

Driven to Extremes

Has Growth in Automobile Use Ended?

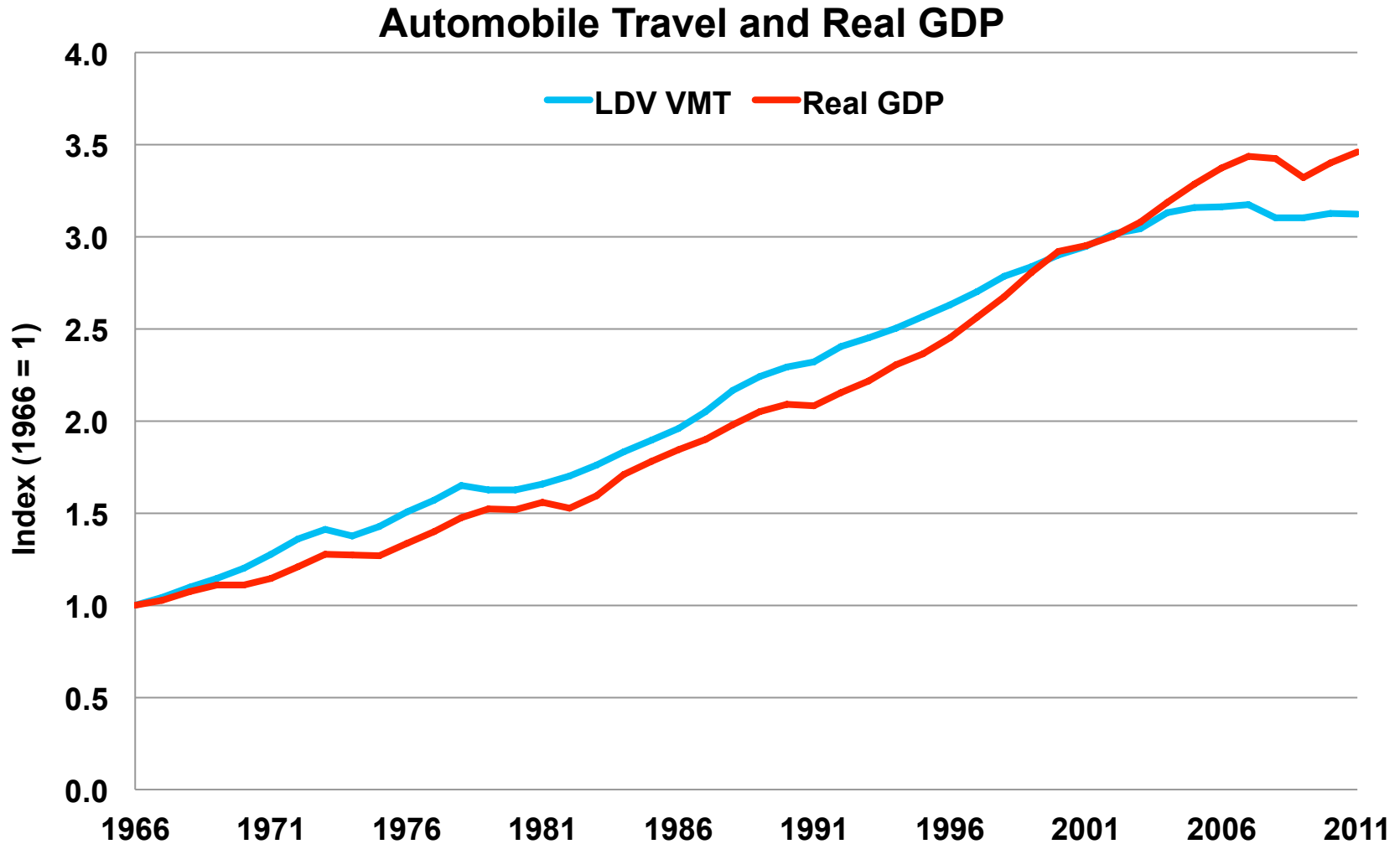
May 23, 2013



Background

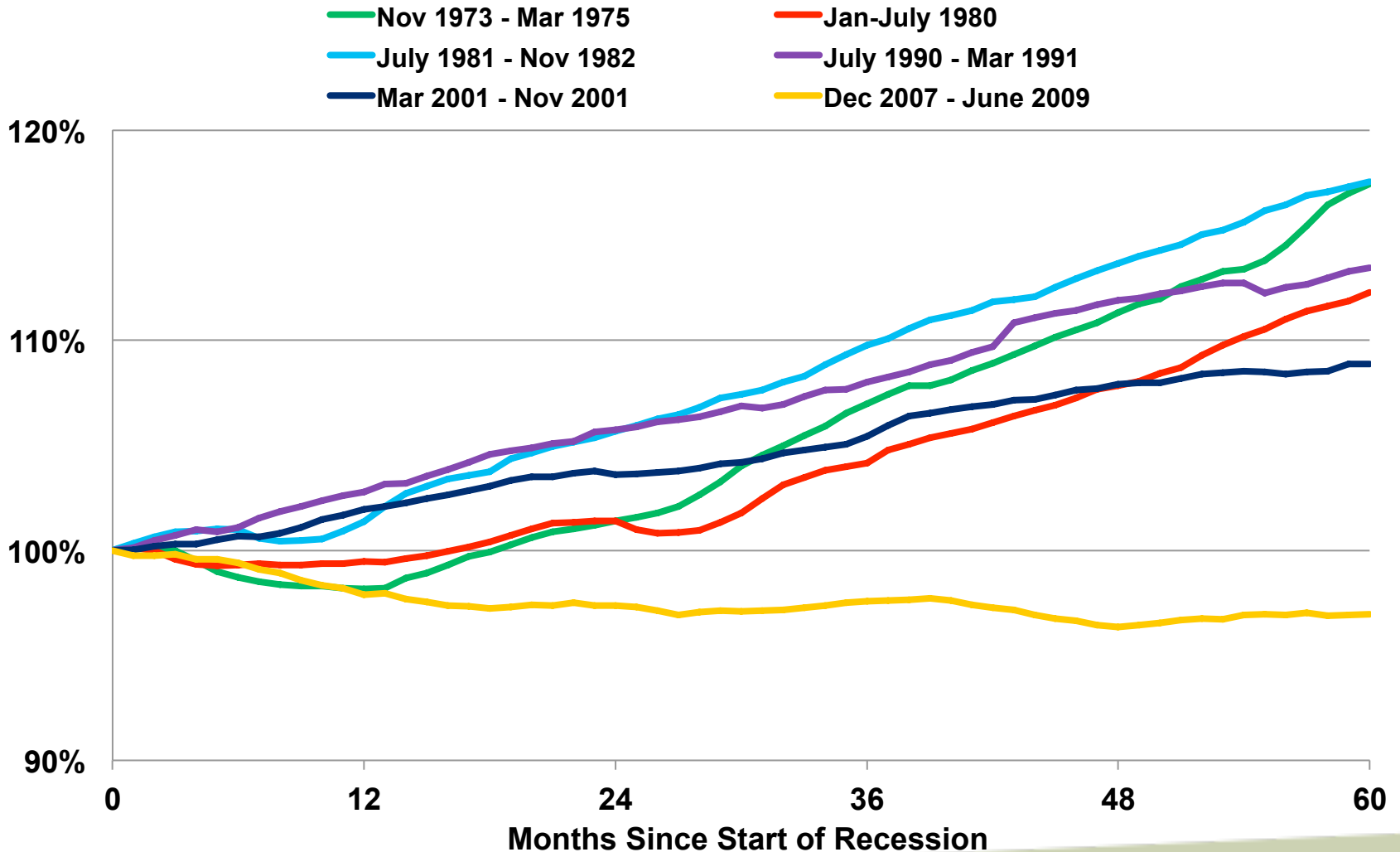
- ❑ This analysis is based on travel demand research sponsored by the Federal Highway Administration, Office of Highway Policy Information
- ❑ Research focus is on estimating and forecasting vehicle miles traveled and vehicle hours of travel
- ❑ *Note: the views and opinions expressed by Volpe in this presentation do not necessarily represent those of FHWA*

