

The Road...Less Traveled: An Analysis of Vehicle Miles Traveled Trends in the U.S.

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Findings

An analysis at the national, state, and metropolitan levels of changing driving patterns, measured by Vehicle Miles Traveled (VMT) primarily between 1991 and 2008, reveals that:

- **Driving, as measured by national VMT, began to plateau as far back as 2004 and dropped in 2007 for the first time since 1980.** Per capita driving followed a similar pattern, with flat-lining growth after 2000 and falling rates since 2005. These recent declines in driving predated the steady hikes in gas prices during 2007 and 2008. Moreover, the recent drops in VMT (90 billion miles) and VMT per capita (388 miles) are the largest annualized drops since World War II.
- **While total driving in both rural and urban areas grew between January 1991 and September 2008, rural and urban VMT have been declining since 2004 and 2007, respectively.** Amongst these collective driving declines, the nation shifted more of its VMT share to larger capacity, urban roadways.
- **While all vehicle types increased their total driving from 1991 to 2006, passenger vehicles—specifically cars and personal trucks—consistently dominate the national share.** This share dominance includes rural interstates, where combination trucks contribute a much larger share than they do elsewhere. Over time, however, passenger trucks produce a greater share of VMT due to their surge in registrations versus standard passenger cars.
- **Southeastern and Intermountain West states experienced the largest growth rates in driving between 1991 and 2006, while the Great Lakes, Northeastern, and Pacific states grew at a slower pace.** These varied, but positive, growth rates reversed after 2006, as 45 states produced less annualized VMT in September 2008. Similarly, per capita driving declined in 48 states since the end of 2006.
- **Total driving on principal arterials is concentrated in the 100 largest metropolitan areas, but the greatest driving per person occurs in low density Southeastern and Southwestern metros.** In addition, the 100 largest metros' urban driving share exceeds the national share, with 83 metros carrying over 70 percent of their principal arterial traffic on urban roadways.

Amid the current recession and declining gas prices, drops in driving should continue, creating dramatic impacts in the realms of transportation finance, environmental emissions, and development patterns. Government officials and policy makers at all levels must account for these potential long-term consequences.

“Continued declines in driving will have dramatic impacts in the realms of transportation finance, environmental emissions, and development patterns.”

roads primarily supported by federal and states gas taxes. The remaining collector and local roads are primarily supported by local property taxes. Thus, this metro analysis covers the majority of total driving and the vast majority of driving on federal and state roads. When making comparisons between national totals and metropolitan totals, we only consider the Universal System road types. Regarding the metro areas, Brookings Metro Program determined the 100 largest metropolitan areas based on 2005 employment statistics.

Lastly, the FHWA also defines five distinct groups of vehicles that travel on these U.S. roads: passenger cars, buses, other passenger vehicles, single-unit trucks, and combination trucks.²⁹ "Other passenger vehicles," a unique category since 1966, includes a host of other passenger vehicles that meet the standard two-axle and four-tire criteria. The main vehicles falling under this category are vans, pickup trucks, and sport-utility vehicles. Single-unit trucks are single frame trucks that maintain at least two-axles and six-tires. These are different from combination trucks, which are the 'rigs' that move detachable freight cars. Since vehicle performance data is only published in the *Highway Statistics* series, the most current vehicle data is through 2006.

Vehicular travel patterns, both in terms of roadway usage and share of VMT, uncover what people are driving, where they are driving, and how public policies can help modify that behavior to achieve desired societal outcomes.

A final note on the term annualized VMT. Annualized VMT is the use of any consecutive twelve month period to construct VMT measures. Because TVT data is monthly and travel patterns vary by season, using an annualized measure of VMT accomplishes two goals. First, when using midyear data, it controls for seasonal variations. Second, it also permits us to compare VMT changes from the middle of the year to past 'January to December' yearly measures.

IV. Findings

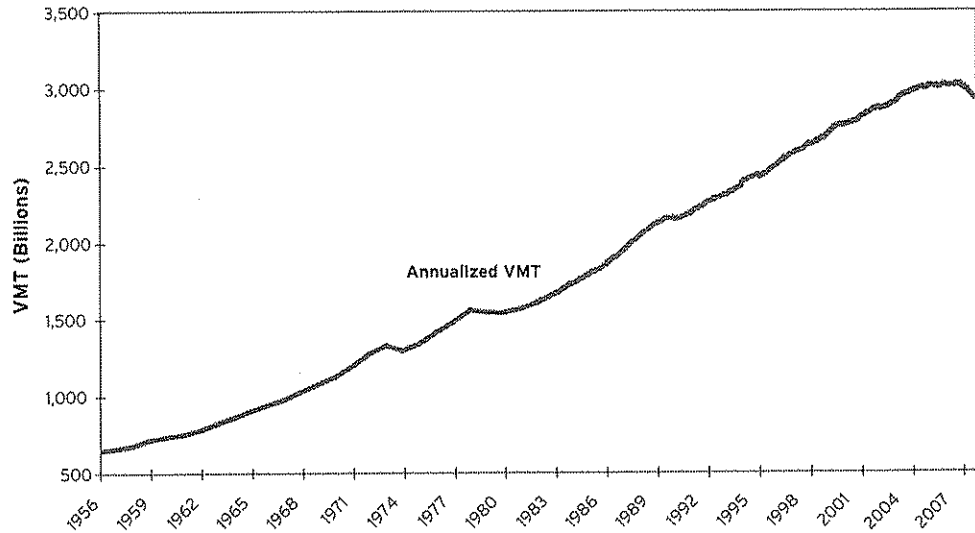
A. Total driving levels, as measured by national VMT, began to plateau as far back as 2004 and dropped in 2007 for the first time since 1980.

