

Tax Disrupters: Rapid Technological and Demographic Changes

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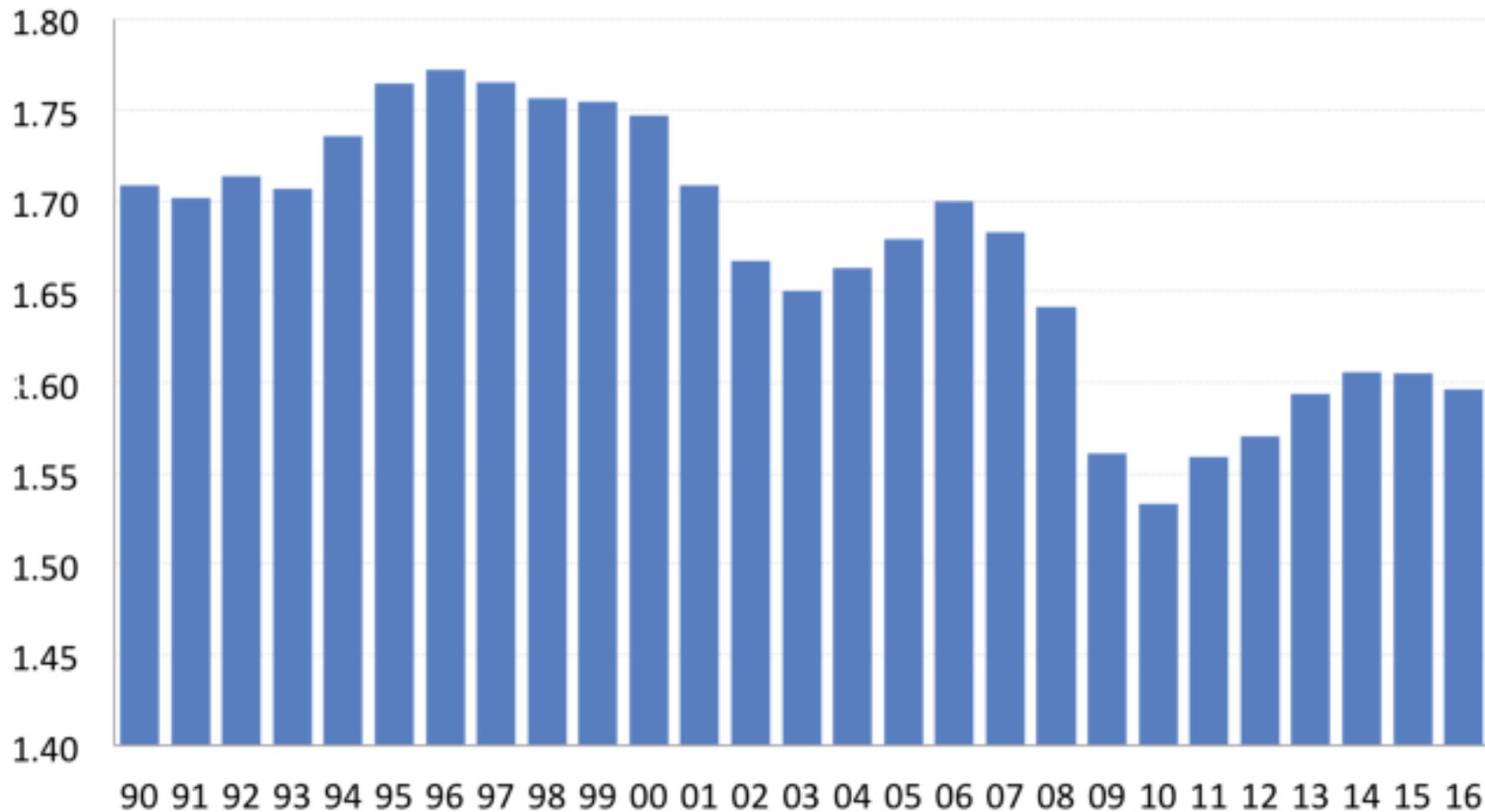
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Tax Disrupters

- Federal Tax Reform
- Technology – about half of activities have the potential to be automated
 - E-commerce
 - Autonomous/electric vehicles
- Demographic Changes

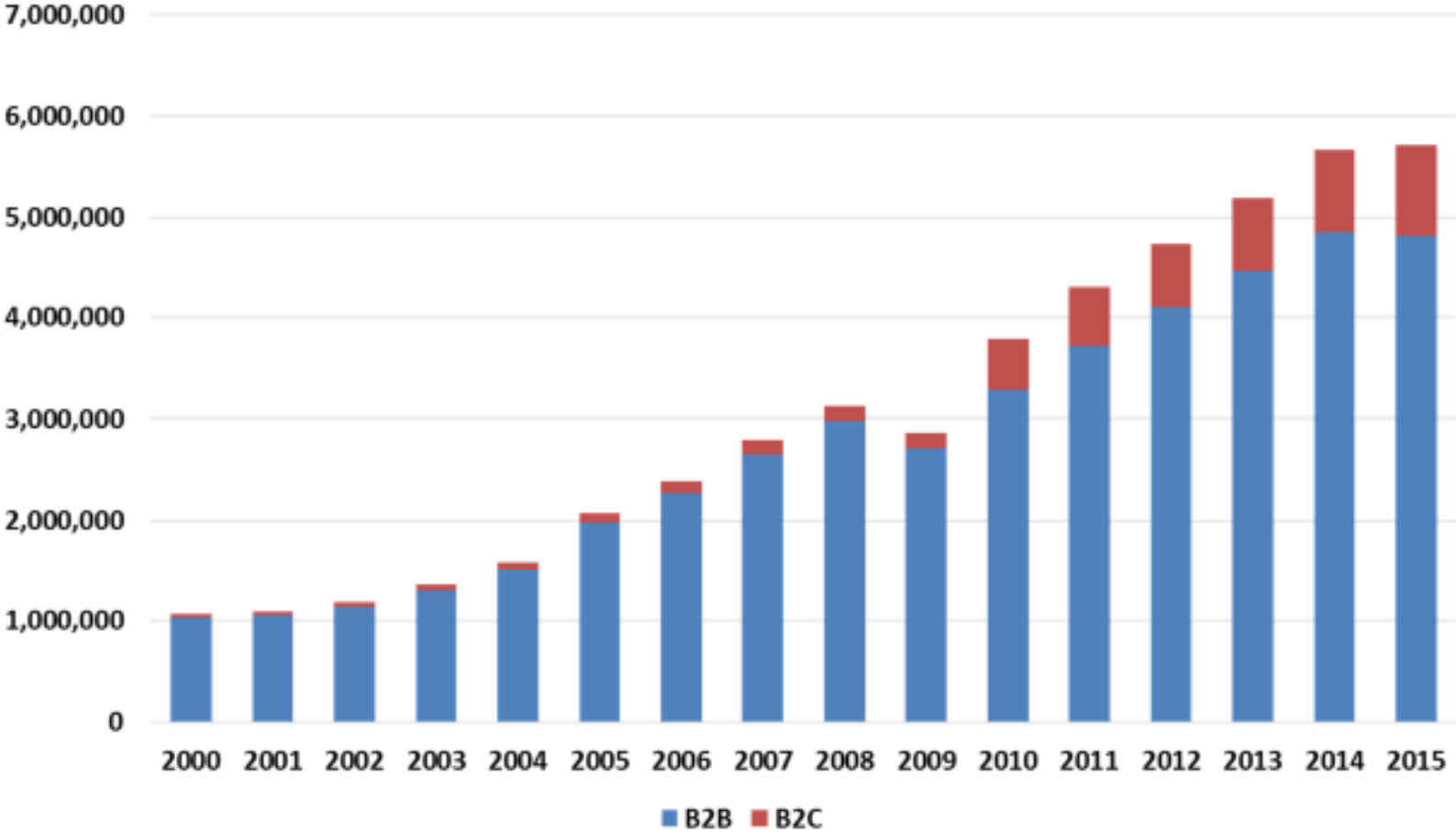
State General Sales Tax Collections as a Percentage of GDP



