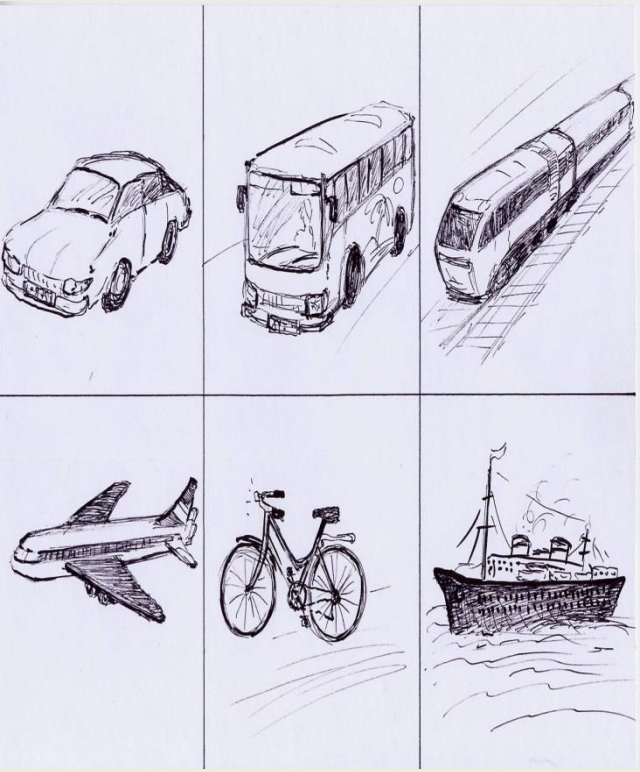
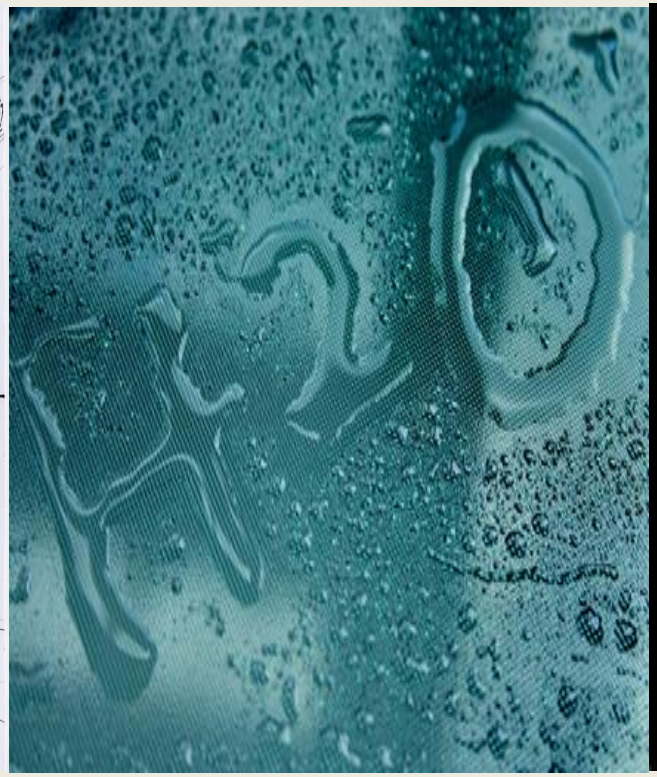
Transportation, Water, and Energy





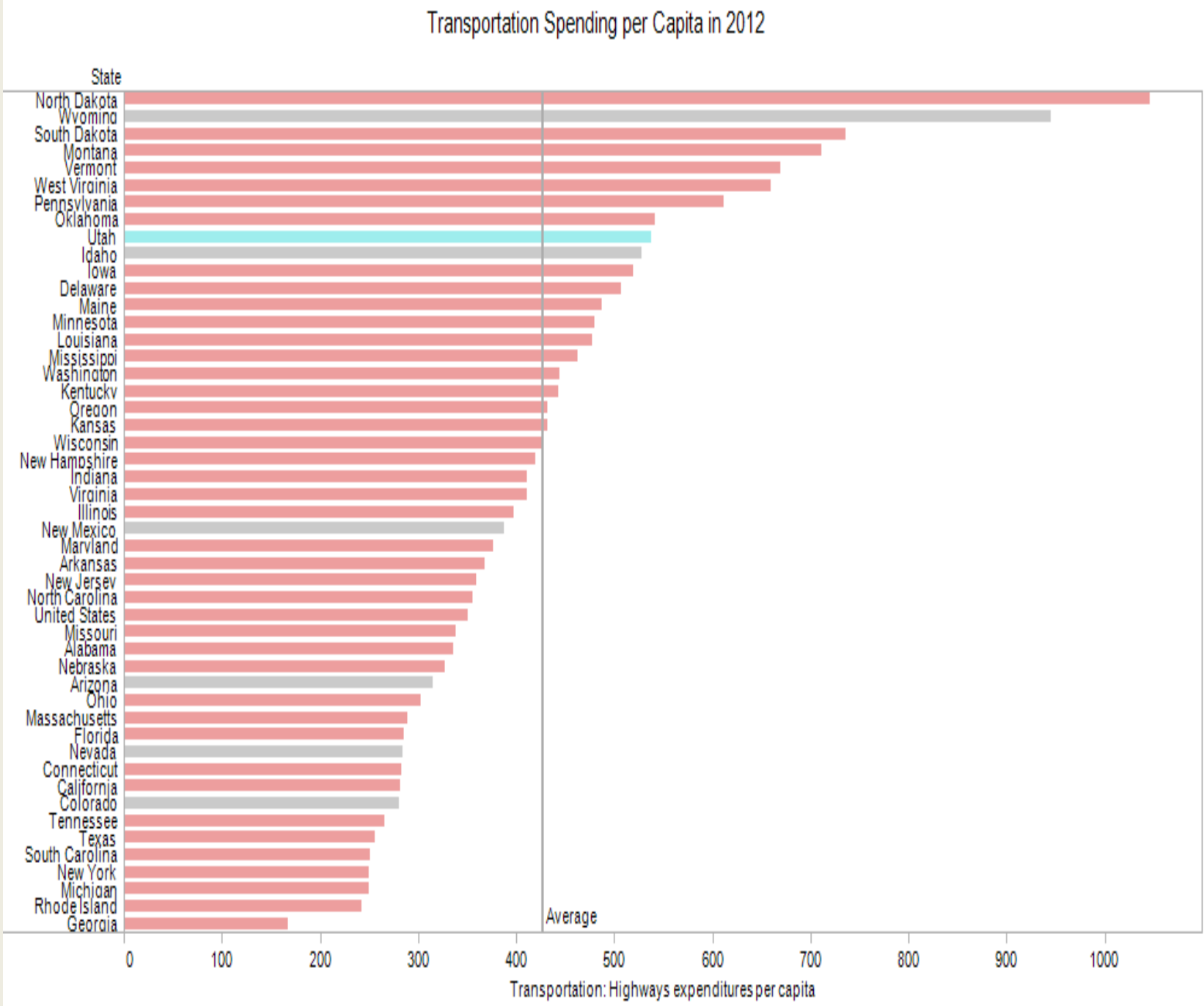
In Connection with Economic Growth

LFA
Legislative Fiscal Analyst

Thomas Young, Ph.D.
Andrea Wilko, Ph.D.
Steven Allred
Mark Bleazard

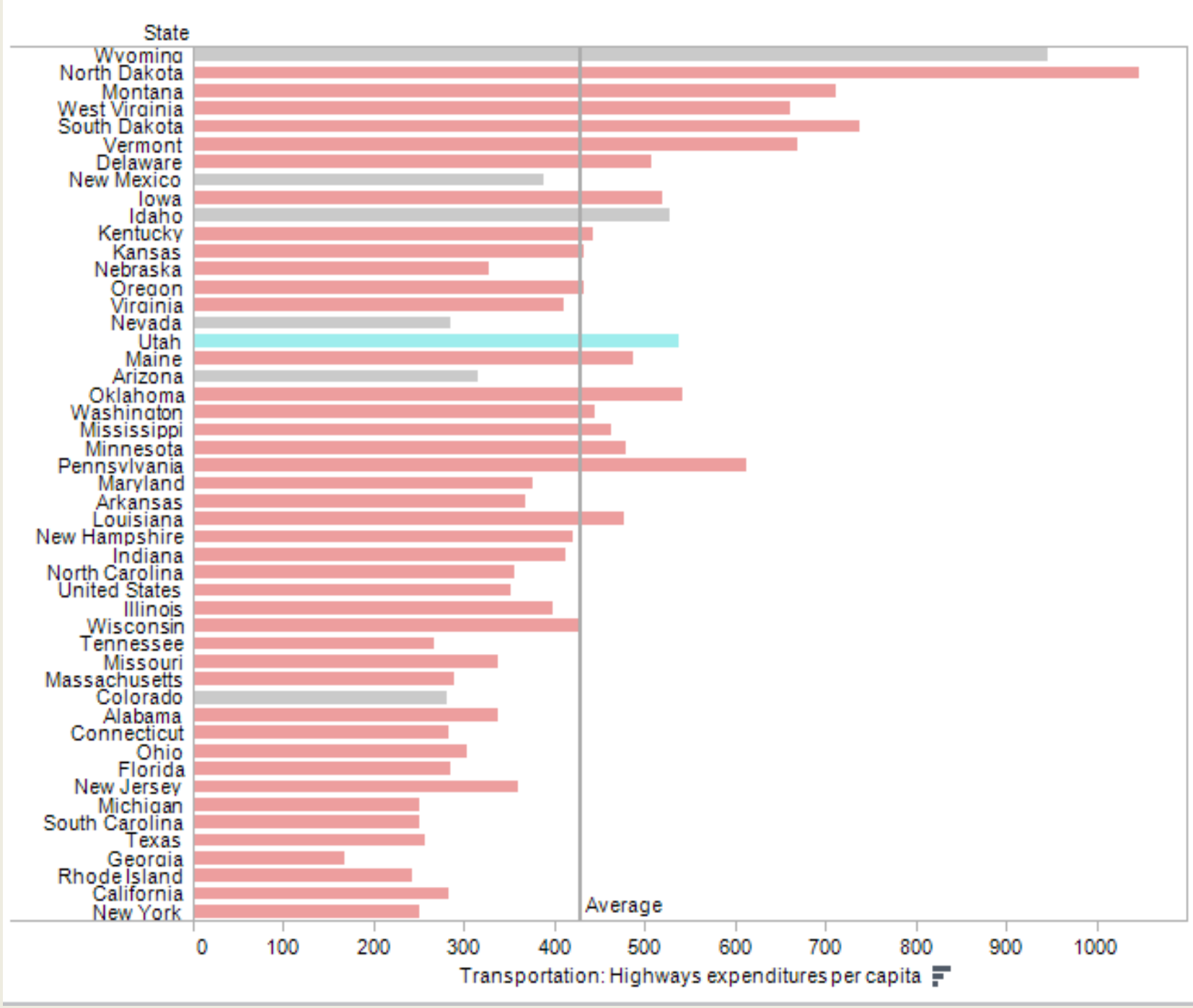
Transportation

Transportation Expenditures

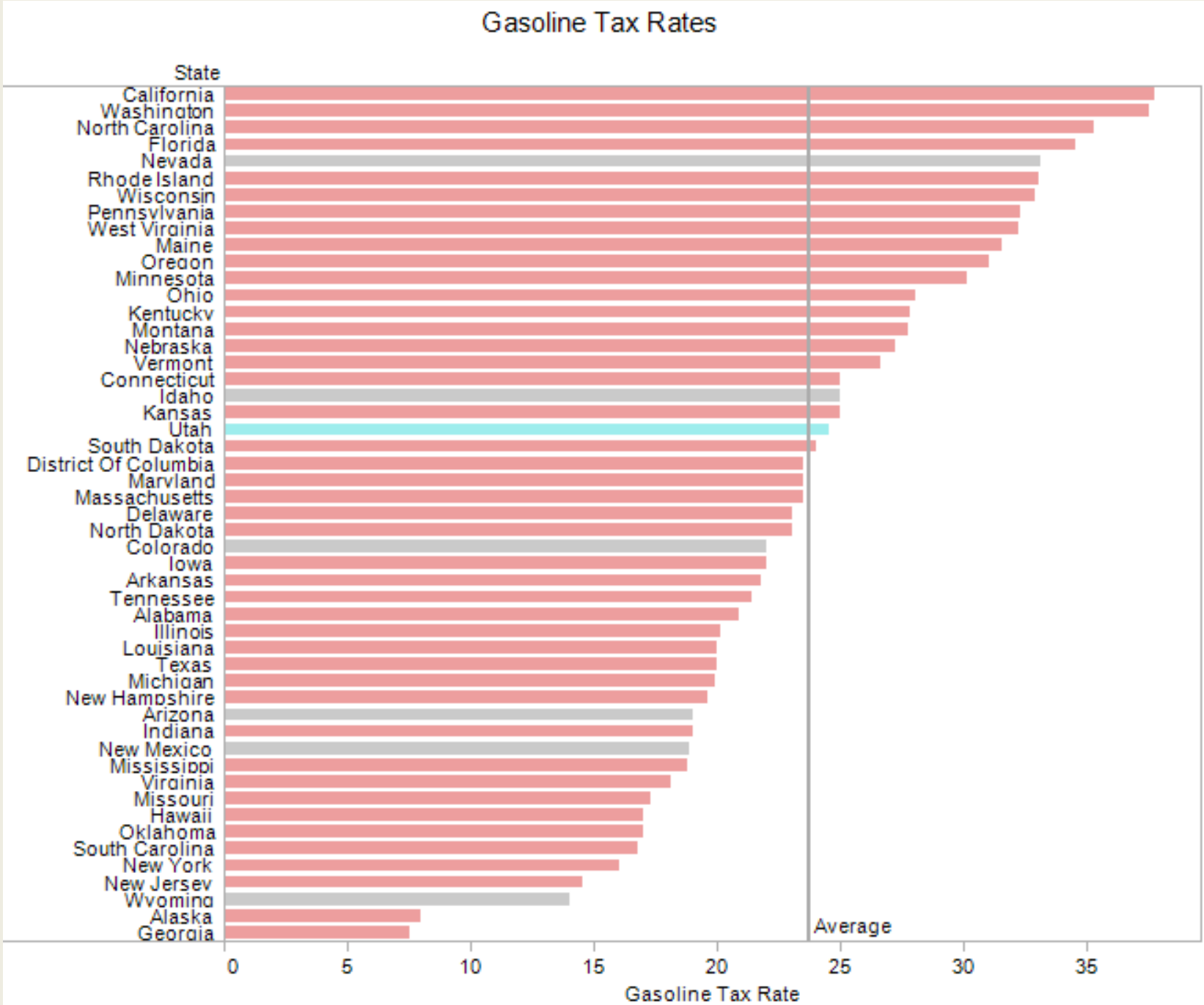


Sources: Census Bureau; LFA

Transportation Expenditures (1970-2012)

