

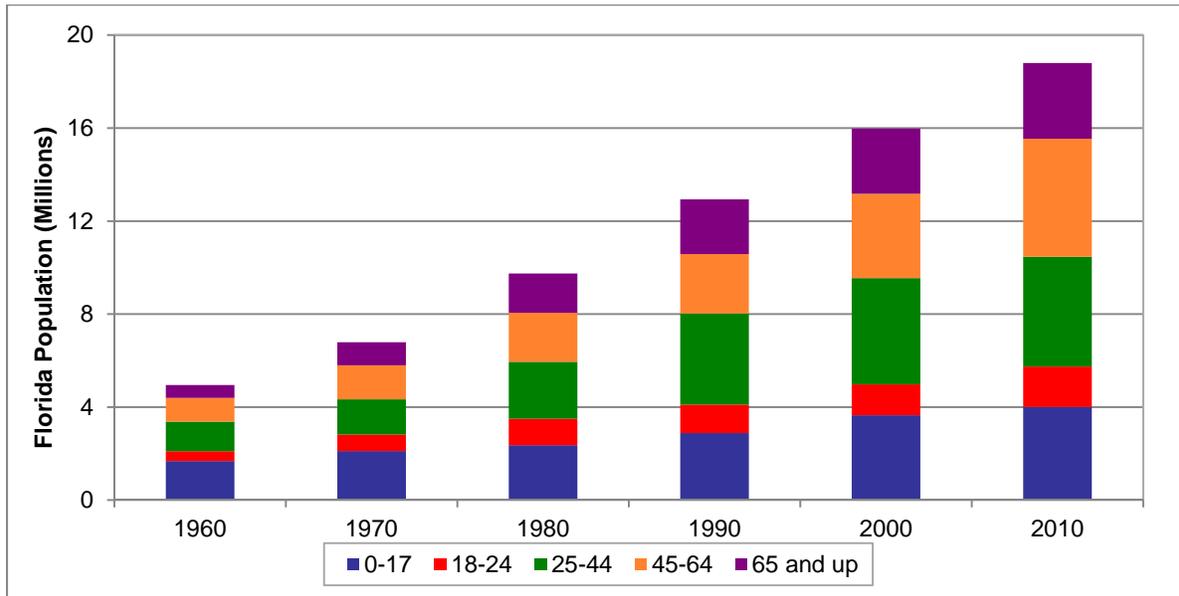


NHTS Brief: Travel Patterns by Demographic and Housing Characteristics

Utilizing the 2009 National Household Travel Survey (NHTS) data for Florida, this brief presents an analysis of the travel patterns of persons based on several variables including age, length of time in residence, housing type, household type, and trip purpose. The objective is to explore whether there are variations in travel demand based on these variables.

Florida has long been recognized as a relocation destination because of its warm climate, low taxes, and affordable cost of living. This has contributed to Florida's population quadrupling in size from 4.9 million in 1960 to 18.8 million in 2010.

