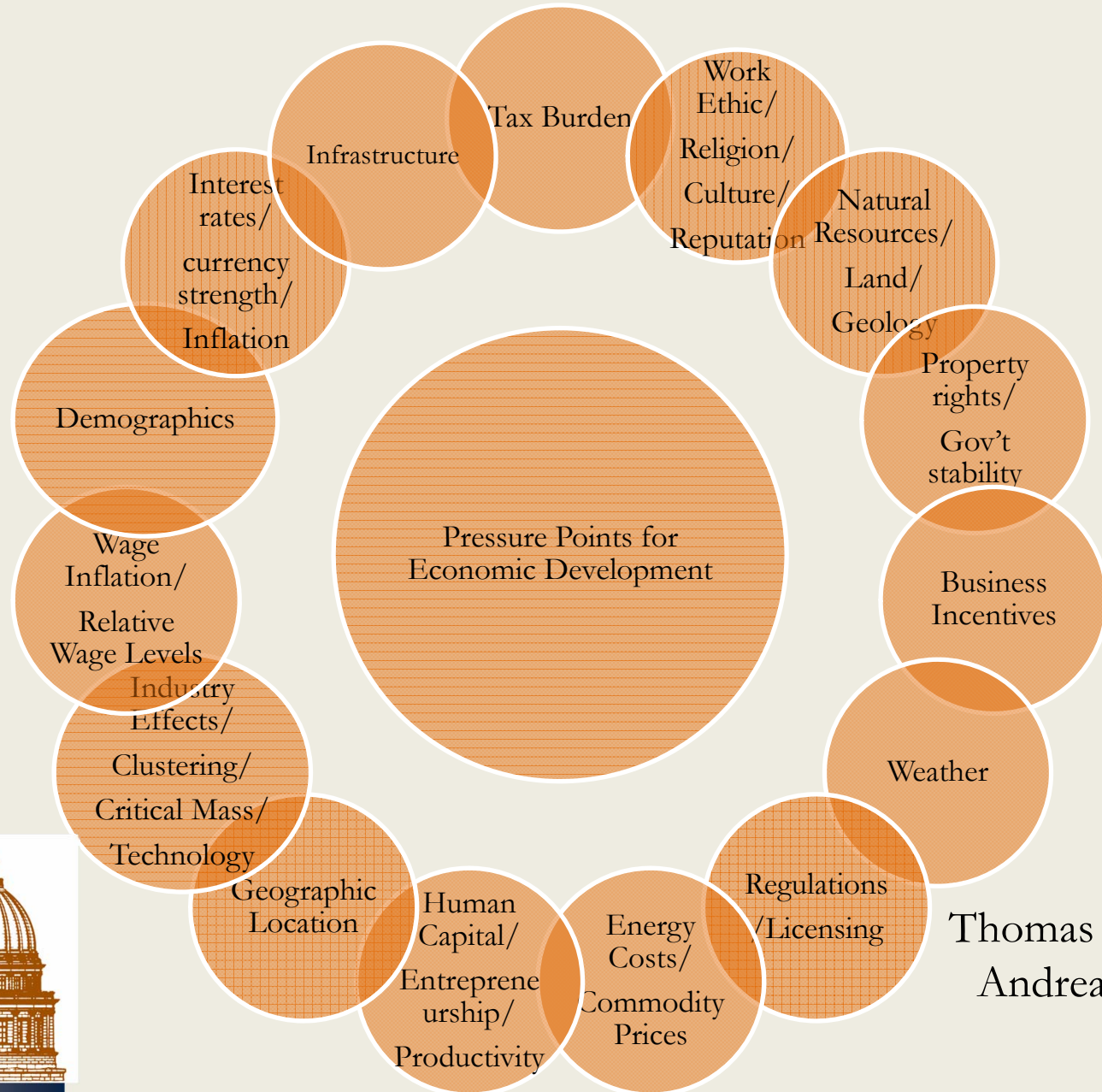


Economic Pressure Points – What Matters for Growth?



Thomas Young, Ph.D.
Andrea Wilko, Ph.D.
Steven Allred
Angela Oh

Outline

The Background

Influential Factors

- a. Current measures
- b. Potential measures/Partial influence
- c. External forces