Personal Consumption Expenditures 1979 and 2016

	1979	2016
Total Expenditures	100.0%	100.0%
Durable Goods	14.2%	11.0%
Autos	5.7%	3.8%
Furn & Household	4.1%	2.5%
Other Durables	4.5%	4.7%
Nondurable Goods	32.2%	21.1%
Food & Beverage	13.7%	7.1%
Other Nondurables	18.5%	14.0%
Services	53.6%	67.9%

E-Commerce Sales are Growing Very Rapidly



STATES ARE USING SEVERAL APPROACHES TO ENFORCE TAX AT DESTINATION

- Broaden nexus rules – recently including marketplace sellers
- Increase ability to enforce the use tax through information reporting – Colorado, Nebraska, Washington.
- Income tax filing – 25 states allow individuals to report use tax liability on income tax returns.

BROADER APPROACHES

- Cooperation – Streamlined Sales Tax Governing Board (24 states)
- Federal legislation
 - Marketplace Fairness Act of 2017
 - Remote Transactions Parity Act of 2017
- South Dakota v. Wayfair, and cases in other states

Challenge of collecting on remote sales is not over

- South Dakota v. Wayfair is a great step
- Many state specific issues remain, such as thresholds, simplification, and retroactivity
- Thresholds may be high enough to continue distorting the economy, and limit tax revenues collected on remote firms – ultimately want an economy where the tax system is the same for large and small businesses

Challenge of collecting on remote sales is not over

- Enforcement could remain difficult for many firms – identifying which have nexus
- Digitization/sharing economy will continue eroding the tax base
- The bottom line, revenues will be much smaller than some expect

Modest number of B2C companies with sales over \$25 million

- > \$1 billion 57
- \$500 - \$1 billion 43
- \$125 - \$500 million 207
- \$40 - \$125 million 456
- \$25 - \$40 million 237

Source: Internet Retailer

My Expectations for AVs

- Owned in fleets – part of the asset sharing
- Electric and charged w/o cords
- Lead to more travel – less for seeking parking, but more because it is easier and less costly to travel
- Ultimately lead to less congestion
- The transition from the current vehicle stock to AVs could be extended but dynamics hasten the change

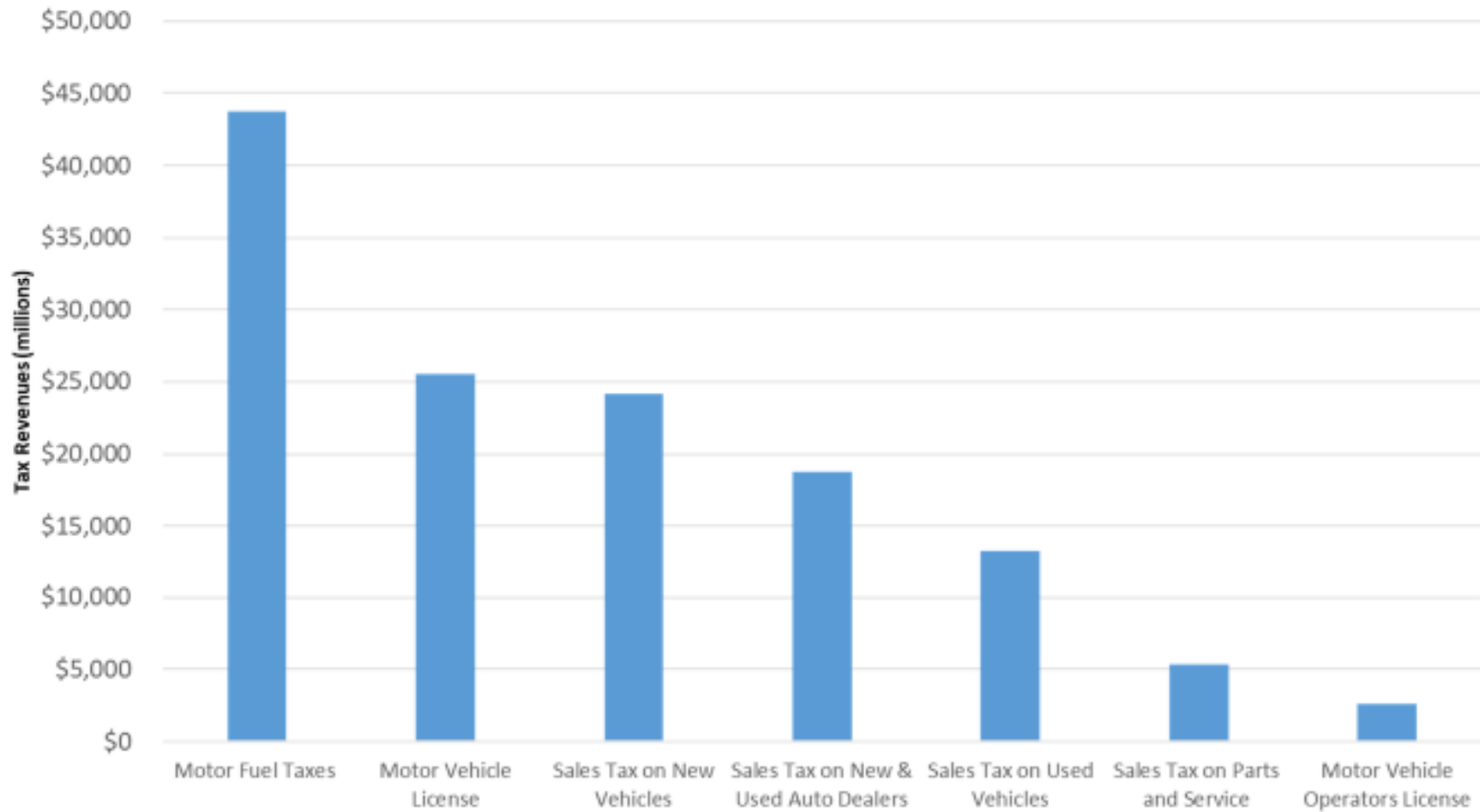
Some Employment Effects of Autonomous/electric Vehicles

