Young People’s Changing Impact on Travel Demand

10th Annual Travel Data User’s Forum
93rd Transportation Research Board
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Travel Behavior Analyst
Outline of Today’s Presentation:

1. Trends in VMT per Capita—Overall, by Age and by Sex
2. Four possible causes of lower VMT/capita in Millennials:
   1. Economic Factors
   2. Social-Demographic Change
   3. Values
   4. Information Communications Technology (ICT)
3. A bunch of data--Census, NHTS, ATUS, Pew--on each
4. Closing thoughts

Caveats:
• These are only my opinions.
• All data are sample data, sweeping generalizations aside not everyone in a group shares the majority characteristics.
• If I move too fast, the presentation will be posted on my website—just contact me with any questions!
VMT per Capita: Is it just the economy?

Source: McGuckin’s analysis of Census Population (Jul 1) and HPMS Historic VM-1 Tables
Why focus on Young People?

Percent Change in VMT per Capita: 1995 to 2009

Source: McGuckin’s analysis of NHTS Data Series, comparing VMT per capita from 1995-2009
Young men’s vehicle travel rates declined more than women (16-29 years old)...

Source: McGuckin’s analysis of NHTS Data Series
Four Possible Reasons:

Money
- The economic downturn and
- Cost of driving and
- Higher insurance rates

Social Trends
- Living at home
- Longer college careers
- Higher rates of post-college unemployment

Values
- Environmental concerns
- Health/activity
- Disinterest in Car Culture

ICT
- On-line social activities, shopping
- Multi-tasking while in transit
Millennial cohort is as numerous as the Baby Boom, but the lowest *share* of population for any youth cohort in history

Millenials 18-29 are in an ‘Emerging Adulthood’ phase of life:

- Fewer licensed to drive and less auto ownership
- Lower workforce participation than previous generations and harder hit by unemployment
- Later marriage and higher live at home rates
- High college attendance (along with high student loan debt)
Millenials are as numerous as the baby-boom, but only about 20% of the US population is 16-29...

In 2030, Millenials will outnumber Baby-Boomers by 22 million:

Source: McGuckin’s analysis of Census historic tables 1900 to 2010, and 2030 forecast
Historic low workforce participation among 16-29 year olds (coupled with historic high participation by 55 and older)

I'm not so sure how much of this has to do with technology or the driving age. I think it has more to do with the fact that young people are one of the largest portions of the population who have been hurt by the recent recession.

-Courtney

Source: McGuckin’s analysis of NHTS Data Series
* The quote is from an informal survey (web-based) conducted by McGuckin, 2010
Driving licensure rates—esp. for young men—have declined...

--**37 percent** said they were either too busy or didn't have the time to get a license.

--**32 percent** said that owning and maintaining a vehicle was just too expensive.

--**31 percent** said they could hitch a ride with someone else if needed.

--**22 percent** said they'd rather walk or bike.

--**17 percent** said they'd rather use public transportation.

--**9 percent** said they were worried about driving's effects on the environment.

--**8 percent** said they could work or communicate online.

Source: The Reasons for the Recent Decline in Young Driver Licensing in the U.S., UMTRI, Schoettle and Sivak m Aug 2013, at: http://deepblue.lib.umich.edu/bitstream/handle/2027.42/99124/102951.pdf?sequence=1
Average age of marriage is at an unprecedented high:

According to Pew, only 21 percent of 18-29 year olds are married.

Marriage these days signals that you’ve figured out how to be a grown up. You’ve “arrived,” having finished school, settled into a career path, bought a condo, figured out who you are, and found your soul mate.

The fairytale wedding is your gateway into adult life.

2010 Pew Research Report

McGuckin’s analysis from data at: Infoplease.com http://www.infoplease.com/ipa/A0005061.html#ixzz2VHfDJzQY
Millenials are more likely to live at home:

“He could be helping his parents ... maybe they need assistance with paying bills / taking care of the house/etc.

He may have had some financial troubles in the past or he might just be saving up his money to buy a nice home of his own in the near future.

Don’t assume the worst!”

-Eric

Source: McGuckin’s analysis of US Census TAD-1. Young Adults Living At Home: 1960 to Present
* The quote is from an informal survey (web-based) conducted by McGuckin, 2010
Some young people may have a different attitude toward auto ownership:

“For Millennials, cars are not status symbols; they are perceived as unnecessary luxuries that are:

- Expensive
- Harmful to the environment
- Antisocial

They would rather own a great smartphone or laptop instead. (Real-time, portable technology helps to confer the sense of “freedom”/ability to be spontaneous that owning a car does.)”

Latitudes Report on Phase 1 findings for TCRP “Millenials and Mobility”

Source: McGuckin’s analysis of NHTS Data Series
But most young non-drivers live in households with other drivers...