Automobile Use No Longer Tracks GDP



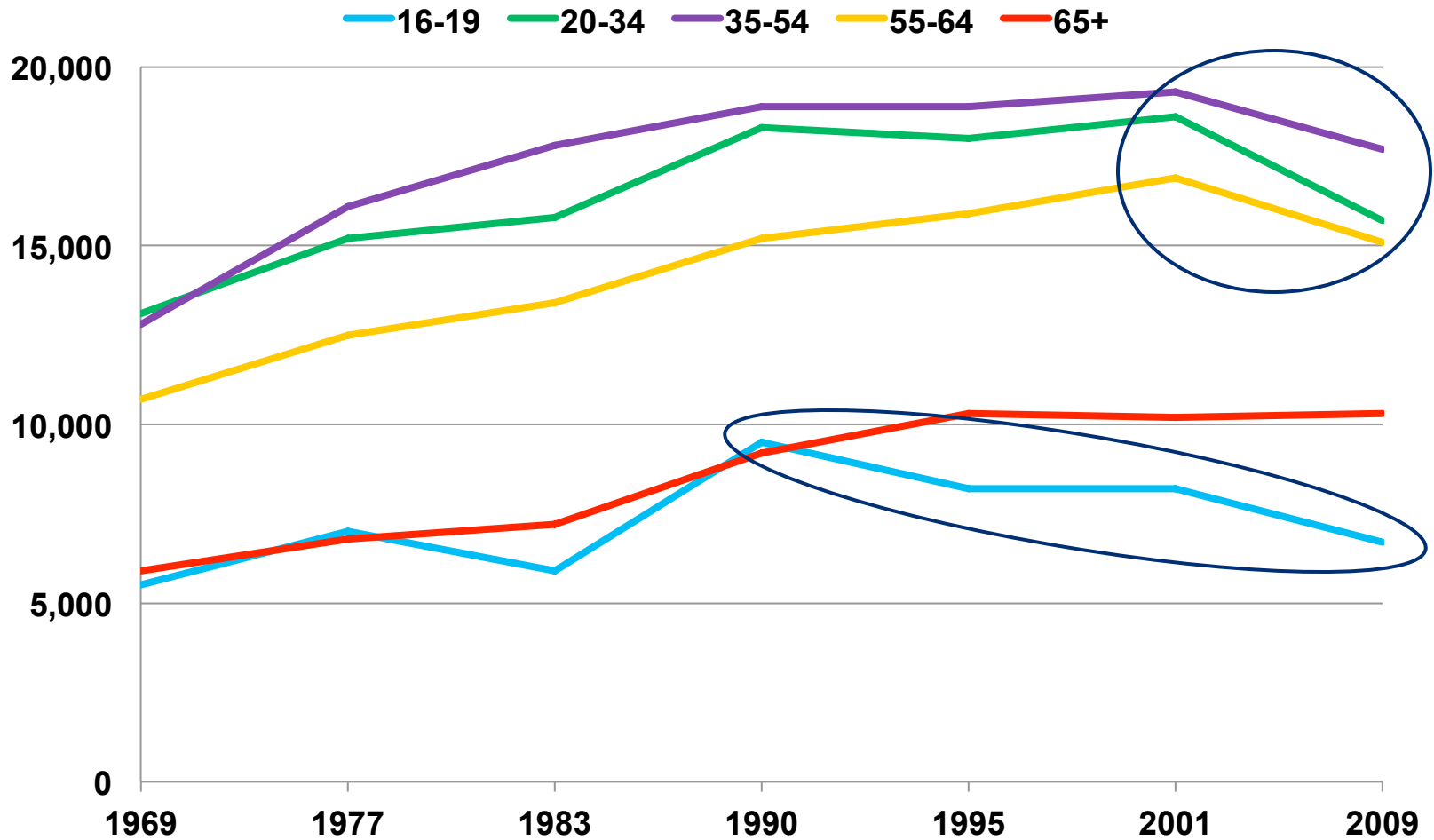
This Recession Has Been Different