- Fewer cars manufactured
 - Less assembly and parts, shorter supply chain for electric
 - Most of a vehicles value will shift from powertrains to batteries, computers and electronics
- Fewer drivers
 - Taxis and vehicle sharing services
 - Truck drivers - 3.8 million
 - 11.7 million use vehicles heavily in jobs - waste management, government, first responders
- Fewer new cars sold, insured, and financed
- Less gasoline and diesel purchased
- Will other jobs develop to replace these?

Some tax/revenue implications of AVs and EVs

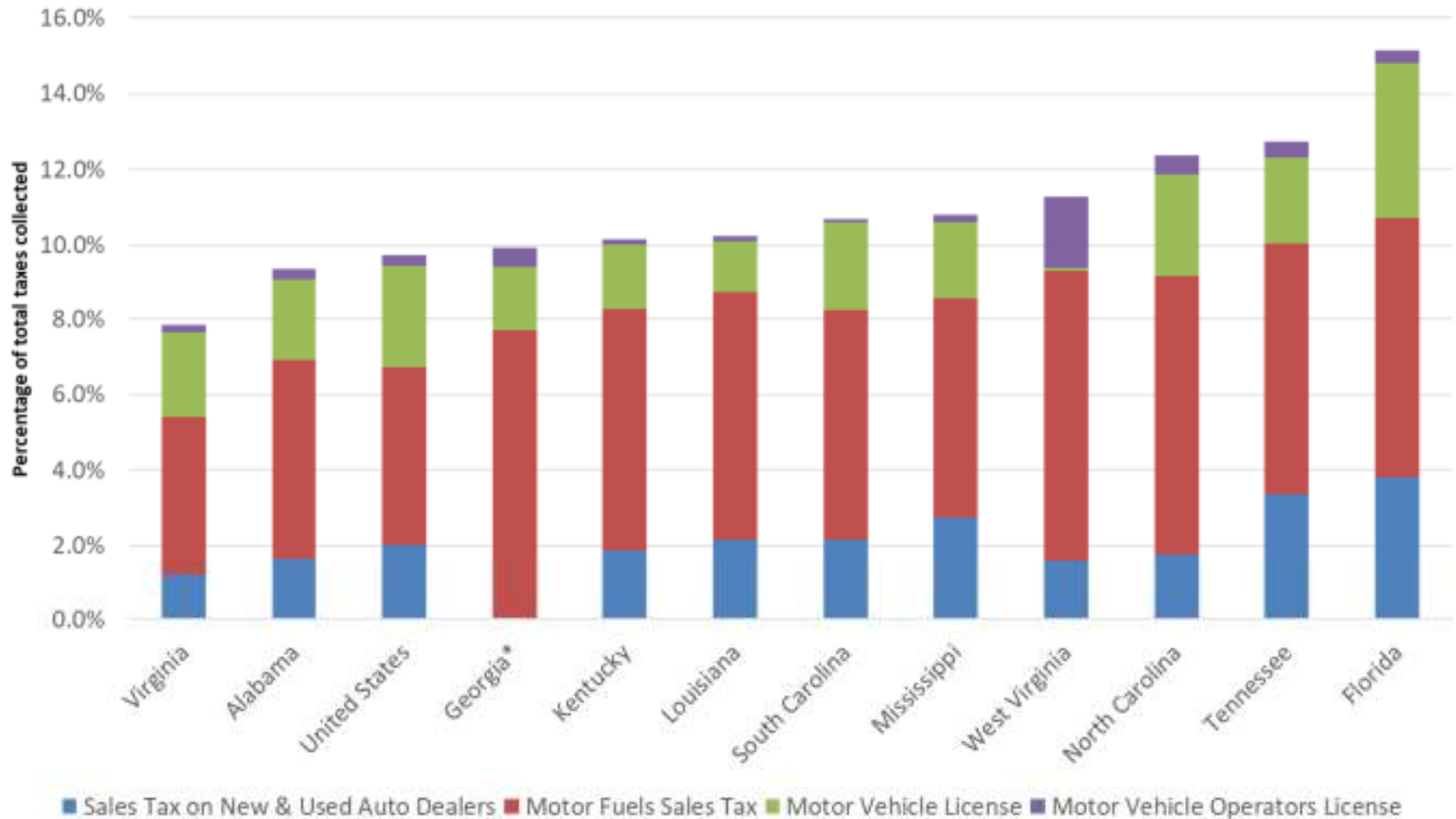
- Sales tax revenues decline with fewer vehicles sold.
- Motor vehicle registrations and titles fees decline.
- Motor fuel tax revenues fall with more electric vehicles.
- Parking, parking fines, traffic citations, registrations, gas taxes, etc. at local level.