“My roommate thinks I'm nuts for not driving a car, but I think he's nuts for going around the block for a half hour just to find a suitable parking spot.”

-Jake

Source: McGuckin’s analysis of 2009 National Household Travel Survey
* The quote is from an informal survey (web-based) conducted by McGuckin, 2010
Millenials are more likely than other cohorts to use transit:
• It’s affordable
• Welcome ‘down time’
• Connect to community
• Fits with values (and people like me)

Some millenials—in urban areas with lots of transportation choices--see mode choice as situational.

The need for exercise, and environmental concerns are balanced with cost and convenience

These are selected findings from the TCRP ‘Millenials and Mobility’ Research conducted by Latitudes, 2013
Available at: http://www.trb.org/Main/Blurbs/169527.aspx
Millenials are more likely to use transit...

Millenials who use transit prefer it for both practical and ideological reasons:

- **It is significantly more affordable**
- It gives them “**me time**” to rest, reflect, or do work
- It makes them **feel more ethical**:
  - It reduces traffic
  - It benefits the environment
- **It feels more social**, more a part of the community vs. feeling isolated in a car
- It allows people to avoid **car hassles (often costly)**, including parking, traffic, and car upkeep

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--Latitudes Report on Phase 1 Findings for TCRP “Mobility and Millenials”

Source: McGuckin’s analysis of 2009 NHTS
Mode Choice can be situational (rather than habitual):

<table>
<thead>
<tr>
<th>Optimal Situations</th>
<th>Walking</th>
<th>Driving</th>
<th>Bus/Rail</th>
<th>Bicycle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nice Outside</td>
<td>Getting There ASAP</td>
<td>To or From Work Alone</td>
<td>Nice Outside</td>
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<tr>
<td></td>
<td>Need Exercise</td>
<td>Bad Weather Shopping</td>
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<td></td>
<td>Pay-per-Use/Affordable</td>
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<td></td>
<td>Better for Environment</td>
<td></td>
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<td></td>
<td>Connected to Community</td>
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<td></td>
<td>More Personal Space</td>
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<td>Flexible</td>
<td></td>
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<td>Lack of Personal Space</td>
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<td>Not Compatible with Other</td>
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<td>Modes</td>
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<td>Slow</td>
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<td>Not Child Friendly</td>
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<td></td>
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<td></td>
<td>Not Compatible with Other</td>
<td></td>
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<td></td>
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<td>Modes</td>
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</tr>
</tbody>
</table>

Source: TCRP Study of Millenials and Mobility, Latitudes Phase 2 Findings, page 15
It seems millennials in the cities studied balance competing factors in their transport choices:

- Convenience
- Exercise
- Save Money
- Environmentally Friendly
- Enjoyable ("Great down time")
Transportation Trends: ENVIRONMENTAL CONSIDERATIONS

Millennials are thinking about the environment more than generations before them. San Franciscans & those living with roommates are the most likely to cite environmental considerations as a motivating factor in their transportation decisions.

<table>
<thead>
<tr>
<th>% Say 'I care about the environment' as a motivation for their transportation routine overall (Q31, n varies by sample group)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
<tr>
<td>Boston, MA</td>
</tr>
<tr>
<td>Chicago, IL</td>
</tr>
<tr>
<td><strong>San Francisco, CA</strong></td>
</tr>
<tr>
<td>Seattle, WA</td>
</tr>
<tr>
<td>Portland, OR</td>
</tr>
<tr>
<td>Washington, DC</td>
</tr>
<tr>
<td>Living w/ spouse or partner</td>
</tr>
<tr>
<td>Living w/ parents or other family</td>
</tr>
<tr>
<td><strong>Living with roommates</strong></td>
</tr>
<tr>
<td>Living alone</td>
</tr>
<tr>
<td>No children (aged 18 or under living in HH)</td>
</tr>
<tr>
<td>Parents (of children 18 or under living in HH)</td>
</tr>
</tbody>
</table>

37% total say they are increasingly feeling a bit better about their "carbon footprint" (Q34)

Source: TCRP Study of Millennials and Mobility, Latitudes Phase 2 Findings, page 16
Information & Communications Technology

[Diagram showing various websites and platforms including Google, Yahoo!, Bing, Facebook, Twitter, Yelp, etc.]
The Connected Generation

- 72% of US households have internet connection -- 83% of individuals 18-29 (Census 2011)
- 90% of millennials use the Internet at least occasionally, compared to 79 percent of boomers
- 75 percent use social networking sites, compared to only 30 percent of boomers.
- There was a 21% increase in online course enrollment in colleges across the country in 2012.

Percent who BYOD (Bring their own device) to the Office—Desk Phones Just Don’t Work for Me:

http://www.eweek.com/mobile/byod-trends-millennials-have-little-use-for-desk-phones-report.html

More activity (especially leisure) can occur without travel...

