



FHWA NHTS

BRIEF

About the NHTS

Conducted periodically since 1969 by the Federal Highway Administration (FHWA), the NHTS collects travel data from a sample of U.S. households. The information is used to understand trends in the Nation's trip-making and miles of travel by mode, purpose, and time-of-day for use in policy, planning, and safety.

Data are collected for household members for each day of the year, yielding a rich demographic profile linked to daily travel and vehicle characteristics.

For more information:

<http://nhts.ornl.gov>



U.S. Department of Transportation
Federal Highway Administration

CHANGES IN ONLINE SHOPPING TRENDS

2017 National Household Travel Survey

August 2018

Online shopping is a thriving market, reflecting the increasing development of information technology and convenience of electronic commerce over the last decade. In an effort to track trends associated with increased access to technology, the National Household Travel Survey (NHTS) began to query respondents ages 16 and older on how many times they purchased a product online for at-home delivery (referred to in this brief as “online shopping”) in the past 30 days. According to the 2017 NHTS survey results, more than half (i.e., 55%) of respondents indicated that they had made at least one online purchase in the last 30 days, with most making, on average, five purchases.⁽¹⁾ This is a 12% increase when compared to the 2009 NHTS survey results, where only 43% of respondents reported similar behavior.⁽²⁾ It is important to note that these differences in the levels of online shopping do not necessarily correspond to differences in travel behavior. While one of the most immediate and expected outcomes of online shopping is a decline in physical shopping trips, the 2017 NHTS results showed very little variation in the proportion of home-based shopping trips captured in the survey—those making online purchases reported that 20% of their total trips were home-based shopping trips as compared to 22% of reported trips for those who did not.⁽¹⁾

Though it is evident that increased access to technology has had a direct impact on the number of online shoppers, other factors, such as respondents' reported Internet usage, geography, household composition, and demography, have also played a role. For example, online shopping is directly proportional with frequency of Internet usage. In the 2017 NHTS, Internet usage was asked at the household level, while online shopping was asked of household members age 16 or older. The majority of households (i.e., 87.5%) reported daily

Internet usage.⁽¹⁾ Of the remaining household households, 6.3 reported using a few times per week, month, or year; 5.6% reported never using the Internet; while 0.6% did not respond to the question (see figure 1).⁽¹⁾