Motor Vehicles taxes are very important



Sources: U.S. Census 2016, National Automobile Dealers Association 2014, Center for Automotive Research 2014

Autos are a Significant Share of Total Taxes Collected in Southeastern States, 2016



*Georgia collects a Title Ad Valorem Tax instead of a Sales Tax on Automobiles

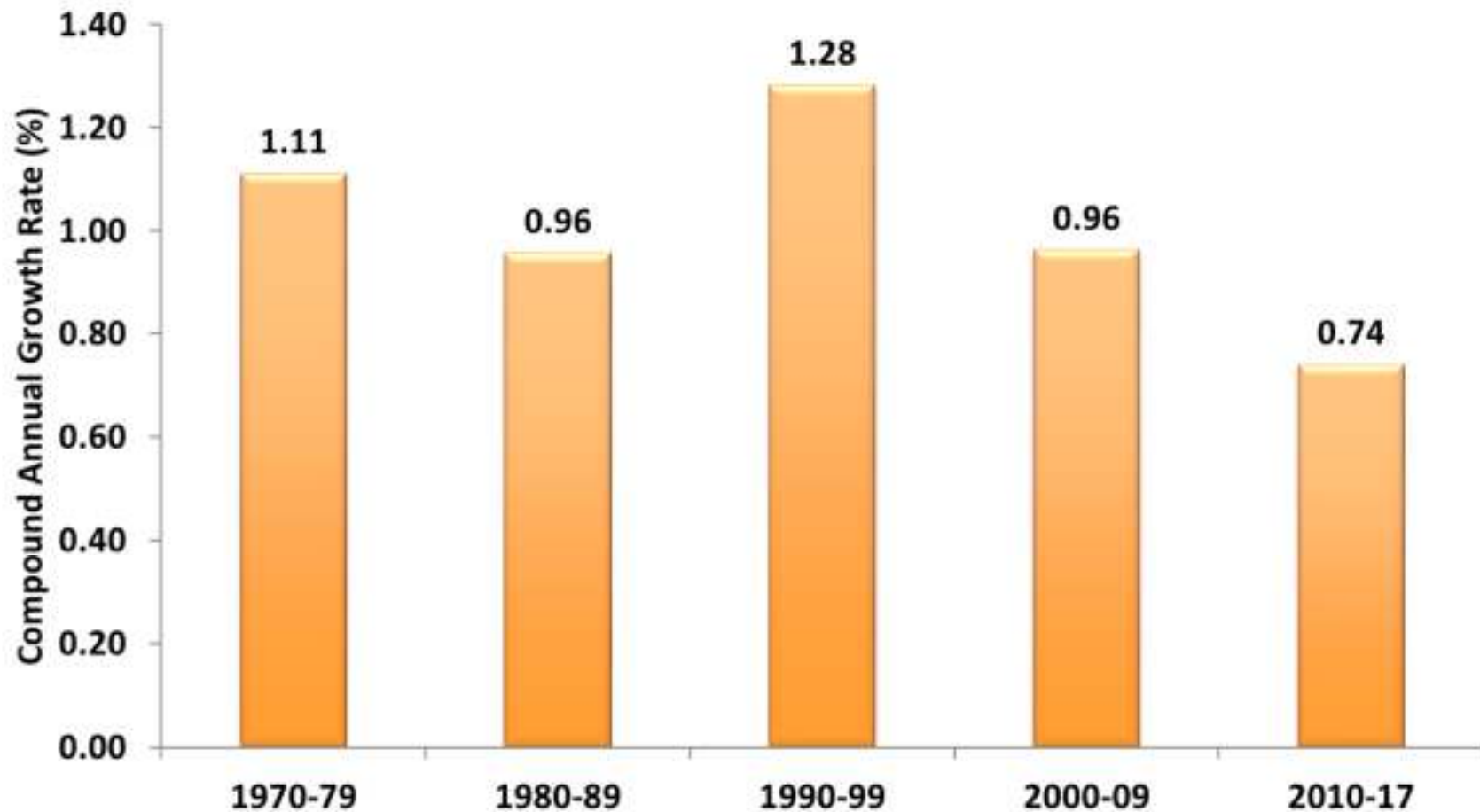
Policy options – keep tax structure up-to-date

- Consider moving from tax on vehicles and fuel to taxes (sales, VMT taxes, etc.) on transportation services, such as vehicle sharing and taxis.
- Carefully consider how to tax other shared assets with an eye towards level playing field, but must define the comparable service being provided
- Collect at the most efficient point in the supply chain

Demographic Issues

- Changing populations
 - Aging populations – living longer, baby boomers passing 65
 - Falling birth rates

