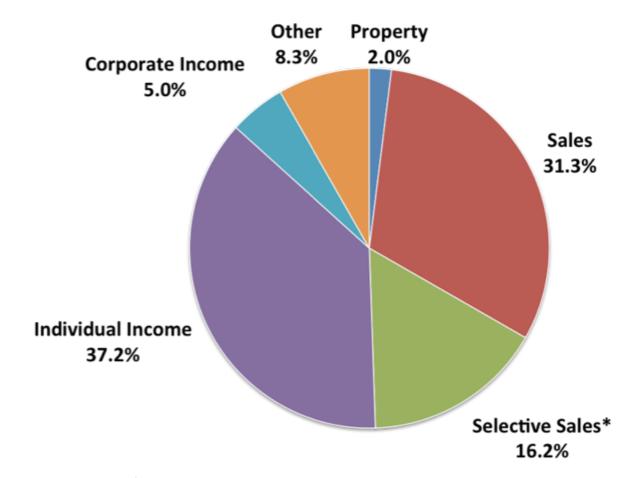
Impacts of Technological Change on State and Local Budgets Urbanism Next March 6, 2018

Donald Boyd
William Fox
Mary Murphy

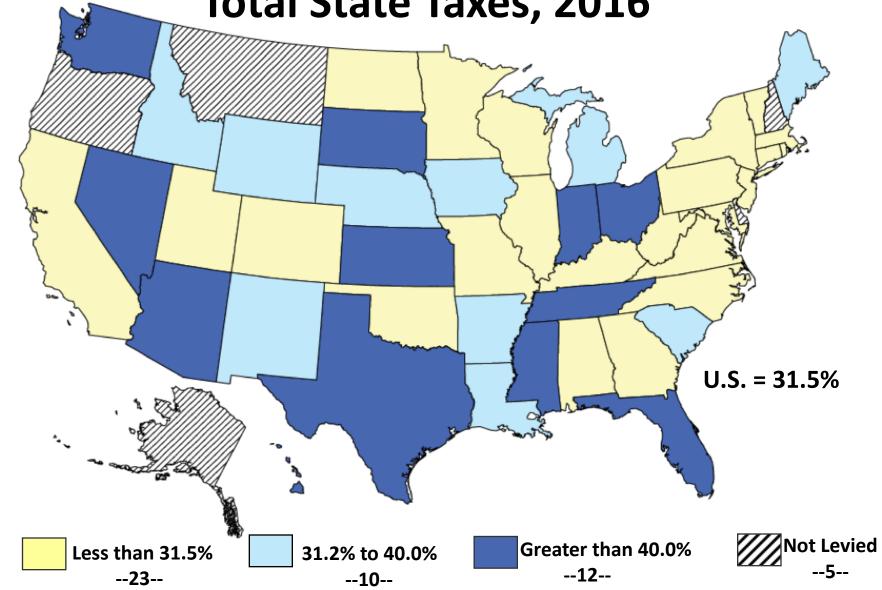
State Governments Rely Most Heavily on Personal Income and Sales Taxes

(Percentage Distribution of State Tax Collections, 2016)



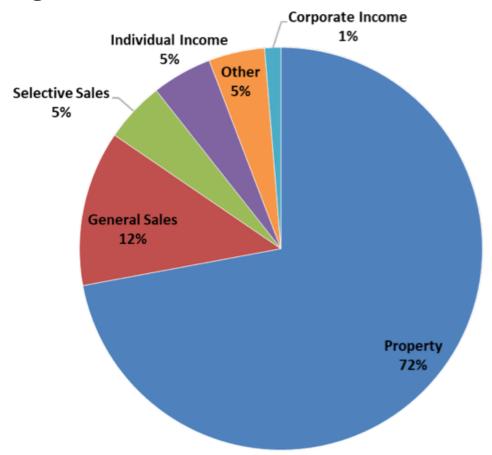
^{*} Selective Sales taxes are state Excise taxes. About 30% of this total is motor vehicle. "Other" includes motor vehicle licenses, which represent less than 3% of tax revenues.

