

Dawn of Change

During the past few years, a nexus of new transportation trends has emerged, threatening to redefine urban mobility as we know it. The sharing economy, in which mobile smartphone apps have allowed personal goods to be efficiently shared for commercial profit, has crept into everyday transportation needs. Companies such as Uber, Lyft, Zipcar, Car2Go, Enterprise CarShare and Turo have many considering whether this is the beginning of the end of personal vehicle ownership. The rise of car-sharing has received ample attention, and raised many questions for fuels and vehicle market stakeholders. Where is car-sharing happening and among which demographic? Has car-sharing had any impact on vehicle ownership and VMT? Have these trends had any impact on fuel demand? This report provides objective data to help answer these questions.

National Phenomenon?

The vast majority of car-sharing vehicles are located in the most populous metro areas. These companies specifically target areas where people may not have a car but may still have the money, and tech-savvy, to use the service at a price that will pay for all the costs of providing the service plus a sustainable profit margin. All companies profiled have 89% of their fleets in metro areas with more than one million residents. The top 10 cities for each company include New York City, Washington D.C., San Francisco and as far as Seattle, proving that this is an urban and metropolitan phenomenon.

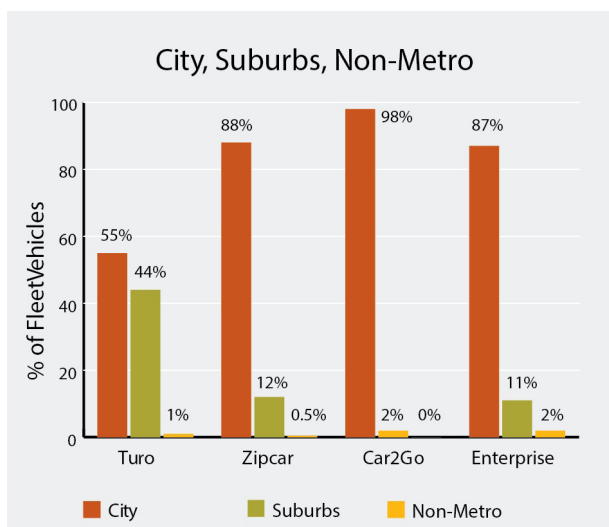


Figure 8: City, Suburbs, Non-Metro
(Source: Inventory downloads from online booking systems; September 2015, October 2015)

Who is the Customer?

It's a common thought that car-sharing services are used primarily by college-age consumers. Is this true? While the median age of users is younger than the median U.S. average, these services are not primarily used by consumers in their twenties. On the contrary, the average customer is 10% more likely to already have a college degree and live in an area where the median home value is more than double the U.S. average. This is likely due to the heavy concentration of services in large, dense metropolitan areas (which tend to have high land values).

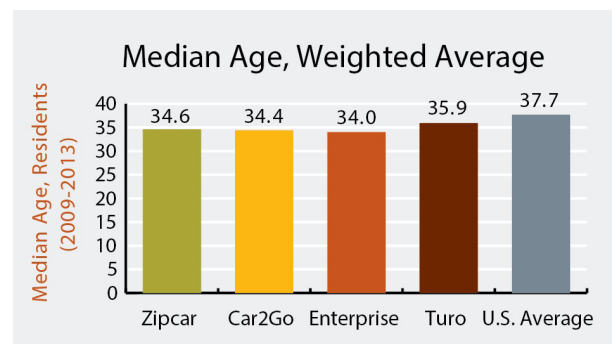


Figure 37: Median Age, Weighted Average
(Sources: U.S. Census, 2009-2013 American Community Survey, 5-Year Estimates; Inventory downloads from online booking systems; September 2015, October 2015)

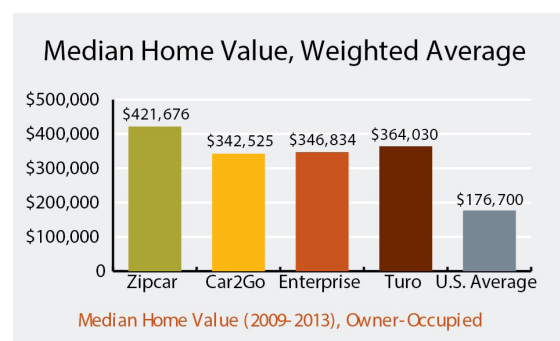


Figure 40: Median Home Value, Weighted Average
(Sources: U.S. Census, 2009-2013 American Community Survey, 5-Year Estimates; Inventory downloads from online booking systems; September 2015, October 2015)

Ownership Trending Down?

Various reports have stated that since the introduction of car-sharing, approximately 500,000 vehicle purchases have been foregone. This brings along more questions than answers. For example, if this were true, then why has there been no change at all in household vehicle ownership in metropolitan areas? On the other hand, it could also be that these reports are accurate and these avoided purchases were indeed avoided, but 500,000 vehicles are a tiny proportion (0.2%) of the total U.S. vehicle fleet of 250 million that the flat trend for vehicle ownership per household could actually factor in the avoided purchases and still remain flat.

A similar logic could apply to the now flat VMT trend-line seen nationwide. It may be that sharing economy companies have caused changes in VMT utilization patterns, but these changes have been so focused in narrowly targeted micro-areas that they do not show up in aggregate numbers for the VMT of all U.S. urbanized areas.

Tabulation of Vehicles per Household, All U.S.

| Year | Estimated Vehicles per Household |
|------|----------------------------------|
| 2005 | 1.72 |
| 2006 | 1.73 |
| 2007 | 1.73 |
| 2008 | 1.72 |
| 2009 | 1.72 |
| 2010 | 1.71 |
| 2011 | 1.70 |
| 2012 | 1.70 |
| 2013 | 1.71 |
| 2014 | 1.72 |

Figure 44: Tabulation of Vehicles per Household, All U.S. Metro Areas, 2005–2014
(Sources: U.S. Census, American Community Survey, 1-Year Estimates)

Conclusion

The rise of car-sharing services is still in its infancy and their fleets represent less than 0.1% of the vehicle market. However, the strategies of the companies engaged in this service are focused on more densely populated, affluent communities, which will allow them the ability to grow at a scale consistent with their markets and to take advantage of the anticipated growth of urban environments.

For both vehicle ownership and VMT, the data presented in this study should be seen as a very basic starting point for future tracking. It is helpful to look at aggregates, since they do define the total scope or universe of what is being studied, but it is not enough. Some amount of research is starting to be done, but has mostly been limited to surveys with a small sample size and has not been done systematically on a nationwide basis. The critical long-term question will be whether measurable changes in narrowly targeted micro-areas, if found to exist, will scale up into large-scale macro trends.

About Fuels Institute

The Fuels Institute, founded by NACS in 2013, is a non-profit research-oriented think tank led by a diverse Board of Directors and driven by a Board of Advisors. We are dedicated to evaluating the market issues related to vehicles and the fuels that power them. The Institute incorporates the perspective of interested stakeholders by commissioning and publishing comprehensive, fact-based research projects. These stakeholders include but are not limited to fuel retailers, fuel producers and refiners, alternative and renewable fuel producers, automobile manufacturers, environmental advocates, consumer organizations, academics, government entities and other stakeholders with expertise in the fuels and automotive industries.

About the Author

This report was prepared for the Fuels Institute by Hart Schwartz, Research Associate of Clarify Consulting & Research, LLC. Hart can be reached at hschwartz@clarifyconsulting.com.