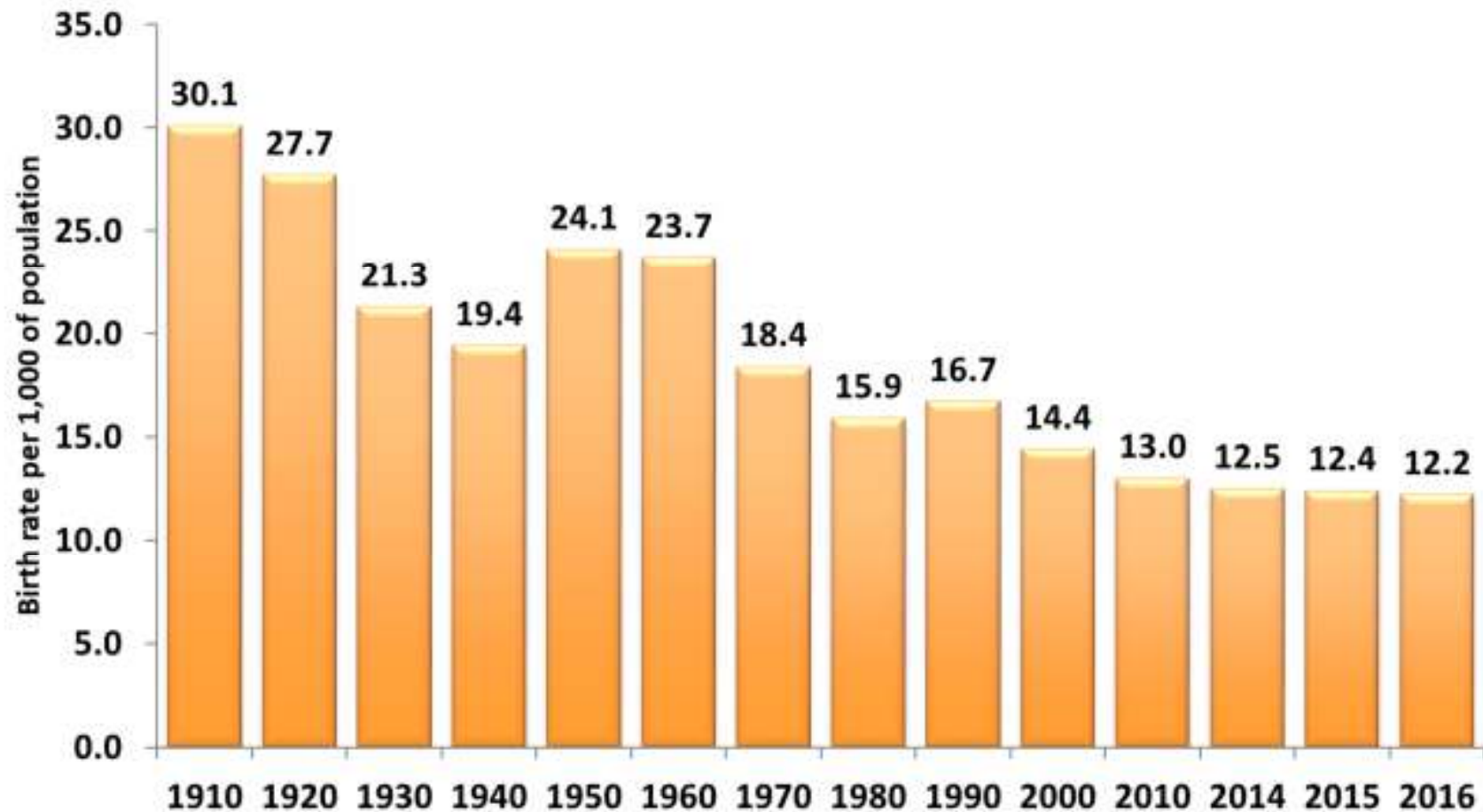
U.S. Population Growing More Slowly



Population Growth

- Varies widely across states – very fast in some, such as Arizona and Colorado and very slow or decline in others, such as Maine and Pennsylvania. Rate of in-migration and natural change both having an effect.
- Growth adds tax revenues, but creates corresponding expenditures which depend on the demographics of the new population, so uncertain how the fiscal position is affected.
- Costs can fall slowly with population decreases.

Birth Rates Continue to Decline (Birth Rates per 1,000 Population)

