Has Driving Come to a Halt?

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Here’s What’s New…

[Graph showing VMT as a % of Pre-Recession Level over months since the start of different recessions.]

- Nov 1973 - Mar 1975
- Jan - July 1980
- July 1981 - Nov 1982
- July 1990 - Mar 1991
- Mar 2001 - Nov 2001
- Dec 2007 - June 2009
...but Here’s What Isn’t
A Perfect Storm?

- Decline in vehicle use since mid-2000s reflects the confluence of several major developments
  - Long-term demographic forces
  - Emerging economic challenges
  - Recent technological innovations

- Some slow-moving demographic trends reached critical thresholds starting about the year 2000

- Many economic challenges are recession-related, but others emerged well before it

- New technologies have improved enough to substitute for some travel

- It’s early to say, but more fundamental changes in behavior may also be taking hold
Baby Boom, Bust, and Echo

Driving by Age (left scale)

Population by Age (right scale)

Age Cohort

Annual Miles per Person

Population (millions)

16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75


5,000 10,000 15,000
### Jobs are “Catching Up” to Their Workers

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Workers</th>
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<th>% of Jobs</th>
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<tbody>
<tr>
<td></td>
<td>Central City</td>
<td>Suburbs</td>
<td>Central City</td>
<td>Suburbs</td>
</tr>
<tr>
<td>1960</td>
<td>54%</td>
<td>46%</td>
<td>66%</td>
<td>34%</td>
</tr>
<tr>
<td>1970</td>
<td>46%</td>
<td>54%</td>
<td>57%</td>
<td>43%</td>
</tr>
<tr>
<td>1980</td>
<td>39%</td>
<td>61%</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>1990</td>
<td>35%</td>
<td>65%</td>
<td>51%</td>
<td>49%</td>
</tr>
<tr>
<td>2000</td>
<td>34%</td>
<td>66%</td>
<td>45%</td>
<td>55%</td>
</tr>
</tbody>
</table>
The Unemployed No Longer Drive to Work

% Employed -- 1970
% Employed -- 1980-2000
% Employed -- 2010

Driving -- Employed
Driving -- Not Employed

% Employed
Annual Miles Driven

Age Cohort
16-19 20-24 25-34 35-44 45-54 55-64 65+
Income Losses Have Hit Hard

- Lowest Quintile
- 2nd Quintile
- Middle Quintile
- 4th Quintile
- Highest Quintile

Annual Miles Driven per Person vs. Household Income (2012 $)
Driving is Getting Expensive

[Graph showing the Consumer Price Index (1982-84-100) for various aspects of driving: New Cars, Used Cars, Maintenance, Insurance, and Fuel.]
The “Highway Boom” Ended, Maybe

[Graph showing the increase in million miles of all paved roads and highway and freeway lane miles from 1950 to 2010.]
Teleworking Was Catching On, Until…

![Graph showing number of teleworkers from 2000 to 2010]
On-Line Retail is Exploding, but Still Small
New Travel Choices?

- Even if all new transit trips since 2005 were formerly made by auto drivers, increase in transit use “explains” at most 12% of decline in auto travel within urban areas
- Almost 60% of recent growth in transit use has been in New York, where auto use barely declined
- Data aren’t ideal, but increases in bicycle and walk trips can only account for only another 1-2% of decline in driving
So Where Are We Headed?

- We’re already seeing a “bump” in vehicle use as the economy recovers, but it’s very tentative.

- Almost everything points to much slower growth in auto use.
  - Likely to converge toward the rate of population growth.
  - But this was well underway before the recession.

- Truck use is likely to grow somewhat faster.

- Its effects – on energy consumption, emissions, economic activity, and pavement wear – are disproportionate.
Wild Cards

- Car sharing
  - Do short-term rentals (Zipcar, etc.) increase or reduce overall driving?
  - Will Uber-type services draw from other modes, or just taxis?
  - Will car “lending” ever really happen?

- Autonomous (“self-driving”) vehicles
  - Will people send them on errands all day?
  - Could they revive carpooling?

- Decline in labor force participation
  - How much of it was just the recession, and how much is permanent?
  - Will it permanently decline among women, too?