VMT as a Percent of Pre-Recession Level



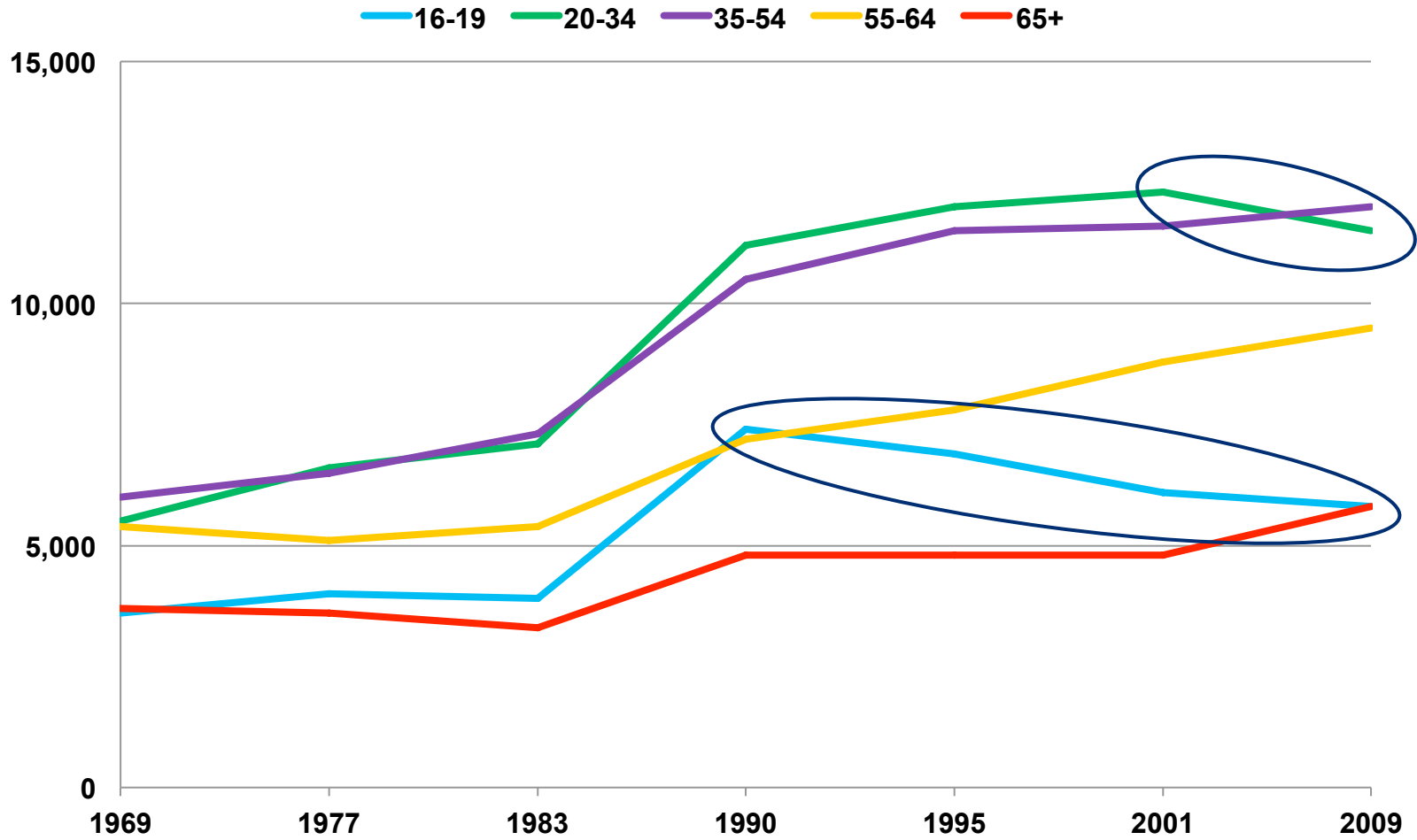
Who's Driving Less? Almost All Men...