Growth Measures

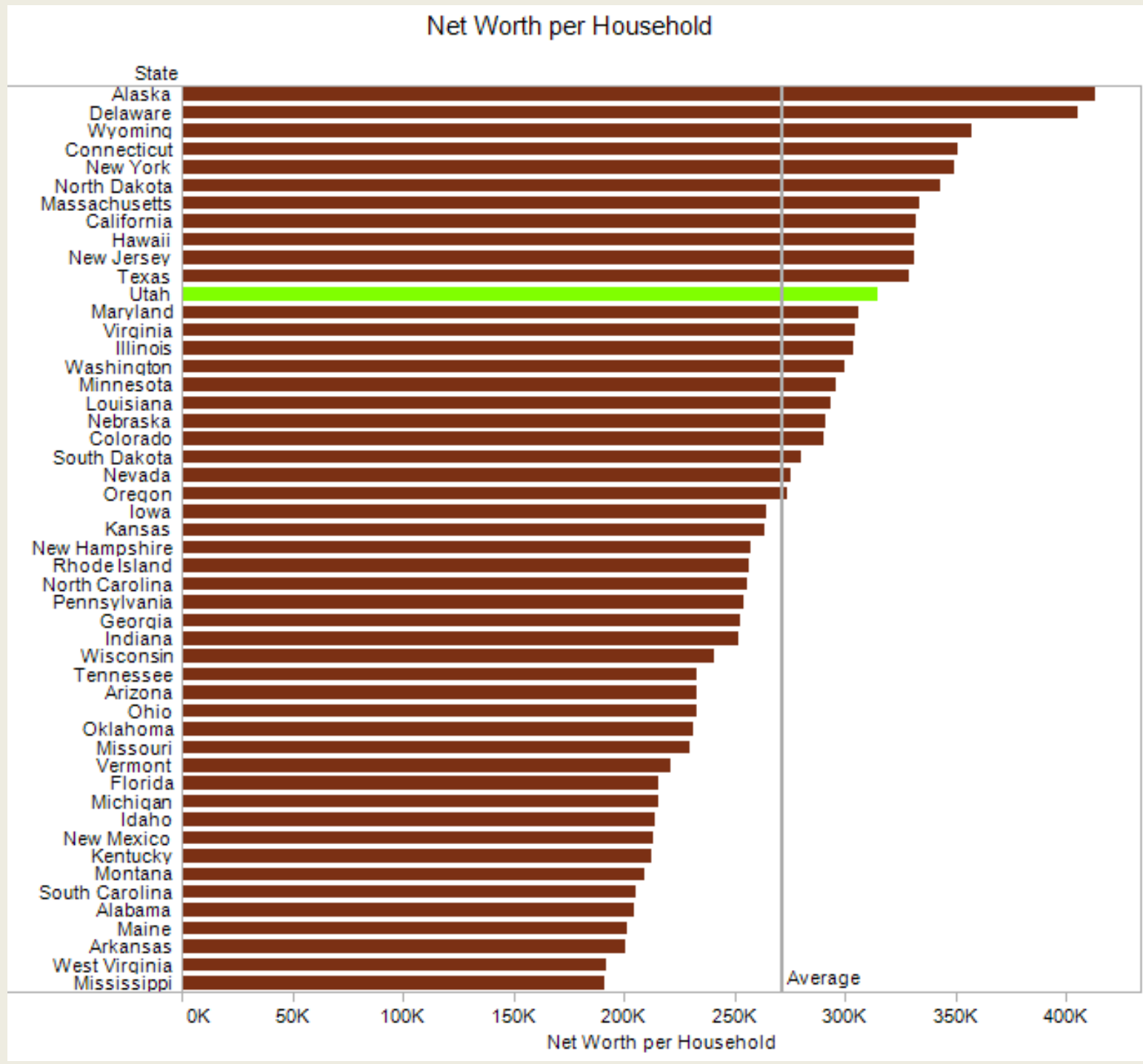
Relationships

Regression Results

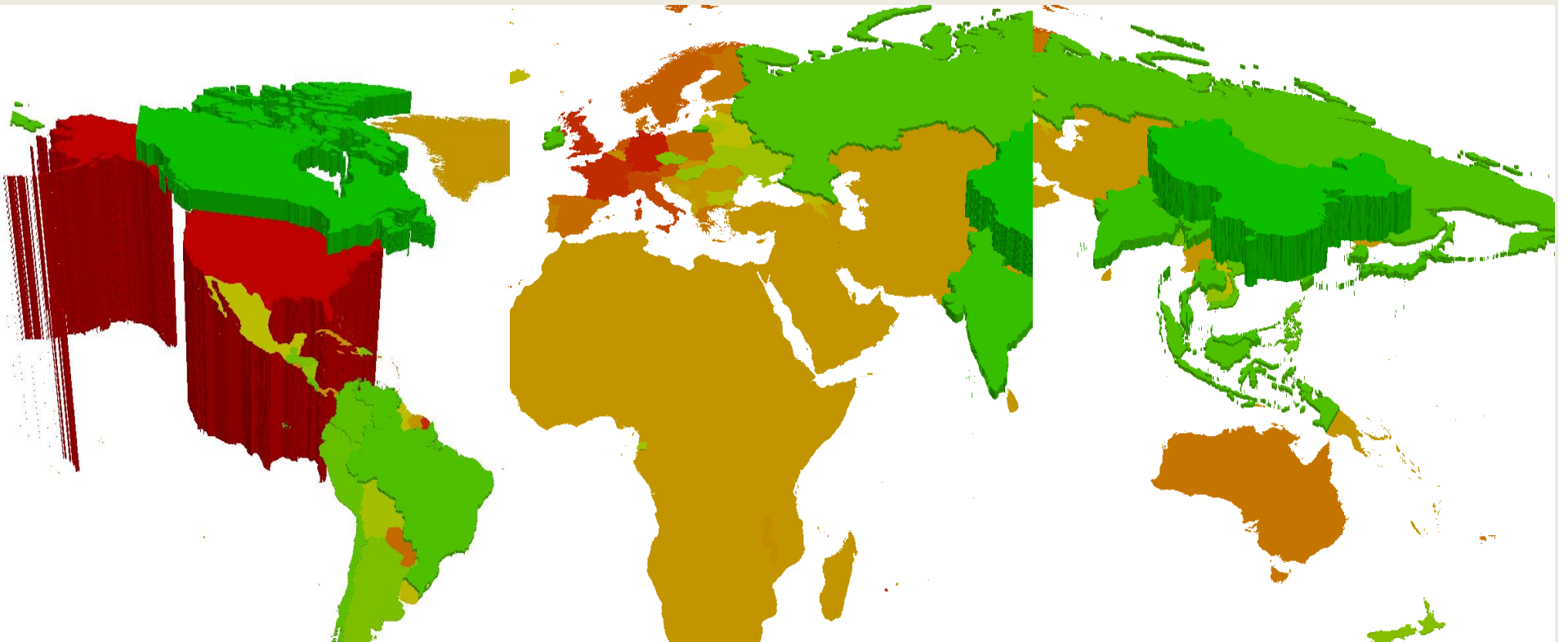
Conclusions

BACKGROUND

EST. WEALTH BY STATE

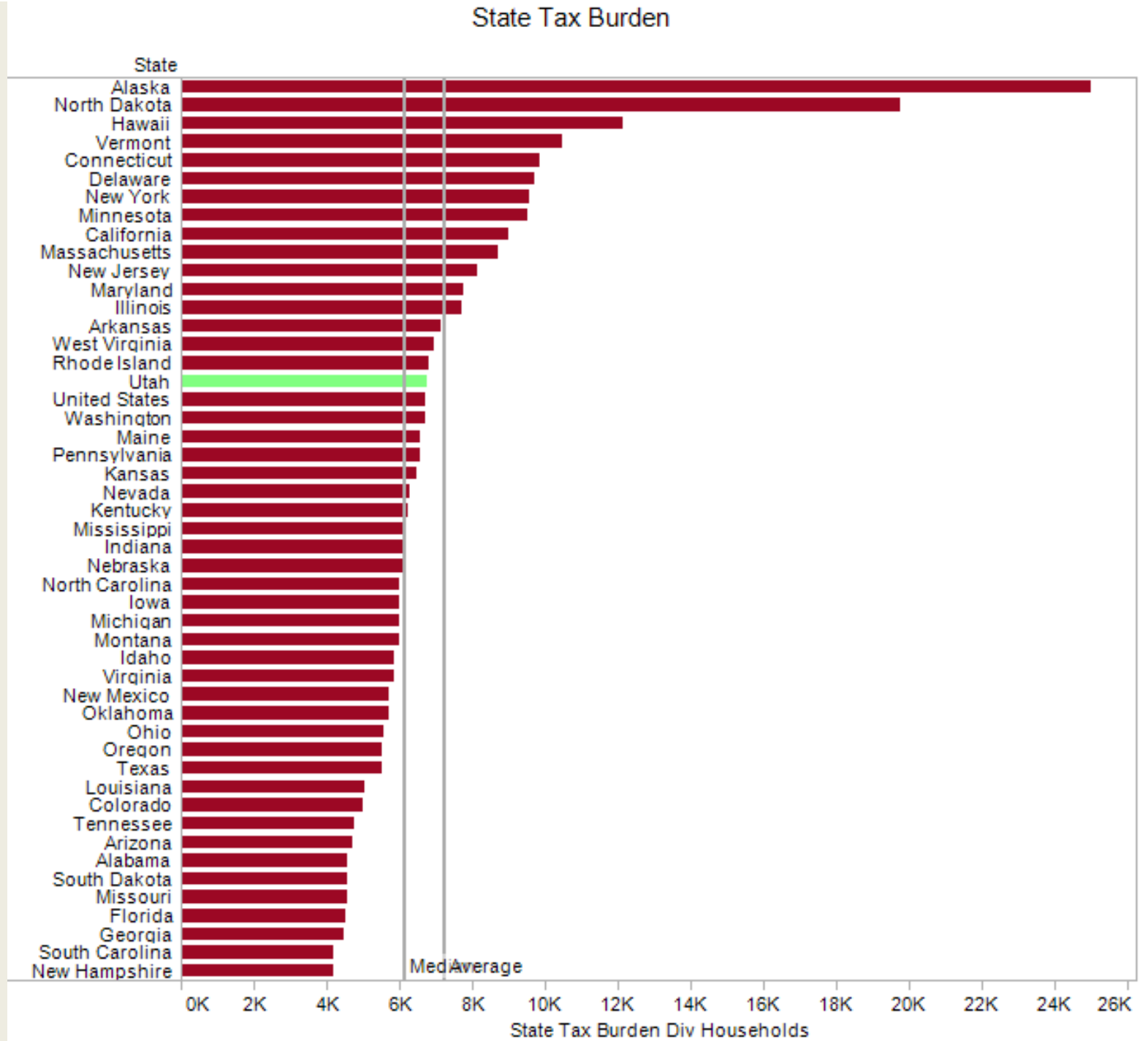


Background: International Wealth