Figure 1: Population by Age and Decade

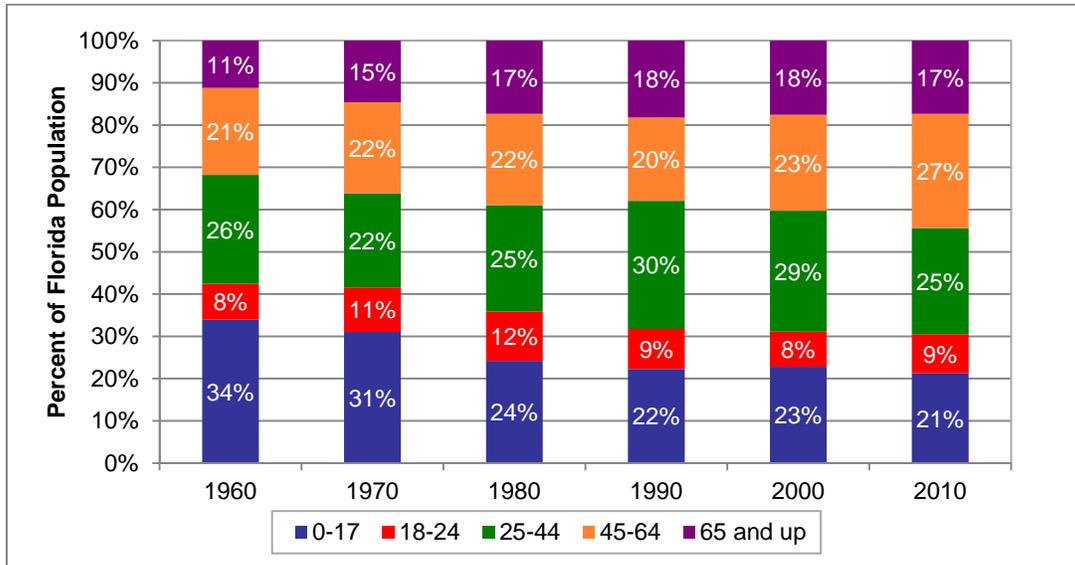


Source: U.S. Census

As shown in Figure 2, the distribution of the state's population by age group from 1960 to 2010 has shifted. In 1960, 0-17 year olds constituted the largest share of the state's population at 34 percent while 45-64 year olds had the third largest share at 21 percent. In 2010, these two groups switched places. 45-64 year olds now make up the largest share of the state's population at 27 percent while 0-17 year olds make up the third largest at 21 percent. Also of note is that the 65 and up age bracket grew from 11 percent in 1960 to 17 percent in 2010. These trends reflect lower birthrates, the migration of retirees to Florida, and the aging of the Baby Boomers who already resided in Florida.