Annual Miles Driven by Age -- Men



...but Only Younger Women

Annual Miles Driven by Age -- Women



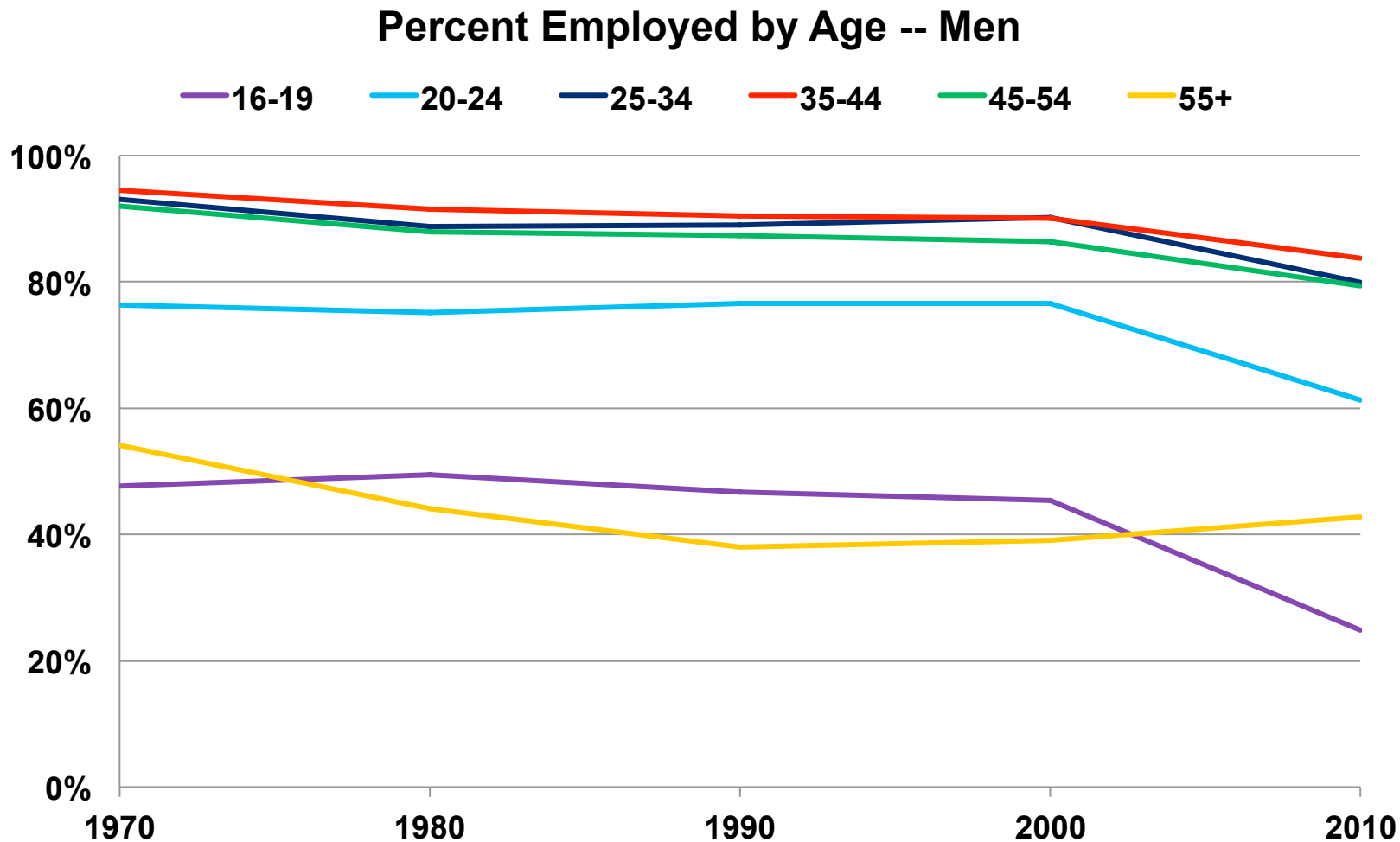
Some Causes Aren't New

- ❑ Baby boom cohort began moving out of peak driving years (mid-30s through mid-50s) in about 2000, and continues to do so
- ❑ Rising household income boosted car ownership and use through the 1970s and 1980s, but its effect has weakened considerably since then
- ❑ Pace of suburbanization has been slowing gradually for several decades
- ❑ Costs of owning and maintaining a car rose rapidly during 1980s and 1990s
- ❑ The highway building boom was over by 1980
- ❑ Graduated licensing programs began to reduce teen driving in the 1990s