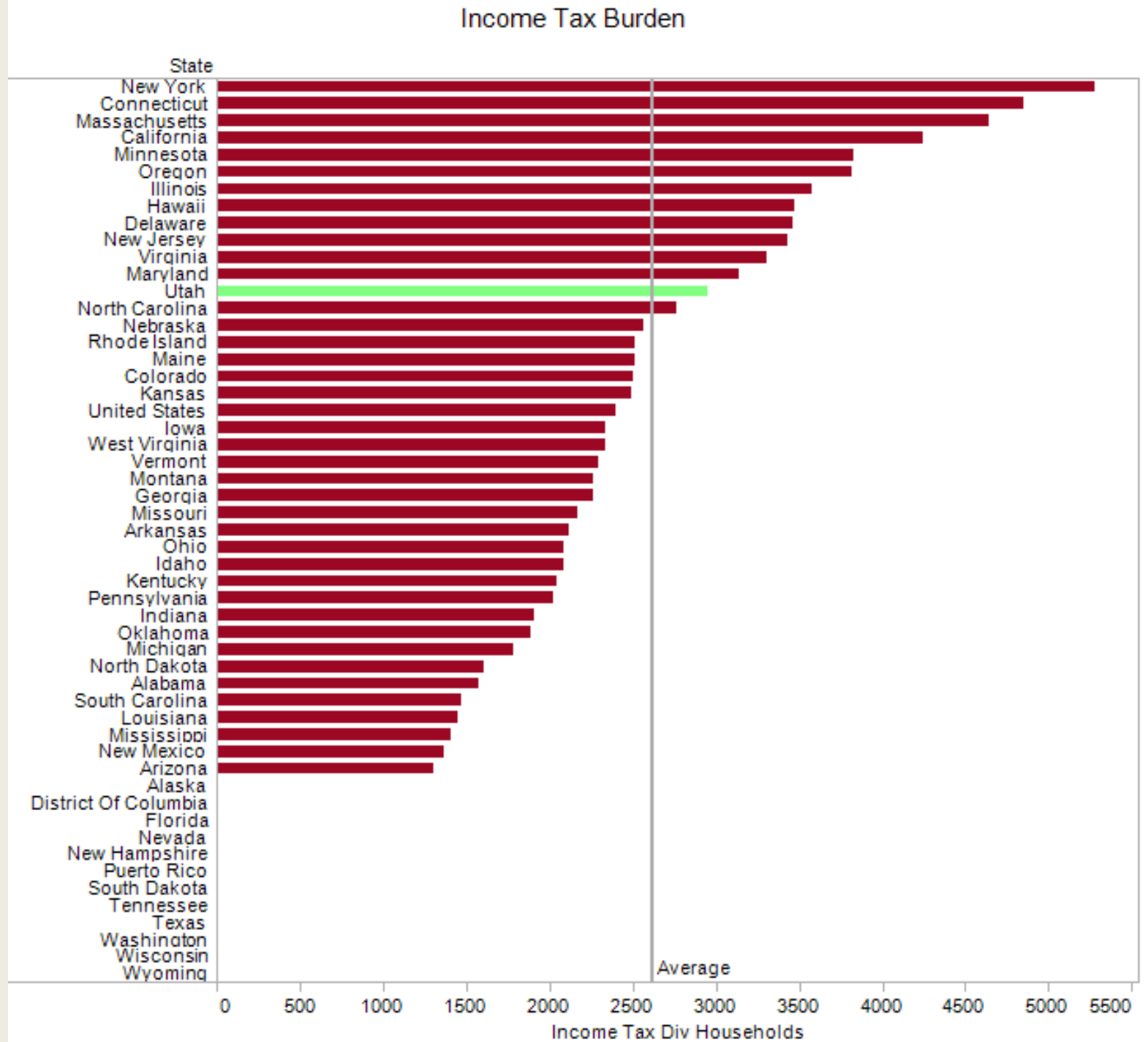
ECONOMIC GROWTH FACTORS
INFLUENTIAL FACTORS
CURRENT MEASURES

TAX POLICY: TOTAL STATE TAX (2012)

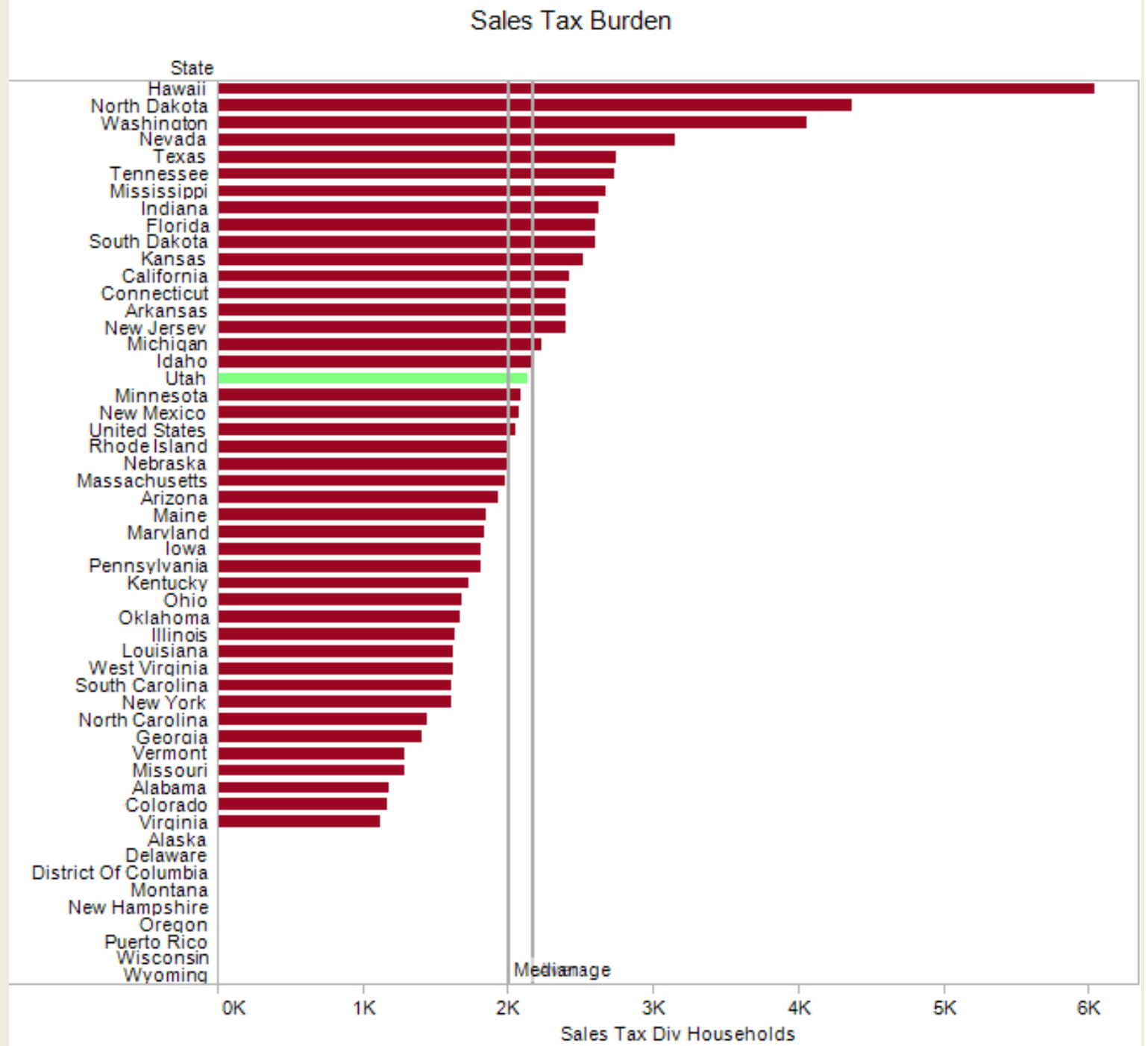


TAX POLICY: INCOME TAX

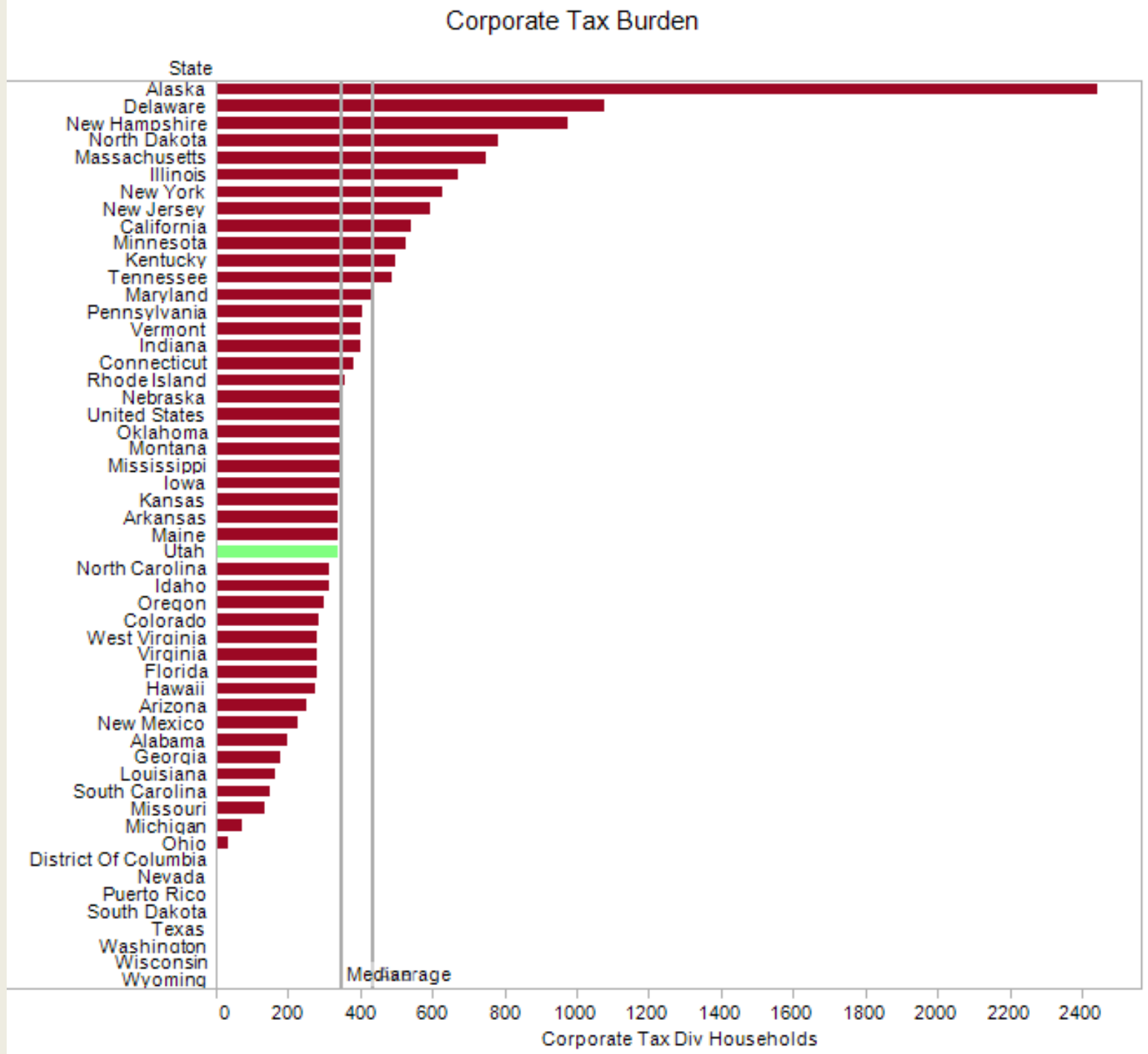
(2012)



