
BFI-10: Extraversion	-0.0053	-0.0020	0.0151	0.0183	-0.0005
BFI-10: Agreeableness	0.0448**	0.0048	-0.0017	0.0057	0.0095
BFI-10: Conscientiousness	0.0149	0.0111	0.0251	-0.0151	0.0015
BFI-10: Neuroticism	0.0011	0.0011	0.0080	-0.0002	0.0044
BFI-10: Openness	0.0024	0.0026	-0.0040	-0.0090	-0.0052
Risk Averse (\$1-20)	-0.0471	-0.0232	-0.0628	-0.1470***	-0.1218**
Risk Averse (\$30-40)	-0.0093	-0.0295	-0.1060**	-0.1003**	-0.0538
Risk Loving (\$60+)	0.1254***	0.0065	-0.1198*	-0.1002*	-0.1405***
Observations	826	826	688	793	823
Adjusted R ²	0.04	0.01	0.03	0.06	0.11
Observations Y=1	138	33	329	384	438

* p<0.10, ** p<0.05, *** p<0.01 report statistical significance for robust standard errors. Results were generated

using a linear probability model and have included all \mathbf{X}'_{igc} and \mathbf{P}'_i variables and county fixed effects described in Section 3 in the paper. The dependent variable = 1 in 'Adopted' models when the respondent has adopted the technology or service. 'Interested in Adopting' uses the subsample that has not yet adopted, and =1 when they report interest in future adoption. Constant is not reported.

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