

ANALYSIS BRIEF

TRENDS IN HOUSEHOLD TRAVEL BY LIFE-CYCLE

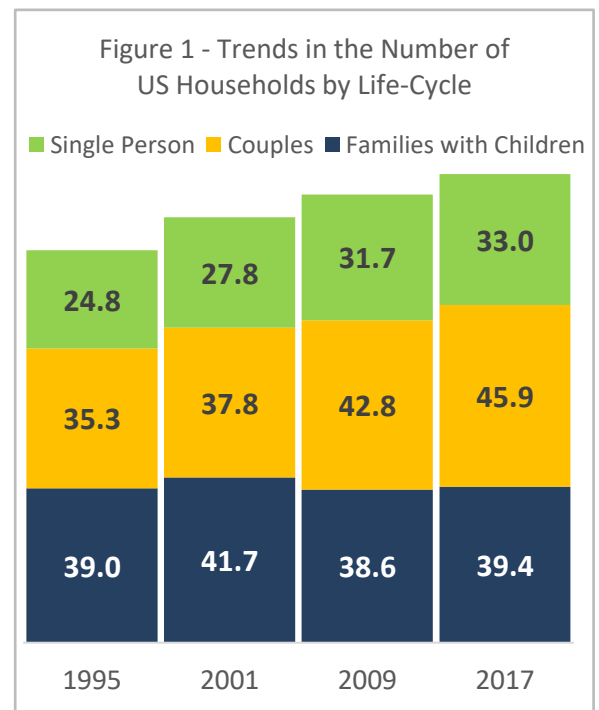


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The 2017 National Household Travel Survey results indicate that overall people are traveling less than previously. Researchers and policymakers wonder what effect large-scale demographic changes have on travel demand. The Baby Boomers are starting to move into the empty-nest and retirement stages of their lives, typified by lower overall travel rates. At the same time, Millennials are delaying marriage, household formation, and child-rearing. The result is that a smaller proportion of US households include children than previously. In addition, the 2017 NHTS data indicate that households with children—while still having the highest trip rates--had the greatest declines in travel. This brief uses the National Household Travel Survey data series to examine the trends in household trip rates for households with and without children.

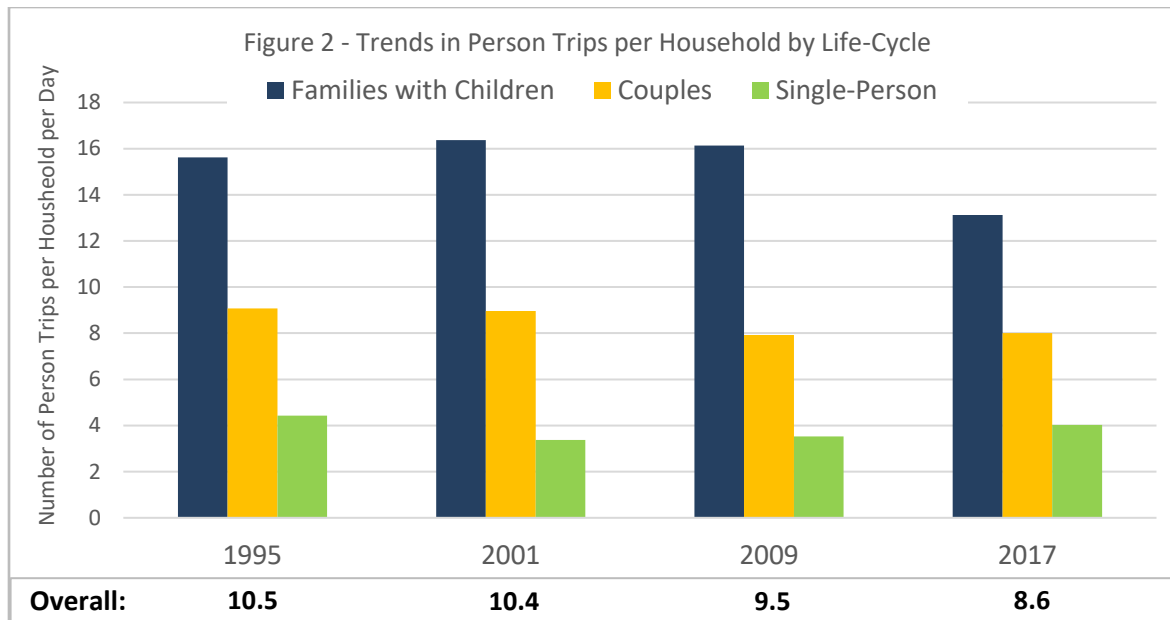
People at different stages of life travel differently¹, and children in the household increase travel rates since parents become chauffeurs for children's activities. The types of trips and the purpose of travel shifts as children grow from infants to teenagers, but regardless of age children change the travel patterns in their households.