State General Sales Taxes as a Percentage of Total State Taxes, 2016



Local Governments Rely Very Heavily on the Property Tax

(Percentage Distribution of Local Tax Collections, 2015)

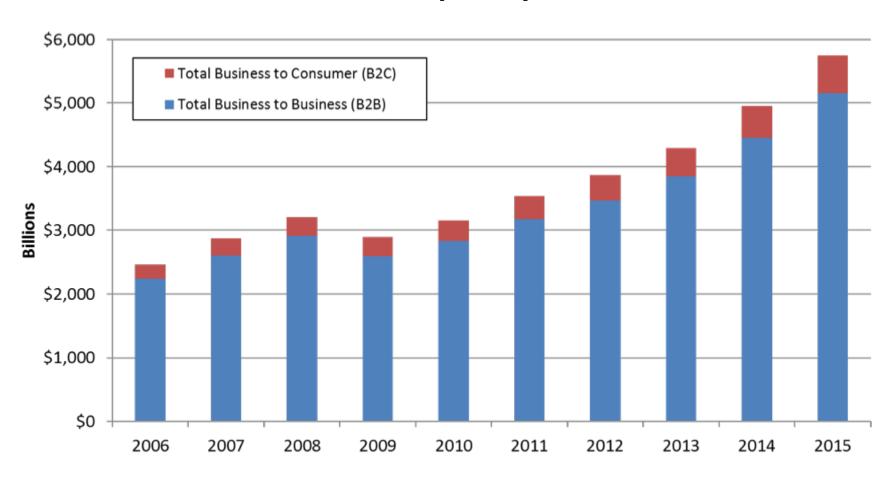


^{*} Selective Sales taxes are state Excise taxes. Local motor fuel and licenses are about 0.3% of total local taxes.

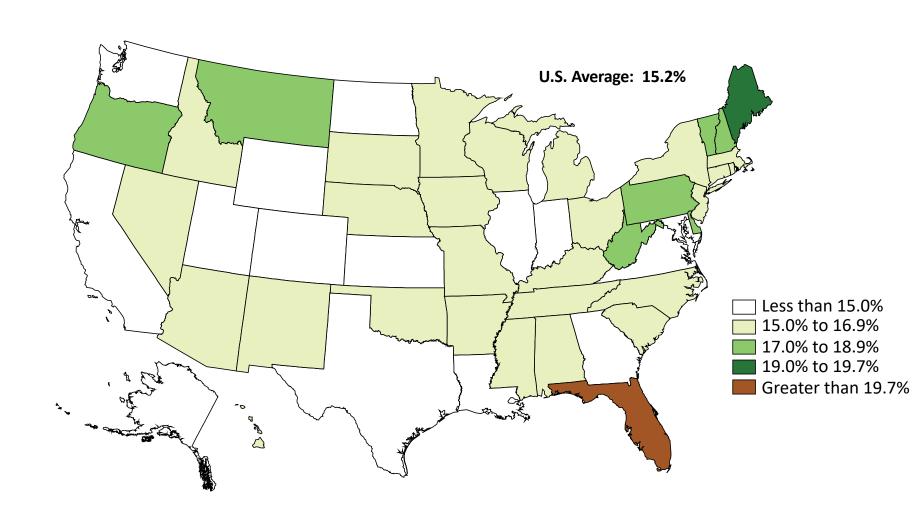
Vehicle Related Sales Taxes are Very Important (Distribution of TN Sales & Use Tax, FY17)