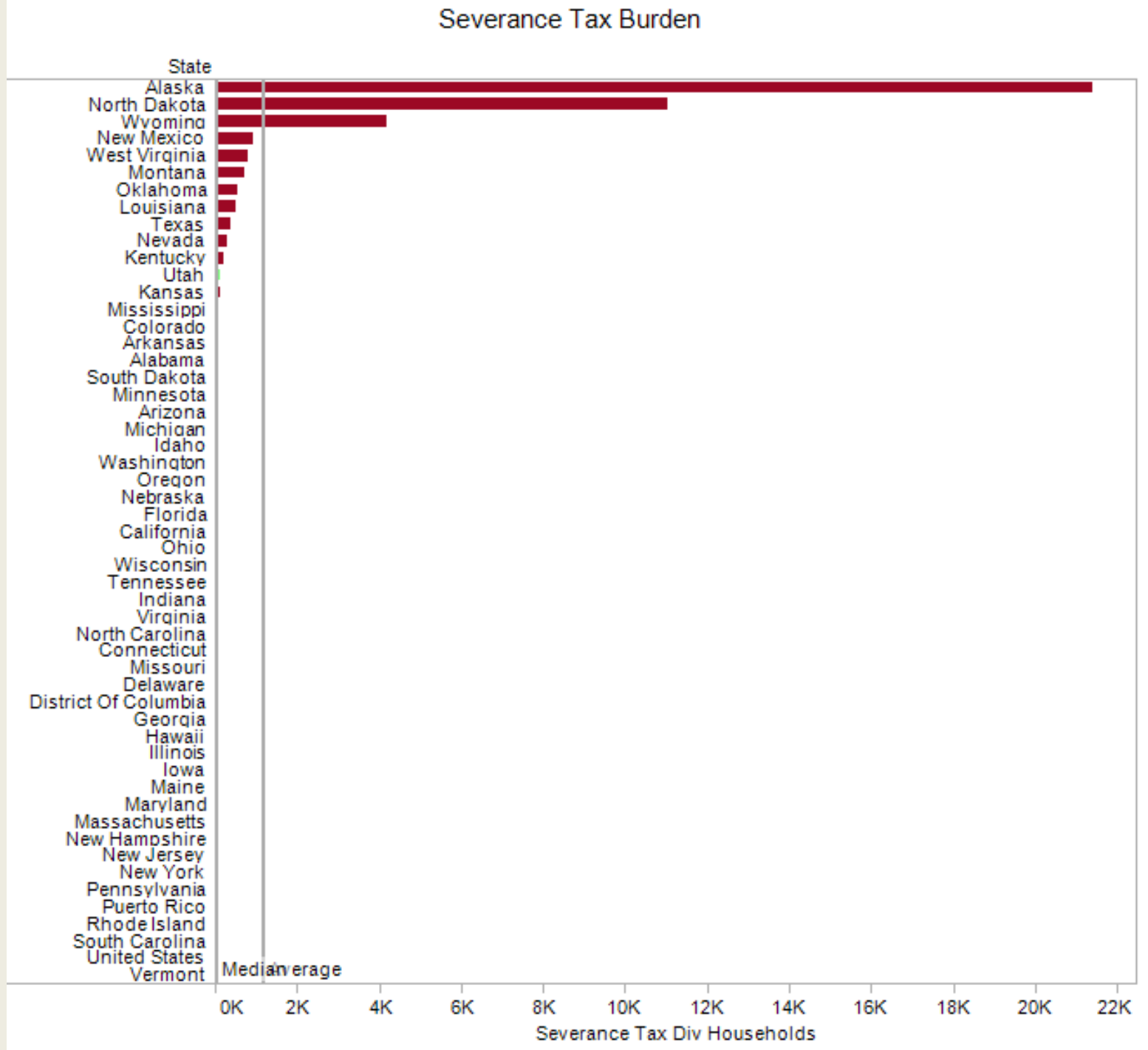
TAX POLICY: SALES TAX (2012)



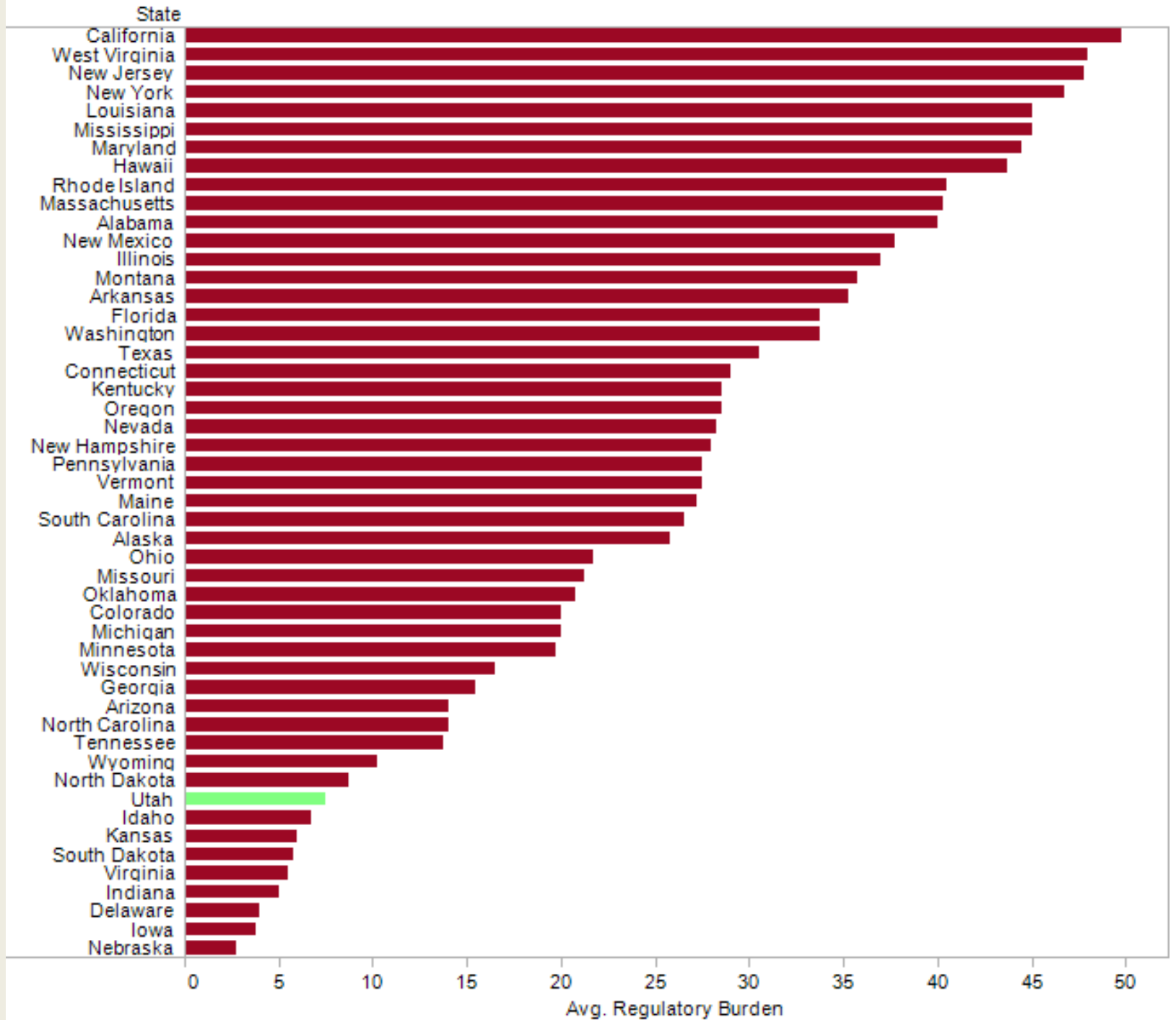
TAX POLICY: CORPORATE TAX (2012)



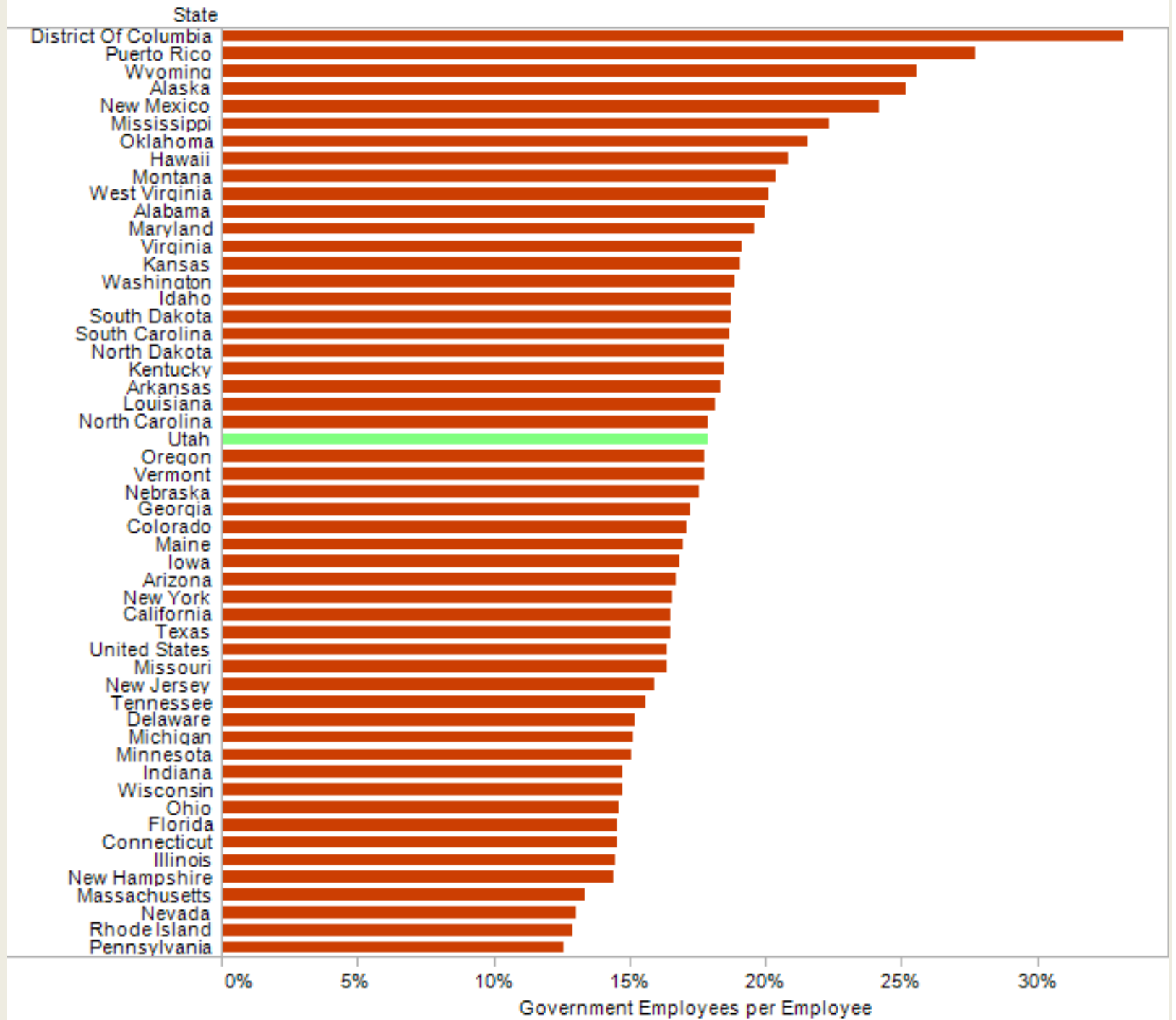
TAX POLICY: SEVERANCE TAX (2012)