Nation-wide, the aging of the Baby-Boomers and delayed household formation of the Millennials is reflected in the relative decline in the proportion of households with children. The number of households with children has not grown at the same rate as other types of households (see Figure 1). Between 1995 and 2017, the number of single person households increased by 33 percent, the number of couple households increased by 30 percent and the number of households with children increased by just 1 percent.



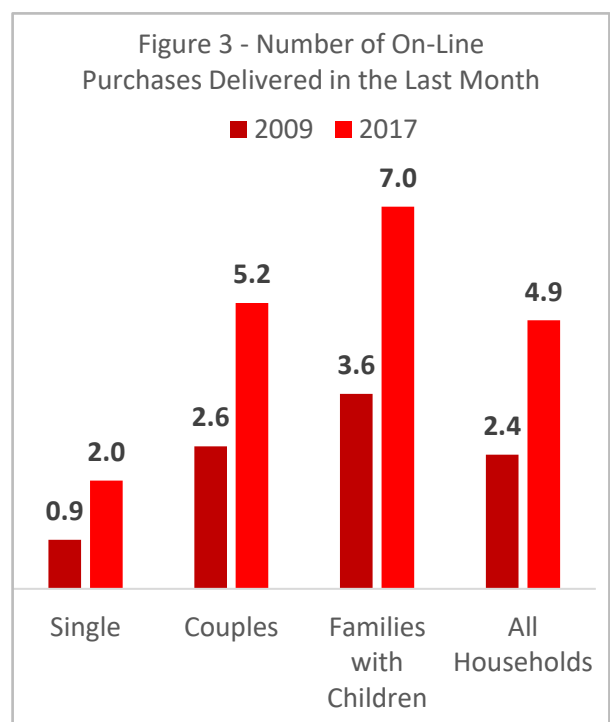
While the number of households with children remained about the same, their travel rates changed the most (see Figure 2). Household trip rates (all trips for all purposes by all means of travel) for households with children dropped from an average of 16 trips per day in 1995 to just over 13 trips per day in 2017. In comparison, the trip rates for couple households stayed the same, while travel by single-person households grew slightly (fueled by the growth in travel by people aged 65 and older²).

Many factors influence travel rates and researchers are especially interested in the impact of on-line activities, especially shopping on-line--since the declines in trip-making come primarily from declines in travel for shopping and errands². Interestingly, time-use trends indicate that people are simply spending more time at home instead of spending time in travel and out-of-home activities³.



The NHTS data shows that the average number of on-line deliveries per household doubled between the 2009 and 2017, and that households with children used online delivery more than other household types (see Figure 3).

More research is needed, however, since method changes in the 2017 NHTS may account for some of the declines in reported travel. For instance, the 2017 NHTS was primarily completed via self-reports on the web, compared to previous surveys which were telephone interviews. While self-reporting their travel, some people might under-report incidental stops or short trips. The 2017 survey also required that all household members complete their travel reports, which adds burden to households with children (an adult completes the travel report for children in the household). In fact, the 2017 NHTS has a higher proportion of children reporting no travel on the assigned day than previous surveys—which will be the subject of another brief.



¹ For example, see Zimmerman, C. "The life cycle concept as a tool for travel research", *Transportation*, 1982 at: <https://link.springer.com/article/10.1007/BF00165594> and

Chatterjee, K; Joachim, S.; "Understanding changing travel behaviour over the life course: Contributions from biographical research" 14th International Conference on Travel Behaviour Research, 2015

² See McGuckin, N.; Fucci, A.; "Summary of Travel Trends: 2017 National Household Travel Survey", 2018 at: <https://www.researchgate.net/project/NHTS-2017-Summary-of-Travel-Trends>

³ Sekar, Ashok; Williams, Eric; Chen, Roger; [SEKAR] *Changes in Time Use and Their Effect on Energy Consumption in the United States*, *Joule*, Vol 2, Issue 3, P521-536, March 21, 2018, at: [https://www.cell.com/joule/fulltext/S2542-4351\(18\)30003-5](https://www.cell.com/joule/fulltext/S2542-4351(18)30003-5)