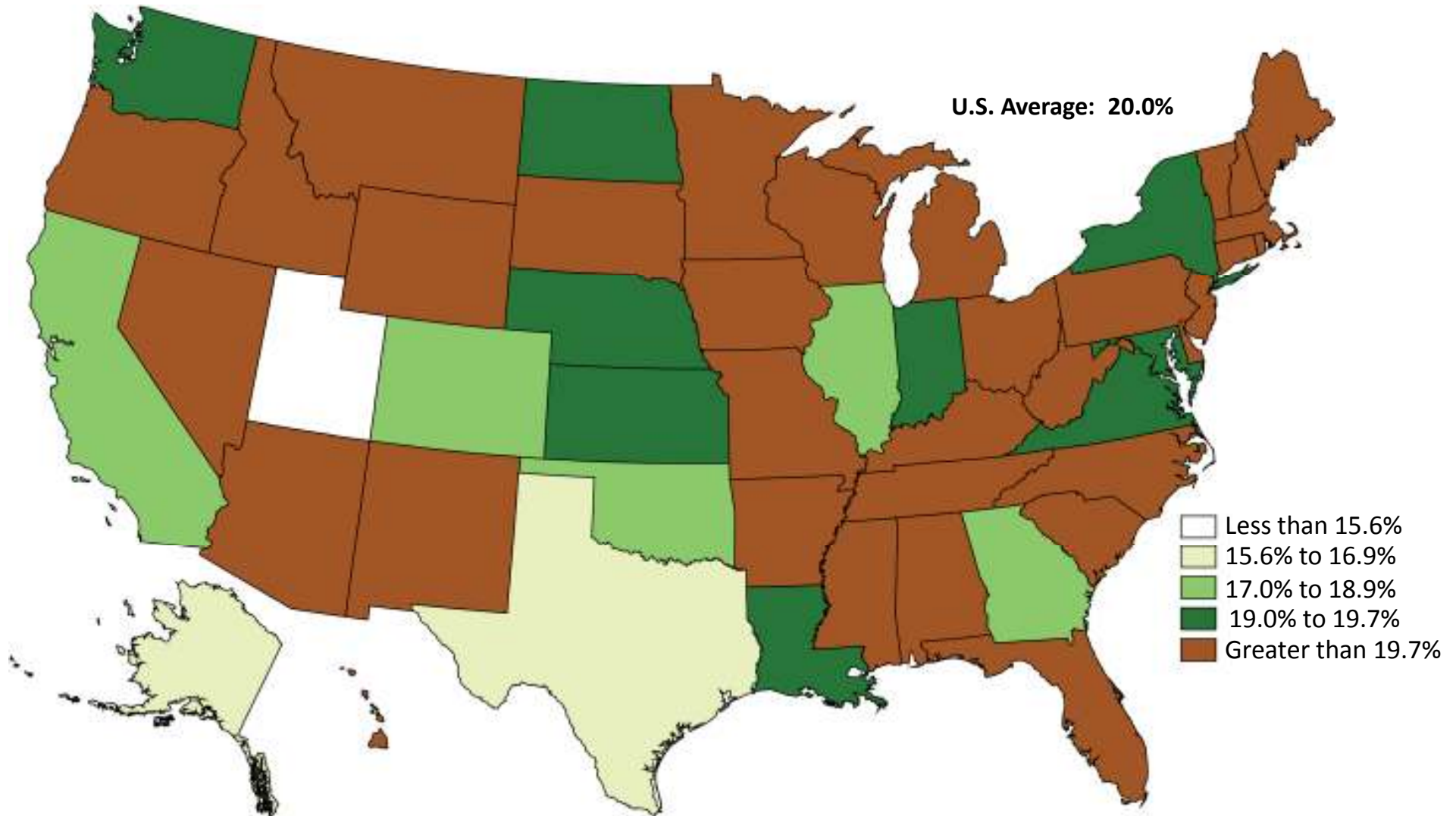


Birth rates are lower for Mothers Under 30

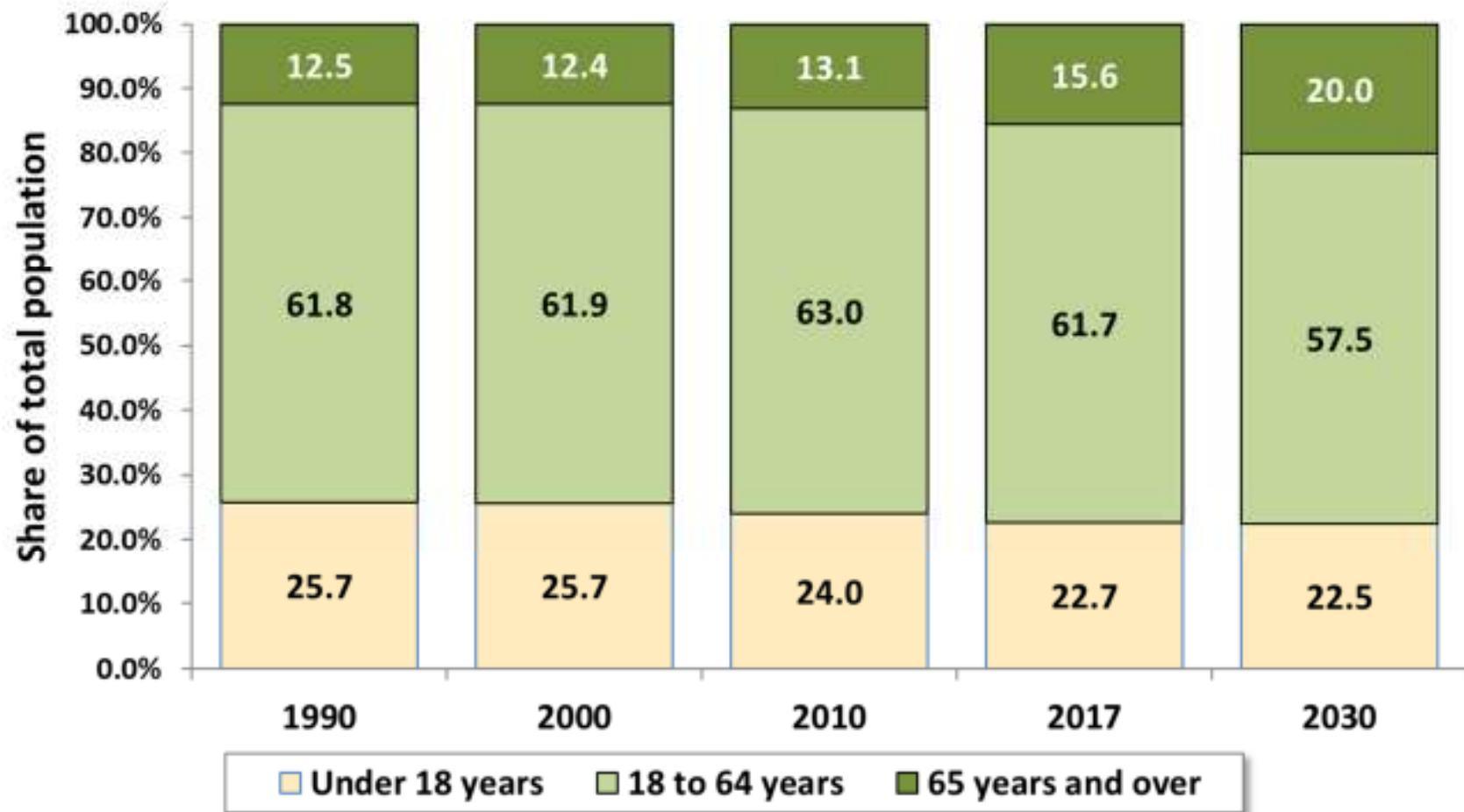
(Birth rates per thousand by mother age)

Age Band	2007 Birth Rate Per Thousand	2016 Birth Rate Per Thousand
15-19	42.5	20.3
18-19	73.9	37.5
20-24	106.3	73.8
25-29	117.5	102.1
30-34	99.9	102.7
35-39	47.5	52.7
40-44	9.5	11.4

Population Aging in Every State (Population 65 Years and Older, 2030)



