Driving to 2030

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Demographic change, urban form, and future VMT growth in the US
Urban Institute

The nonprofit Urban Institute is dedicated to elevating the debate on social and economic policy. For nearly five decades, Urban scholars have conducted research and offered evidence-based solutions that improve lives and strengthen communities across a rapidly urbanizing world. Their objective research helps expand opportunities for all, reduce hardship among the most vulnerable, and strengthen the effectiveness of the public sector.
Key takeaways

Growth and aging:
  Countervailing VMT impacts, but growth wins

Where we’ll grow:
  Shifts to low-density Southeast metros will boost VMT

If we want to reduce VMT growth…
  - Focus intensively on 25 metros with fastest growth
    - Reduce single family lot sizes for new development
    - Incentivize infill and multifamily housing in dense, mixed-use centers
  - Anticipate rising senior driving and explore alternatives
We’re growing, but we’re getting older.

Which trend wins?
US population growing 38M from 2015-2030; 70% of the growth will be in the 65+ population

Source: U.S. Census 2014 National Population Projections
VMT per capita peaks in middle age, but senior driving is growing

Senior driving growing significantly

- 84 percent of Americans 65 and older held a driver's license in 2010 compared to barely half in the early 1970s.
- Drivers over 65 increased trips by 20 percent and increased miles travelled 33 from 1990 to 2009.
- Health, assets, and mortgage debt provide incentive and ability to extend working years

Source: 2009 NHTS Table: VMT by age and gender [http://nhts.ornl.gov/tables09/FatCat.aspx](http://nhts.ornl.gov/tables09/FatCat.aspx)
If average VMT/capita by age remains at 2009 level, total personal VMT grows ~10% from 2015-2030

Not all metros in the U.S. are growing.

What impact will population redistribution have on VMT?
How urban form matters for VMT

Density
- Metropolitan areas with higher population and employment per developed hectare have lower VMT/capita
- Density may also contribute to other VMT-reducing aspects of urban form (diversity, design)

Diversity
- Mixed use generates fewer trips, reduces VMT

Design
- Small blocks reduce VMT
Mapping America’s Futures:
Most growth will be in the Sunbelt

Projected population change, 2010-30

Source: Urban Institute projections.
Most fast-growth areas are low density.

Source: U.S. Census 2010, block level data from nhgis.org. Average population density of populated blocks with non-zero land area only.
Most fast-growth areas have high VMT/capita

Source: NHTS 2009 translation file, aggregated from tract to CZ level by R Pendall August 2015
In low-density commuting zones, people drive more.

\[ y = -0.642x + 49.131 \]

\[ R^2 = 0.4732 \]

Source: NHTS 2009 translation file, aggregated from tract to CZ level by R Pendall August 2015; 2010 Census of Population, block statistics, excludes blocks with zero population and zero land area. CZs with over 500,000 persons only.
How can we limit VMT growth through land-use change?
Focus on 25 high-VMT, high-growth metro areas

Multifamily development in mixed-use sub-centers

Reducing lot sizes in single-family areas

Beaufort, SC: 1/acre

Dallas, TX: 2.3/acre

Davis, CA: 4.3/acre

Fresno, CA: 8.1/acre

Source: http://www.lincolninst.edu/subcenters/visualizing-density/
What about seniors?
Mapping America’s Futures:
Seniors growing everywhere

Projected change in 65+ population, 2010-30

Source: Urban Institute projections.
Thanks.
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