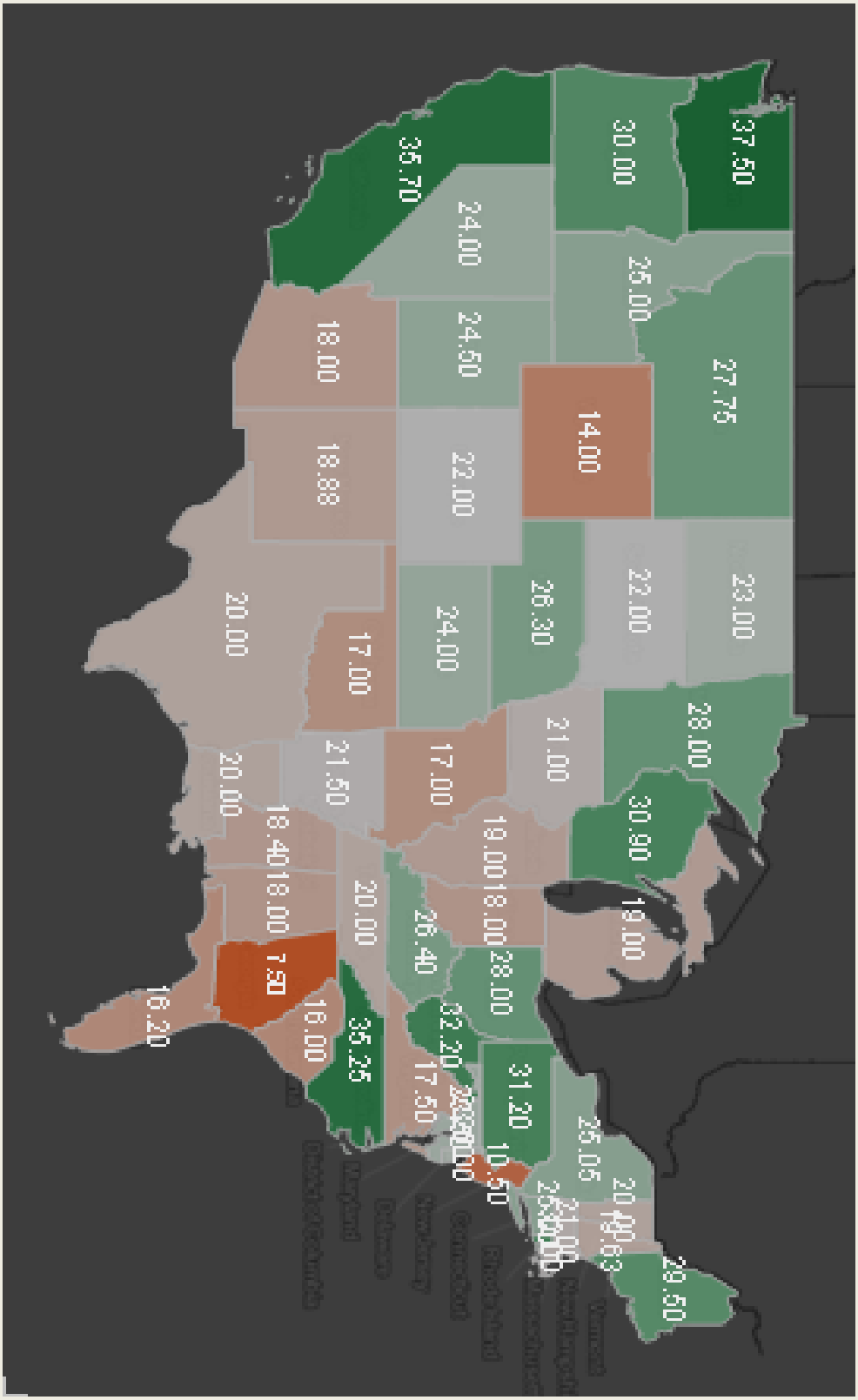


Transportation Tax Rates
Gasoline



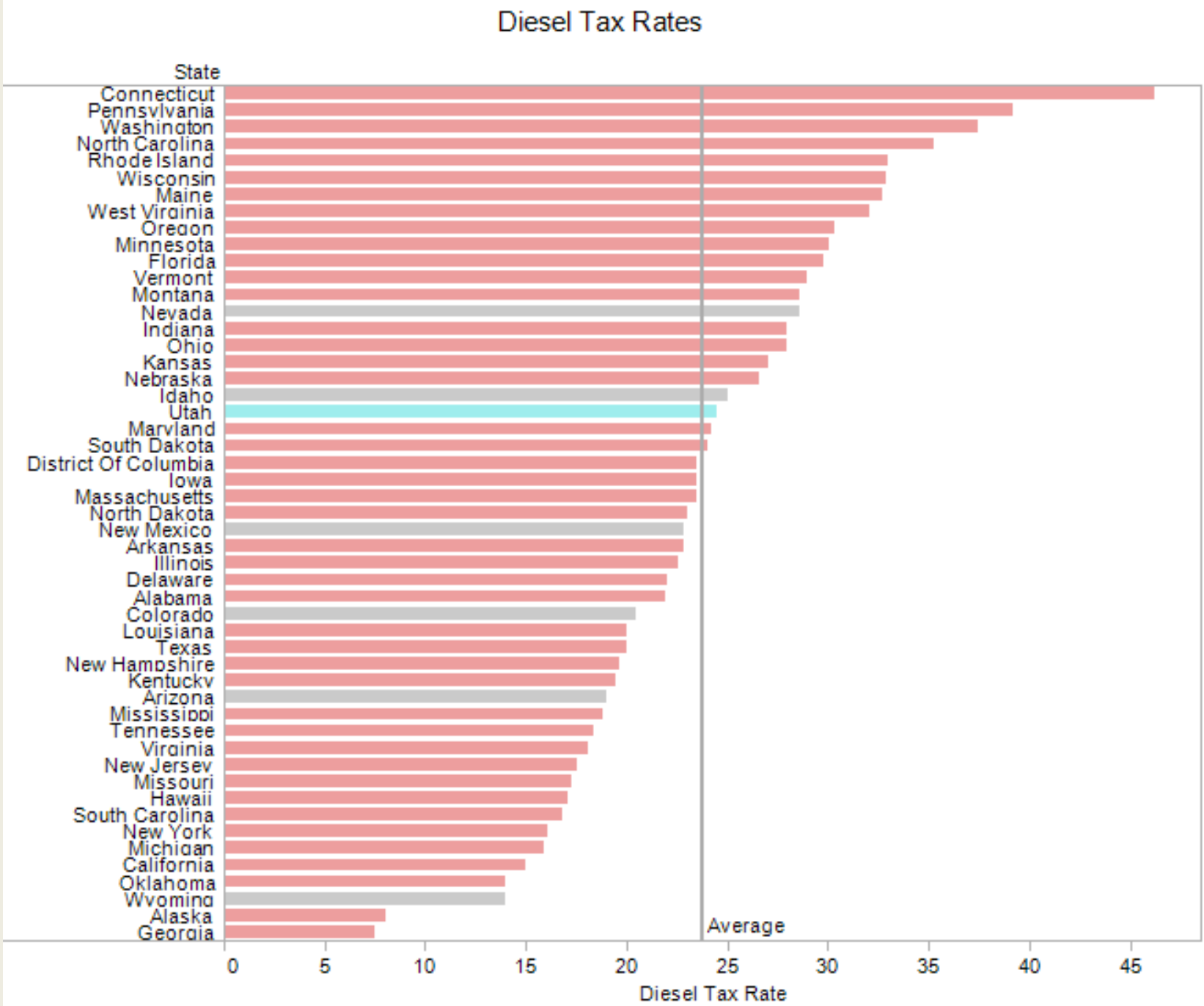
Source: Tax Foundation

Transportation Tax Rates
Gasoline, Change over Time, 1980-2011



Transportation Tax Rates

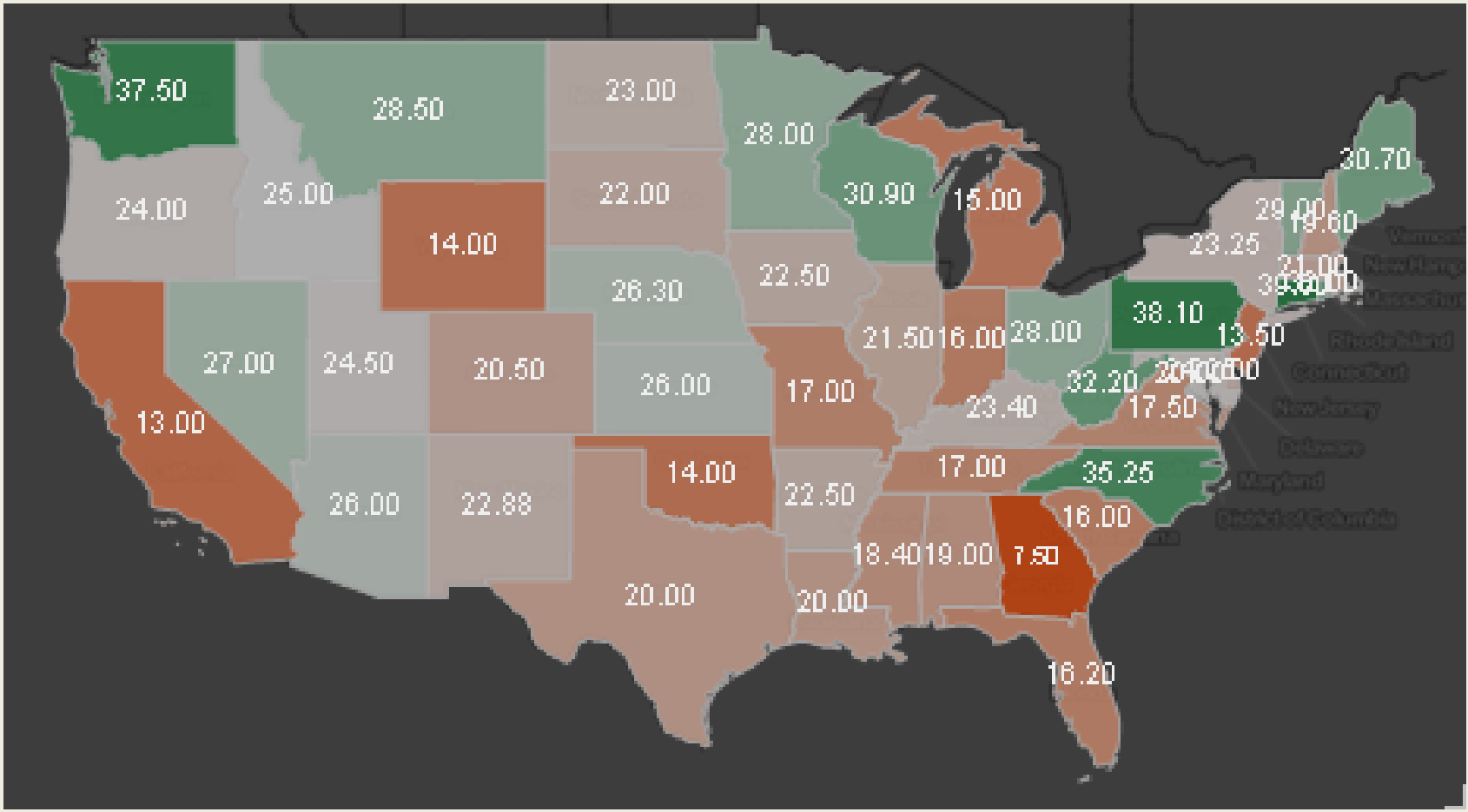
Diesel



Source: Tax Foundation

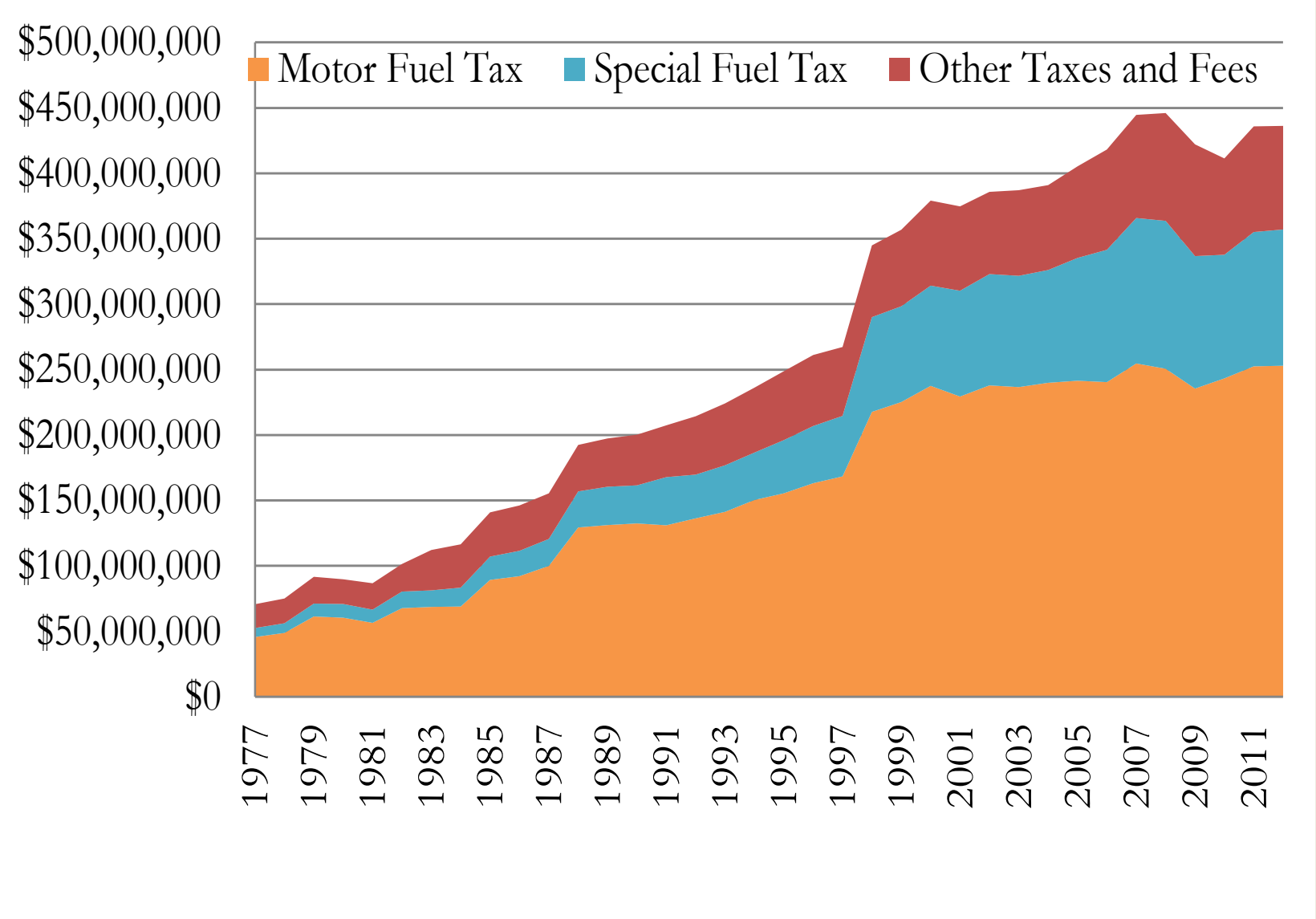
Transportation Tax Rates

Diesel, Change over Time, 1980-2011

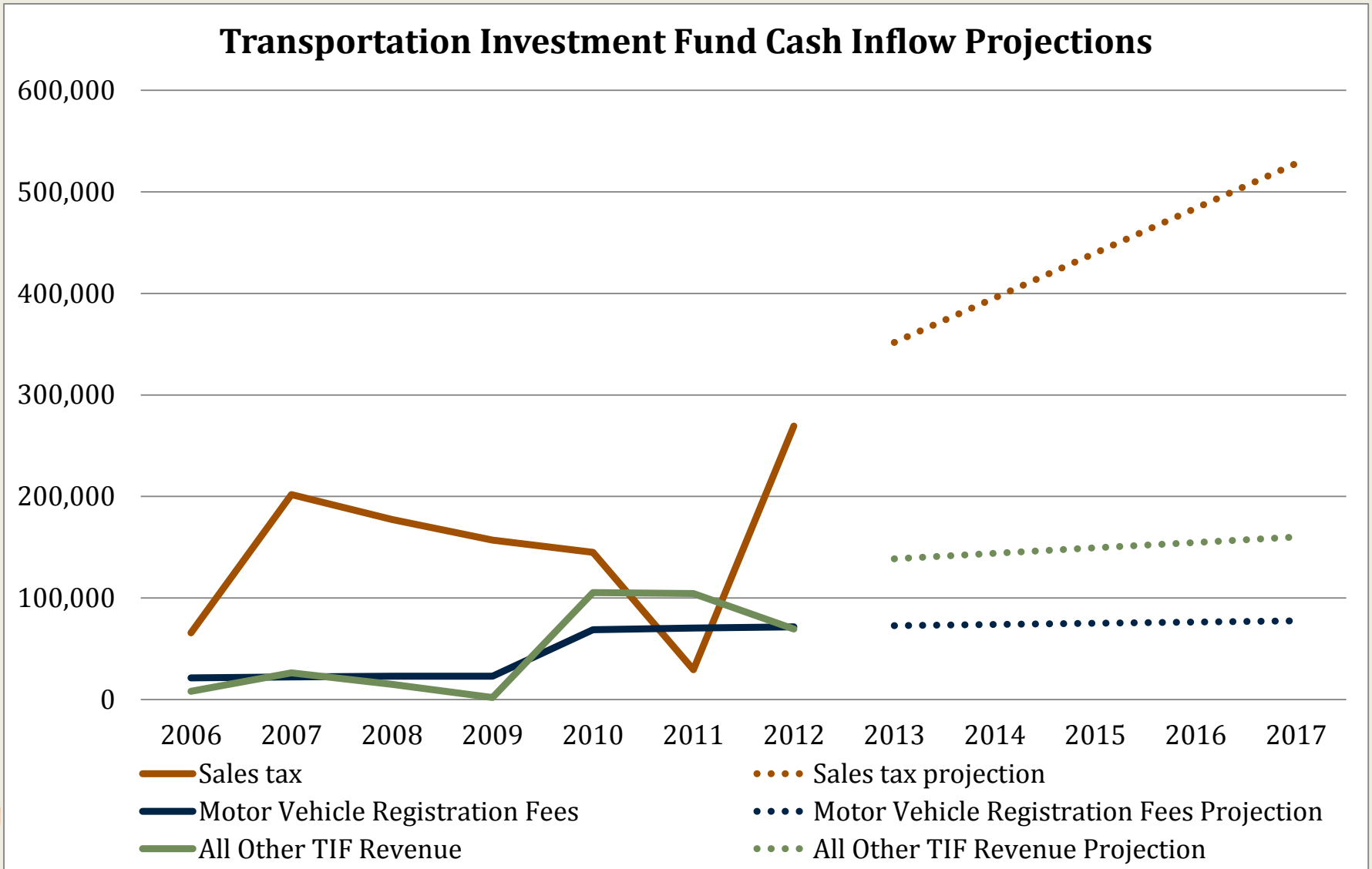


Transportation Tax Streams

Utah