E-Commerce Continues to Rise Very Rapidly

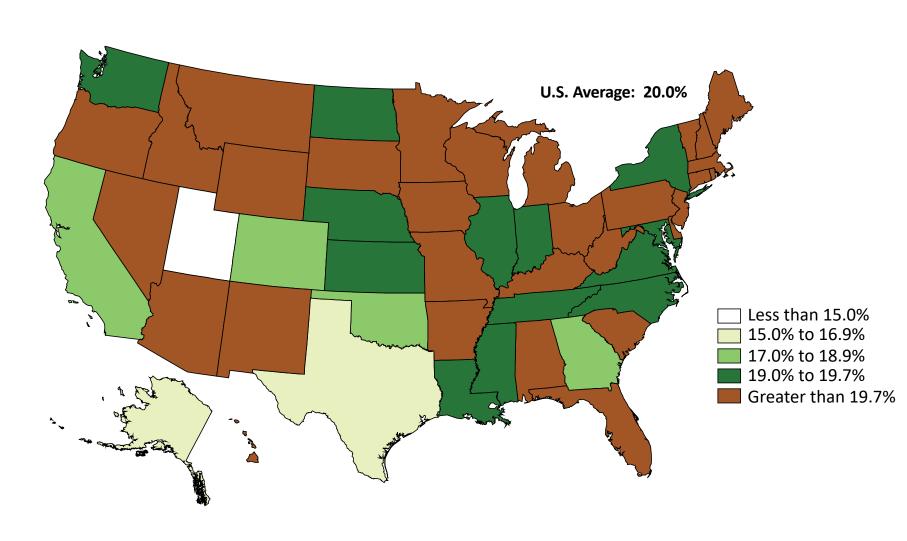


Population 65 Years and Older, 2016



Population Aging in Every State

(Population 65 Years and Older, 2030)



Federally taxable retirement income is growing rapidly and will continue to do so

Retirement Income in Federal Adjusted Gross Income

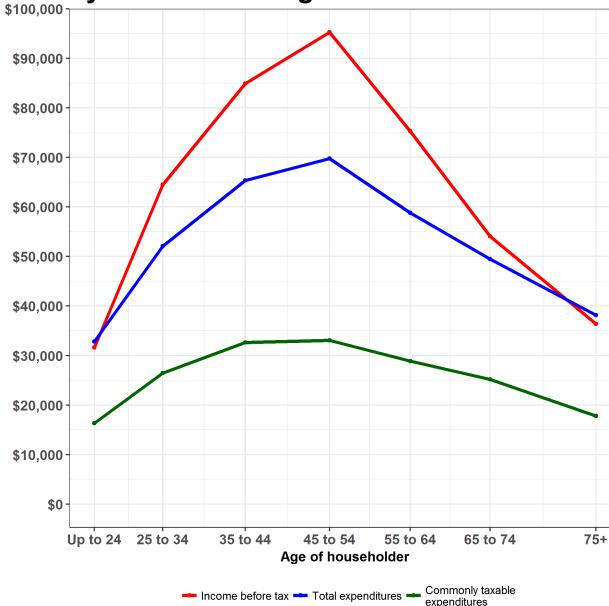
Billions of dollars

			% share of	Change from 2009 to 2014	
				Dollar	Percent
	2009	2014	AGI in 2014	change	change
Adjusted gross income	\$ 7,801.0	\$ 9,706.0	100.0%	\$1,905.0	24.4%
Salaries and wages	5,710.9	6,729.6	69.3%	1,018.7	17.8%
Net capital gains less loss	224.1	696.6	7.2%	472.5	210.9%
Taxable pensions	516.5	659.6	6.8%	143.2	27.7%
Taxable Social Security	171.3	260.4	2.7%	89.1	52.0%
Taxable IRA distributions	133.9	236.4	2.4%	102.5	76.6%
Retirement income	821.7	1,156.5	11.9%	334.8	40.8%
All other non-retirement income	1,044.4	1,123.4	11.6%	79.0	7.6%