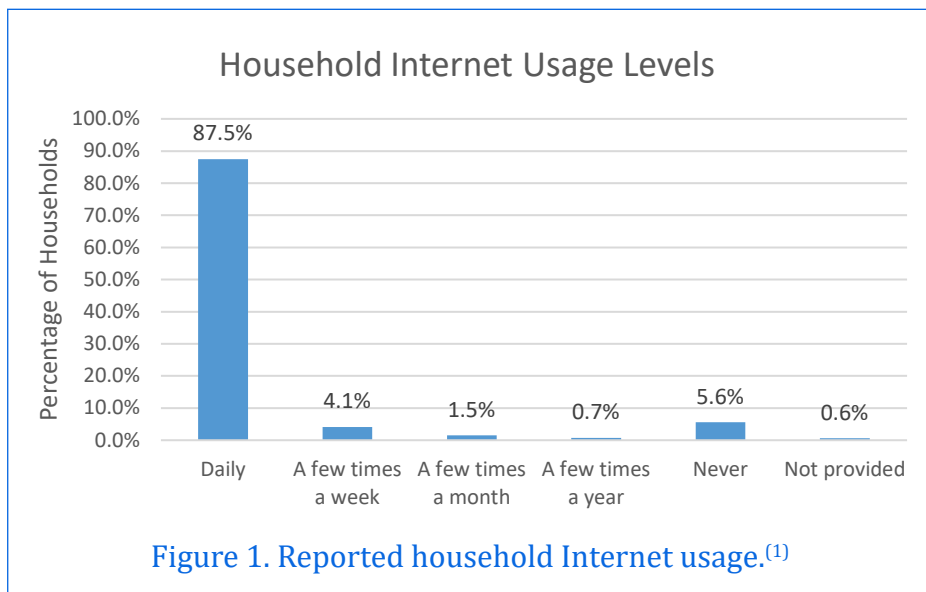


Figure 1. Reported household Internet usage.⁽¹⁾

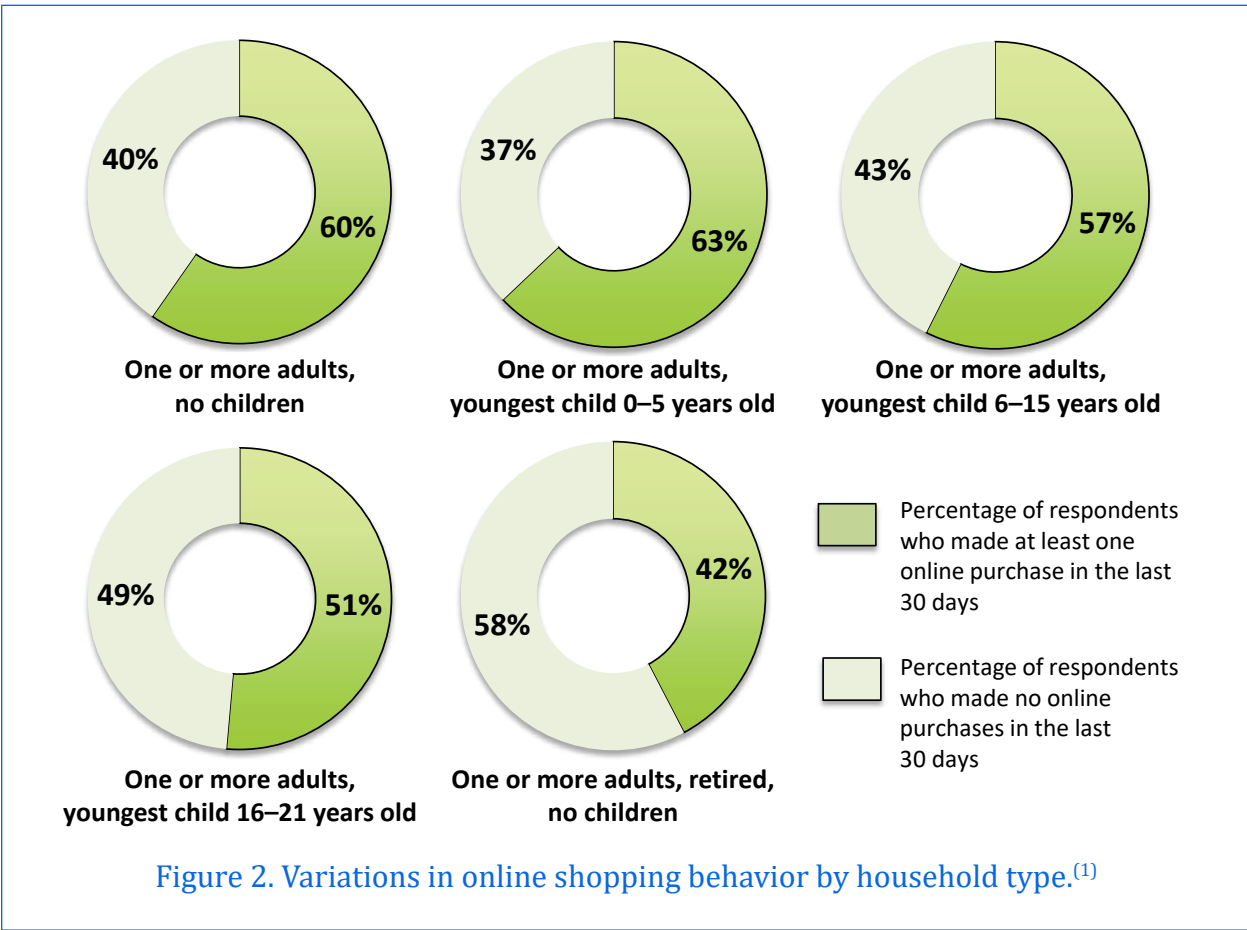
Among respondents from those 87.5% of households who reported

daily Internet usage, 59% made at least one online purchase in the past 30 days. This compares to only 18% of respondents in households using the Internet at any other level who also reported making an online purchase in the past 30 days.

Geographically speaking, reports of online shopping were fairly equal across U.S. Census regions. The percentages of respondents who shopped online at least once in the past 30 days were 53% in the South, 54% in the Midwest, 57% in the West, and 58% in the Northeast. There was more of a difference reported in online shopping when considering urban versus rural locations. Specifically, the growth in online shopping from 2009 to 2017 was greater for respondents living in urban areas as compared to their rural counterparts—reported online shopping increased from 43% to 56% for urban respondents (i.e., a 13% increase), while rural respondents documented an increase from 42% to 51% (i.e., a 9% increase) for the same time period.^(1,2) These differences in growth rates between urban and rural areas may, to some extent, reflect unequal broadband availability. According to 2016 American Community Survey 1-year estimates, 83% of urban households had broadband subscriptions as compared to 76% of rural households.⁽³⁾

In terms of Internet usage by household composition, the proportion of households comprised of retirees in the 2017 NHTS reported lower levels of shopping online as compared to all other household types. As shown in figure 2, online shopping was highest for those households with young children (63%) or with no children (60%). Reports of online shopping among households with children decreased as the age of the children increased.

Other demographic characteristics also influence online shopping. According to the 2017 NHTS, respondents in households above the poverty line were almost twice as likely to make online purchases compared to respondents in households below the poverty level (i.e., 61% versus 33%).⁽¹⁾ Similar trends were also noted in the 2009 NHTS results (i.e., 45% versus 25%) (see table 1).



In sum, this brief is intended to provide a quick understanding of how online shopping varies based on access to technology, Internet usage, geography, household composition, and demographic characteristics. The level of reported online shopping in the 2017 NHTS represents an increase from that reported in the 2009 NHTS and is shown to be related to increased access to technology and the Internet. The increase in online shopping rates is fairly consistent across the United States, with higher reports for respondents living in urban areas as compared to their rural counterparts. In addition, respondents living in households with small children (ages 0–5) or no children report higher levels than other household types. This analysis also showed that those living above the poverty levels reported higher online shopping rates as compared to those living in households below poverty levels. Future research can help to further determine the relationship of online shopping behavior with travel patterns.

Table 1. Percentage of respondents shopping online at least once in the last 30 days by poverty level and year.^(1,2)

Poverty Level	2009 NHTS	2017 NHTS
Below poverty	25%	33%
Above poverty	45%	61%

Note: Only includes respondents who reported online shopping.

References

1. Federal Highway Administration. (2017). *2017 National Household Travel Survey*, U.S. Department of Transportation, Washington, DC. Available online: <https://nhts.ornl.gov>.
2. Federal Highway Administration. (2009). *2009 National Household Travel Survey*, U.S. Department of Transportation, Washington, DC. Available online: <https://nhts.ornl.gov>.
3. American Community Survey. (2016). "Table GCT2801: Percent of Households With a Broadband Internet Subscription, United States-Urban/Rural," *2016 ACS 1-Year Estimates*, U.S. Census Bureau, Washington, DC. Available Online: <https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2016/1-year.html>.

Contact Information

For more information, please visit our website at <http://nhts.ornl.gov> or contact:

Daniel Jenkins
NHTS Program Manager
Federal Highway Administration
daniel.jenkins@dot.gov