



Caltrans Division of Research,
Innovation and System Information

Research



Results

Planning, Policy,
and Programming

The Mobility of Generation Y (Millennials) in California – Phase 2

An investigation of the impact of residential location, lifestyles and emerging technologies on the travel behavior of young adults in California

WHAT IS THE NEED?

Young adults (“millennials”, or members of “Generation Y”) are increasingly reported to have different lifestyles and travel behavior from previous generations at the same stage in life. They postpone the time they obtain a driver’s license, often choose not to own a car, drive less if they own one, and use alternative non-motorized means of transportation more often. Several explanations have been proposed to explain the behaviors of millennials, including their preference for urban locations closer to the vibrant parts of a city, changes in household composition, and the substitution of travel for work and socializing with telecommuting and social media. However, the research in this area has been limited by the lack of comprehensive data on the factors affecting millennials’ residential location and travel choices (e.g., information about individual attitudes, lifestyles and adoption of shared mobility is not available in the U.S. National Household Travel Survey and most regional household travel surveys).

Improving the understanding of the factors and circumstances behind millennials’ mobility is of outmost importance for scientific research and planning processes. Millennials make up a large portion of the population, and their travel and consumer behavior will have large effects on the future demand for travel and goods. Further, millennials are often early adopters of new trends and technologies that are later adopted by other segments of society: improving the understanding of millennials’ choices will likely increase the ability to understand and predict future trends more at large.

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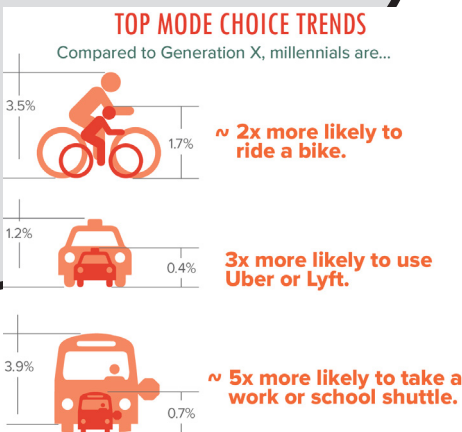
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The Mobility of Generation Y (Millennials) in California – Phase 2

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WHAT WAS OUR GOAL?

This study sought to provide critical insights into the motivations affecting young adults' travel behavior and car ownership aspirations. The goal was to allow researchers and policy-makers to better understand likely future trends in travel demand, and the potential responses to policies designed to increase transportation sustainability.

WHAT DID WE DO?

This study built upon a large research effort launched by the National Center for Sustainable Transportation to investigate the emerging transportation trends and the impacts of the adoption of new transportation technologies in California, particularly among the younger cohorts, i.e., the millennials that live in the State and the members of the preceding Generation X. During the previous stages of the research, we designed a detailed online survey that we administered in fall 2015 to a sample of 2400 residents of California, including millennials (young adults, 18-34 in 2015) and Gen Xers (35-50 year-old adults). We used a quota sampling approach to recruit respondents from each age group (young millennials, older millennials, young Gen Xers, and older Gen Xers) across all combinations of major geographic region of California and neighborhood type (urban, suburban, and rural). The result is the California Millennials Dataset, a comprehensive dataset that contains information on the respondents' personal attitudes; lifestyles; adoption of online social media and use of information and communication technology (ICT) devices and services; residential location and living arrangements; commuting and other travel patterns; auto ownership; awareness, adoption and frequency of use of various shared mobility services; major life events in the past three years; expectations for future events; propensity to purchase and use a private vehicle vs. to use other means of travel; political ideas,

and sociodemographic traits.

In this Part II study, the researchers augmented the California Millennials Dataset with additional variables measuring land use and built environment characteristics available from other sources, including the U.S. Environmental Protection Agency's Smart Location dataset, and the walkscore, bikescore and transitscore from the commercial website walkscore.com, based on the geocoded residential location of the respondents. In addition, the researchers weighted the data to correct the distribution of cases in the sample, and replaced the non-representativeness of the data, based on the region of California where the respondents live, the neighborhood type, the age group, gender, student and employment status, household income, race and ethnicity, and presence of children in the household. The Part II report summarizes the findings from the analyses of the residential location, travel behavior and vehicle ownership of millennials and members of the preceding Generation X developed in this stage of the research.

WHAT WAS THE OUTCOME?

We found many differences in the lifestyles and behaviors of millennials and members of the preceding Generation X, which can be attributable to a combination of lifecycle, period and generational effects. Several differences are observed in the adoption of travel multimodality, vehicle miles traveled, and car ownership. We analyzed the attitudinal profiles of millennials and Gen Xers, identifying some differences in attitudes towards the environment, technology embracing, materialism and adoption of cars (even if the differences for several attitudinal dimensions are not large).

We focused on residential location and the adoption of multimodality among the members of

the two generations. In this analysis, we further distinguished independent millennials, who have already established their households, from dependent millennials, who still live with their family of origin. We compared the multimodal characteristics of individuals' travel behavior to the accessibility, by mode, from the respondents' residential location, and discussed differences observed between those that travel by car by necessity (e.g. because they live in locations where few travel options are available) and those that do so by choice (e.g. despite the availability of other modes). Independent millennials are found, on average, to choose more central, and accessible, residential locations, and they more often adopt multimodal travel. At the other end of the spectrum, the members of the preceding Generation X by far rely the most on the use of private vehicles. Interestingly, dependent millennials, even if they live, on average, in the least accessible locations, more often engage in multimodal travel.

We then modeled the self-reported vehicle miles traveled (VMT) by millennials and Generation X, and found that millennials travel less than members of Generation X, even after controlling for the effects of sociodemographic traits and variables related to the stage in life, such as age and income. Larger heterogeneity is found in millennials' VMT, probably due to the impact of additional factors that cannot be fully captured by controlling for the impact of built environment variables and sociodemographic variables.

We estimated a multinomial logit model of vehicle type choice using six aggregated vehicle type categories: Compact/Small, Midsize, Full-size/ Large, SUV, Luxury, and Luxury SUV. Consistent with expectations, as age increases the likelihood to own to own large or full-sized vehicles increases. Not surprisingly, the presence of children in the household increases the probability

of owning SUVs and large vehicles. Further, we estimated the impact of individual attitudes and preferences on vehicle choices. Individuals who feel they are more established in life (good career, happy with living conditions, etc.) are less likely to own small or compact vehicles.

The study provides useful insights for planners and policy-makers, through improving the understanding of millennials' choices and the impact of lifecycle, period and generational effects on future travel. Future stages of the research will focus on the analysis of additional components of millennials' choices, including the current residential location, the future aspirations to modify vehicle ownership and travel choices, the adoption of shared mobility services, and the relationships between the adoption of shared mobility services, household's vehicle ownership and other components of travel behavior (e.g. frequency of use of other transportation modes).

WHAT IS THE BENEFIT?

This research contributes to improving the understanding of the travel behavior of millennials, who represent an influential demographic group for future passenger travel. Previous studies in this area have been limited by the lack of information on specific variables (e.g. personal attitudes and preferences, for studies based on National Household Travel Survey data), or the use of convenience samples (e.g. studies on university students). The analysis of the California Millennials Dataset provides useful insights for planners and policy-makers into millennials' choices, it helps understand the evolving nature of travel behavior at a time of deep transformation in social habits and transportation technology, and it allows researchers and planners to investigate the impacts of lifecycle, period and generational effects on future travel demand and vehicle ownership.