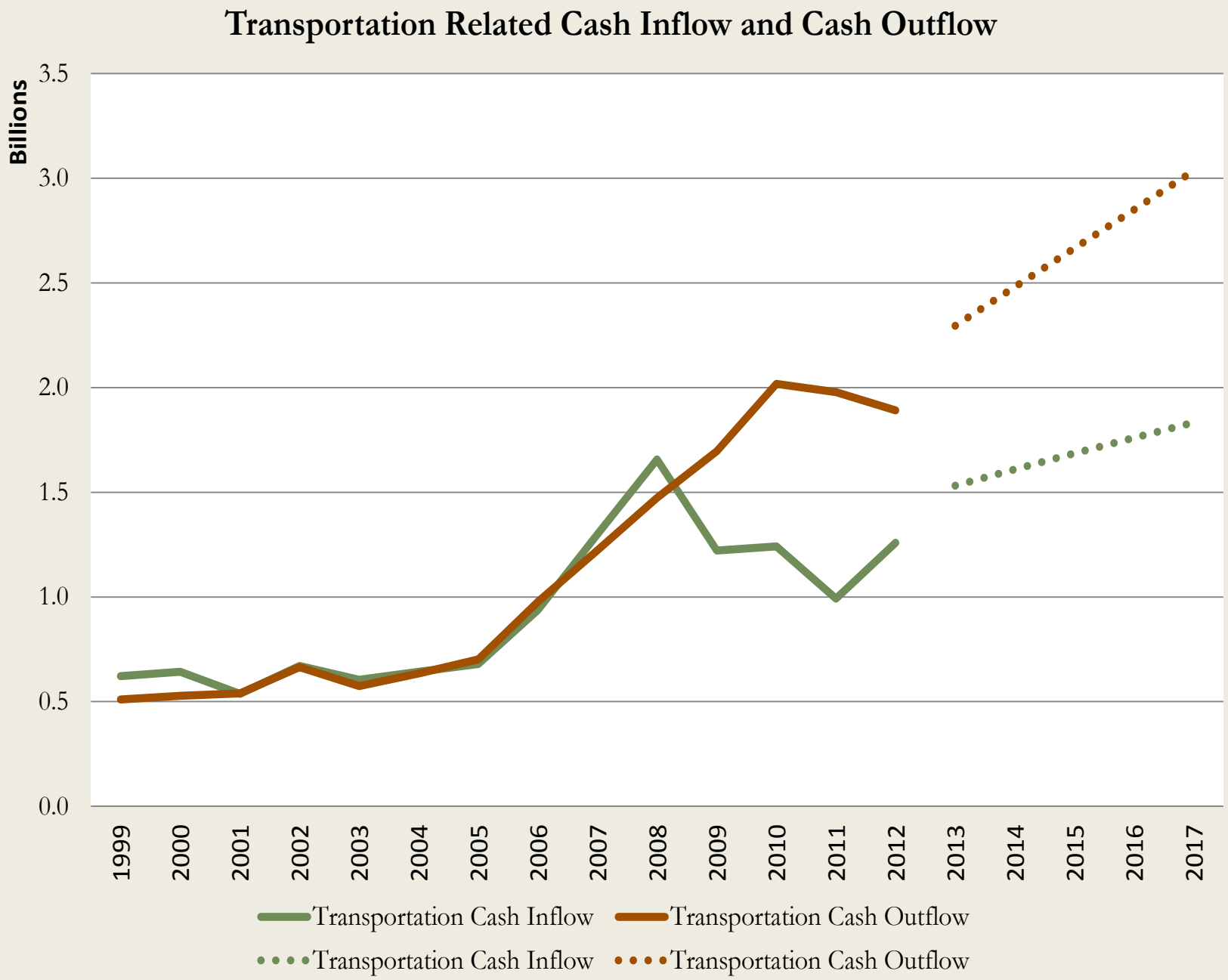


Transportation Tax Streams Utah

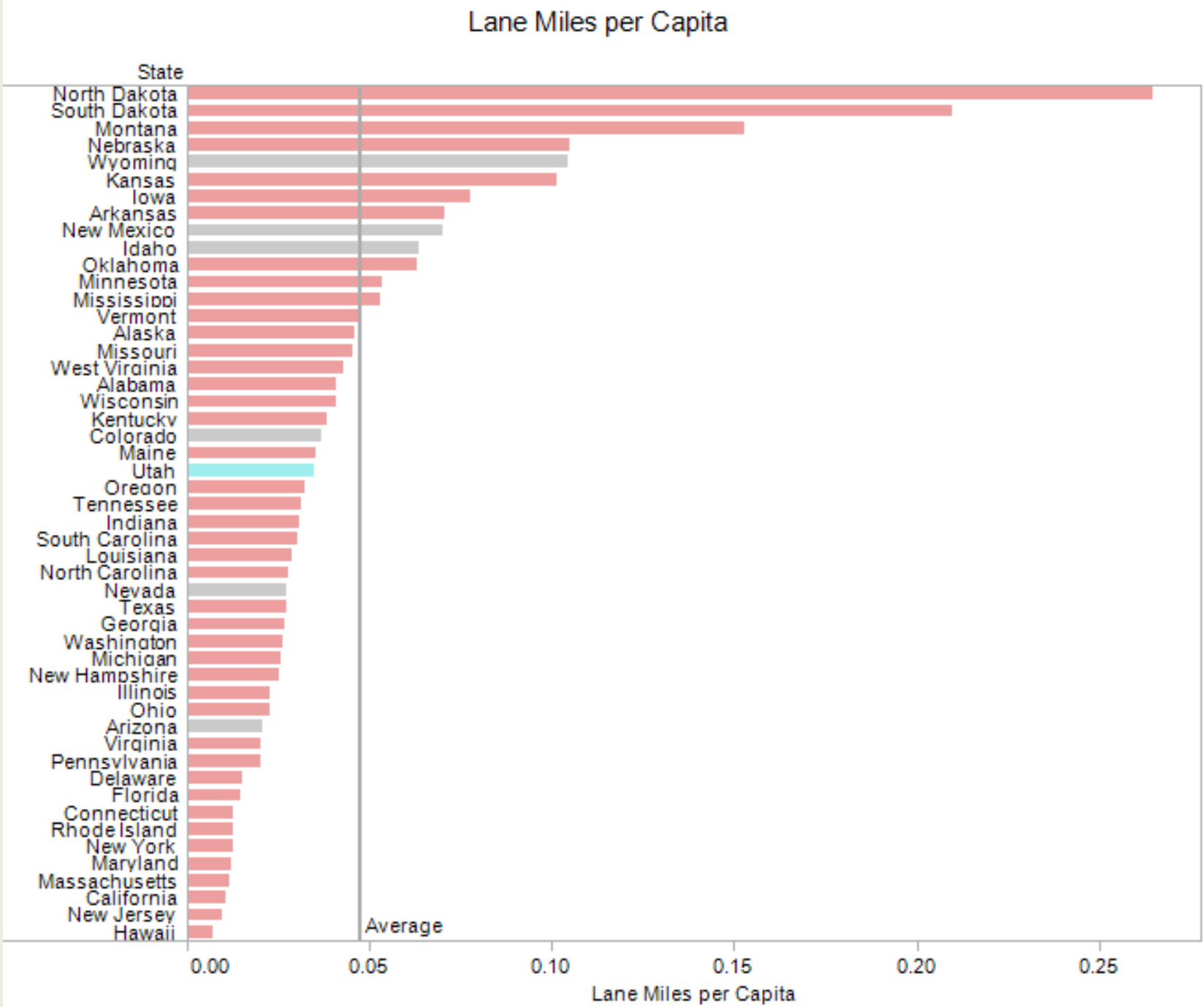


Note: The drop in sales tax in FY 2011 is due to a decline in the 8.3% earmark to 1.93% for FY 2011 only; the increases and decreases in the "All Other TIF Revenue" is due to budgeting changes made to the Critical Highway Needs Fund; the diagonal growth in sales tax for FY 2013 onward is due to SB 129 of the 2011 Veto Override Session, which prioritizes 30% of sales tax growth to the TIF