Above 65 Population Rising Rapidly



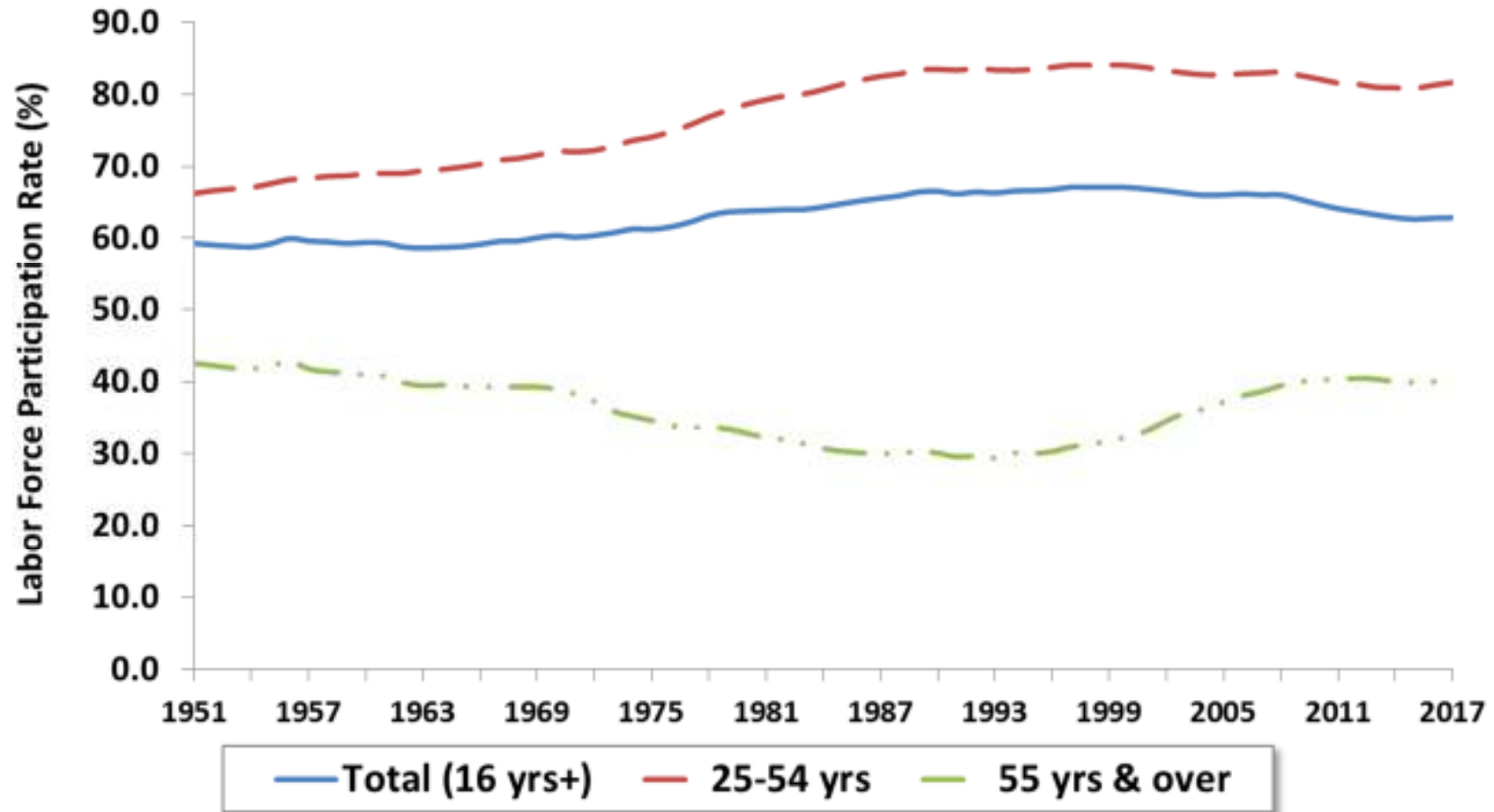
Expenditure implications of aging

- State and local pensions
- Health care
 - Employees or retirees
 - Low income elderly
- Education –
 - What will the elderly be willing to pay for?
 - How will fewer students affect spending
- Demand for different services, such as more or different recreation

Personal Income Tax

- Effects from aging arise from behavioral changes and from statutes.
- Behavioral effects
 - Average earnings increase through most of your career, and then drop as approach retirement – relative patterns differ across states
 - Income changes to relatively more pensions, interest and capital gains
 - Labor force participation varies by age, but will likely see more transitional retirement
 - Demographics reduce per capita tax revenues

Lower but Rising Labor Force Participation Rate for 55 and Up



Personal Income Tax

- Statutory effects
 - Progressivity affects how demographics impact income tax revenues
 - More limited taxation of capital income.
 - 37 states have some type of special provision for pension income, and all have some favorable treatment for the elderly
 - Only six states tax social security to the same extent as the Federal Government
 - Many have special treatment for other pensions.
 - Other credits and exemptions – GA cost more than \$250 million per year a decade ago

Sales Tax

- Some consumption smoothing over life but consumption patterns change with age – middle aged spend the most, oldest and youngest groups spend a little more than half as much – taxable spending much greater 35-54
- Elderly consume more health care and food at home, so breadth of base affects how sales tax responds
- Aging population will cause per capita tax revenues to fall, with the biggest effects in Hawaii, Colorado and North Carolina

