

Economic output less dependent on road transportation

December 22 2014, by Bernie Degroat

For the past 10 years, motorization in the U.S. has been on the decline, due mainly to more telecommuting, greater use of public transit, increased urbanization of the population and changes in the ages of drivers.

The economy, says a University of Michigan researcher, has had little to do with it.

Building on previous research that examined changes in vehicle ownership, distance driven and [fuel consumption](#) over the past 30 years, Michael Sivak of the U-M Transportation Research Institute studied the link between road transportation and [economic activity](#) going back to the end of World War II.

He found that distance driven per inflation-adjusted Gross Domestic Product reached its highest values in a broad plateau from the early 1970s to the early 1990s, and then decreased steadily. Today, this miles-per-thousand-dollars measure is down 22 percent from its absolute maximum achieved in 1977.

Further, the amount of fuel consumed per GDP peaked in the early 1970s and has declined by 47 percent since then, reflecting the added contribution of the improvement in vehicle fuel economy.

"A possible explanation for this pattern would be an increased proportional contribution to GDP from activities that do not require any

road transportation, either by personal vehicle or heavy trucks," Sivak said. "Indeed, there are several lines of supporting evidence for this hypothesis."

Among these, are:

- The distance driven per person in a light-duty vehicle decreased by about 5 percent from 2000 to 2012.
- GDP attributed to truck transportation as a percentage of the total GDP from private industry decreased from 1.12 percent in 2000 to 0.98 percent in 2012.
- GDP attributed to data processing, Internet publishing and related services increased by a factor of 3.5 from 2000 to 2012.

The value of e-commerce increased by a factor of 8.2 from 2000 to 2012, while the value of traditional commerce increased by a factor of only 1.4 during the same time.

Provided by University of Michigan

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