

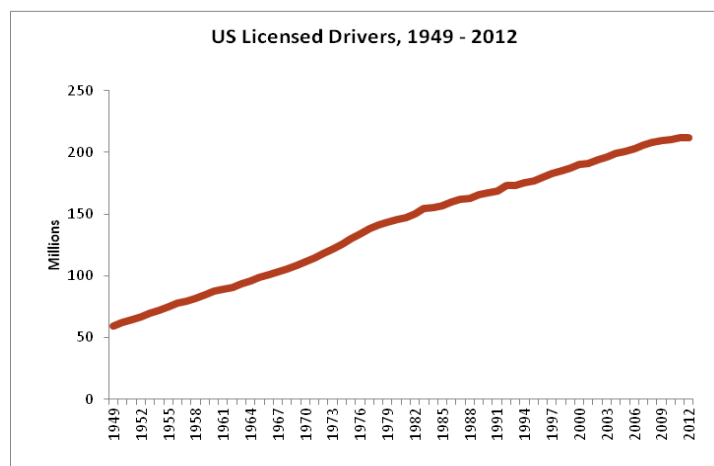
## Driver Demographics – The American Population’s Effect on Vehicle Travel and Fuel Demand

June 2016

### A Driving Society

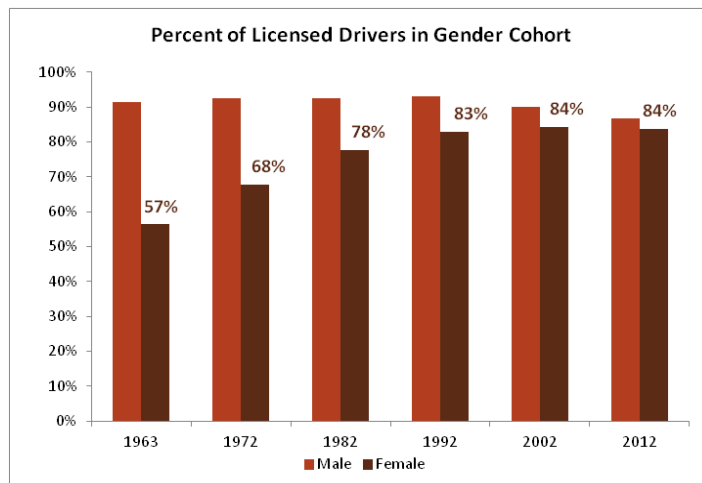
Through 2012, it appeared as if transportation demand had stabilized after a century of continuous growth. Recent increases in reported vehicle miles traveled (VMT), associated with the sustained lower price of fuel, seem to have returned the U.S. to a trajectory of increased vehicle travel. But the factors that are contributing to that growth are different from what drove growth in the 20th century and the fundamentals underlying the future trends in travel are very different from historic norms.

This report, first released in January 2015, takes an historic and detailed look at the effect on travel of such demographic variables as gender, age, income, wealth and employment. Through this analysis, it is clear that the natural capacity of almost every VMT growth factor related to drivers has been reached, with the exception of general population growth.



### Expansion of Female Drivers

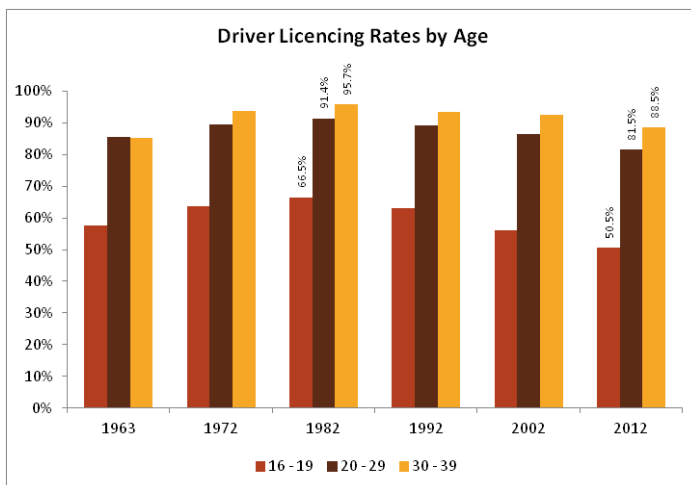
The single biggest contributor to increased frequency of driver licensing, and increased VMT followed by saturation, has been the mass entry of women into the “driving society.” Female licensing rates seem to have plateaued in the early 1990s, at which time it can be assumed that every woman in the U.S. who wants a driver’s license has one. The increase in participation correlates directly with expansion of women in the work force, which has risen dramatically since 1960. The behavioral pattern of female driving is unmistakable, but it is a non-repeatable trend. If VMT is to continue growing, other sources of growth will need to contribute.