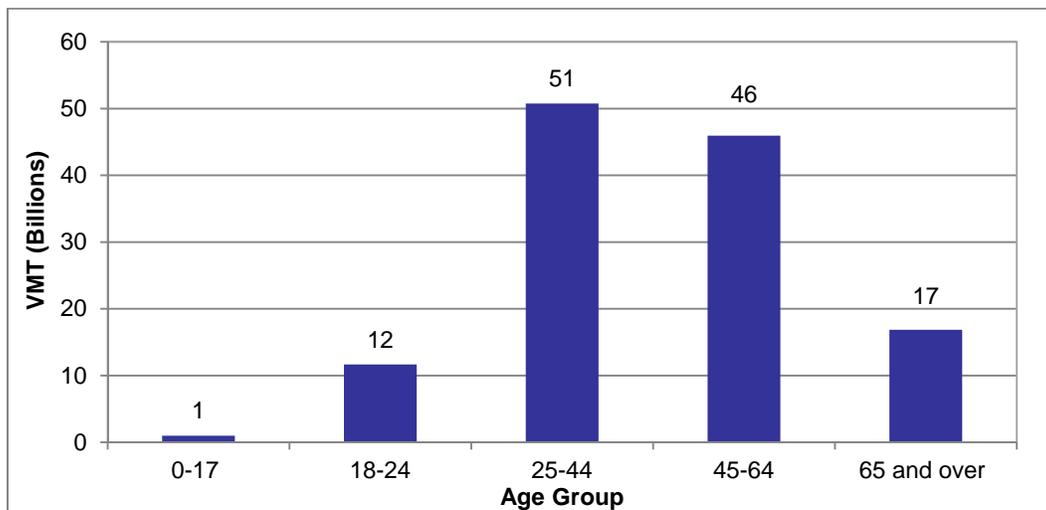


Figure 2: Percent of Population by Age Group



Source: U.S. Census

Figure 3: 2009 Vehicle Miles Traveled by Age Group



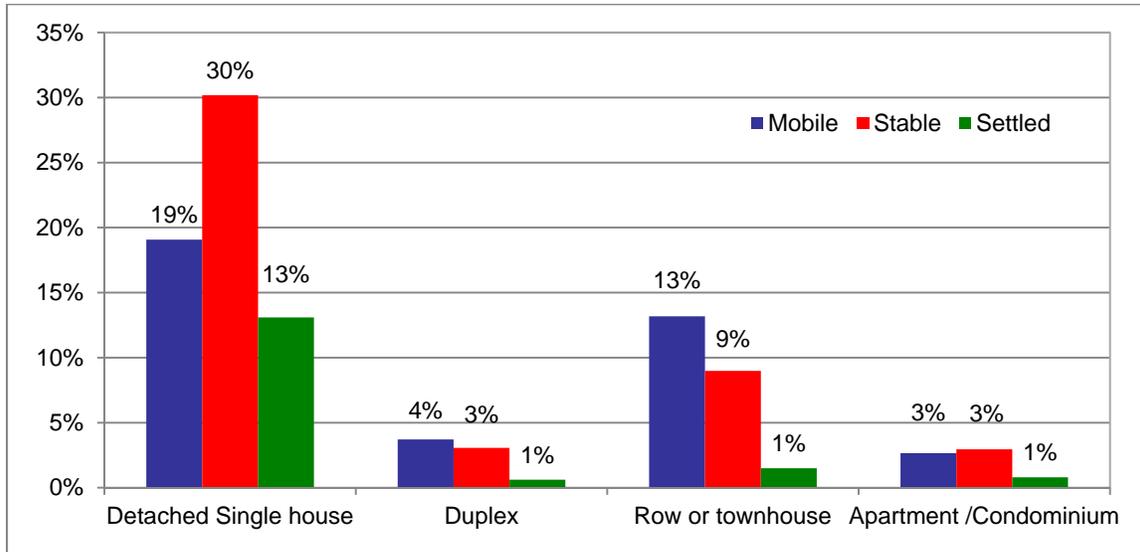
Not surprisingly, the two age brackets that account for the largest share of the population (25-44 and 45-64) also account for most of the vehicle miles travelled (VMT) as Figure 3 exhibits. What is interesting is that although the 45-64 age bracket accounts for a larger percentage share of the population than the 25-44 age bracket, they do not travel quite as much as the 25-44 age bracket. This indicates that people travel somewhat less as they get older because their travel needs are somewhat lower. Often this decline can be traced to lower levels of travel to meet household member needs (taking children to school and recreation venues etc.)

Relocation Time Periods and Residential Tenure

The analysis looks at the distribution of households in Florida by housing type (single house, duplex, townhouse, and apartment) and by residential tenure (mobile, stable, settled). For the

purposes of the analysis, “mobile” households are defined as households that have been in their home for less than five years. Households classified as “stable” have been in their home for 5 to 20 years. Households classified as “settled” have been in their home for more than 20 years.

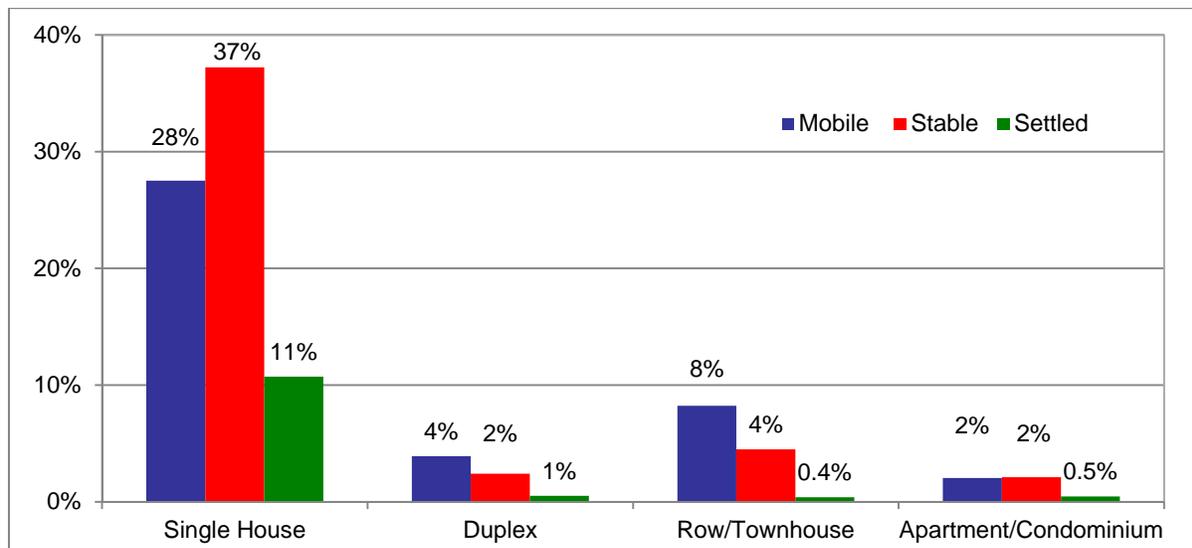
Figure 4: Share of Households by Housing Type and Residential Tenure