Source: IRS Statistics of Income, 09in54cm.xls and 14in54cm.xls

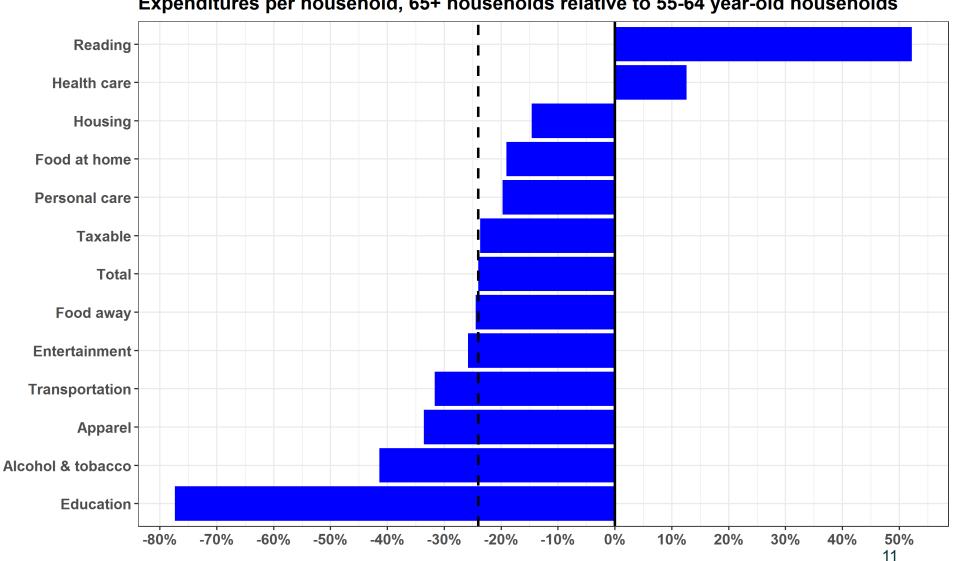
- Expenditures fall in older cohorts of households, but not as sharply as income falls
- Expenditures commonly taxed by states do not fall as sharply across cohorts as do total expenditures.
- Research that follows
 people over time suggests
 that people do reduce
 expenditures after they
 retire they do not fully
 "smooth" consumption
 over their lives. (e.g., Hurd
 and Rohwedder 2006,
 Banerjee 2015)

Household income and expenditures by householder age



Age 65+ cohort spends less per household than age 55-64 households on most expenditure categories

Expenditures per household, 65+ households relative to 55-64 year-old households

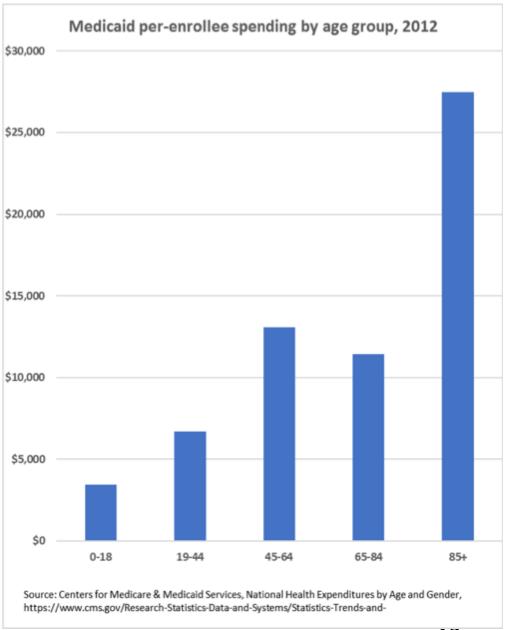


Source: U.S. Bureau of the Census, Consumer Expenditure Survey 2015 Table 1300, plus author's calculations