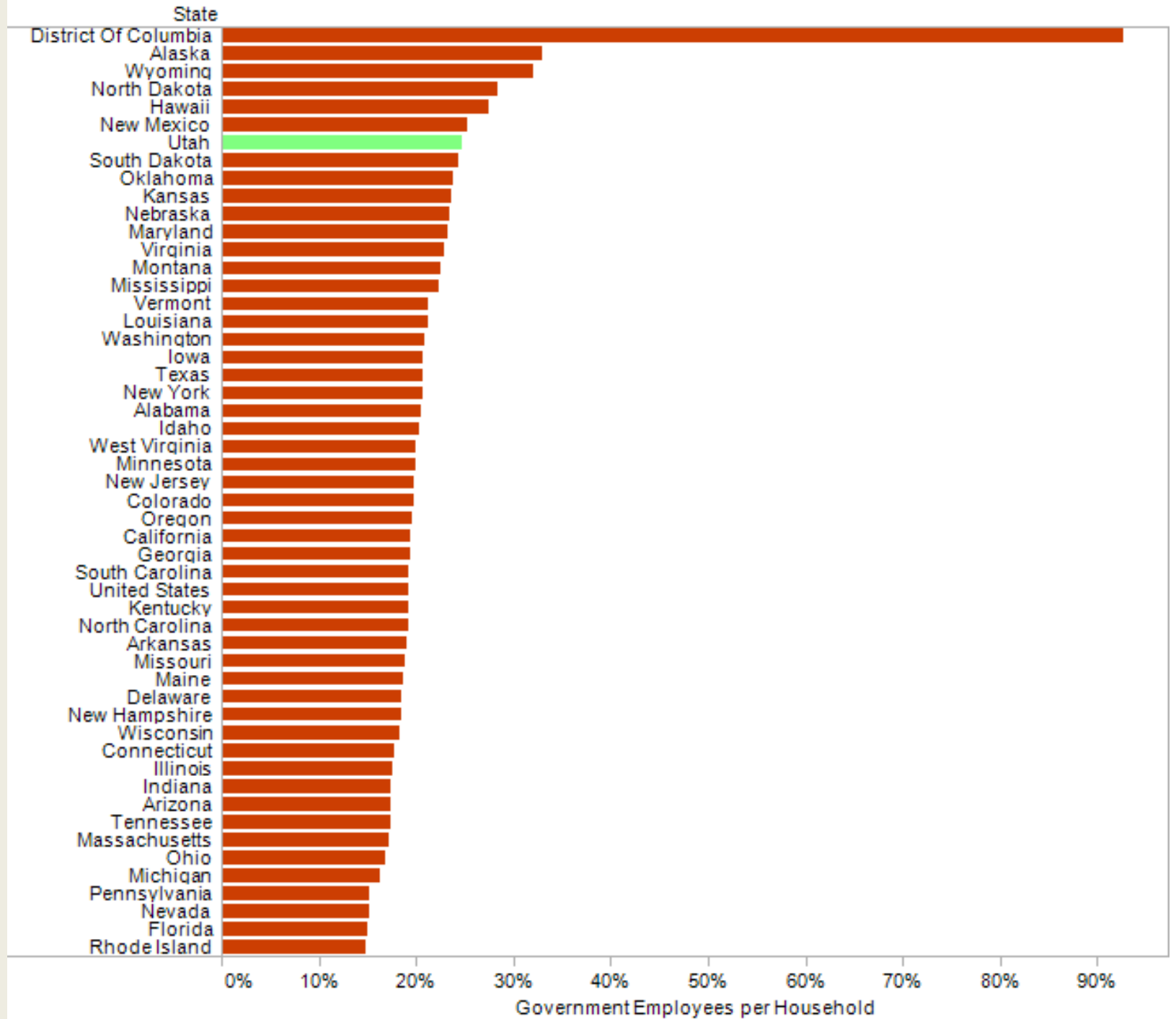
REGULATIONS AND LICENSING



REGULATIONS AND LICENSING GOVERNMENT EMPLOYMENT

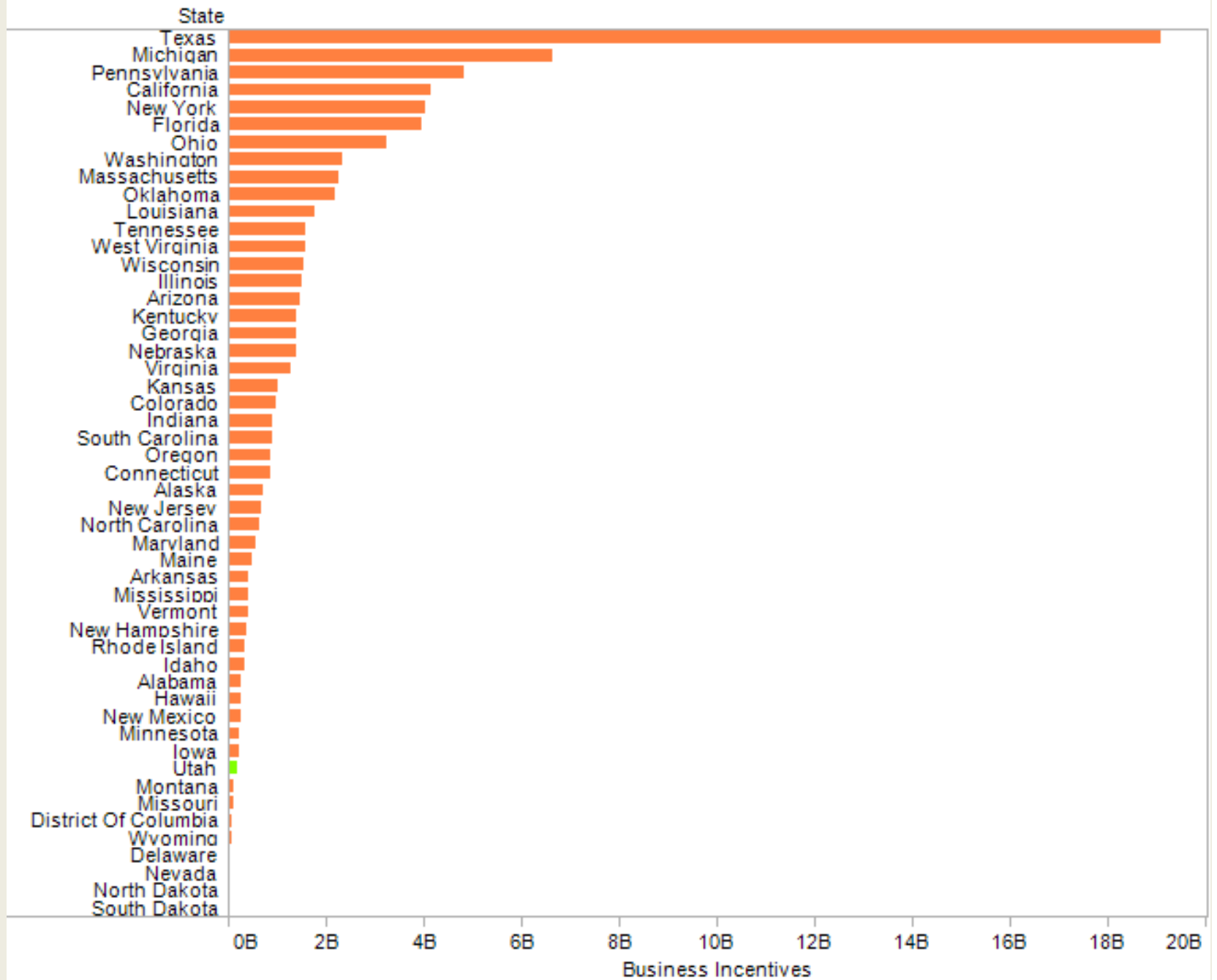


REGULATIONS AND LICENSING GOVERNMENT EMPLOYMENT



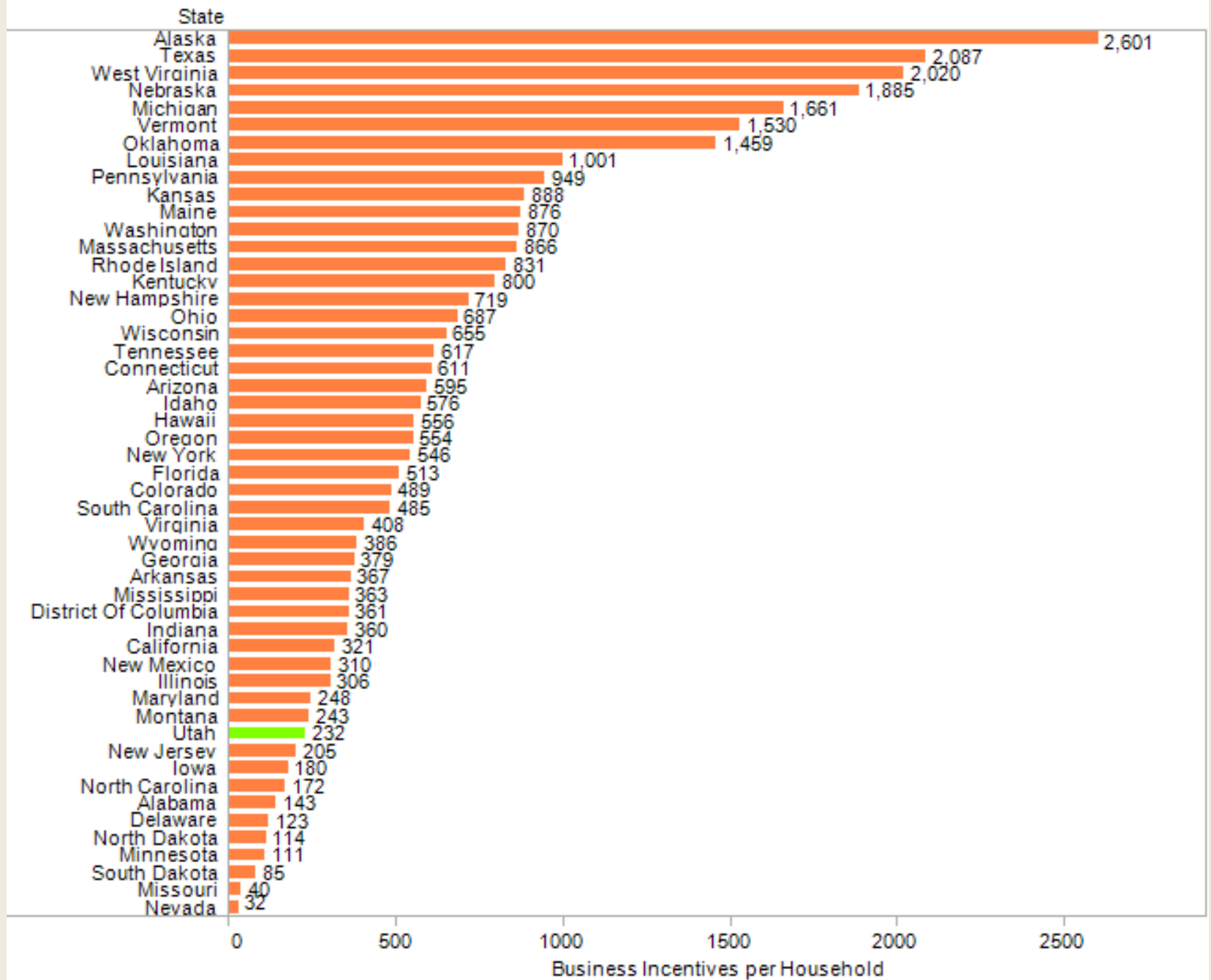
BUSINESS INCENTIVES

Business Incentives



BUSINESS INCENTIVES

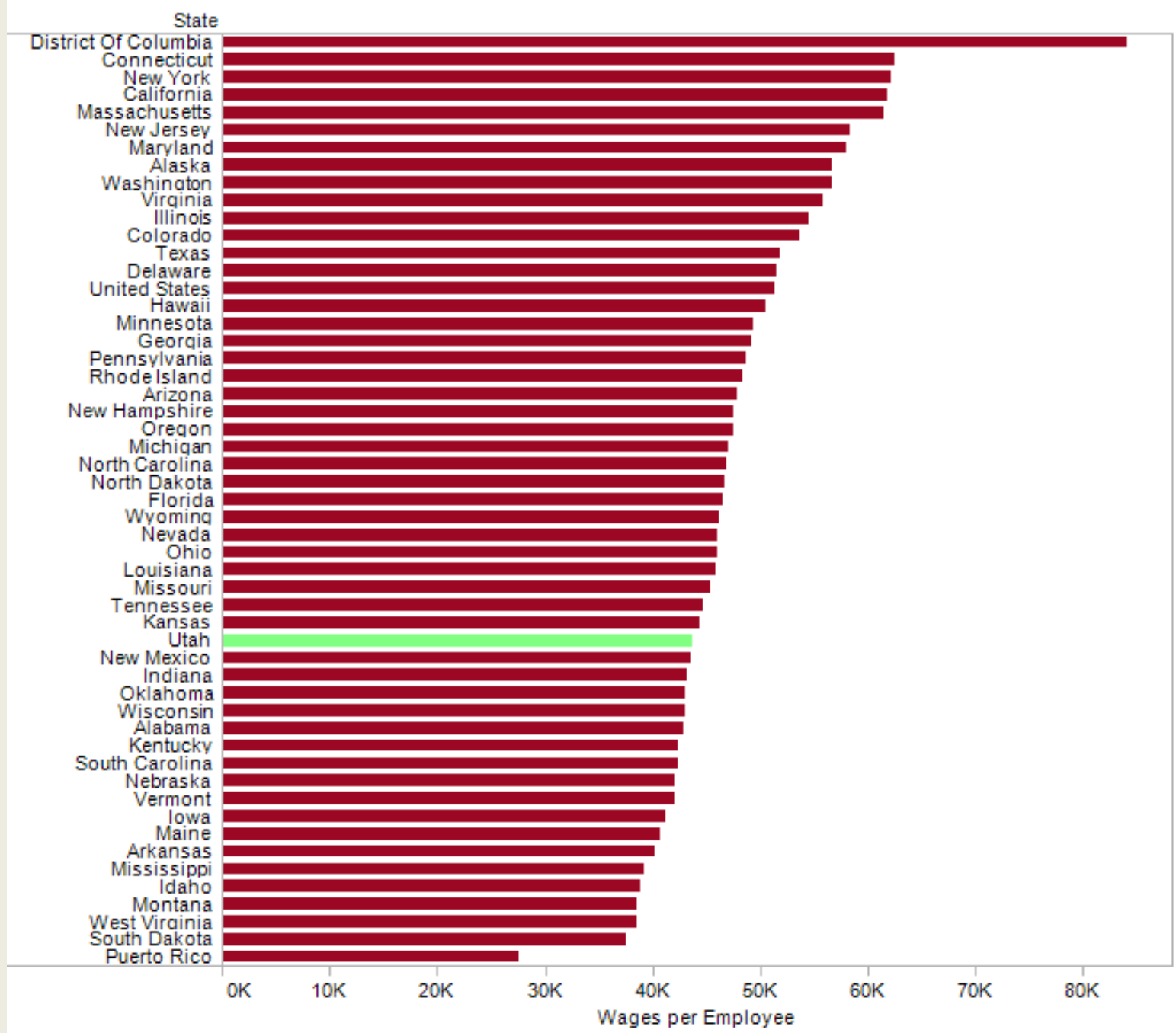
Business Incentives per Household



ECONOMIC GROWTH FACTORS
INFLUENTIAL FACTORS
POTENTIAL MEASURES
PARTIAL INFLUENCE

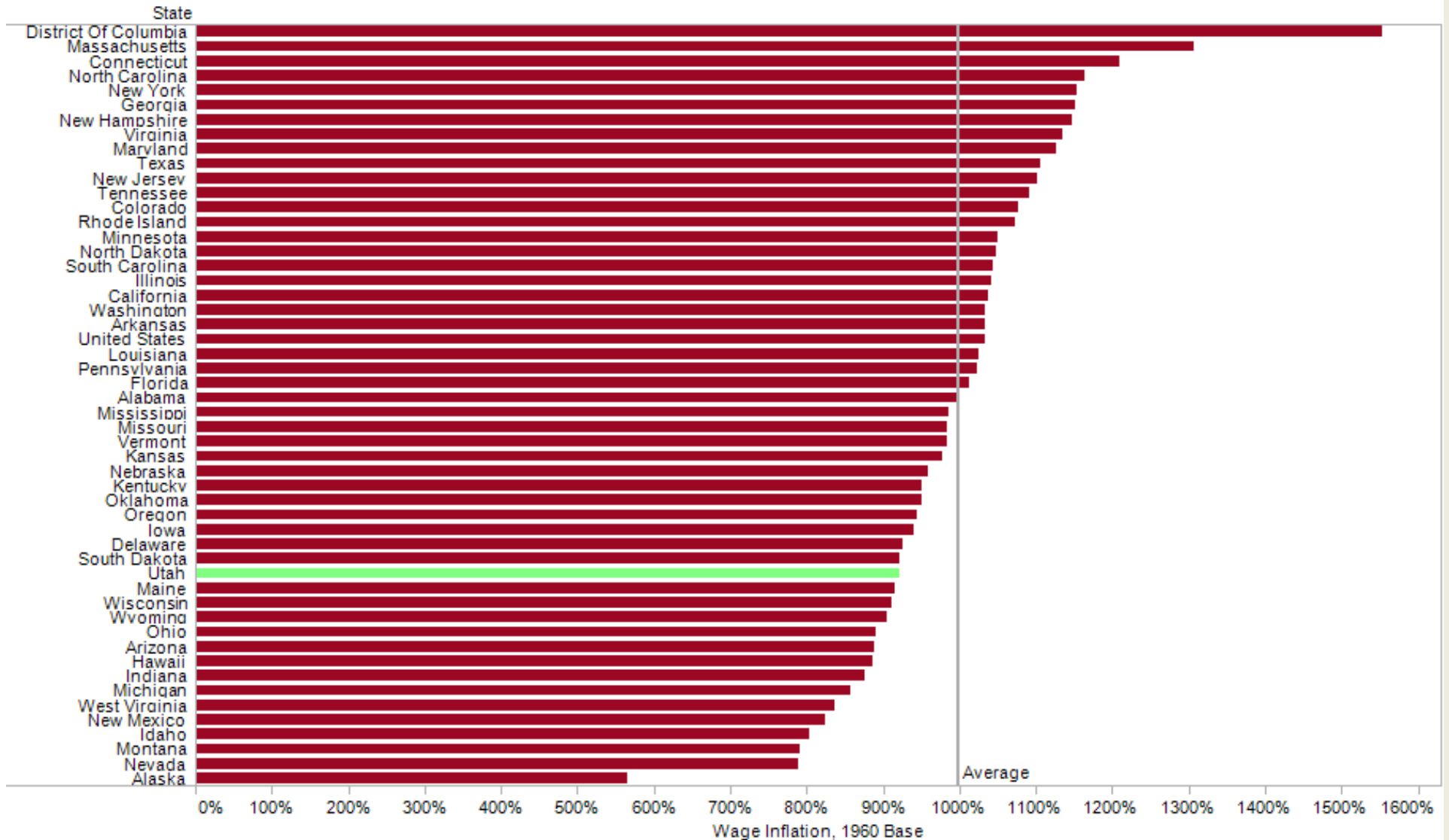
WAGE LEVELS (2012)