Source: 2009 National Household Travel Survey – 6,951,142 households in Florida (15,659 household sample)

Across all housing types, 39 percent of households are classified as mobile, 45 percent are stable, and only 16 percent are settled (Figure 4). Single family homes account for the largest percentage of housing type at 62 percent. They also account for the largest percentage of VMT at 76 percent (Figure 5).

Figure 5: Share of Total VMT by Housing Type and Residential Tenure

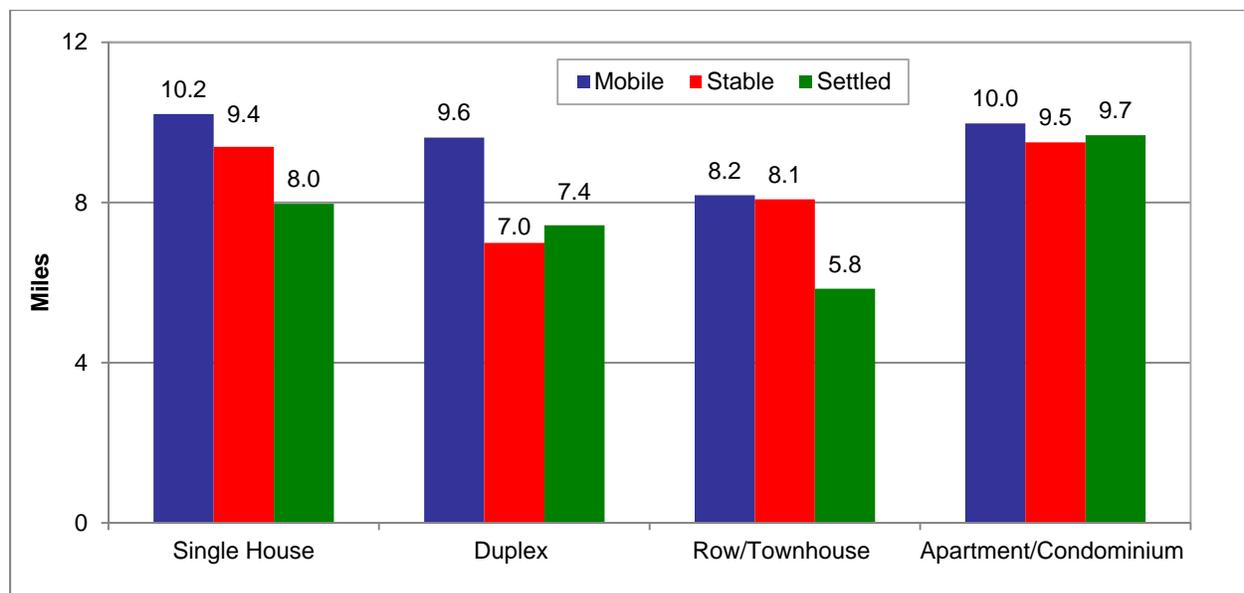


The expectation of the analysis was that the VMT for stable and settled households would be less than the VMT for mobile households. That expectation was observed for duplexes, townhouses,

apartments, and condominiums but not for single family homes. A closer examination of the data in Figure 4 and Figure 5 shows that the changes in VMT may have less to do with residential tenure and more to do with the percentage distribution of housing type and its correlation with income. In other words, the percentage distribution of VMT is almost identical to that of housing type.