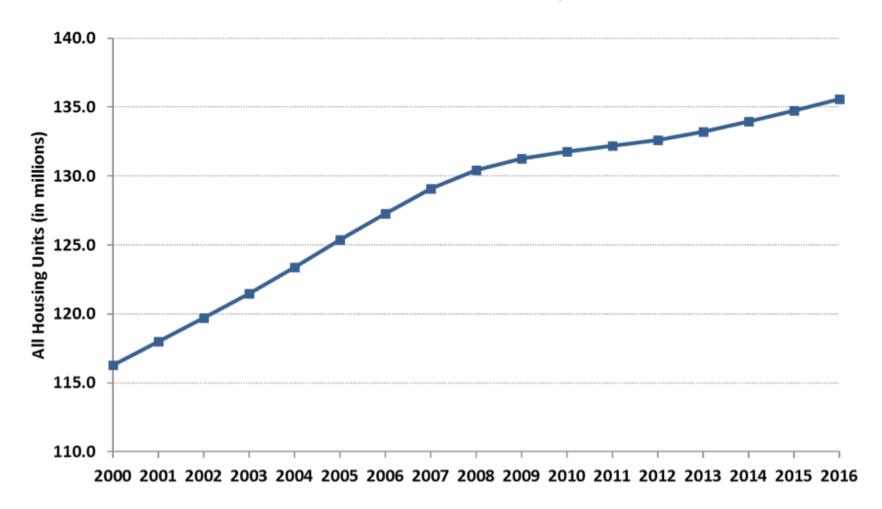
Medicaid

We know:

- Spending per enrollee on nearelderly and elderly is much higher than other groups
- 2. Elderly enrollees will grow rapidly so there will be pressure
- 3. Federal policy is a wild card



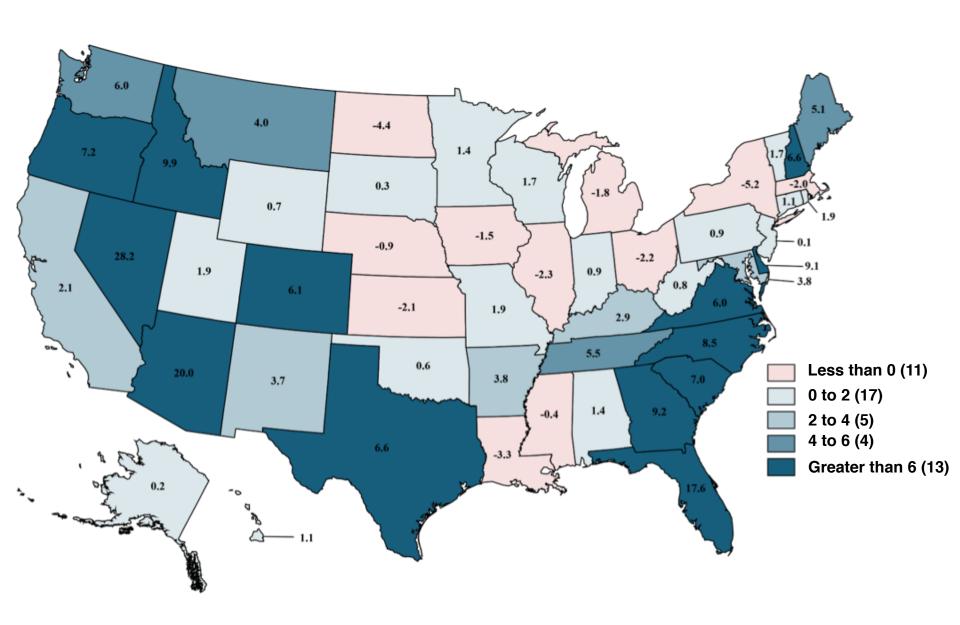
Household Formation has Slowed Dramatically



New Privately Owned Housing Units Have Fallen Significantly from the Previous Expansion