...but Others Are New

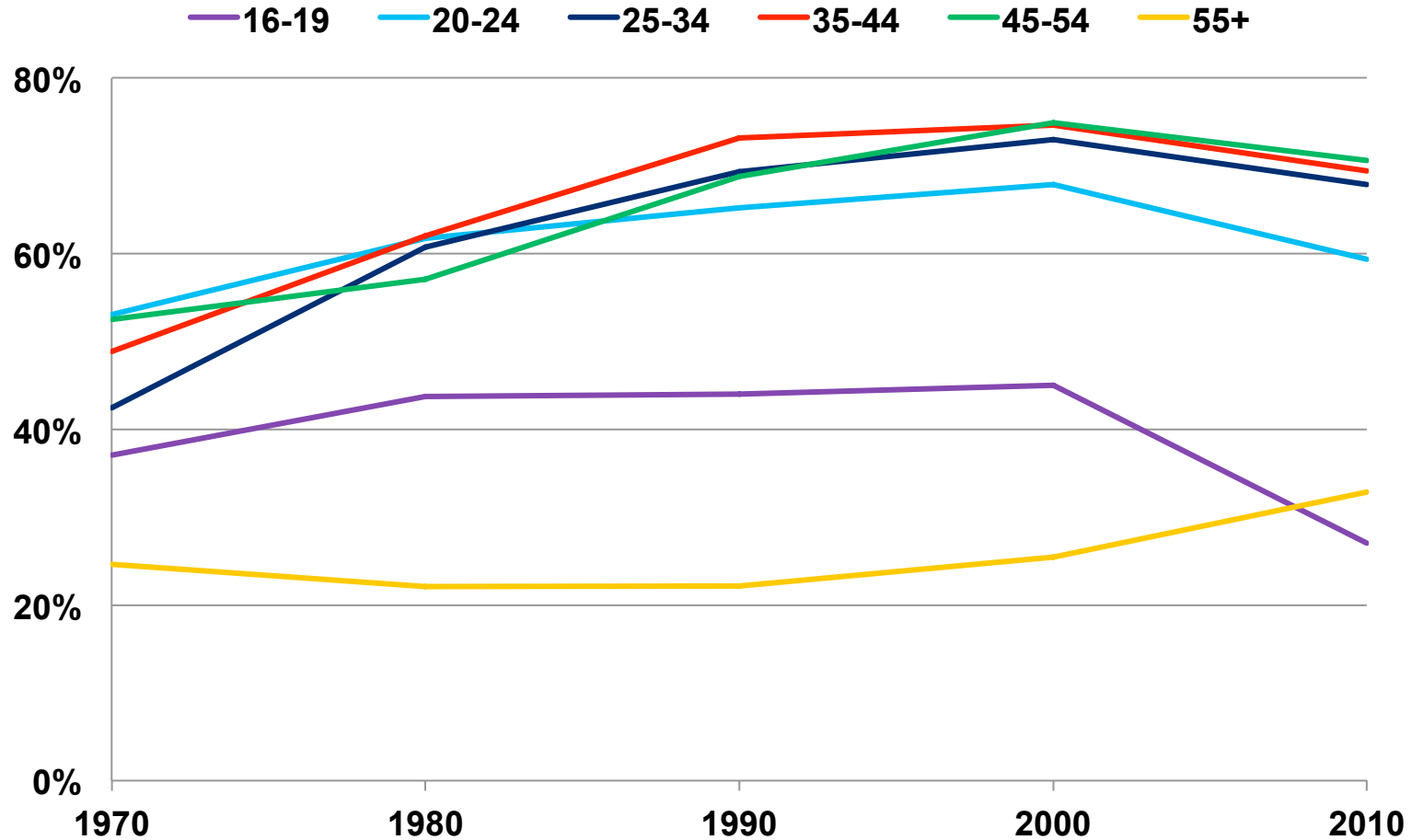
- ❑ Fraction of population holding jobs is down drastically since the early 2000s, particularly among young adults
- ❑ Recent declines in income have been largest among households where its effect on driving is strongest
- ❑ Gasoline prices up sharply since 2005, and *much* more volatile
- ❑ Young households' debt burdens – primarily from student loans – are higher than a decade ago, making home and car purchases difficult
- ❑ Recent college graduates are having unprecedented difficulty finding quality jobs