Transportation, GASB-based Forecast of Revenue & Expenditures

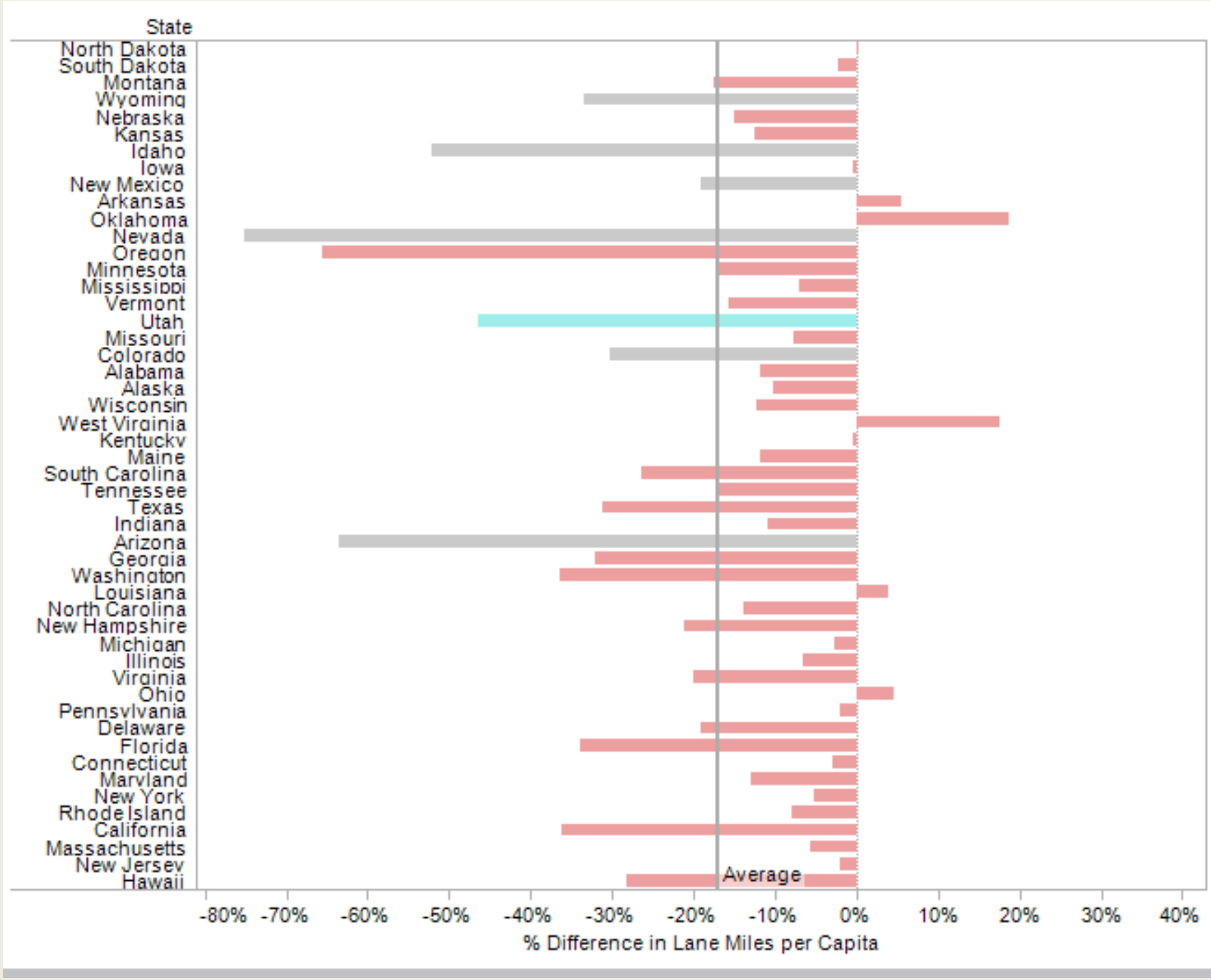


Capacity (i.e. Lane Miles per Capita)

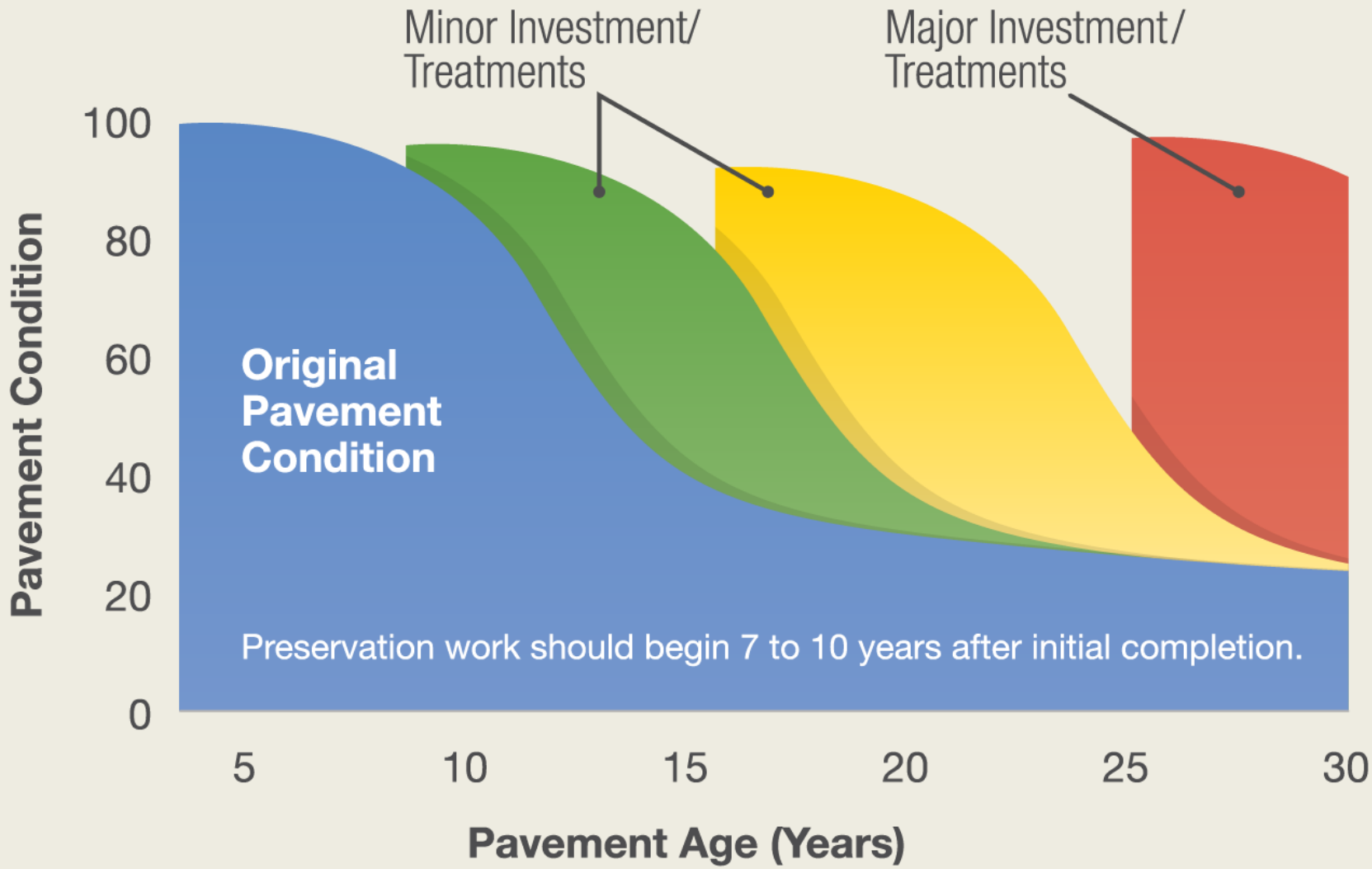


Source: National Highway Transportation Administration; LFA

Capacity (i.e. Lane Miles per Capita)
Percent change from 1980-2009 relative to 1980