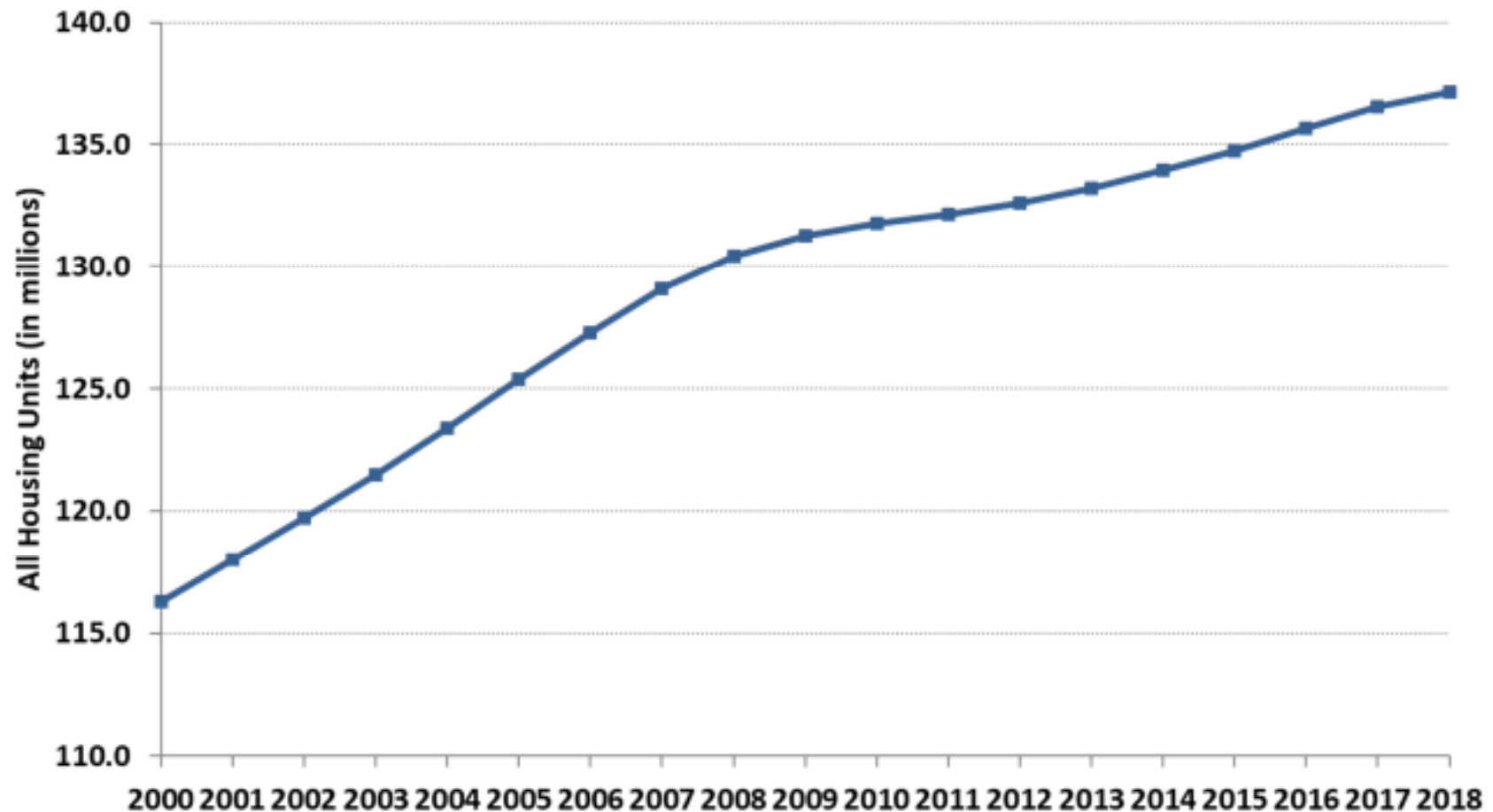
Sales Tax and Millennials

- How does lower (at least to this point) asset accumulation by Millennials alter sales tax revenues? Fewer cars with car sharing and autonomous vehicles?
- Sales tax collection and remote sales

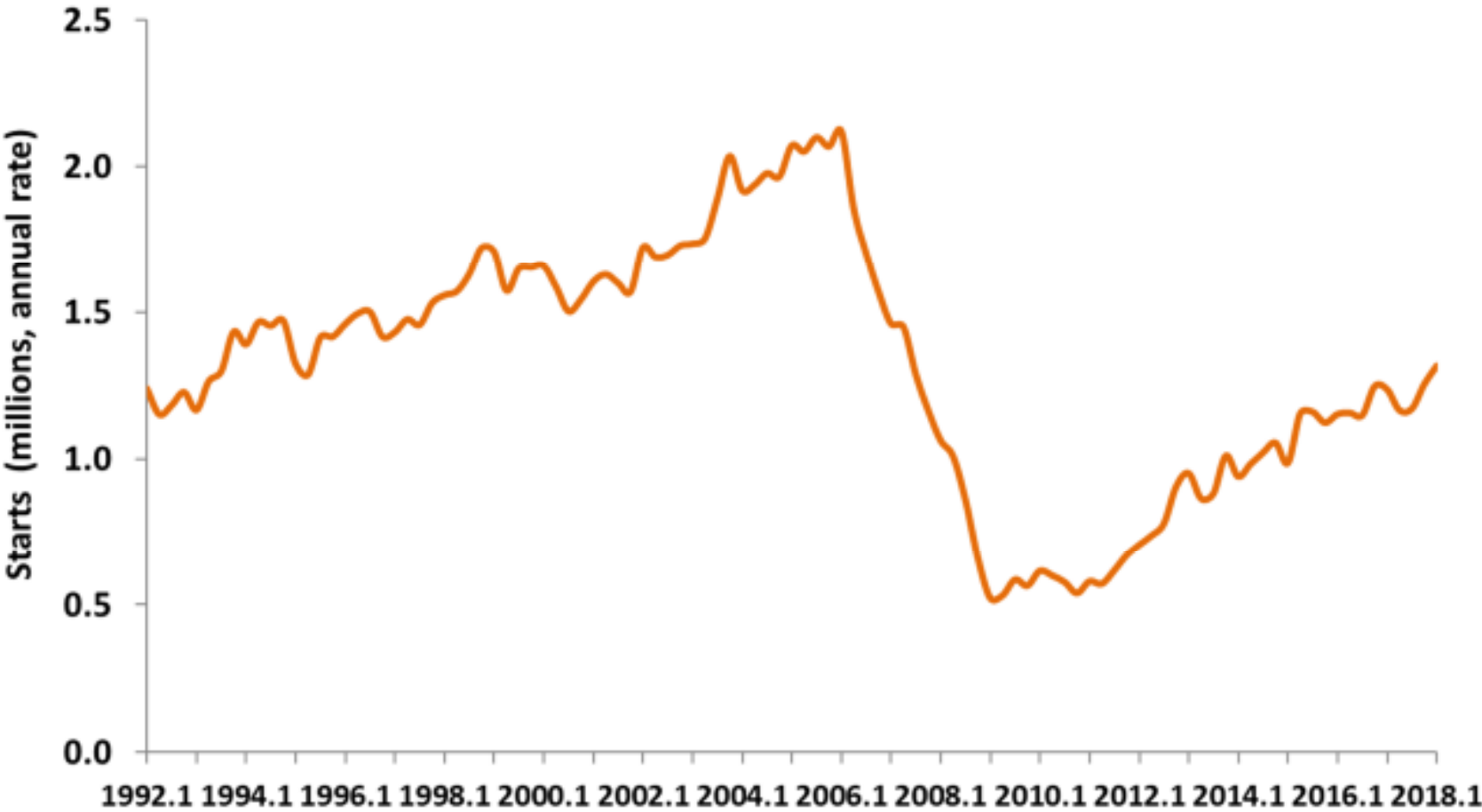
Property tax

- Again, behavioral effects and statutory effects
- Millennials
 - How will they behave in terms of property ownership?
 - Household formation affects need for new construction.
 - Decisions to own versus rent could alter the value of property.

Household Formation has Slowed Dramatically



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



Property tax

- Behavior - Older people spend less on housing
 - want to stay in their home but most ultimately downsize
- Statutory
 - Age specific homestead exemptions
 - Move into nontaxable nursing homes, etc.
 - Places relatively more of the tax burden on the working age population

Policy Options

- Keep tax bases broad
 - Limit any further age related (and all) exemptions
 - Tax pensions and Social Security under PIT
 - Tax food and carefully selected services under sales tax
 - What about health care?
 - Homestead exemptions?

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