For nearly every year since statistics were collected, national VMT increased from one year to the next. As Figure 1 shows, VMT's trend line from 1956, the beginning of the interstate highway era, to 1991, the beginning of the current federal transportation era, is consistently positive. Even when accounting for the two dips based around the geopolitical events of the 1970s, it is clear that Americans continued to drive more and more over these thirty five years.³⁰ This trend continued after the passage of major federal transportation reform legislation in 1991: between January 1991 and December 2004 VMT grew by another 38.4 percent. This thirteen year period was composed of remarkably steady growth—the average annual rate was 2.4 percent and the median rate was 2.5 percent.

However, as Figure 1a shows, this consistent annual growth stopped in 2004. The next three annualized measures in December—2005, 2006, and 2007—show percent changes of 0.8, 0.6, and -0.3, respectively. The 2007 number is extremely significant. For the first time since 1980, and only the fourth time since the end of World War II, the annual change in national VMT was actually negative. Moreover, this annualized trend has continued into the nine reported months of 2008. Each of these months reported negative annualized VMT when compared to the previous twelve month periods.

A similar trend exists when examining VMT per capita for the nation. From 1991 through 2000, the amount of driving per capita steadily climbed upward. However, following the tech bubble burst in

Figure 1a. U.S. Vehicle Miles Traveled, Annualized, December 1956-September 2008

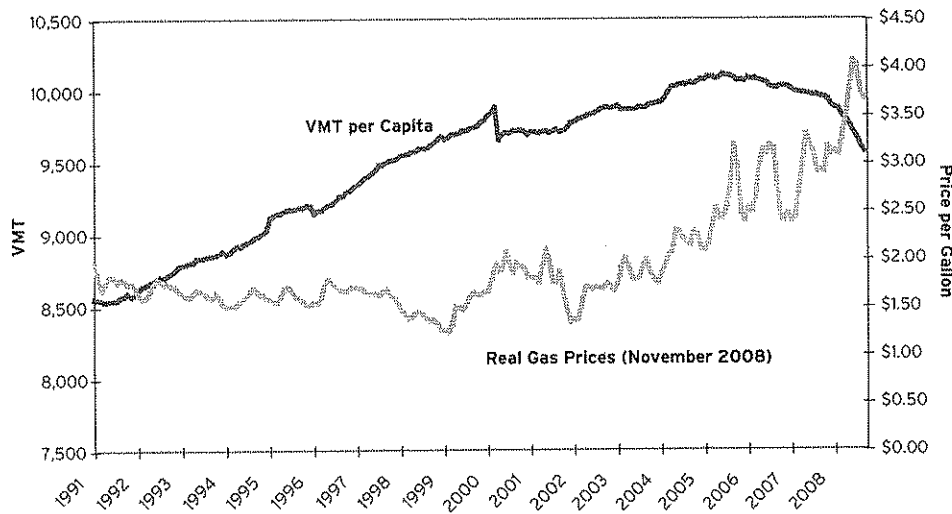


Source: 1956-1982: Highway Statistics, Table VM-201; 1983-September, 2008: Traffic Volume Trends

2000 the growth rate in VMT per capita began to plateau. Moreover, after 2005 the per capita rate actually began to slide. The per capita rate has continued to drop for over three straight years, to the point where the September 2008 VMT per capita rate (9,564 miles) is now less than what it was a decade ago (9,603 miles). What this means is that amid the total growth in VMT over this ten year period, the average American is still driving the same distances per year as they were in 1998. Interestingly, these years of plateau and decrease did not always coincide with gas price increases. As Figure 1b shows, inflationary-adjusted gas prices remained relatively stable between 2000 and 2005, followed by a period of volatility after 2006. Thus, only the most recent drop in per capita driving is coupled with gas price spikes.

While these national changes clearly indicate a significant decline in national driving, one of the primary stories regarding national VMT is how much it diverges across the country depending on the unit of analysis. The next four findings divide these numbers by road type, vehicle category, state, and metropolitan area, thereby helping to uncover the intricacies within our national driving patterns.

Figure 1b. U.S. Vehicle Miles Traveled Per Capita, Annualized and Real Gasoline Pump Prices, January 1991-September 2008



Source: Traffic Volume Trends and Energy Information Administration

B. While total driving in both rural and urban areas grew between January 1991 and September 2008, rural and urban VMT have been declining since 2004 and 2007, respectively.

The changes in VMT are not even across the spatial landscape of the U.S. Between January 1991 and September 2008, the VMT on all urban roadways jumped 51.3 percent in comparison to all rural roadways' increase of 14.9 percent. This means over the seventeen year period the growth in VMT from urban areas more than tripled its rural counterparts. However, this general comparison does not tell the whole story of the urban-rural split.

Prior to 2003, urban and rural VMT grew at a relatively equal rate. While total urban VMT is always significantly larger than total rural VMT, their growth rates were remarkably similar (see Figure 2). However, the total level of driving in rural and urban areas began to diverge in 2003. Rural VMT fell for the first time in 2003, and has proceeded to fall every year since.³¹ The total decline in rural VMT from the beginning of 2003 to the end of 2006 was 7.7 percent. Urban roadways, conversely, continued to grow and added another 14.0 percent to their annualized VMT between January 2003 and the close of 2006.