Wages per Employee (2012)



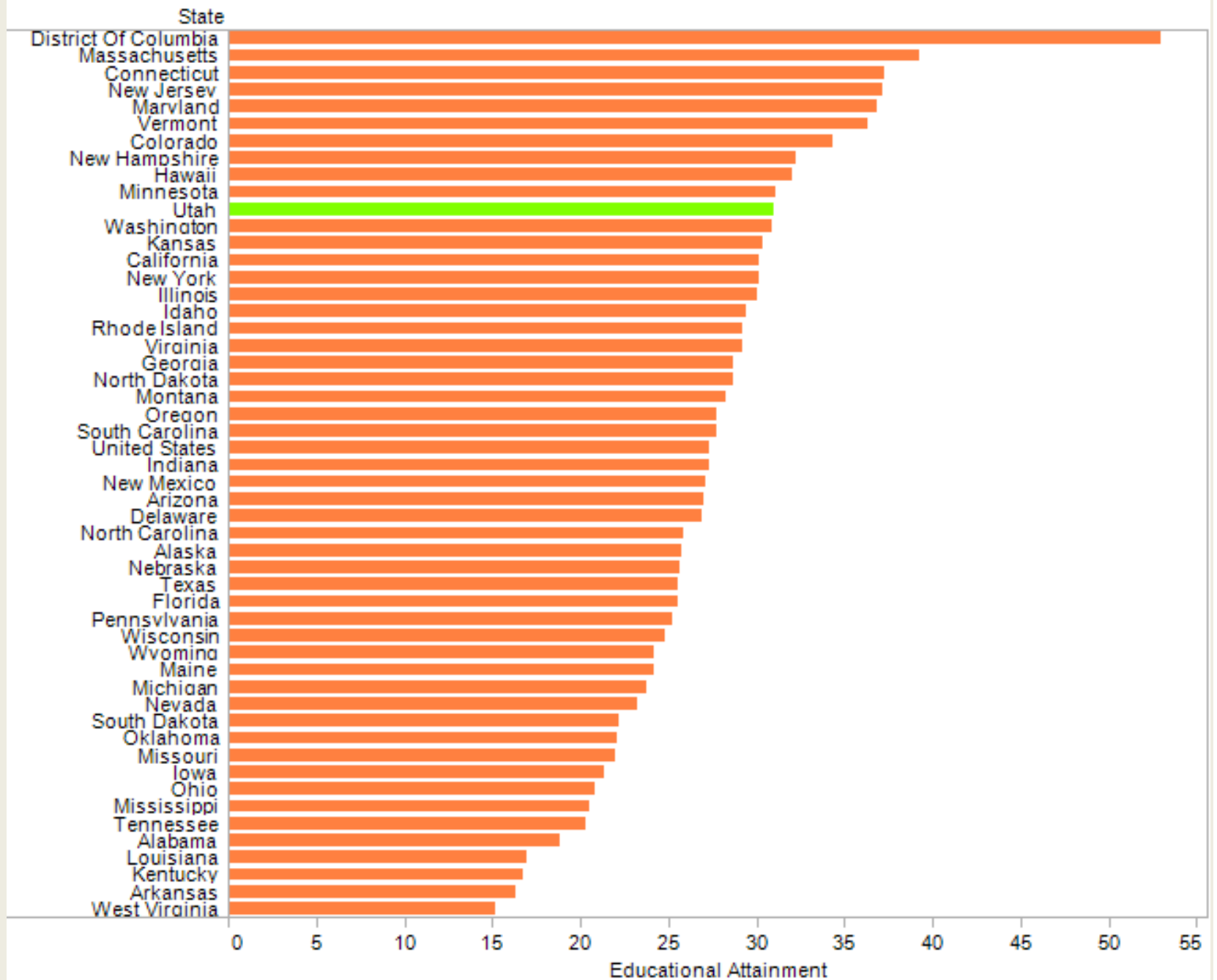
WAGE INFLATION

Wage Inflation per Employee, 2012

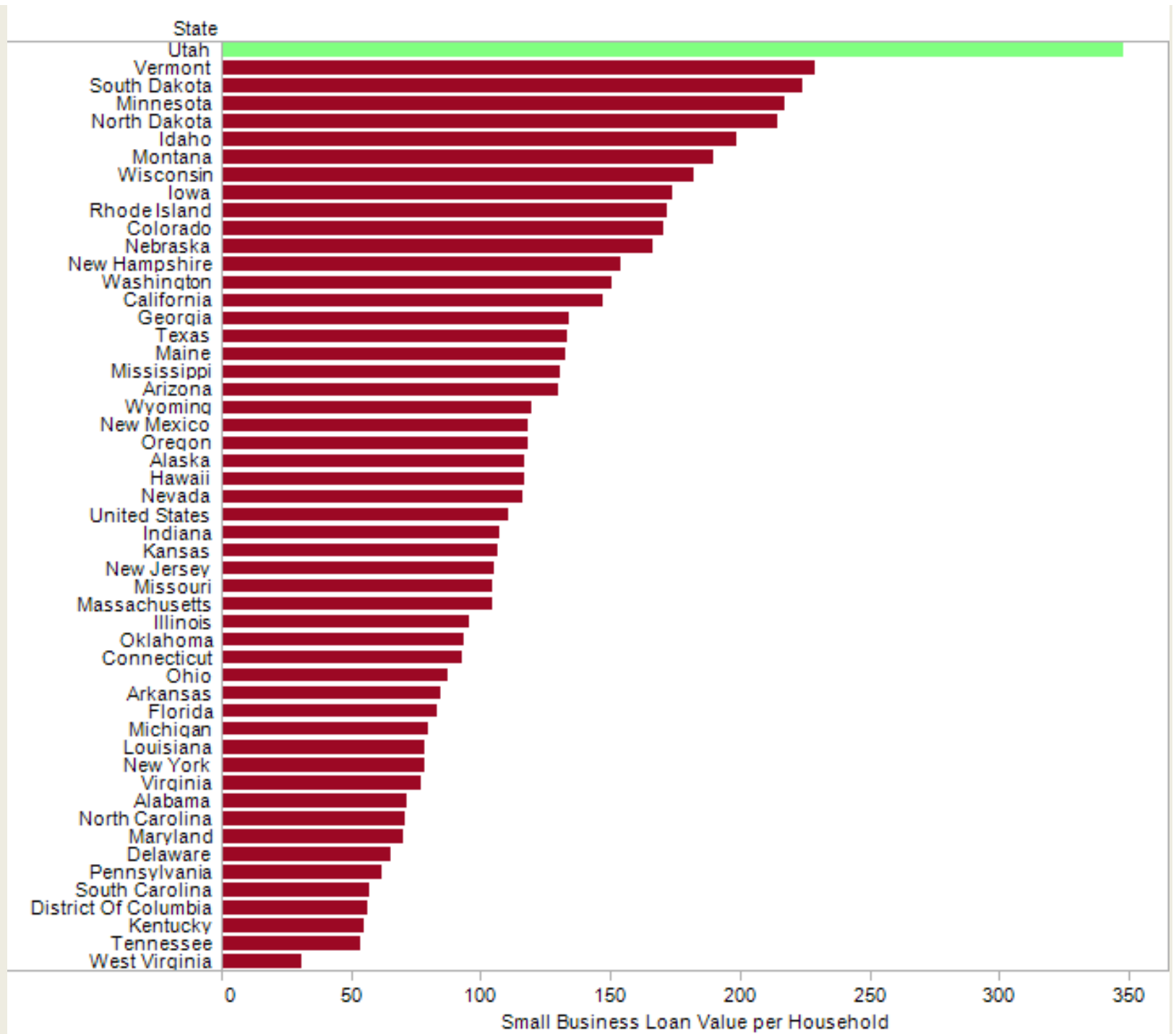


EDUCATION

Educational Attainment

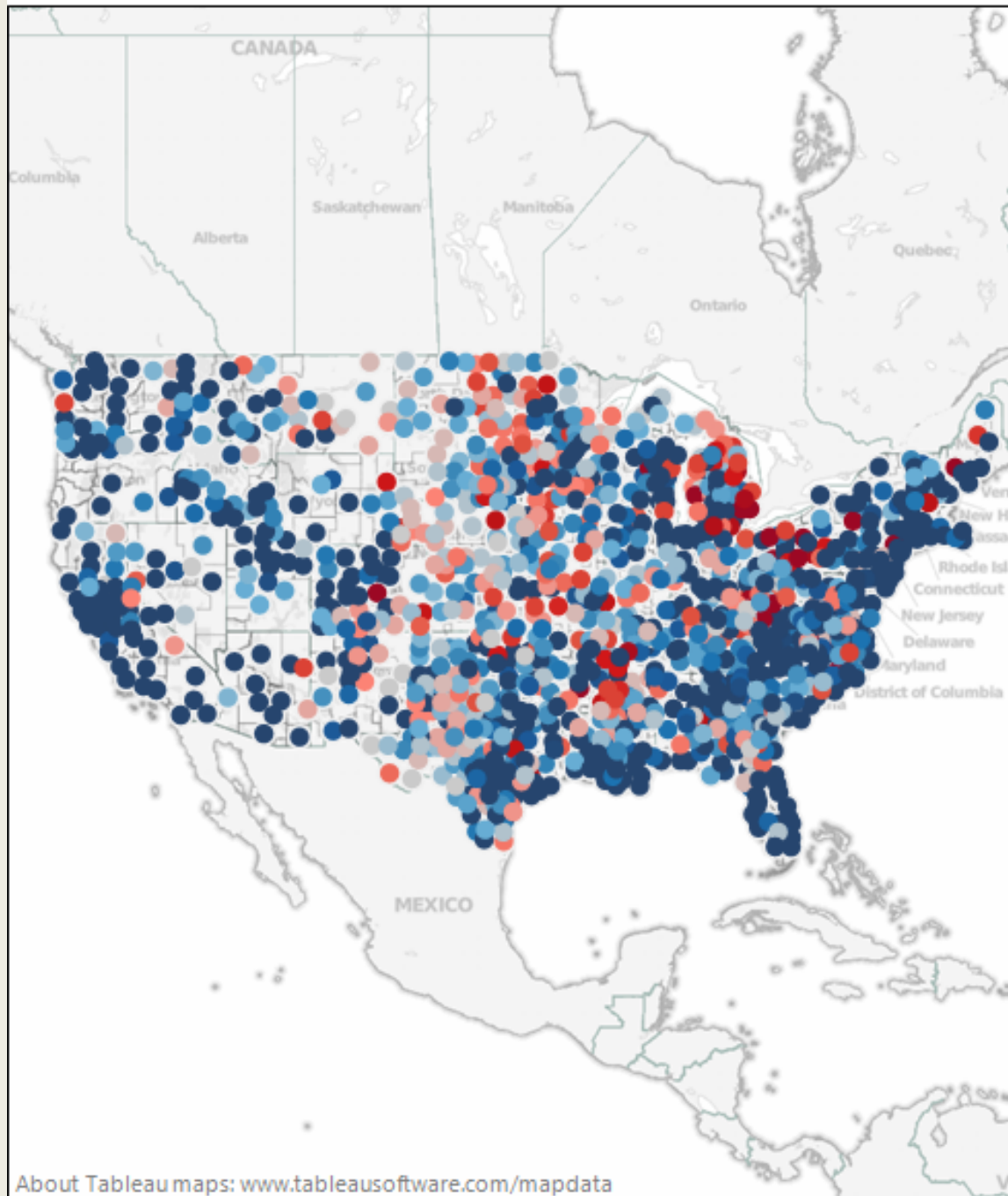


ENTREPRENEURSHIP



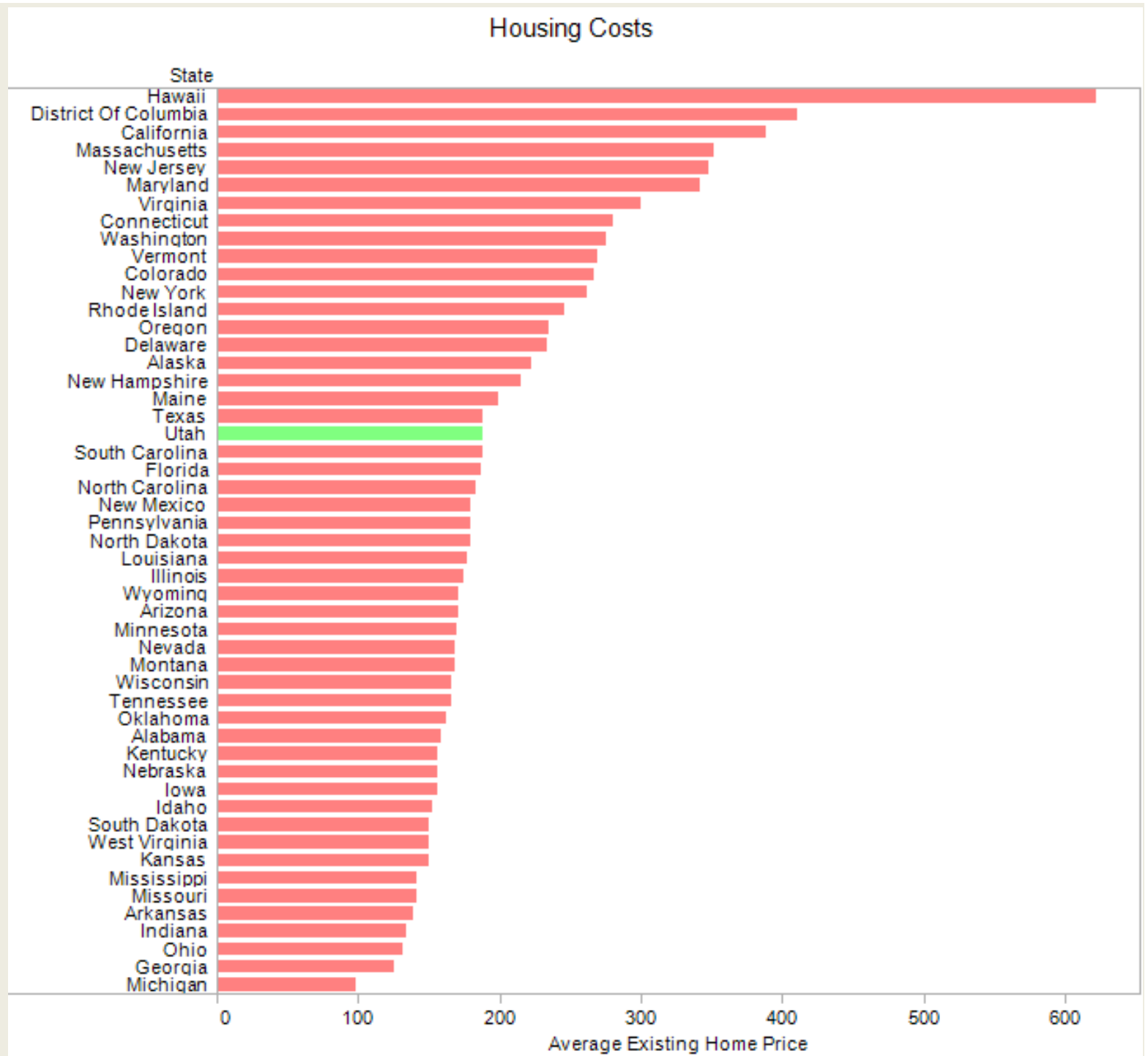
ENTREPRENEURSHIP BUSINESS BIRTHS LESS DEATHS

Business Births - Deaths

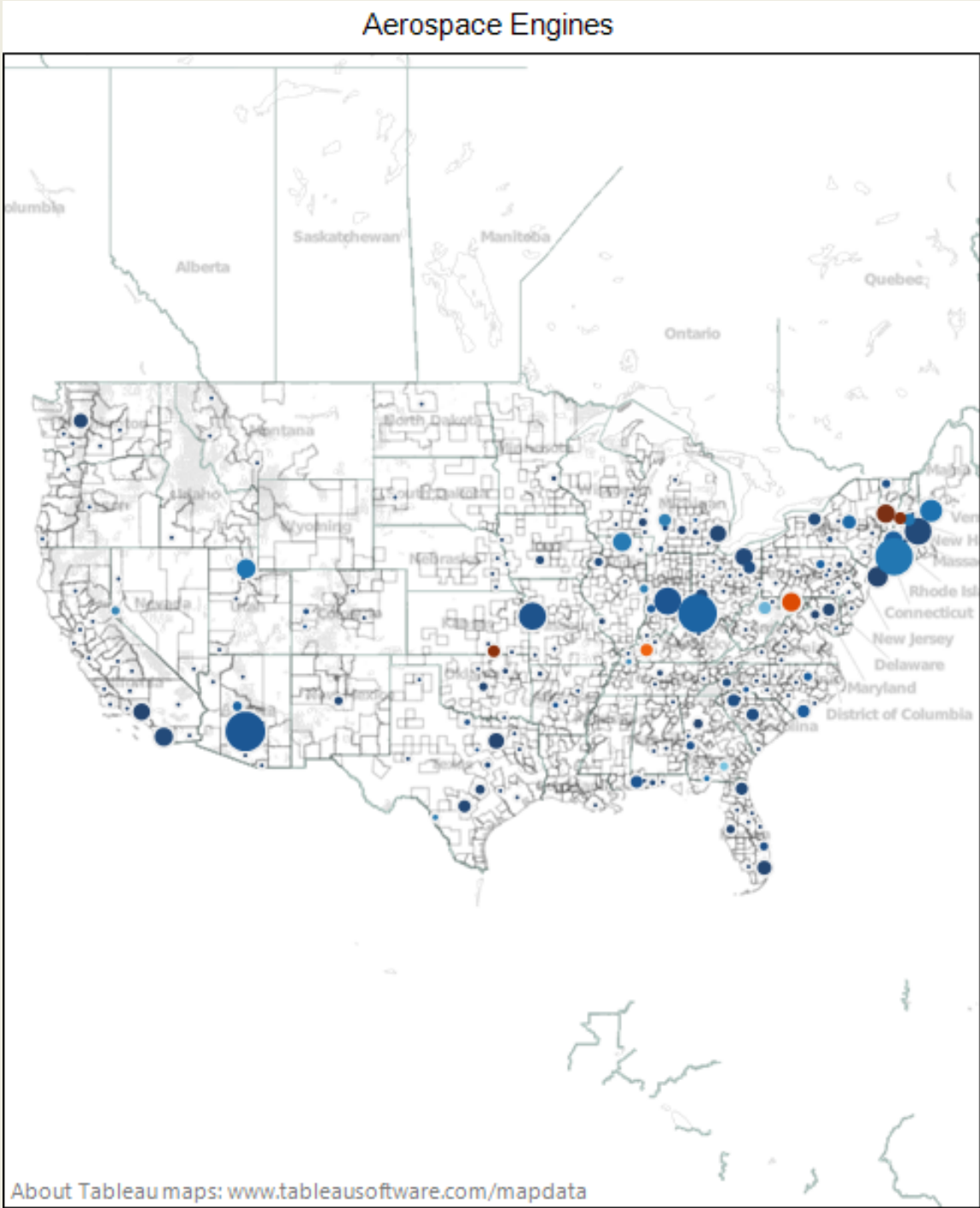


About Tableau maps: www.tableausoftware.com/mapdata

HOUSING COSTS

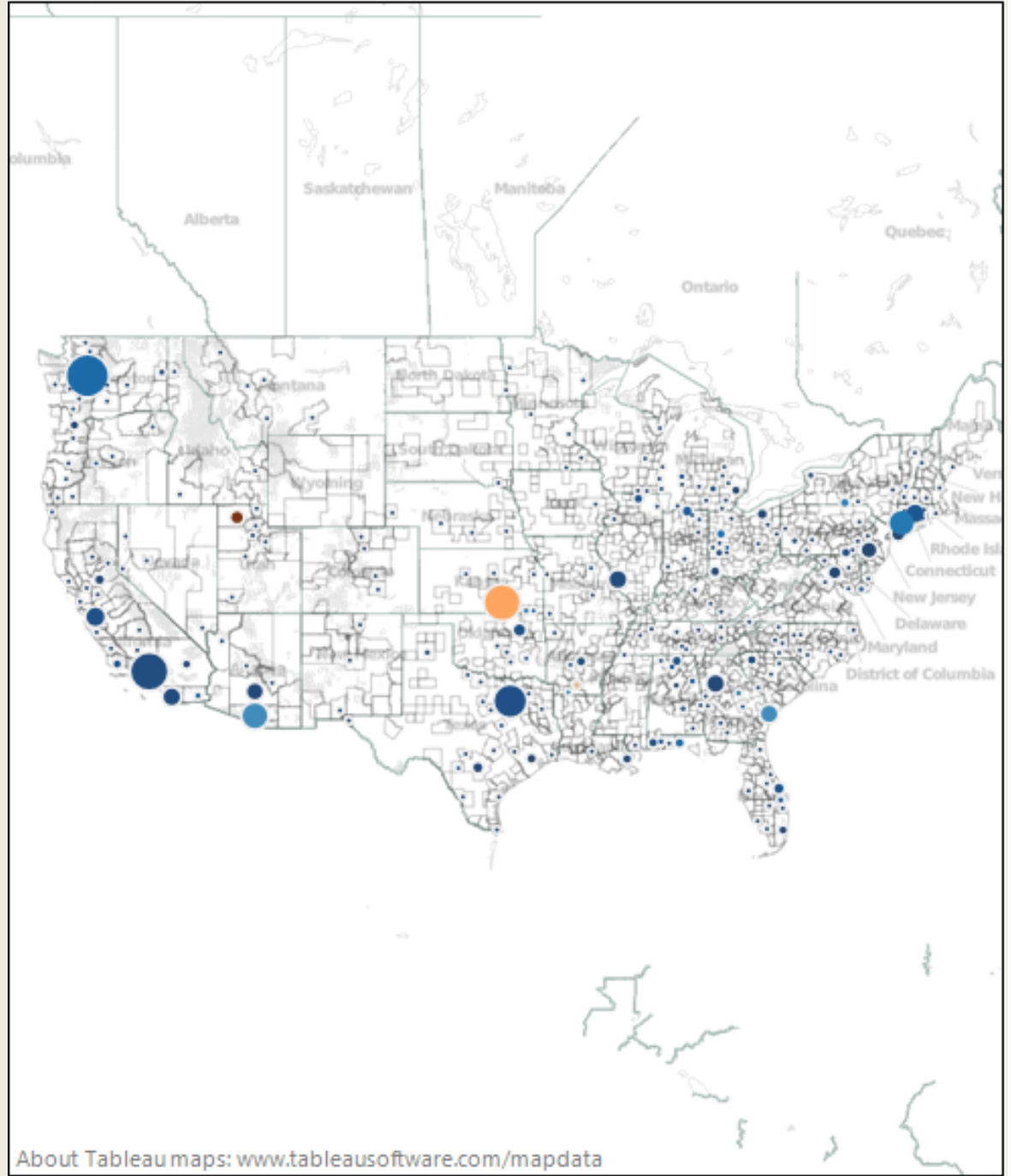