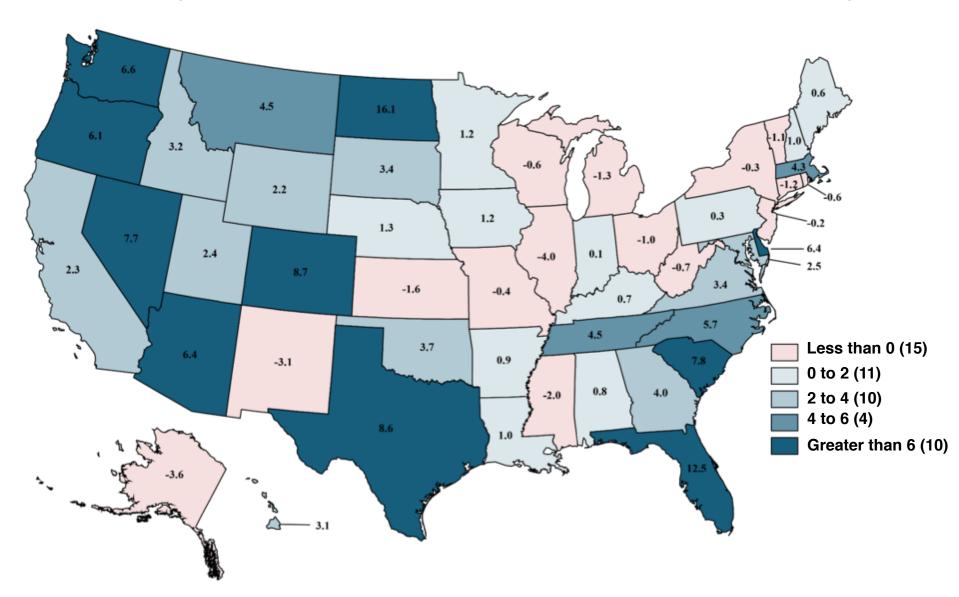


Net Migration Per 1,000 Residents, 2005 (Five Year Average)



Migration has Slowed in Most but Not all States

(Net Migration Per 1,000 Residents, 2015 (Five Year Average))



Autonomous Vehicles

- Some employment effects in transition
 - Fewer cars manufactured assembly and parts
 - Less demand for drivers in taxis and car sharing services
 - Fewer truck drivers
 - Fewer new cars sold, insured, and financed
 - Will other jobs develop to replace these? Who will get these jobs?

Some tax implications

- Sales tax revenues decline with fewer vehicles sold.
- Motor vehicle registrations and titles fees decline.
- Motor fuel tax revenues fall with more electric vehicles.
- Parking, traffic fines, etc. at local level

Policy options – keep tax structure upto-date

- Consider taxing transportation services, such as vehicle sharing and taxis.
- Carefully consider how to tax other shared assets with eye towards level playing field.
- Work to overcome the Quill limitation
 - Federal legislation such as the Marketplace
 Fairness Act
 - Reconsideration by the Supreme Court

Personal Income Tax

- Effects from aging arise from behavioral changes and from structure of statutes.
- Behavioral effects
 - Labor force participation varies by age, but will likely see more transitional retirement
 - Average earnings increase through careers, and then drop with retirement
 - Income changes to relatively more pensions, interest and capital gains

Two main reasons income tax is lower for older individuals

- Total income falls for older individuals retirement income usually less than pre-retirement earnings.
 (Aggregate retirement income is growing rapidly, but total income of retirees is lower than before retirement.)
- Tax breaks! For example:
 - Exclusion of Social Security income, public pensions, private pensions, IRA/401(k) withdrawals.
 - Additional personal exemptions and credits for the elderly

Expenditure implications of aging

- State and local pensions
- Health care
 - Employees or retirees
 - Low income elderly
- Education will the elderly want less?
- Demand for different services, such as more or different recreation

Pensions & retiree health care

- Workforce aging is taken into account by actuaries, but all forecasts of the far future potentially are subject to significant error
- Potential longevity (mortality) improvements often taken into account by actuaries, again, subject to error
- Pension contributions as % of payroll become more volatile as # of retirees rises relative to # workers on payroll
- Retiree health care generally a smaller fiscal concern than pensions: (a) numbers not as large (Lutz & Sheiner, 2014), and (b) generally weaker legal protections.