On any given day, a person will make multiple automobile trips for a variety of purposes, and these trips will vary in length. Figure 6 shows overall average trip lengths, irrespective of trip purpose, sorted by housing type and residential tenure. This suggests that as single family homeowners become acclimated to their geography, they find activities closer to home. In contrast, the average trip length of apartment and condominium residents is similar regardless of residential tenure.

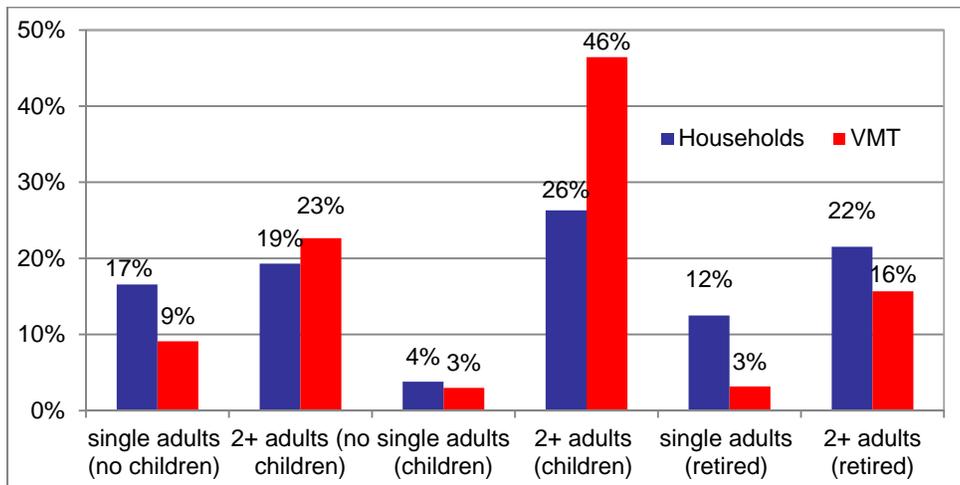
Figure 6: Average Auto Trip Length by Housing Type and Residential Tenure



Looking at the combined data from Figure 4 through Figure 6, two observations can be made about the travel characteristics of single family homeowners. On the one hand, their average trip length gets shorter the longer they are in their house. On the other hand, their percentage share of VMT is almost identical to their percentage share of housing.

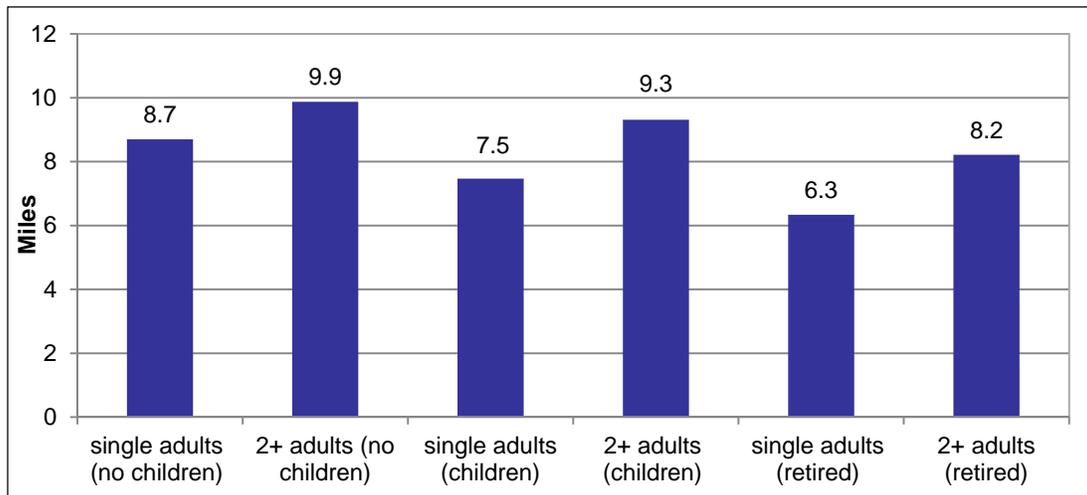
Different household types can have different patterns of VMT. Figure 7 looked at the VMT of households with one adult and two adults, with children and without children, retired and not retired. Households with two adults and children comprise the largest percentage of households (26%) as well as the largest percentage of VMT (46%).