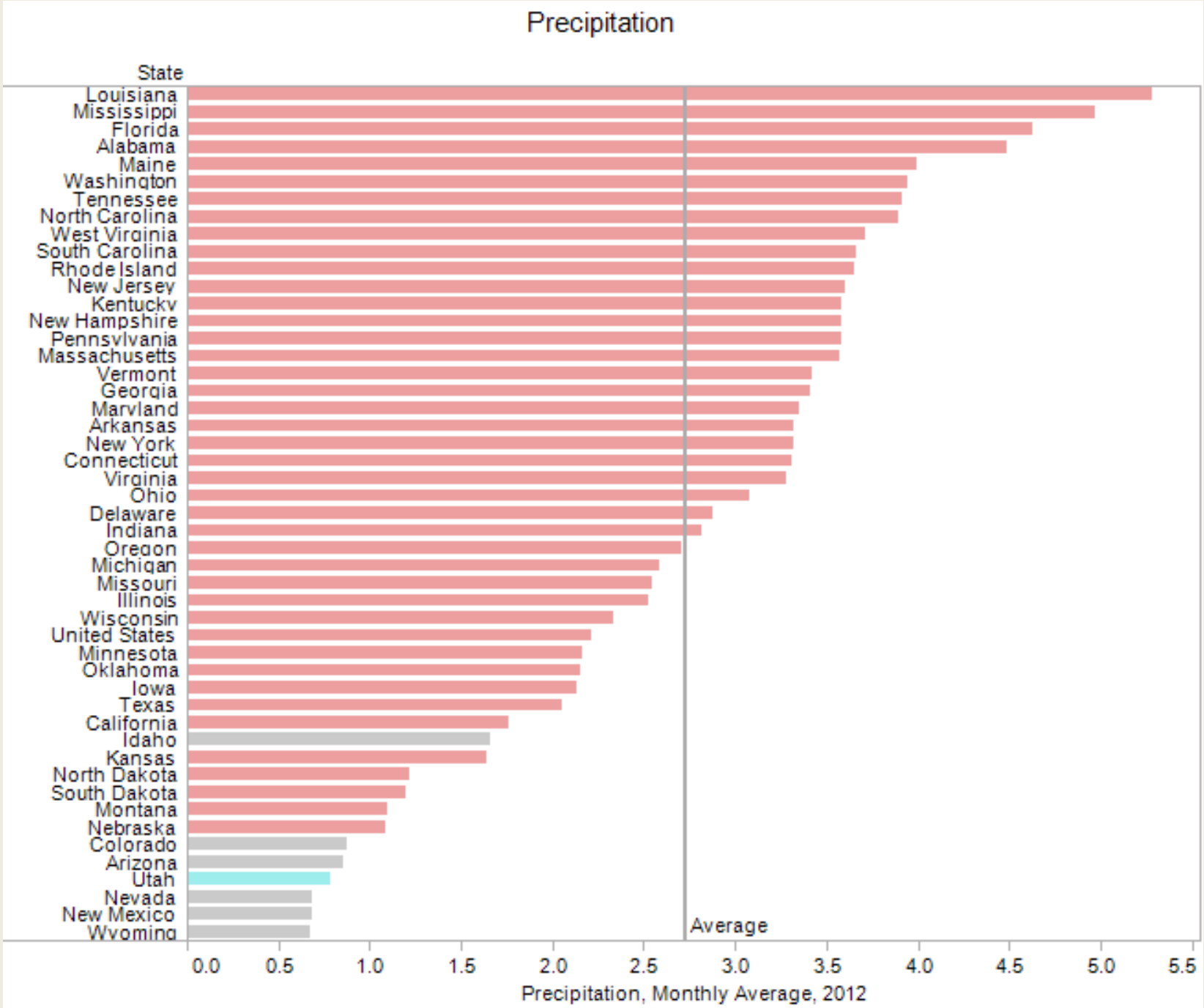


Maintenance vs. New



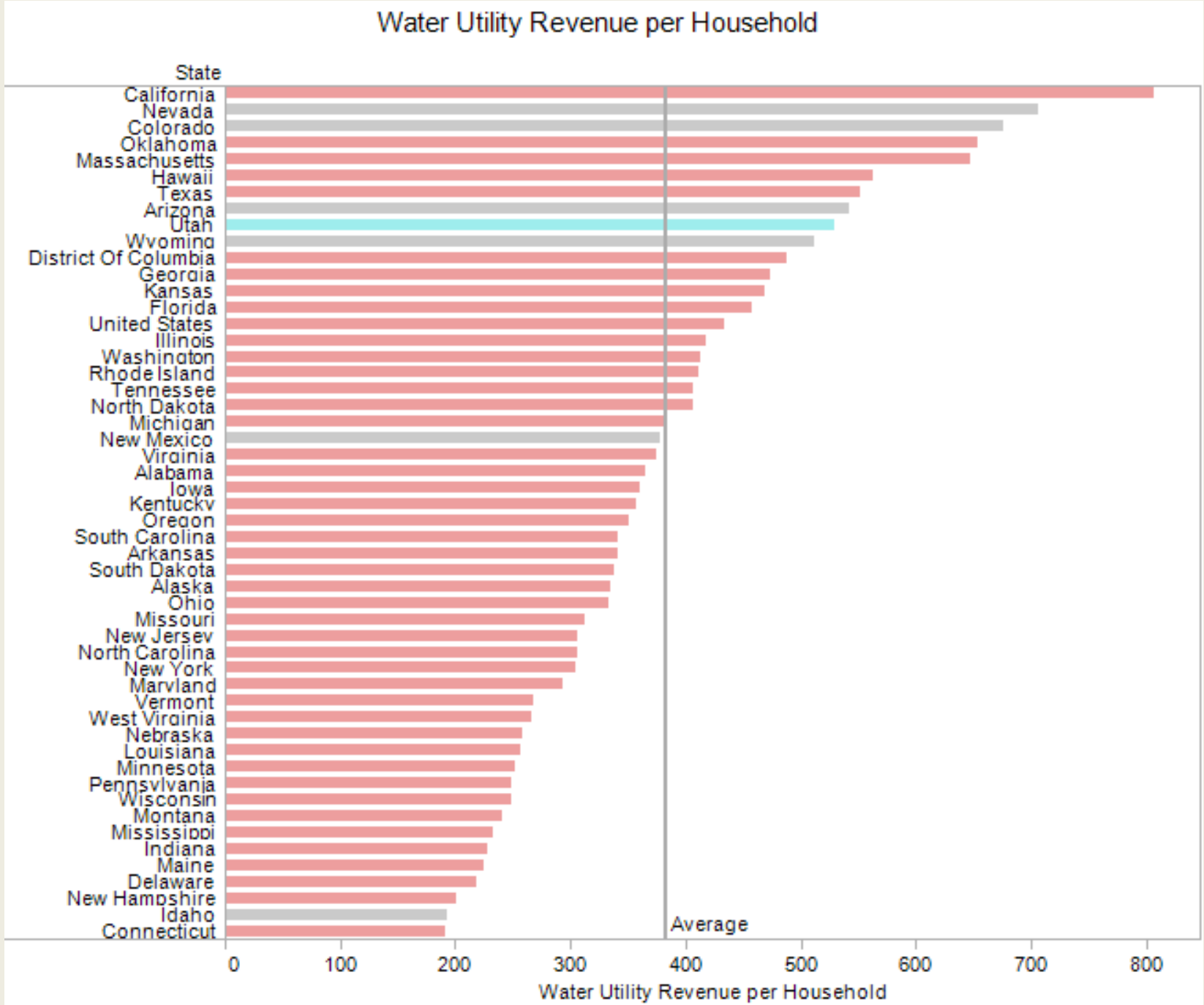
Water

Water



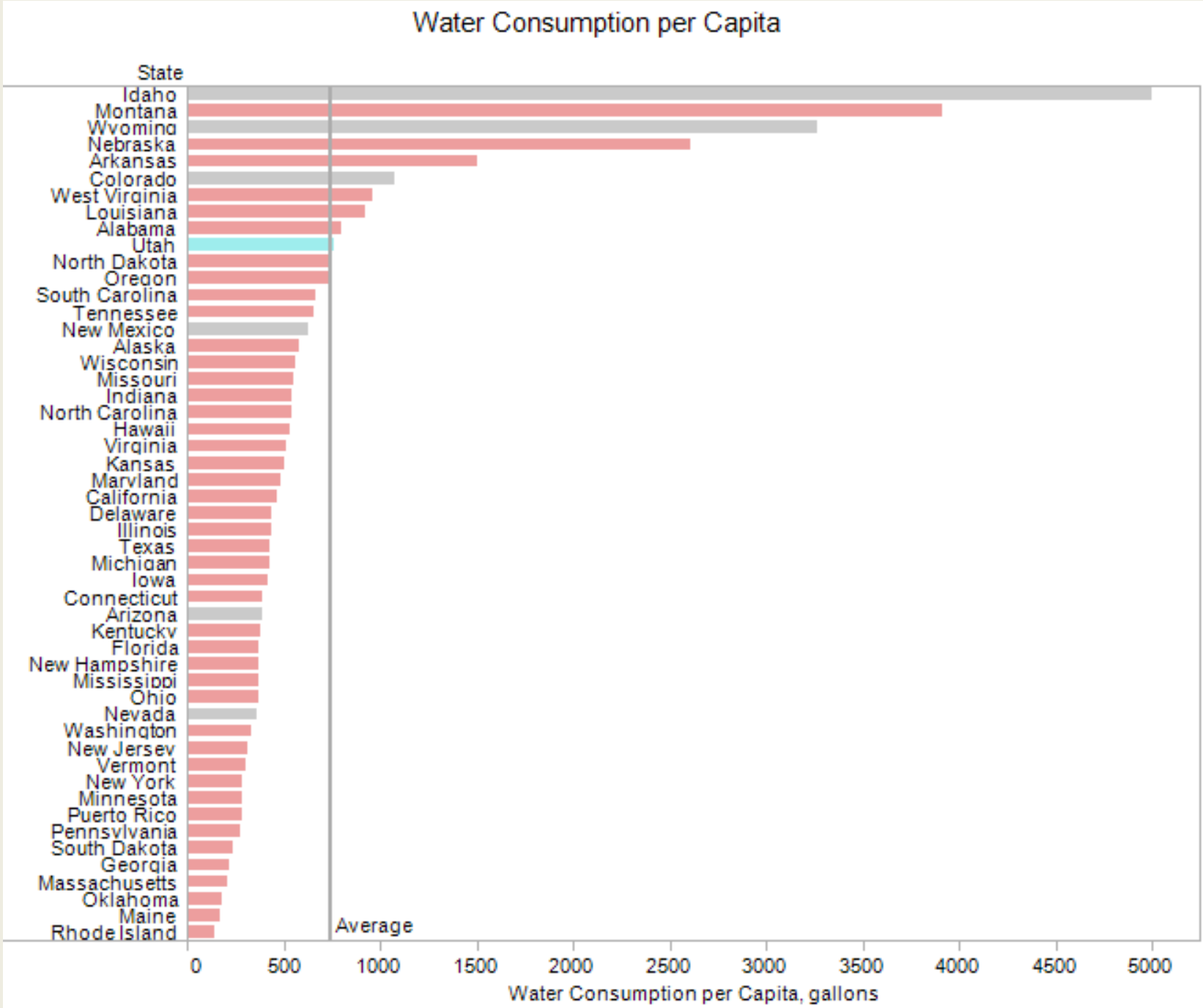
Source: National Climactic Data Center

Water



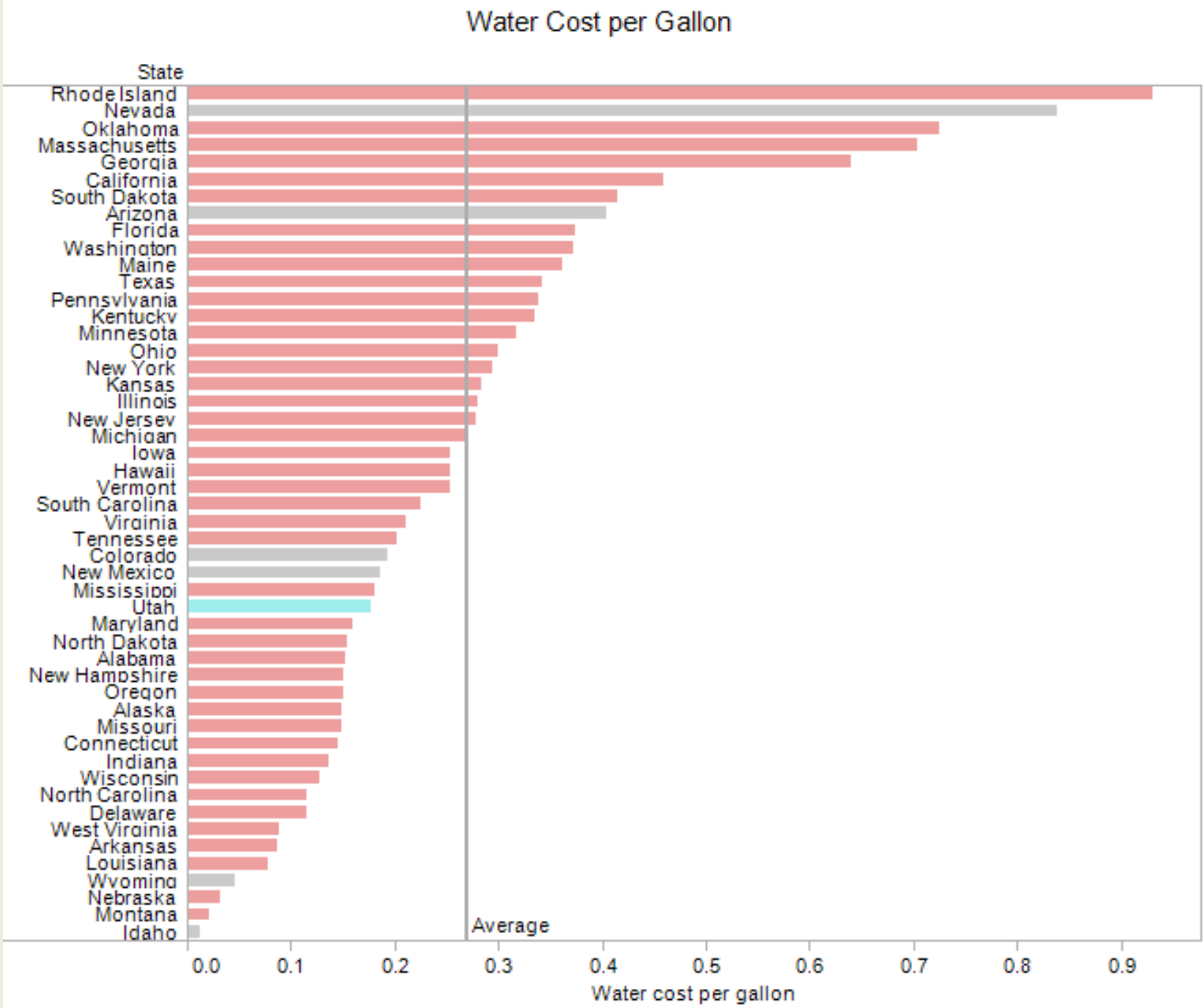
Source: Census Bureau; LFA

Water Consumption per Capita



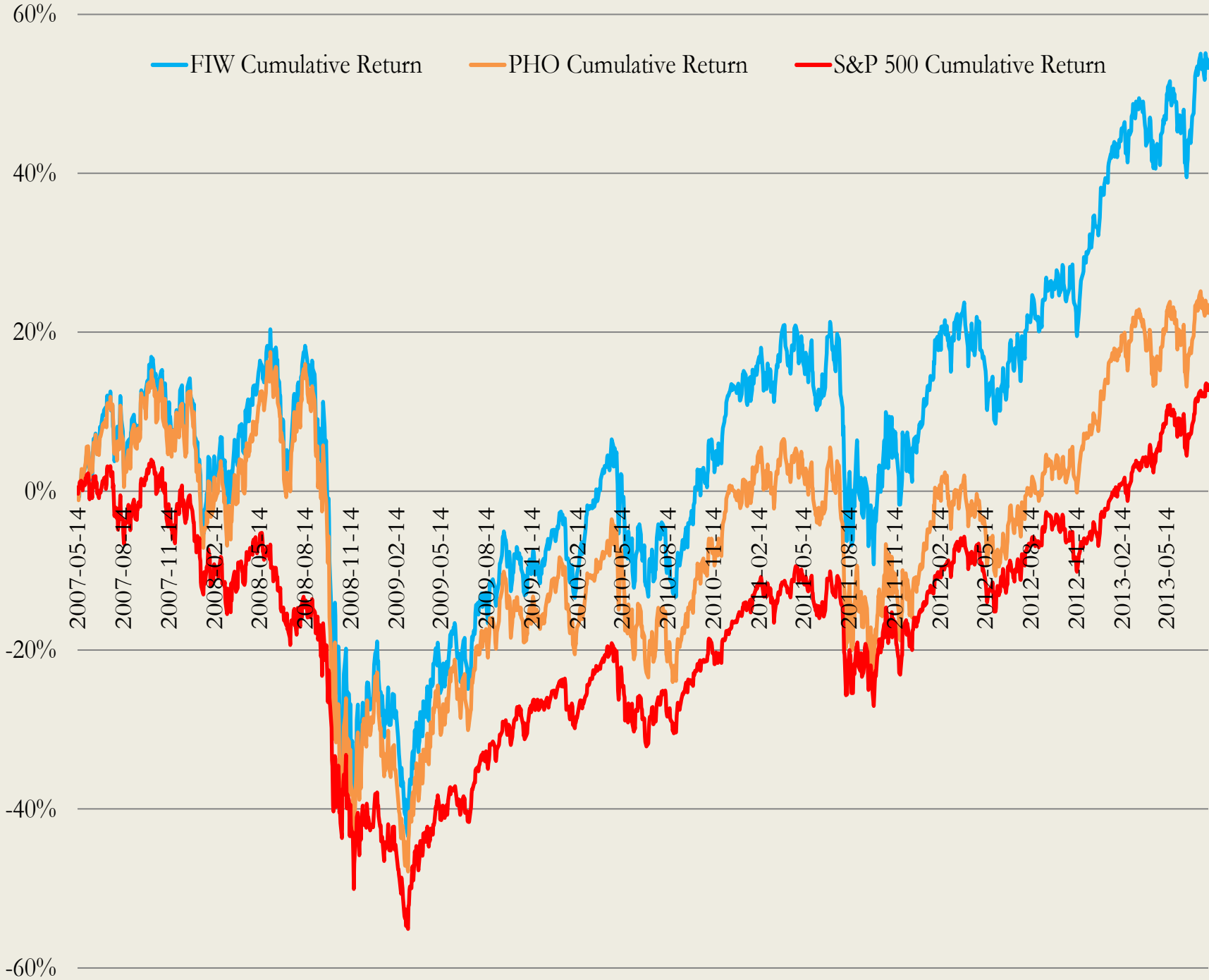
Source: USGS

Water Cost per Gallon by State