INDUSTRY EFFECTS/CLUSTERING UTAH CLUSTER: AEROSPACE AND AVIATION



INDUSTRY EFFECTS/CLUSTERING UTAH CLUSTER: AEROSPACE AND DEFENSE

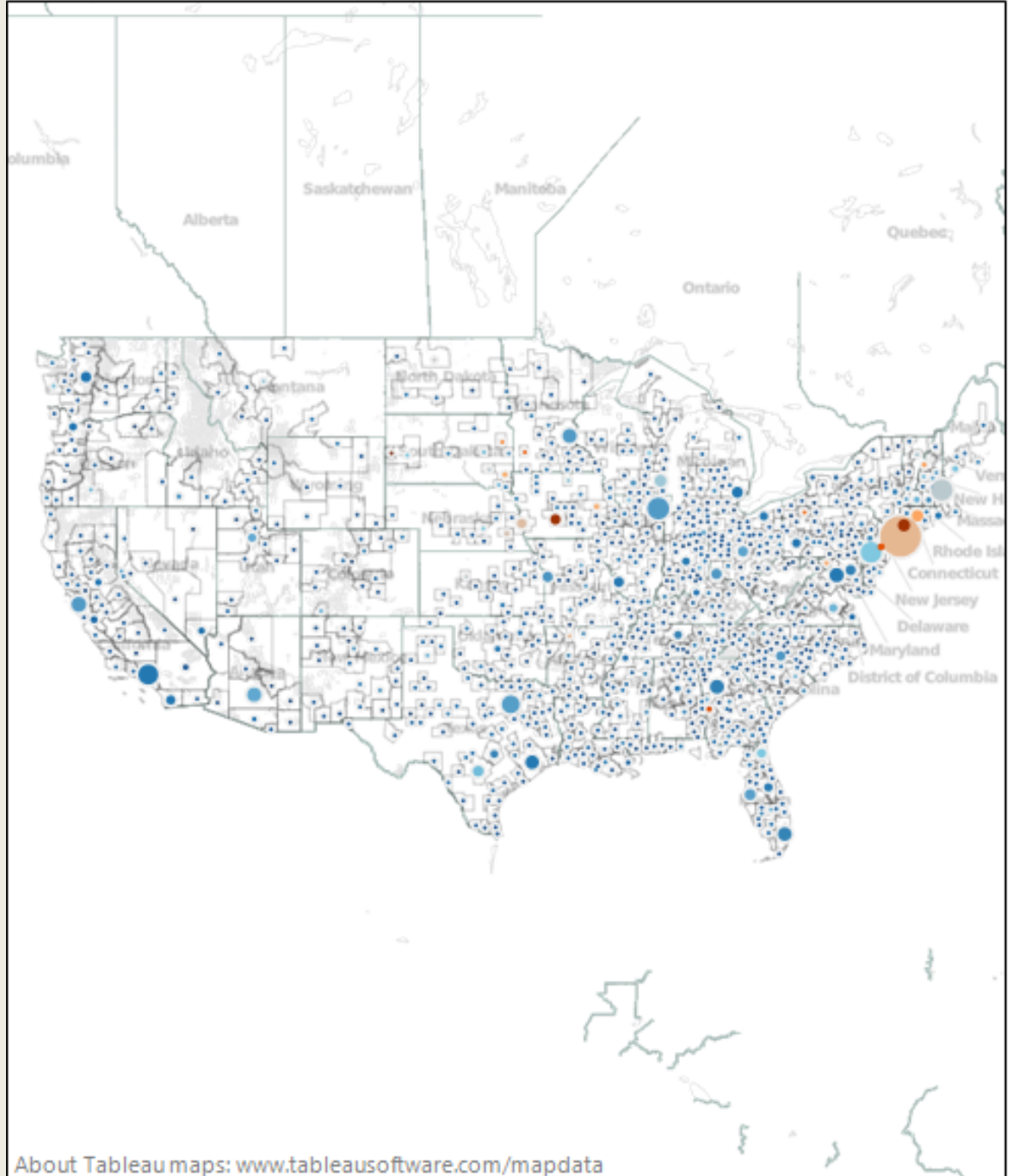
Aerospace Vehicles and Defense



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INDUSTRY EFFECTS/CLUSTERING UTAH CLUSTER: FINANCIAL SERVICES

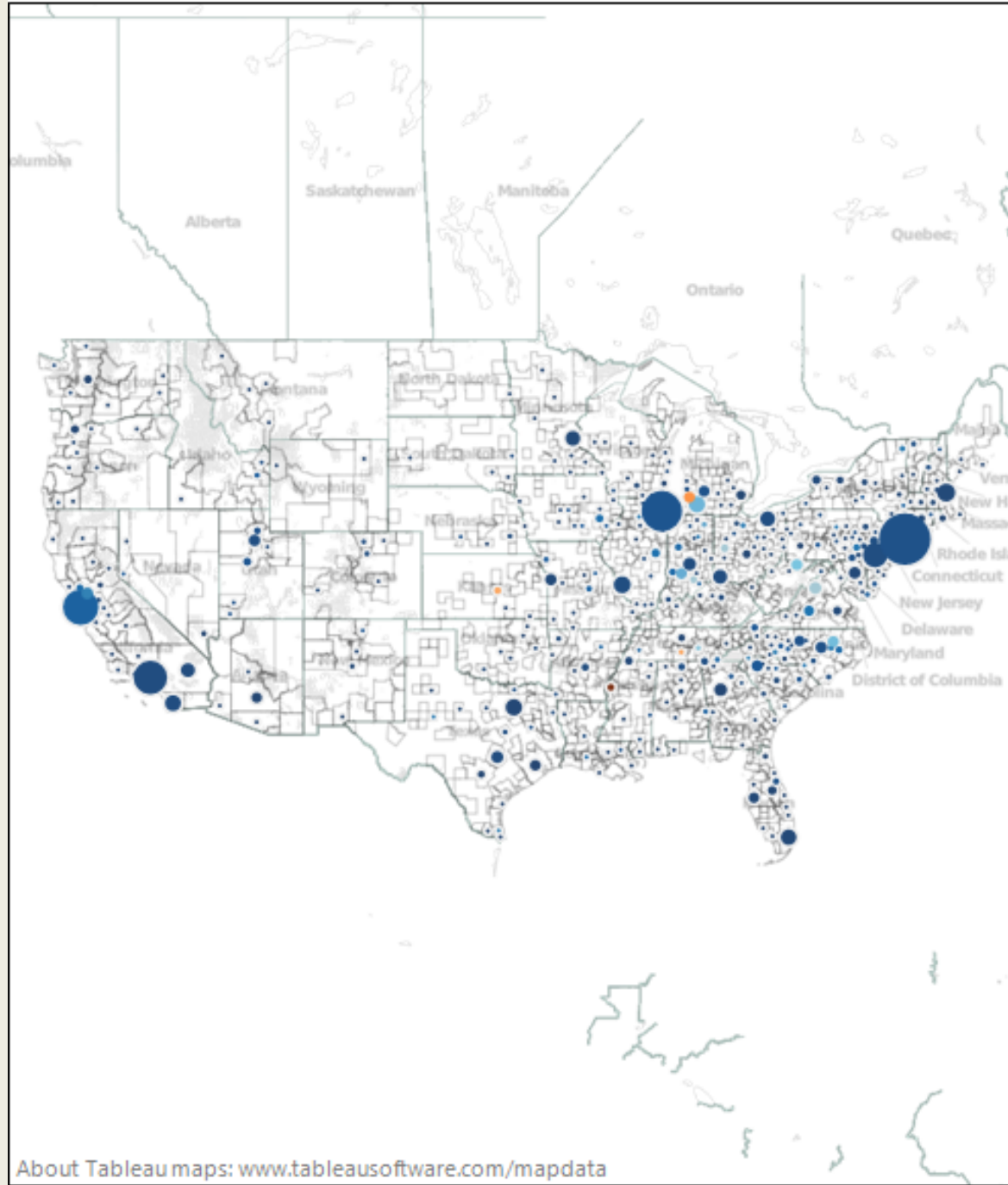
Financial Services



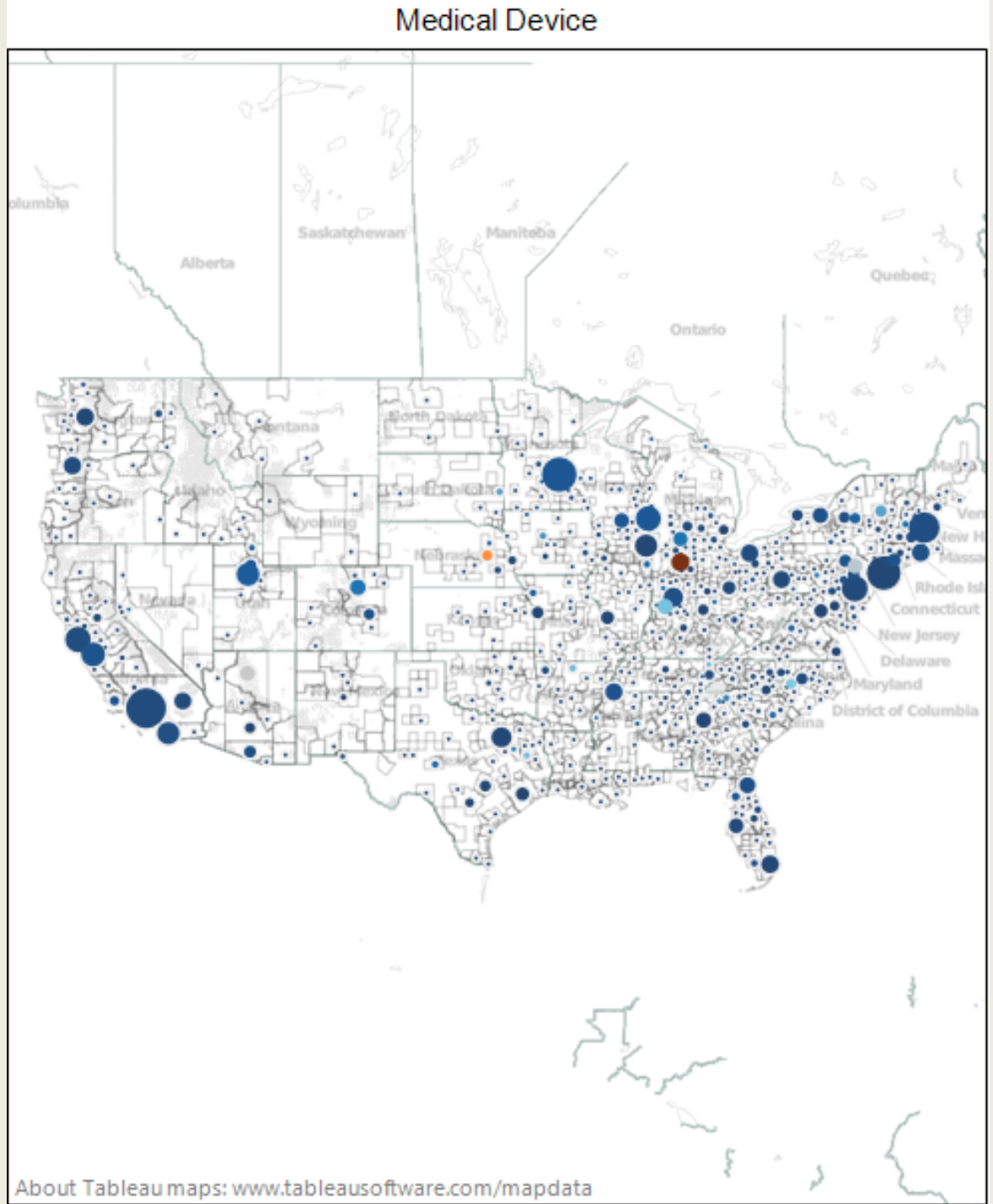
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INDUSTRY EFFECTS/CLUSTERING UTAH CLUSTER: LIFE SCIENCES