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Activity Description</th>
<th>Without Travel</th>
<th>With Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure</td>
<td></td>
<td>87%</td>
<td>13%</td>
</tr>
<tr>
<td>Sub-Categories:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise</td>
<td></td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Rest and Relaxation</td>
<td></td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Amusement</td>
<td></td>
<td>91%</td>
<td>9%</td>
</tr>
</tbody>
</table>

“With the advent of social media and other forms of electronic communities teens perceive less of a need to physically congregate, and less of a need for a mode of transportation.”

J.D. Power & Associates,
“Millenials Have Less Interest in Cars”

And Millennials are spending a lot more time on-line:

“Computers and the internet play a huge role in [millenials’] everyday lives; they depend on this technology for everything from work to socializing to getting around.”

---Latitudes Phase 1 findings for TCRP “Millenials and Mobility”

Source: McGuckin’s analysis of the American Time Use Survey (ATUS) data
Not all on-line activity has a direct transportation equivalent:

- Used social or professional sites (FB, LN)
- Get News
- Go on-line just to pass the time
- Played On-Line Games
- Watch video on-line (You-Tube)
- Did banking on-line
- Used Classified ads like Craigslist
- Look for How-To, Do-it-Yourself or Repair...
- Buy a product on-line
- Take part in chat rooms
- Take a virtual tour of a location

Source: McGuckin’s analysis of the Pew “Usage over Time” data, all ages. Only people reporting on-line activity
We need to be able to link on-line behavior and travel behavior more conclusively...

**77.1 percent** of millennial respondents reported browsing online before purchasing in the store, nearly **17 percentage points** higher than the general population.

**58 percent** of millennial respondents admitted to showrooming, nearly **10 percentage points** higher than older shoppers.

**56.3 percent** of millennial respondents admitted to browsing for an item in the store, yet purchasing the item online from a different retailer – **double the rate of the general population.**

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Per Capita Shopping Trips by Whether Respondent Made On-Line Purchases

<table>
<thead>
<tr>
<th>Age of Respondent</th>
<th>Did Not Shop On-Line</th>
<th>Made Purchases On-Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-24</td>
<td>339</td>
<td>412</td>
</tr>
<tr>
<td>24-34</td>
<td>395</td>
<td>418</td>
</tr>
<tr>
<td>35-54</td>
<td>388</td>
<td>406</td>
</tr>
<tr>
<td>All</td>
<td>392</td>
<td>392</td>
</tr>
</tbody>
</table>

Source: McGuckin’s analysis of 2009 NHTS, self reports only
Just a quick look at how fast things are changing:

<table>
<thead>
<tr>
<th>Old School</th>
<th>New School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bookstores</td>
<td>Amazon / Kindle</td>
</tr>
<tr>
<td>Travel Agent</td>
<td>On-line booking</td>
</tr>
<tr>
<td>Blockbusters</td>
<td>Streaming Video</td>
</tr>
<tr>
<td>Avis/Hertz</td>
<td>Zipcar</td>
</tr>
<tr>
<td>Greyhound</td>
<td>Megabus</td>
</tr>
<tr>
<td>Taxi</td>
<td>Uber</td>
</tr>
<tr>
<td>Priceline</td>
<td>Hotel Tonight</td>
</tr>
<tr>
<td>Facebook/Myspace</td>
<td>IM/Skype/Vine</td>
</tr>
<tr>
<td>Big Data</td>
<td>Bigger Data</td>
</tr>
<tr>
<td>The Internet</td>
<td>The Internet of Things</td>
</tr>
</tbody>
</table>
Closing thoughts on VMT shift:

1. The evidence suggests that the nation’s per-capita decline in driving cannot be dismissed as a temporary side effect of the recession. (USPIRG “Moving off the Road” at: http://uspirg.org/reports/usp/moving-road)

2. Identifying a long-term plateau or reduction in driving would avoid ‘optimistic’ forecasts (e.g. for user fees/toll-ways)

3. Research should focus on the why of driving reduction

Graphic from: USPIRG New Direction at: http://www.uspirg.org/reports/usp/new-direction
Closing Thoughts on Millennials:

• Unprecedented social-demographic shifts:
  • Emerging adulthood as a life-stage
  • Diverse, Connected, Digitally enabled

• A skeptical eye toward car ownership:
  • Is it affordable? More of a hassle than a convenience?
  • Are there other options that are better (for health, environment, etc)

• A balanced attitude toward transport: What do I need today?

• Situational (rather than habitual) mode choice, including not traveling at all
Thank You!

More research is needed about how to research this.

People Like Me
Showrooming
BYOD
Carbon Credits
The Circle

Car Sharing
Connected
Bike to Work
location enabled

Mobile-Me
Changing values

ELECTRONIC COMMUNITY

The Internet of Things