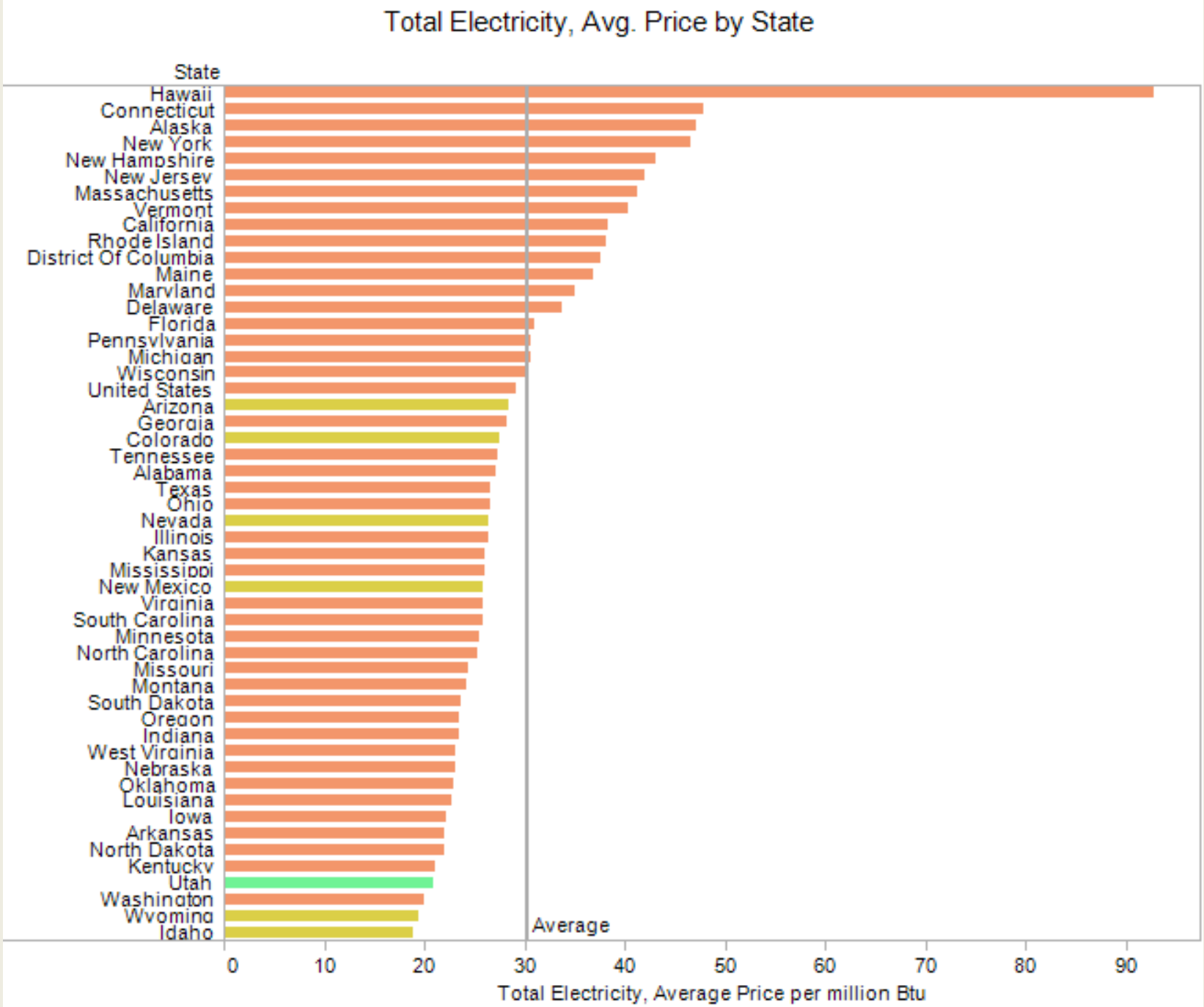
Source: USGS; Census Bureau; LFA

Water: The Market



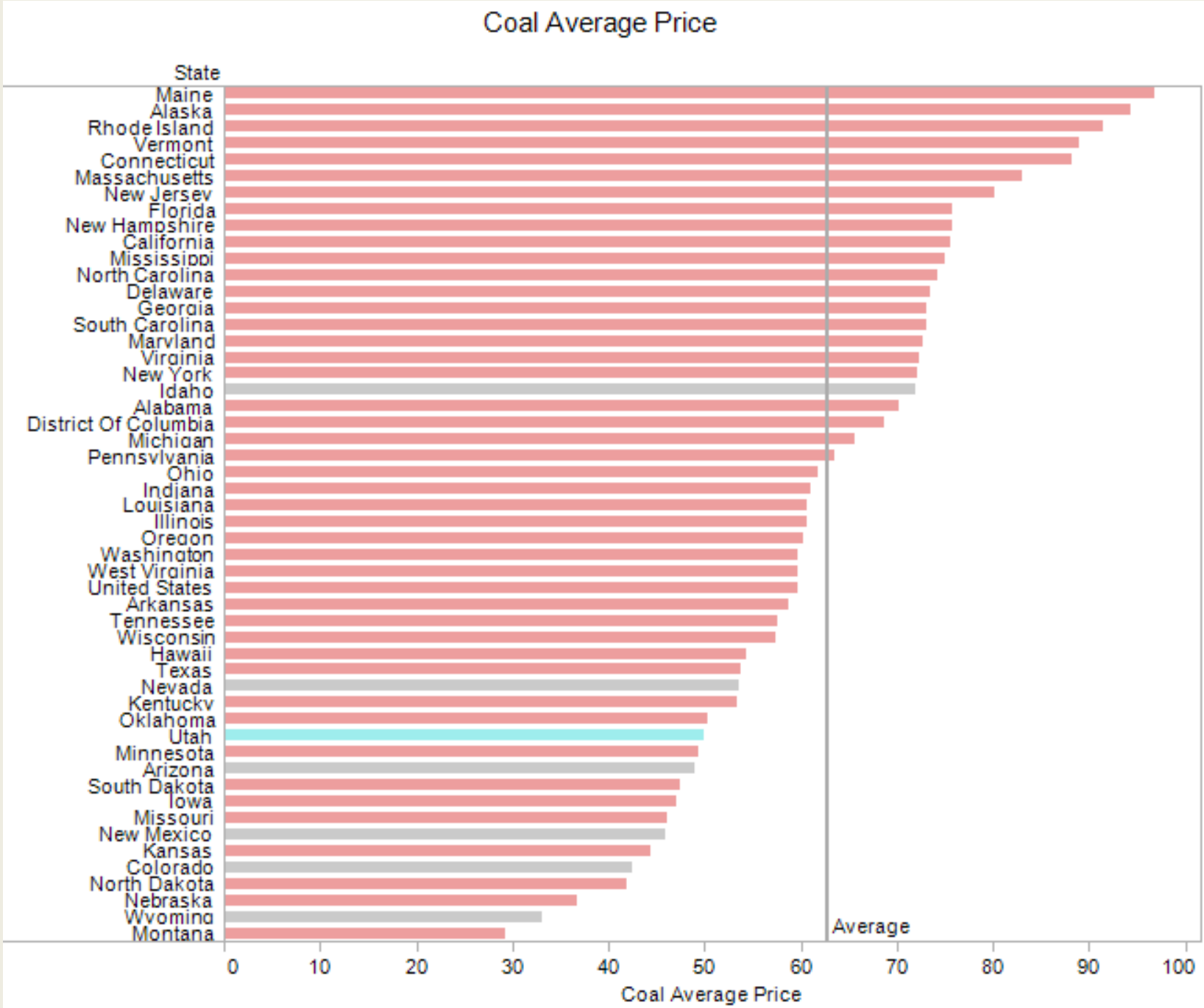
Energy

Electricity Cost by State, 2011



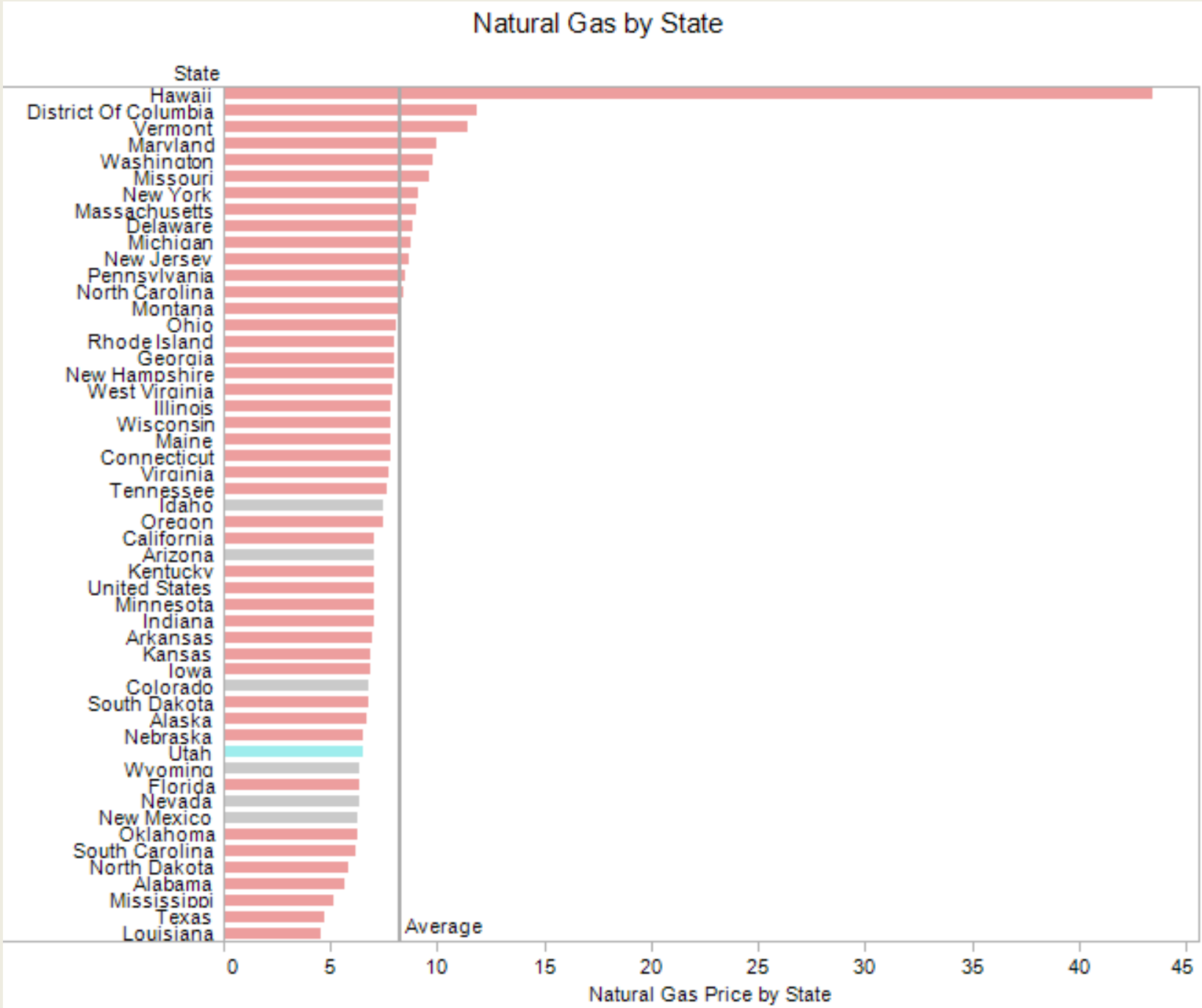
Source: EIA

Coal Cost by State, 2011



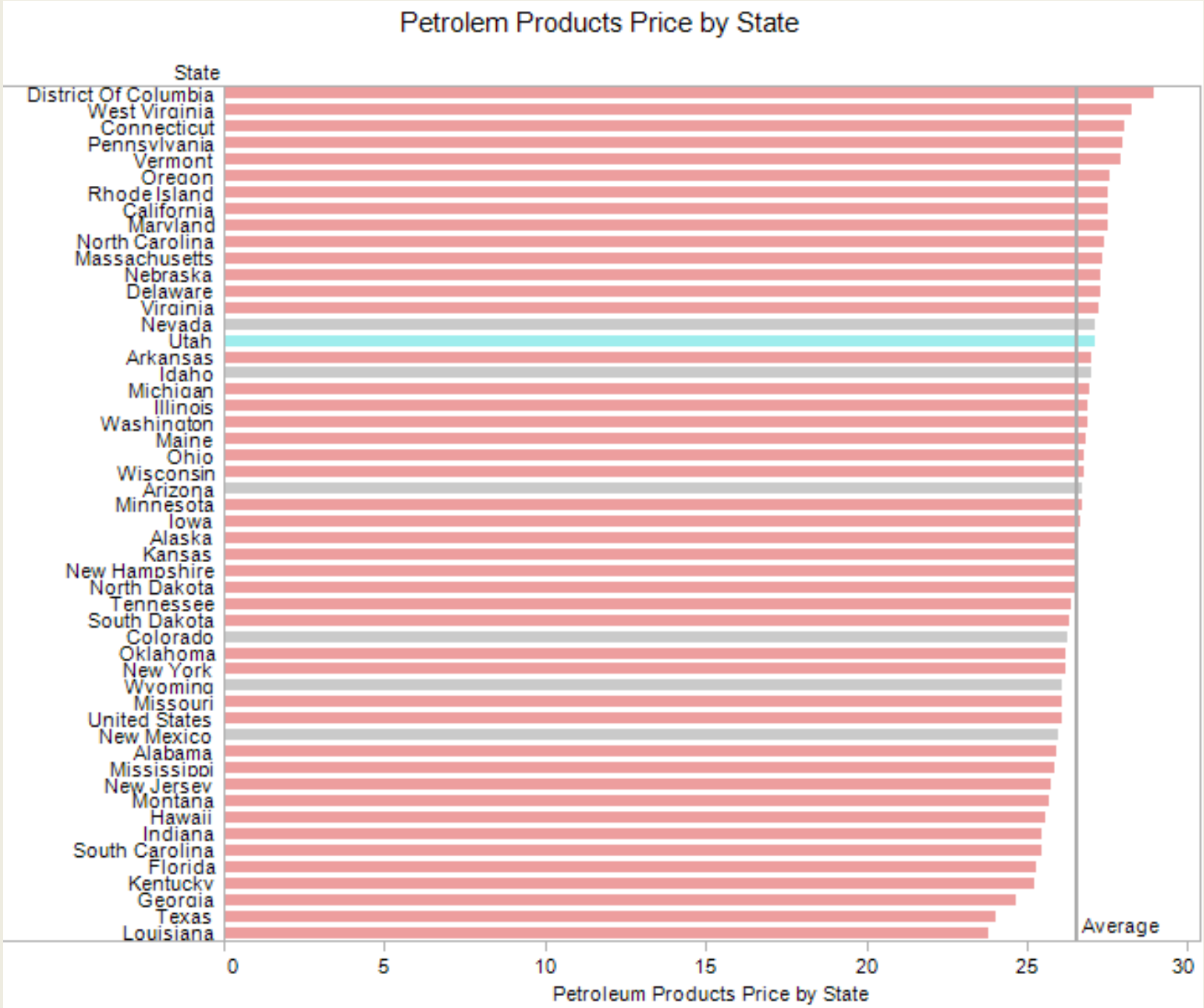
Source: EIA

Natural Gas Cost by State, 2011



Source: EIA

Oil Cost by State, 2011