Figure 7: Share of VMT by Household Type



Two adult households without children have the longest average trip lengths at 9.9 miles followed by two adult households with children at 9.3 miles (Figure 8). These two types of households contribute the largest percentage of VMT. The data suggests that two adult households without children may make slightly longer trips on average, but they do not travel as much as two family households with children. Hence they do not contribute as much VMT.

Figure 8: Average Trip Length by Household Type



The final variable to be examined is trip purpose. Figure 9 shows the average trip length of various trip purposes aggregated by residential tenure. Visiting friends and relatives constitutes the longest average length followed by work trips. Mobile households tend to have the longest trip lengths regardless of trip purpose. Trip lengths get shorter the longer someone resides in place indicating that people adjust their travel patterns over time. The one exception to this pattern was recreational trips. Trip lengths for recreational trips were almost the same regardless of whether a household was mobile, stable, or settled.

Figure 9: Trip Length by Purpose and Residential Tenure

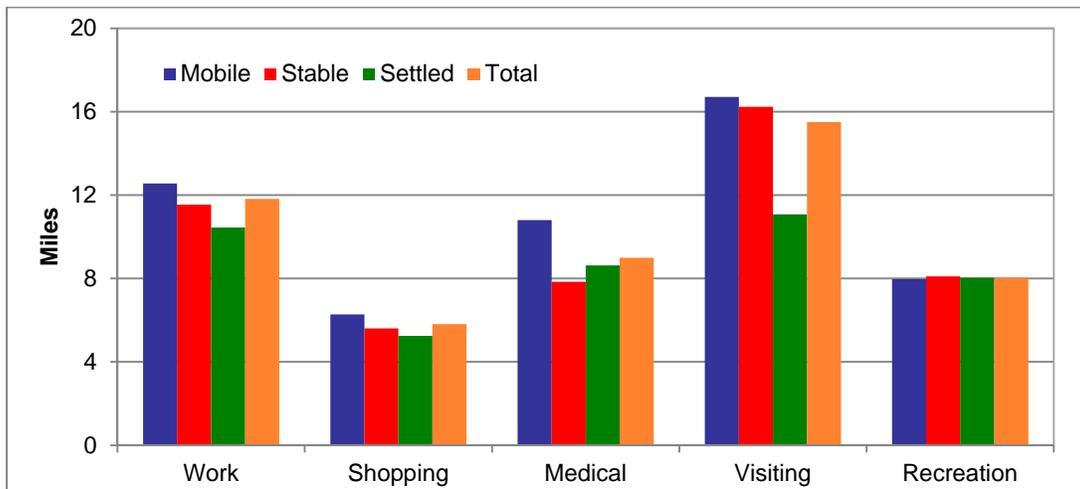
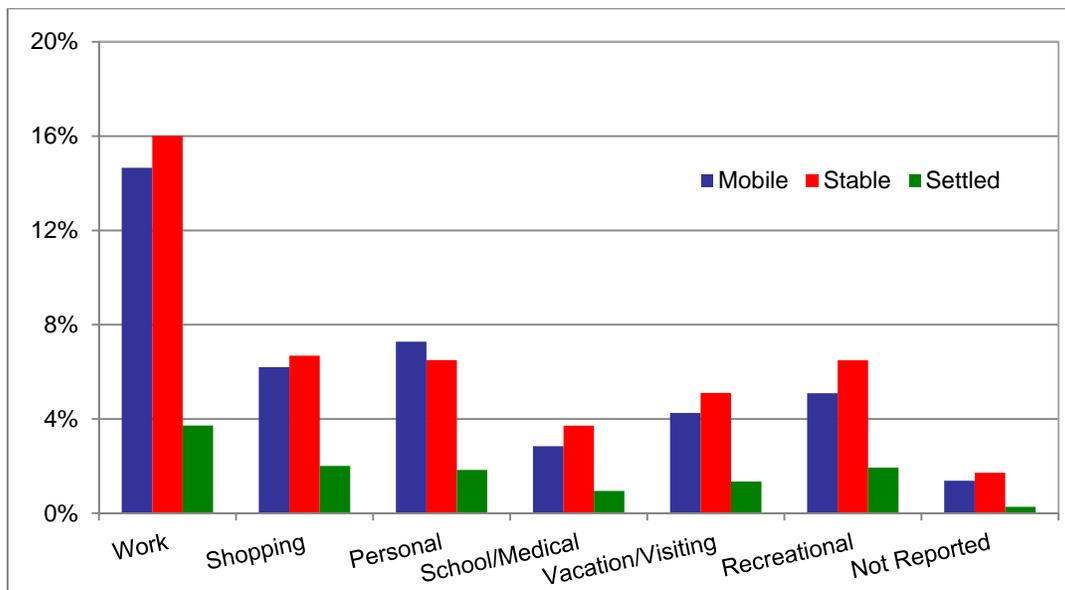