Declines in Driving Exactly Mirror Job Losses among Men



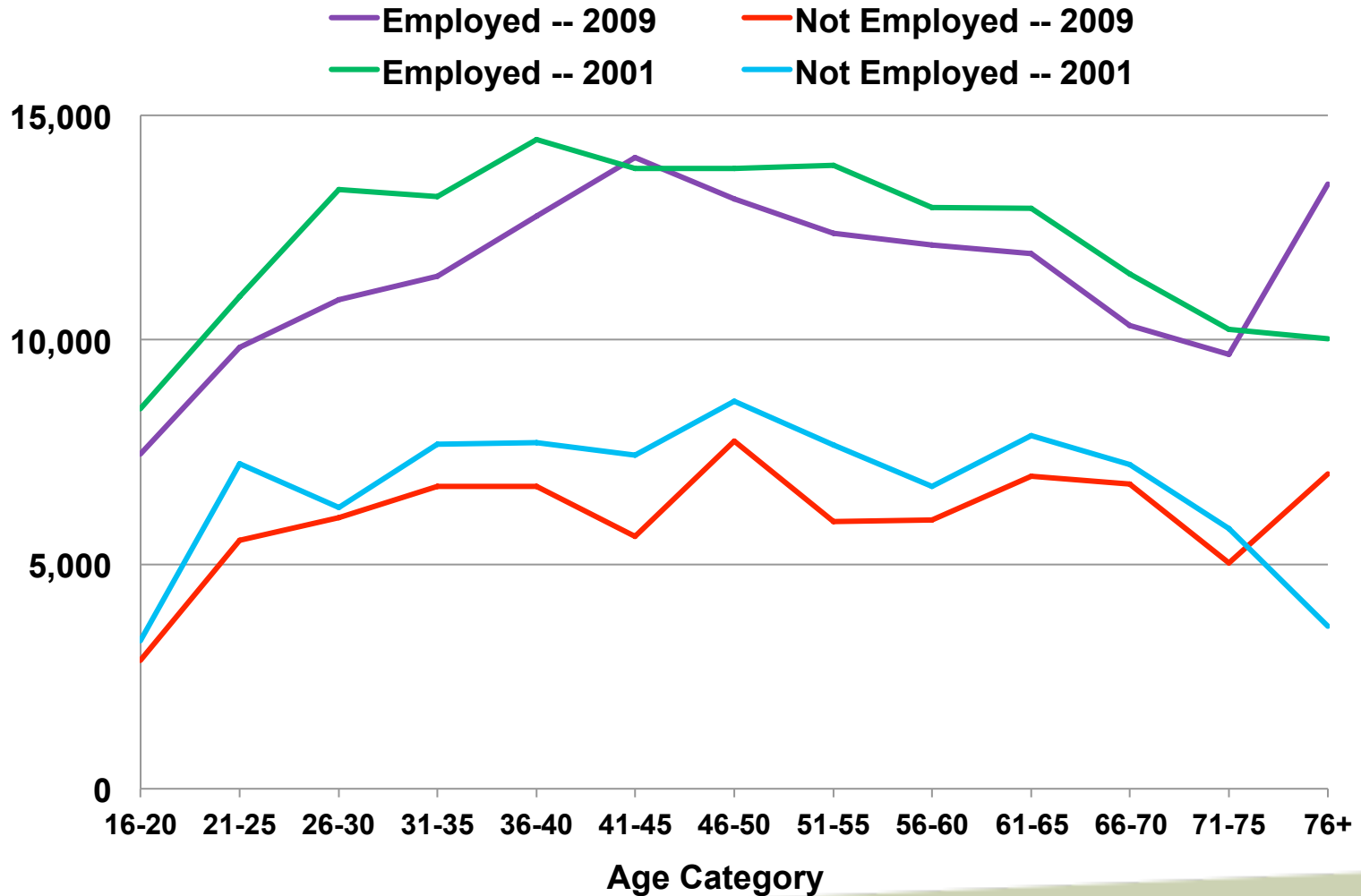
...and it's a Similar Story among Women

Percent Employed by Age -- Women

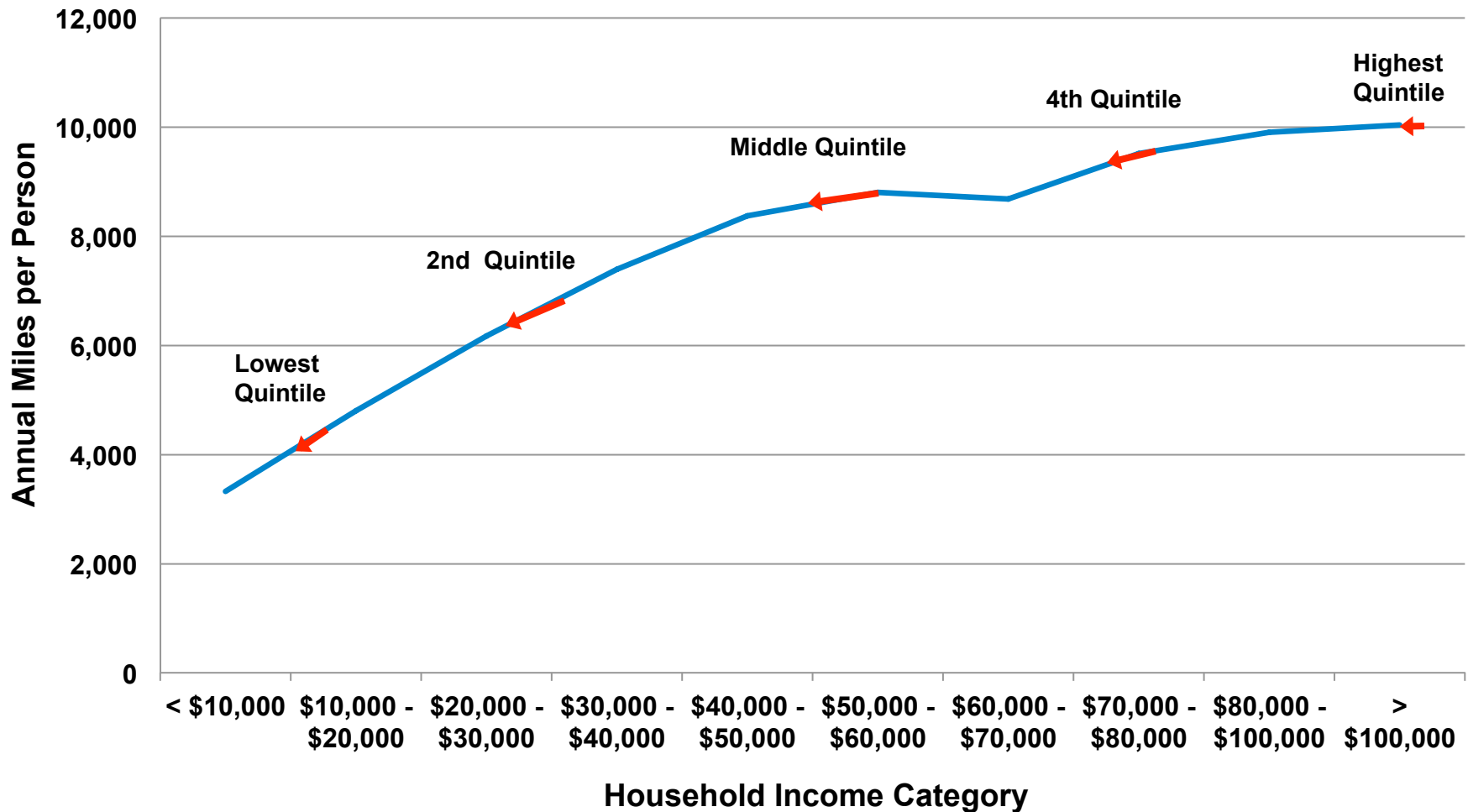


...but Even the Employed are Driving Less

Annual Miles Driven by Employment Status



Income Losses Have Been Largest where they Affect Driving the Most



Some Popular Explanations

❑ New Travel Choices

- Increase in transit ridership since automobile use peaked accounts for less than 1% of decline in automobile travel
- Increase in bicycle and walk trips only accounts for another 1% of the decline

❑ Rise of Internet shopping

- Households average only 3 on-line purchases per month (vs. 40 shopping trips by car), and 80% of on-line purchases require added truck travel for delivery
- Shopping trips were the only category of driving to increase in the last decade
- On-line shopping may still save some driving in search of specialized products

❑ Substitution of teleworking for commuting

- Share of employed who work at home regularly increased from 3.5% in 1970 to 4.3% in 2010
- Annual commute trips by car has remained at about 350 per worker for decades

It's too Early to Tell about Other Things

❑ Growth in social media

- Little question that the young use them *a lot* more
- Do they really substitute for personal contact?

❑ Resurgence in urban living

- So far, it seems concentrated among young, well-educated, high-income adults (mostly without children), plus a few of the affluent retired
- Meanwhile, the rest of the population – and increasingly, their jobs – continues to disperse

❑ Car sharing as an alternative to ownership

- Data are still scarce, but car sharing and other short-term rental arrangements appear to be growing rapidly