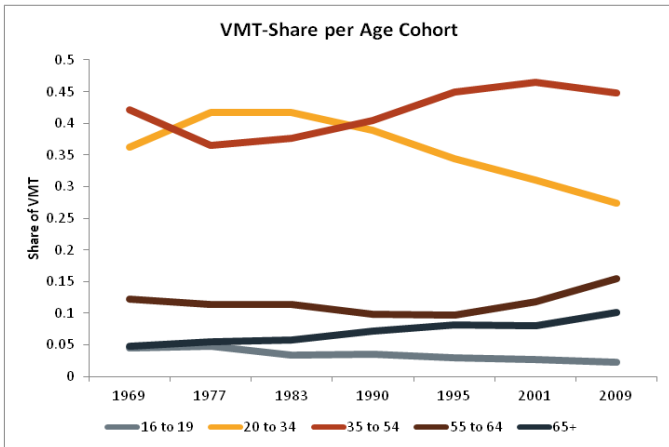
### Boomers to Millennials

Over the next 20 years, growth in driving by baby boomers may offset a decline in driving by millennials. Longer term, the effect of driving rates is less clear. If millennials’ patterns follow the traditional age-cohort patterns, then millennials will likely drive more as they get older. However, historical data indicates that generations tend to behave similarly throughout their lives, which would suggest that millennials who today drive less than boomers at the same age will likely continue to drive less than boomers even as their driving frequency increases with age.

The trend of reduced driving rates among younger consumers is unmistakable. Since 1982, the number of teens with driver’s licenses has dropped 16%, while the licensing rates for those in their 20s has dropped nearly 10% and for those in their 30s more than 7%.

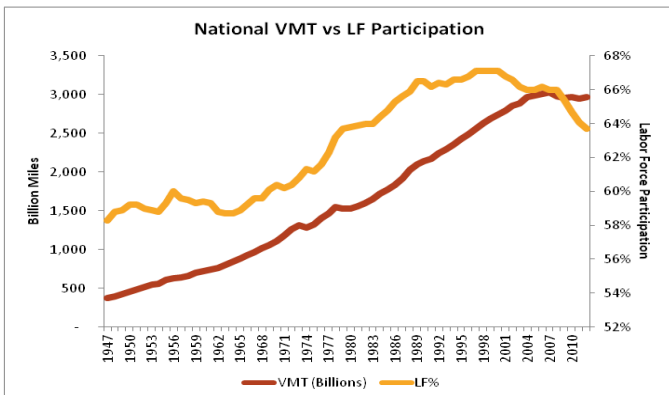


In addition to evaluating the driver licensing rates of age groups, how much each cohort drives is another valuable indicator of their overall influence on the market. Drivers between the ages of 20 and 54 have historically represented the greatest share of overall VMT in the United States, but their driving volume is declining. For those in their 20s, there has been a steady decline in miles traveled since 1983. In fact, in the past decade the only age groups that have recorded an increase in total miles traveled are those over the age of 55.



## Employment Influences Travel

The demographic interplay between one major population—the drivers—and another major population—the workers—is pivotal. There is a strong correlation that indicates workers drive more than non-workers. Historically since 1947, the trends in labor force participation and VMT have been strongly correlated, although not universal, indicating the effect of additional variables. However, the recent decline in labor force participation rates, drop in VMT and effect on driving rates among younger age cohorts are related. Workers in their teens and 20s experienced a significant drop off in labor force participation since 2002, while older workers have increased their participation. This correlates to the trends witnessed in driver licensing rates and could contribute to a greater understanding of the long term trends that may befall younger drivers and their potential VMT patterns.



## Conclusion

The fuels and vehicles industries are currently entering a period of massive change, which may last a generation. No one quite knows what business models will prove successful as alternate fuels and drivetrains mature. As regulatory requirements change, fuel efficiency increases and alternative fuels are introduced to the market, the concerns over future fuel consumption will only increase.

The paradigm shifts that are underway will take place within the overall context of a relatively fixed end-user market. The technological changes already underway will give rise to strategic business problems of market fragmentation. How to pay for multiple infrastructures of petroleum, electric, hydrogen, diesel, natural gas, biofuels and the like will be complicated by the fact that these parallel worlds will serve an end market which is not growing very rapidly, if at all.

Through a compelling analysis of historic demographic trends, “Driver Demographics” provides insight into the factors that may ultimately affect long-term driving patterns. The saturation of several factors, which limits their individual effect on overall driving behavior, is critical to understanding the development of the transportation market. Further, by illuminating the relationship between economic factors and age-related driving patterns, this report provides valuable context to market fundamentals to help guide those seeking to understand trends that can affect long-term market development.

## 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

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