Figure 10: Share of Total VMT by Trip Purpose and Residential Tenure



Work related trips comprise the largest percentage of VMT. There is a stark contrast in the percentage of VMT for work trips when comparing mobile and stable households with settled households. Some of this is due to the fact that a much larger percentage of households are classified mobile and stable than settled (See Figure 10). There is another possible explanation for the contrast between mobile and stable households and settled households. For the purposes of this report, households classified as “settled” have been in their home for more than 20 years. It is likely that a large percentage of the individuals in this household category are retired. Figure 3 had shown that the 65 and over age bracket (i.e. retirees) contributed a much lower amount of VMT than the 25-44 and 45-64 age brackets.

Conclusion

Despite the recent economic recession, Florida continues to attract new residents each year. Some are young, and some are old. Some have children, and some do not have children. Many choose to live in single family homes. Others live in townhomes, apartments, and condominiums. What they all have in common is that they rely every day mostly on the state's network of roads to meet their travel needs. People have different travel needs and, therefore, different travel patterns.

This analysis has shown that Florida's population has quadrupled since the 1960 Census. Over that time, the age distribution of the population has shifted. In 1960, 0-17 year olds made up the largest percentage of the state's population. In 2010, 45-64 year olds composed of the largest percentage. When looking at the amount of VMT contributed by each age group, the data suggest that Florida residents travel less the older they get. For example, the 25-44 age bracket contributed 51 billion miles of VMT, the 45-64 age bracket contributed 46 billion miles, and the 65 and over age bracket only contributed 17 billion miles. This indicates that people travel shorter distances and/or make fewer trips as they get older because their travel needs are more modest and can be addressed within a shorter radius.

Average trip length tends to decrease with home tenure, particularly for single family home owners. This finding suggests that homeowners become acclimated to their geography and find activities closer to home. However, it also reflects the fact that travel needs decline with age which is highly correlated with tenure.

Two adult households with children contribute the largest percentage of VMT (46%), but two adult households without children have the longest average trip length at 9.9 miles. They were followed closely by two adult households with children at 9.3 miles. This suggests that two adult households without children make slightly longer trips on average but do not travel as much as two family households with children.

The trip purpose with the longest average length was visiting friends and relatives, followed closely by work trips. However, work trips accounted for the largest percentage share of VMT. With the exception of recreational trips, average trip lengths were shorter for stable and settled households than they were for mobile households. This further confirms that people find closer activities the longer they reside in their home.