- But it's not yet clear whether they substitute for car ownership or supplement it, so we can't yet tell whether they raise or lower *total* auto use

Will Growth in Driving Resume?

- ❑ A “bounce” in driving is likely once the economy finally recovers fully, but that could take a couple of more years
- ❑ Even if growth in driving does resume, its pace will continue to slow down over the future
- ❑ Most future growth in driving will result from population increases, not from increased driving *per Capita*
- ❑ Some major uncertainties remain
 - Income and employment prospects among the young and lower-income households
 - Future immigration rates and auto use patterns among recent immigrants
 - Employment levels and auto use among older Americans, particularly women
 - How household locations adjust to continuing suburbanization of jobs adjust
 - How driving responds to continuing increases in car ownership costs and fuel prices

Why Should We Care?

- ❑ Highway Trust Fund revenues are unlikely to support historical investment levels, but this is happening already
- ❑ Congestion is unlikely to grow dramatically, except in selected locations
- ❑ Long-range transportation planning process is oriented toward supporting capacity expansion to accommodate growth, and may need to be re-thought

Income Losses Have Been Largest where they Affect Driving the Most

Changes in Mean Household Income (adjusted for inflation)

Time Period	Lowest Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile
1970-80	9%	0%	2%	7%	8%
1980-90	7%	8%	8%	11%	20%
1990-2000	11%	10%	11%	14%	28%
2000-10	-15%	-11%	-8%	-5%	-6%

Source: computed from data reported in U.S. Bureau of the Census, Historical Income Tables, Table H-3, Mean Household Income Received by Each Fifth and Top 5 Percent, All Races: 1967 to 2011.