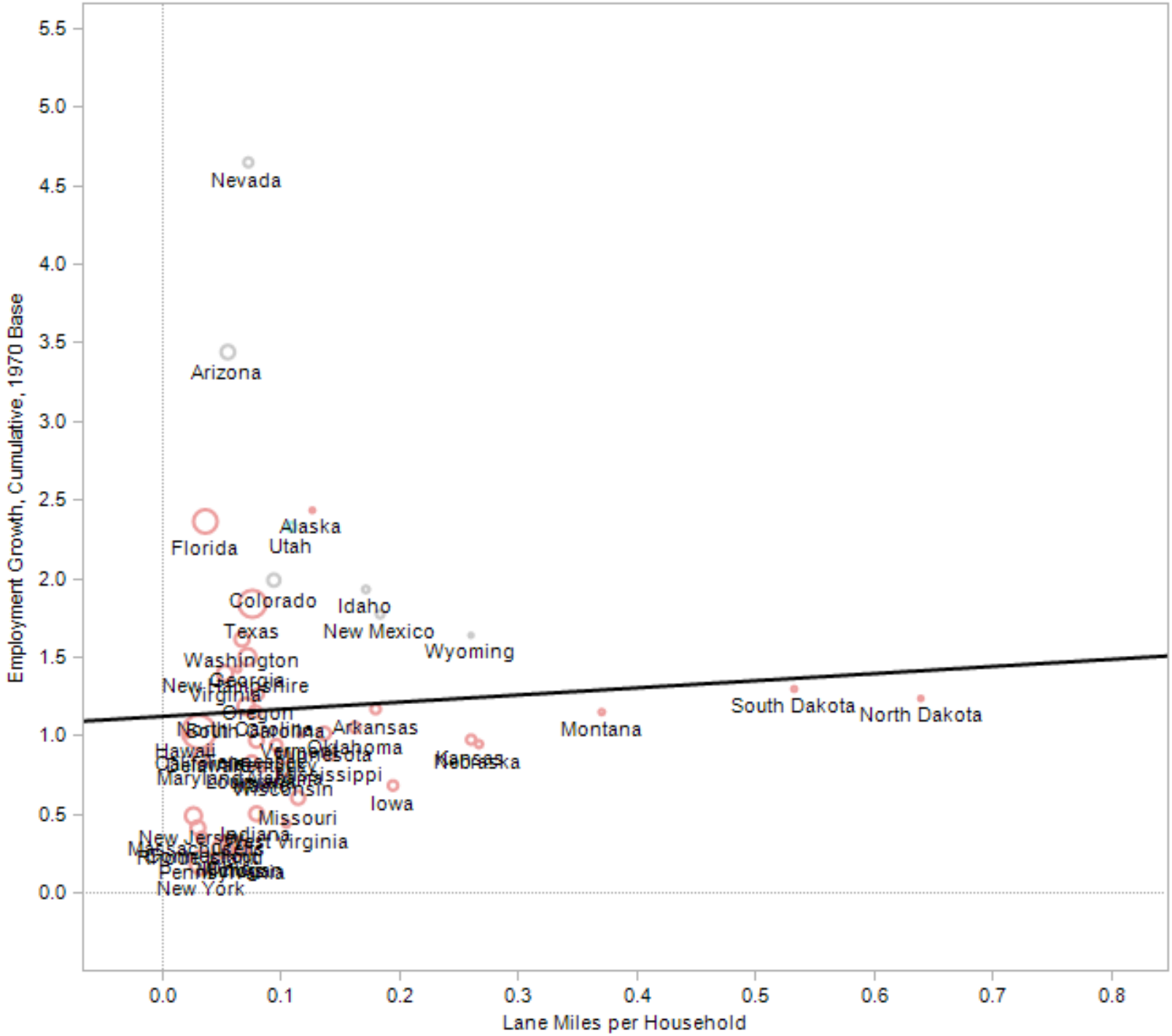
Source: EIA

Driving Factors Behind Transportation, Water, and Energy
Supply & Demand

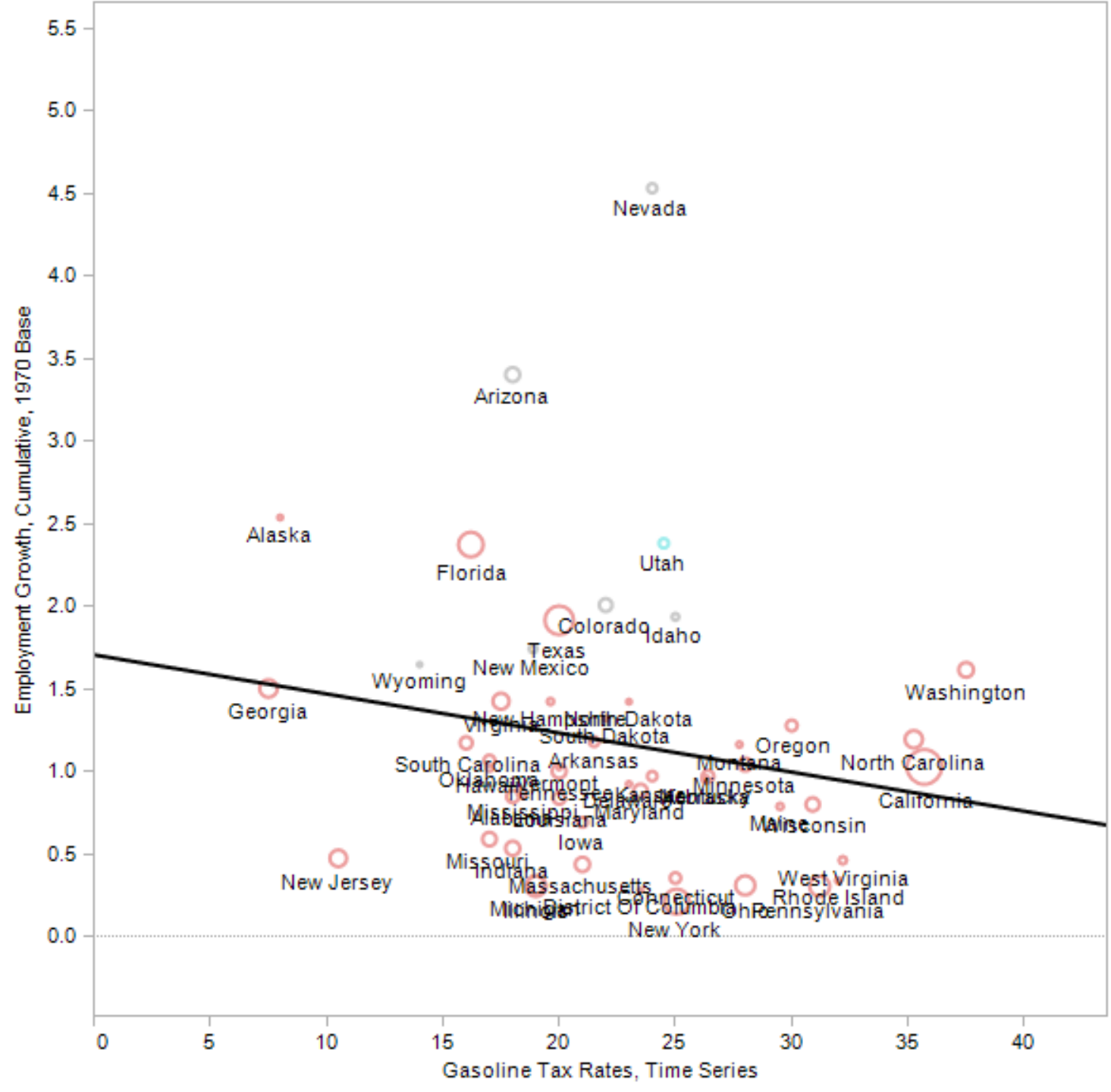
- Demographics
- Business/Industry Demand
- Lifestyle changes
- Prices
- Input Costs
- Expected Profit

Connection with Economic Growth

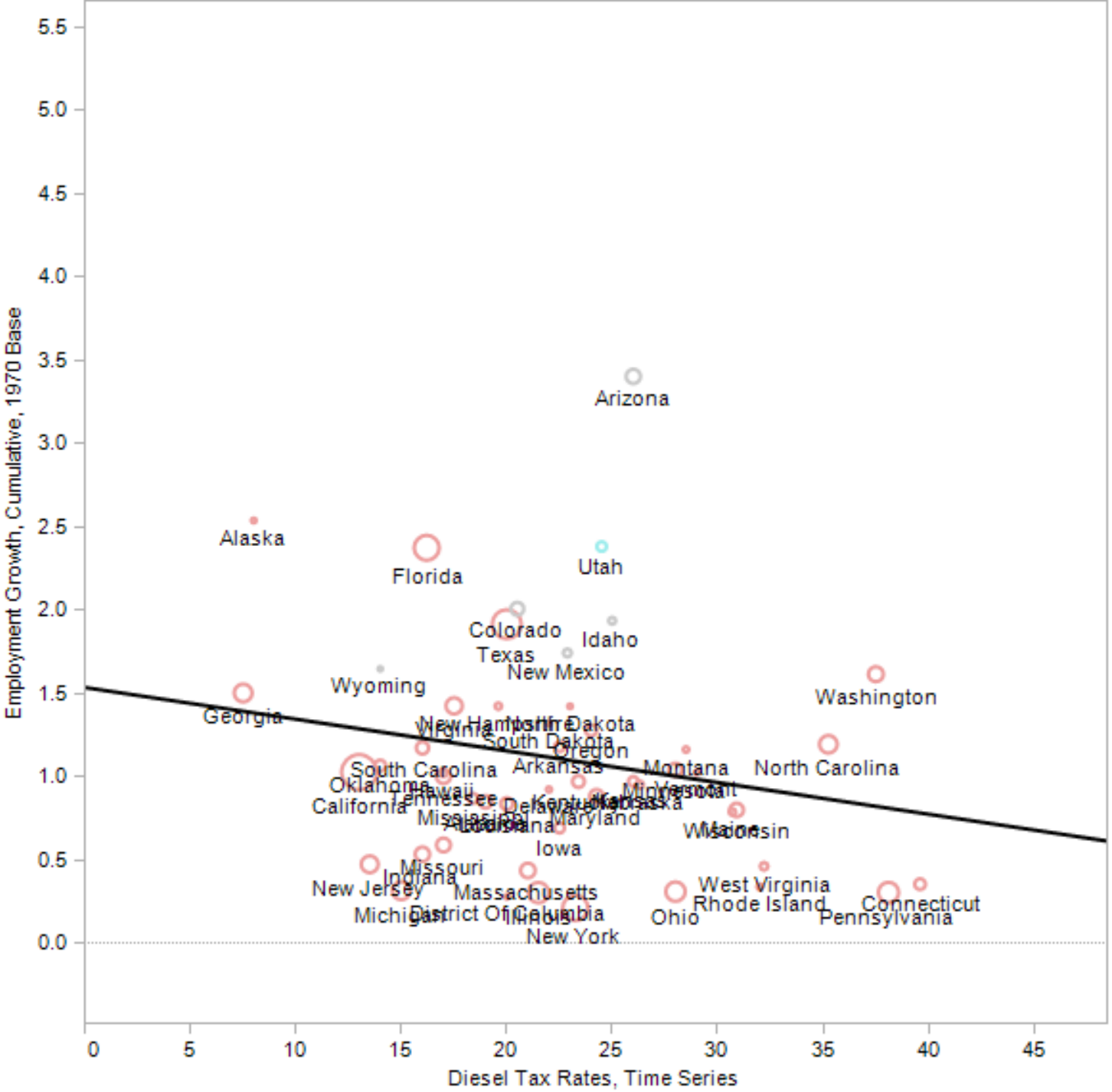
Lane Miles per Household and Economic Growth



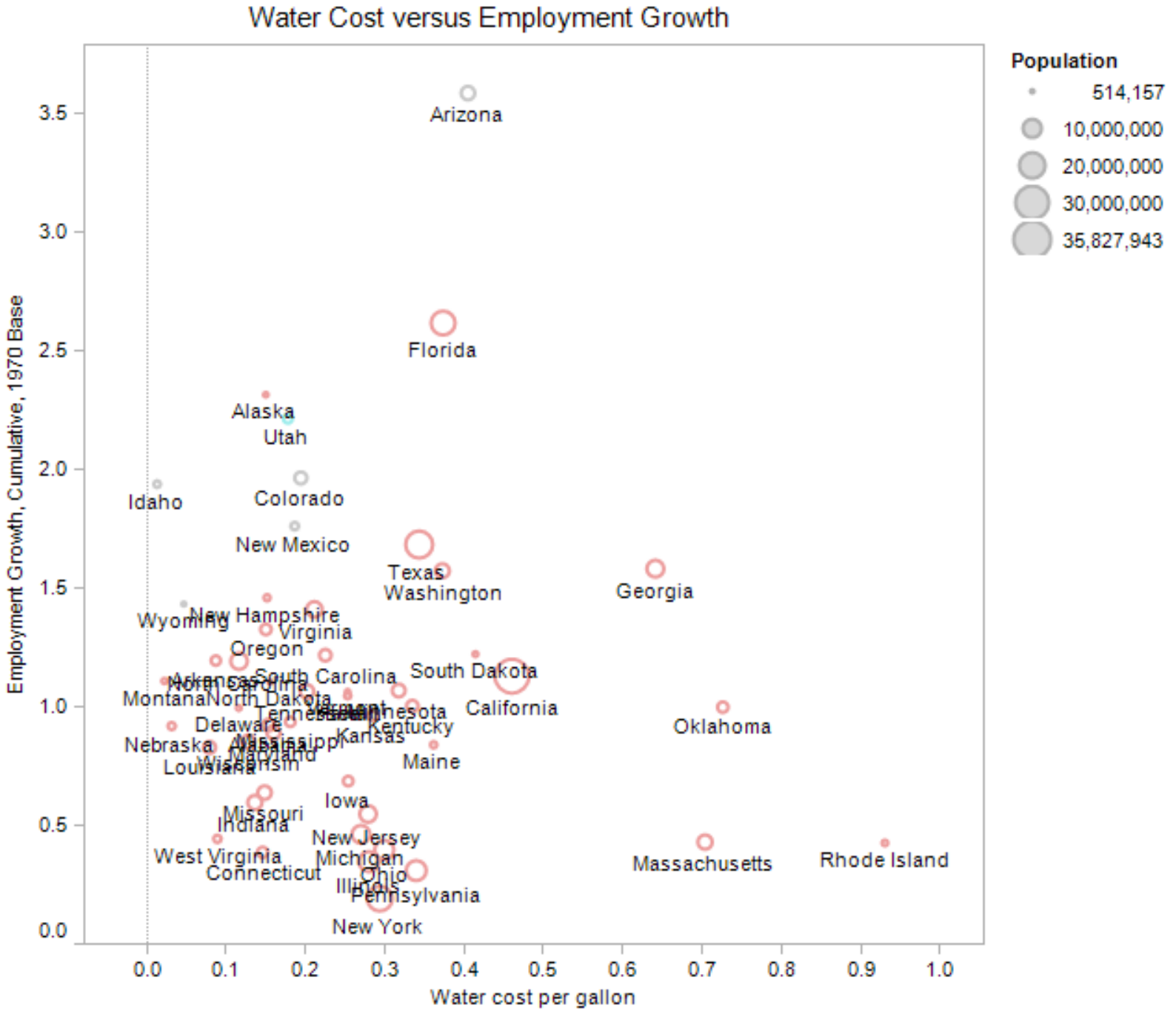
Gasoline Tax Rates and Economic Growth



Diesel Tax Rates and Economic Growth

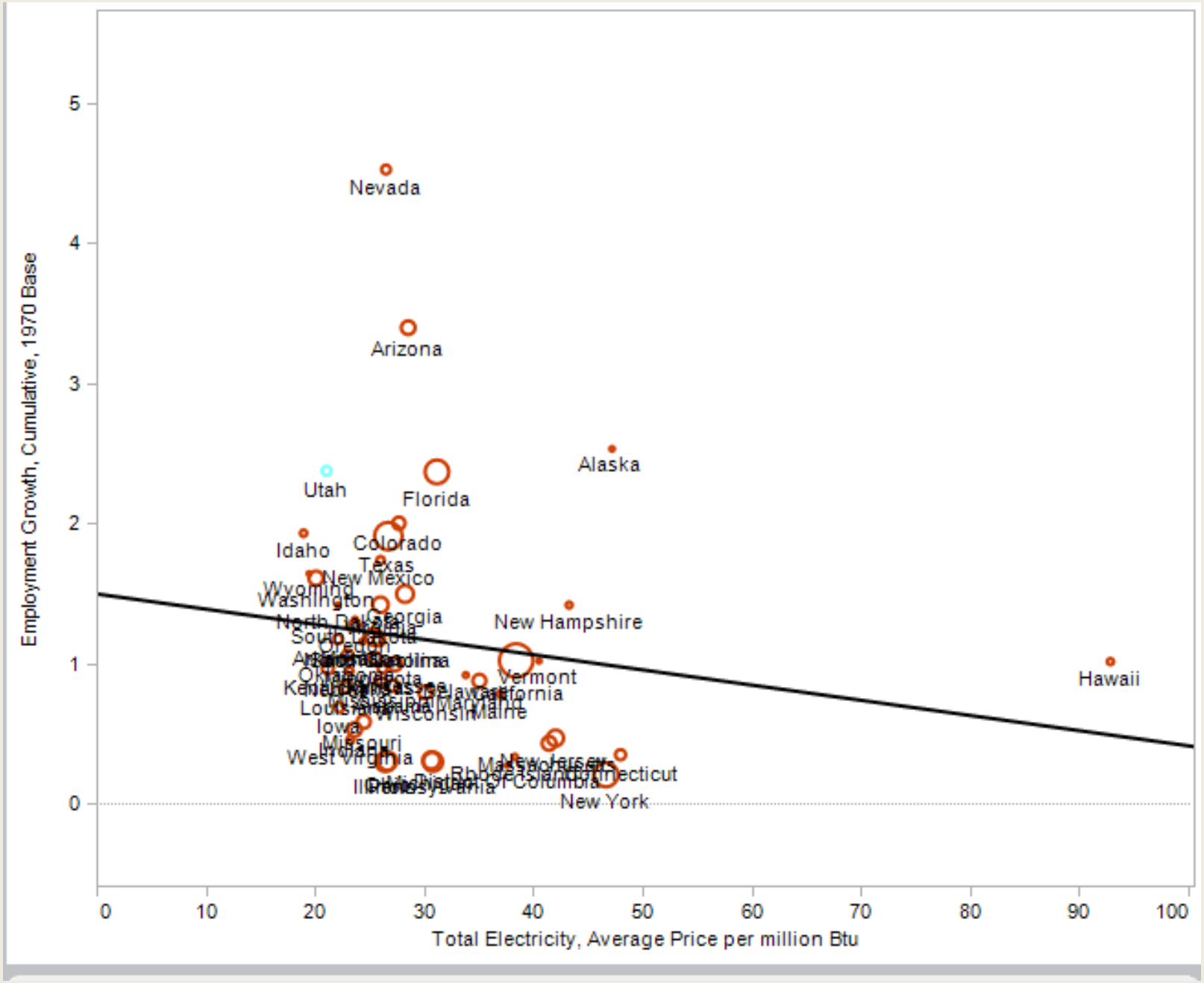


Correlations Between Water Price and Employment Growth

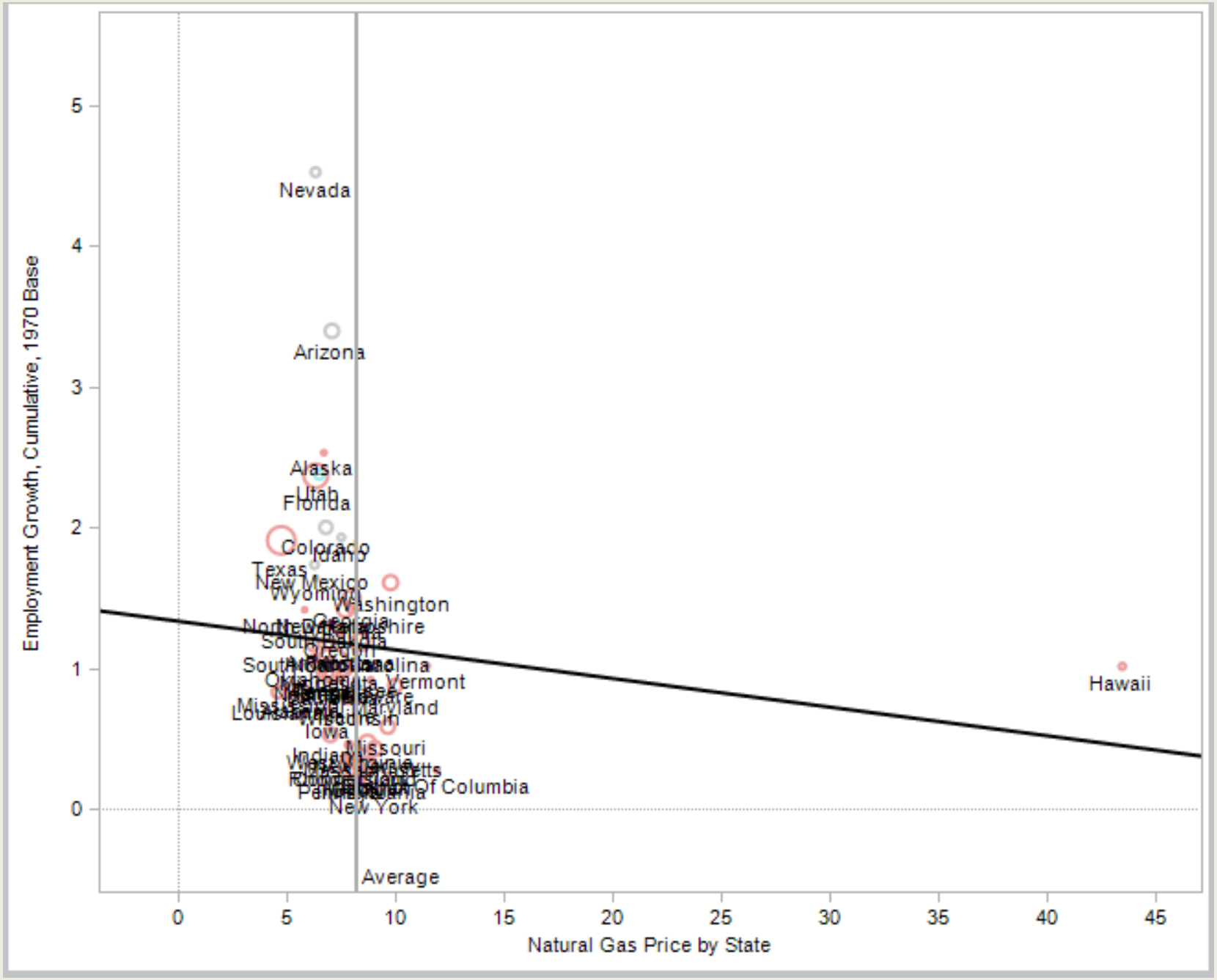


Source: BLS; USGS; Census Bureau; LFA

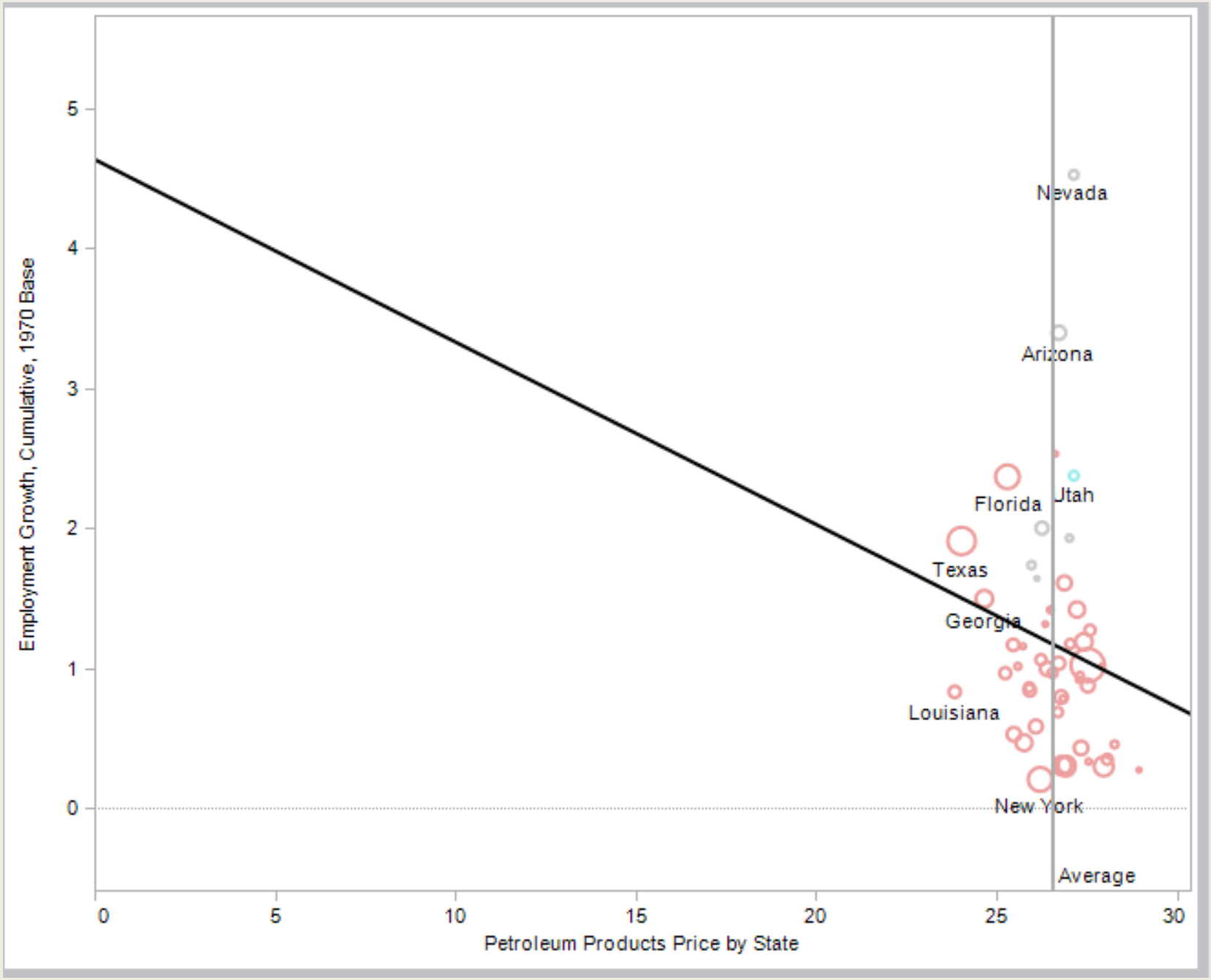
Electricity Cost and Employment Growth



Natural Gas Price and Employment Growth



Petroleum Products Price and Employment Growth



Conclusions

An increase in the price of energy by 5% over what happens in other states correlates with a lower annual employment growth of up to 0.07% to 0.12%.

An increase in the price of water by 5% over what happens in other states correlates with a lower annual employment growth of 0.006% to 0.009%