Biopharmaceutical



INDUSTRY
EFFECTS/CLUSTERING
UTAH CLUSTER: LIFE SCIENCES

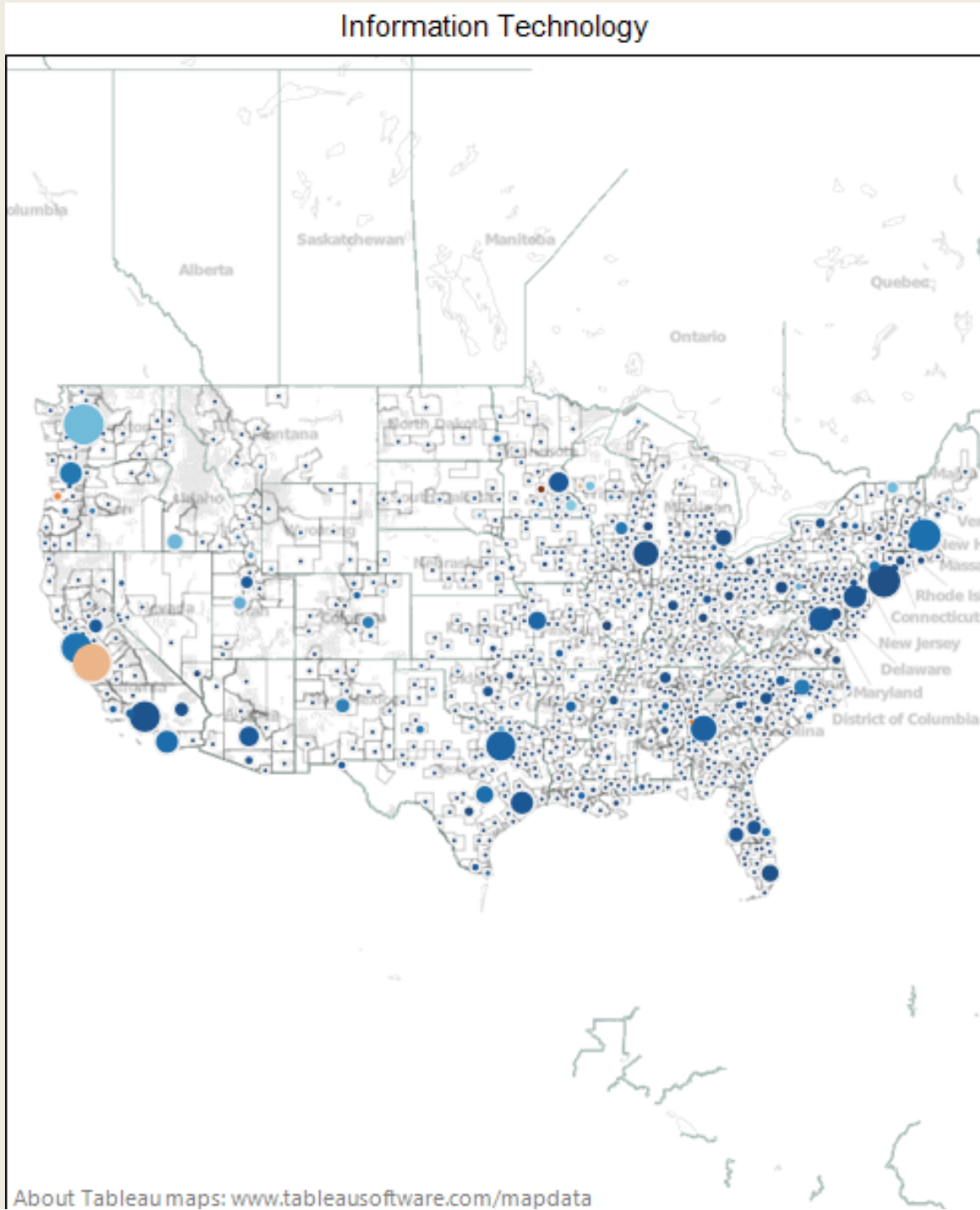


INDUSTRY

EFFECTS/CLUSTERING

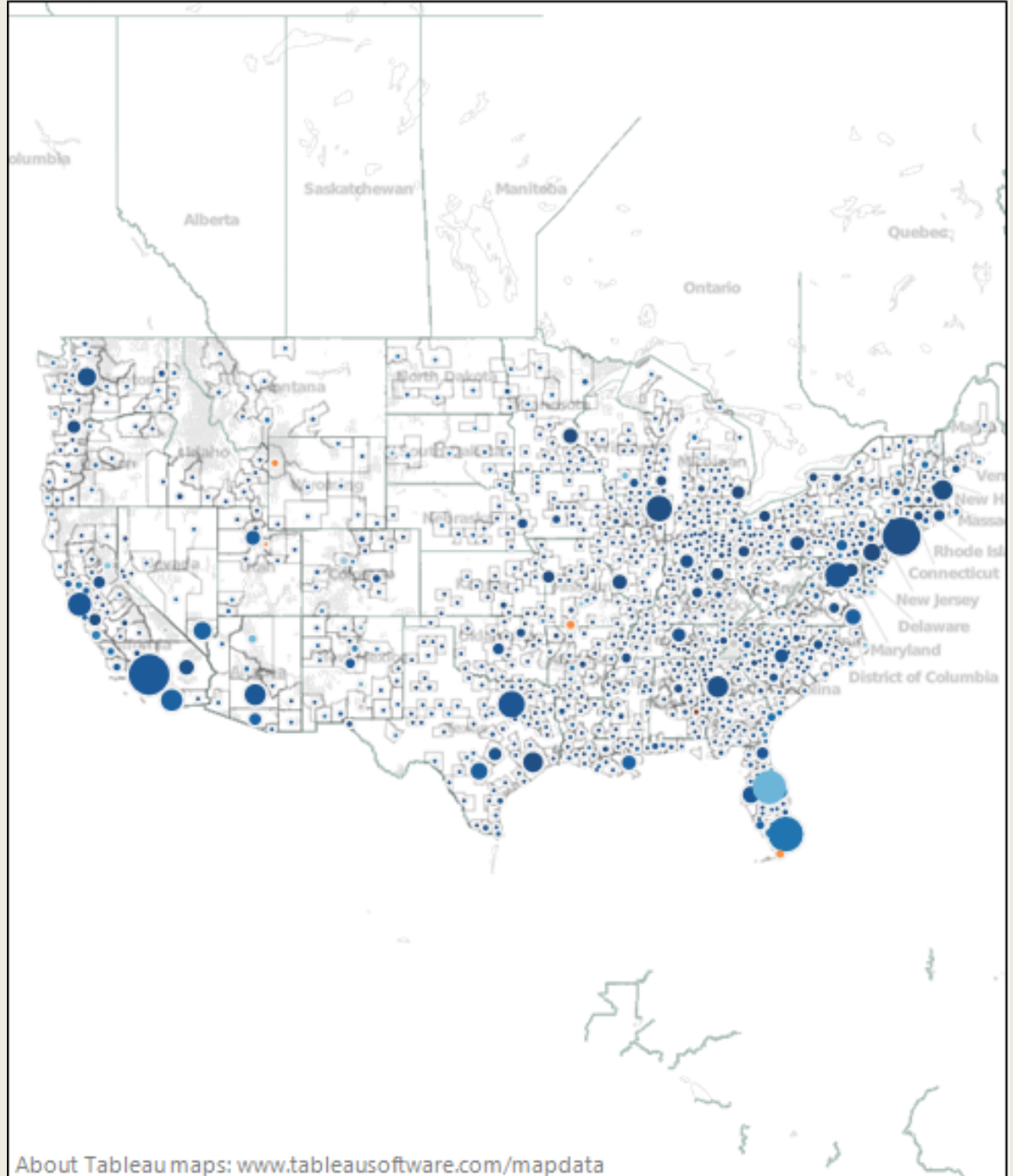
UTAH CLUSTER: INFORMATION

TECHNOLOGY

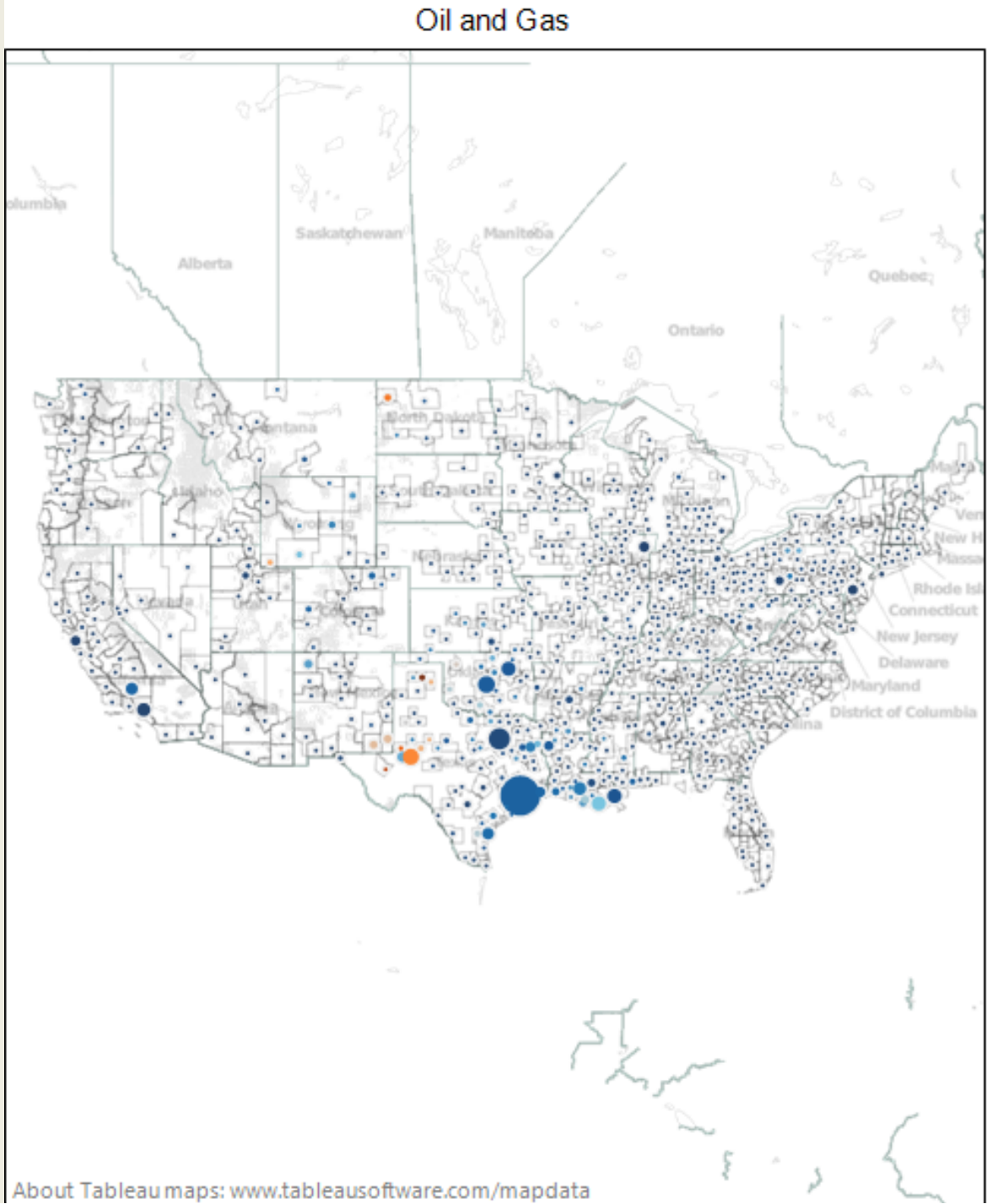


INDUSTRY
EFFECTS/CLUSTERING
UTAH CLUSTER: OUTDOOR
PRODUCTS & RECREATION

Hospitality and Tourism

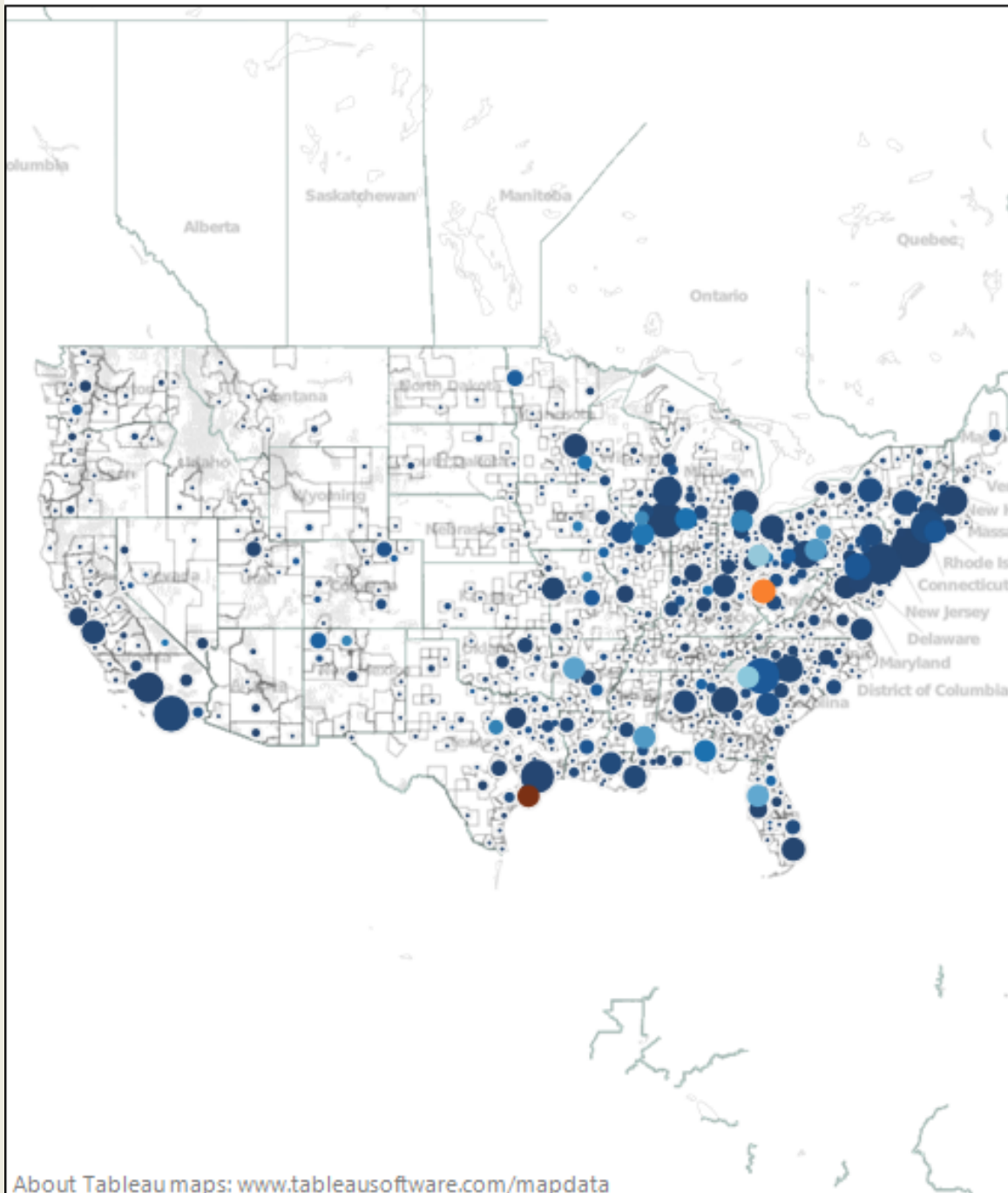


INDUSTRY
EFFECTS/CLUSTERING
UTAH CLUSTER: ENERGY AND
NATURAL RESOURCES



INDUSTRY
EFFECTS/CLUSTERING
UTAH CLUSTER: ENERGY AND
NATURAL RESOURCES

Power Generation and Transmission

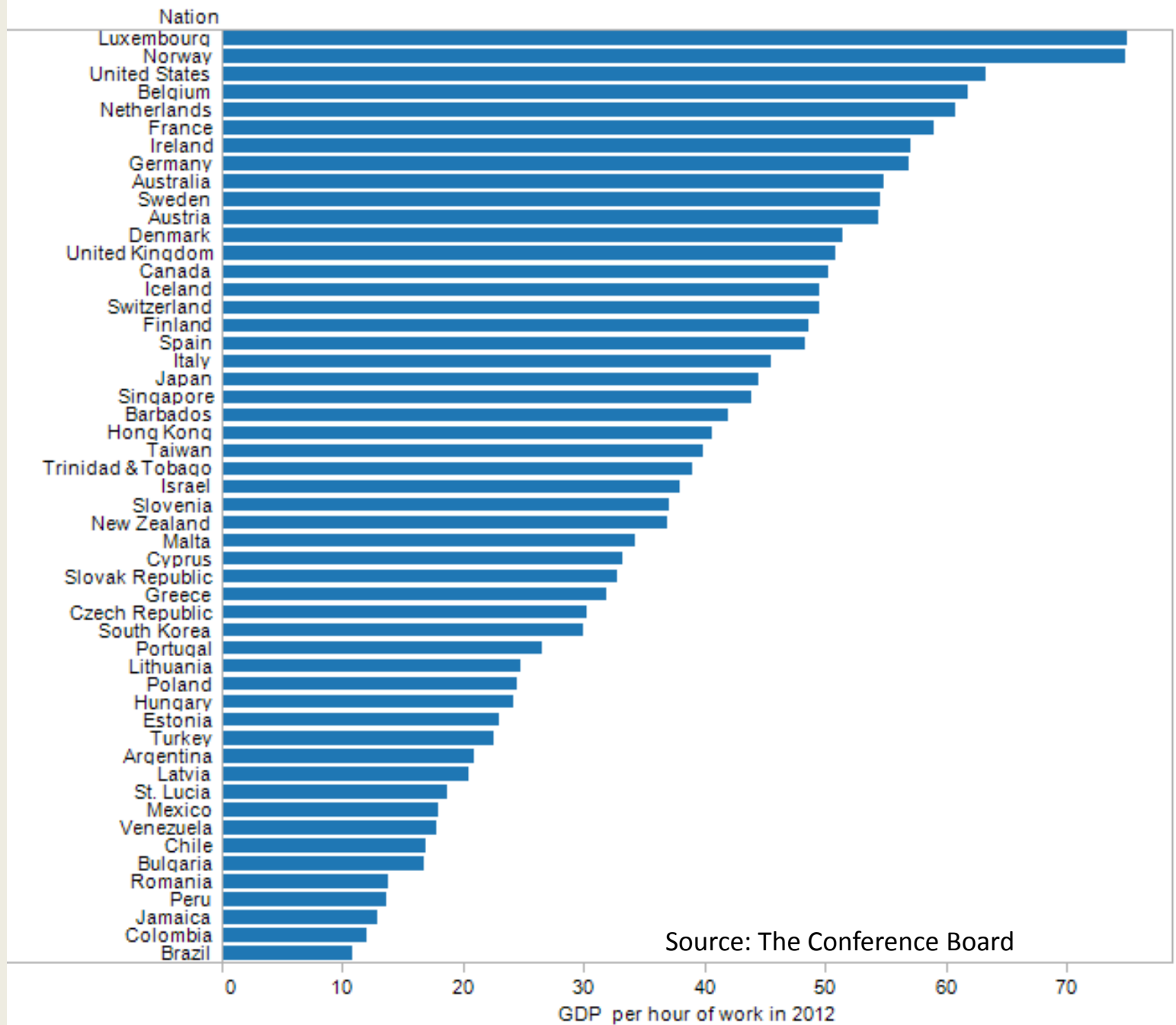


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ECONOMIC GROWTH FACTORS
INFLUENTIAL FACTORS
EXTERNAL INFLUENCE

PRODUCTIVITY

Productivity (2012)



Source: The Conference Board

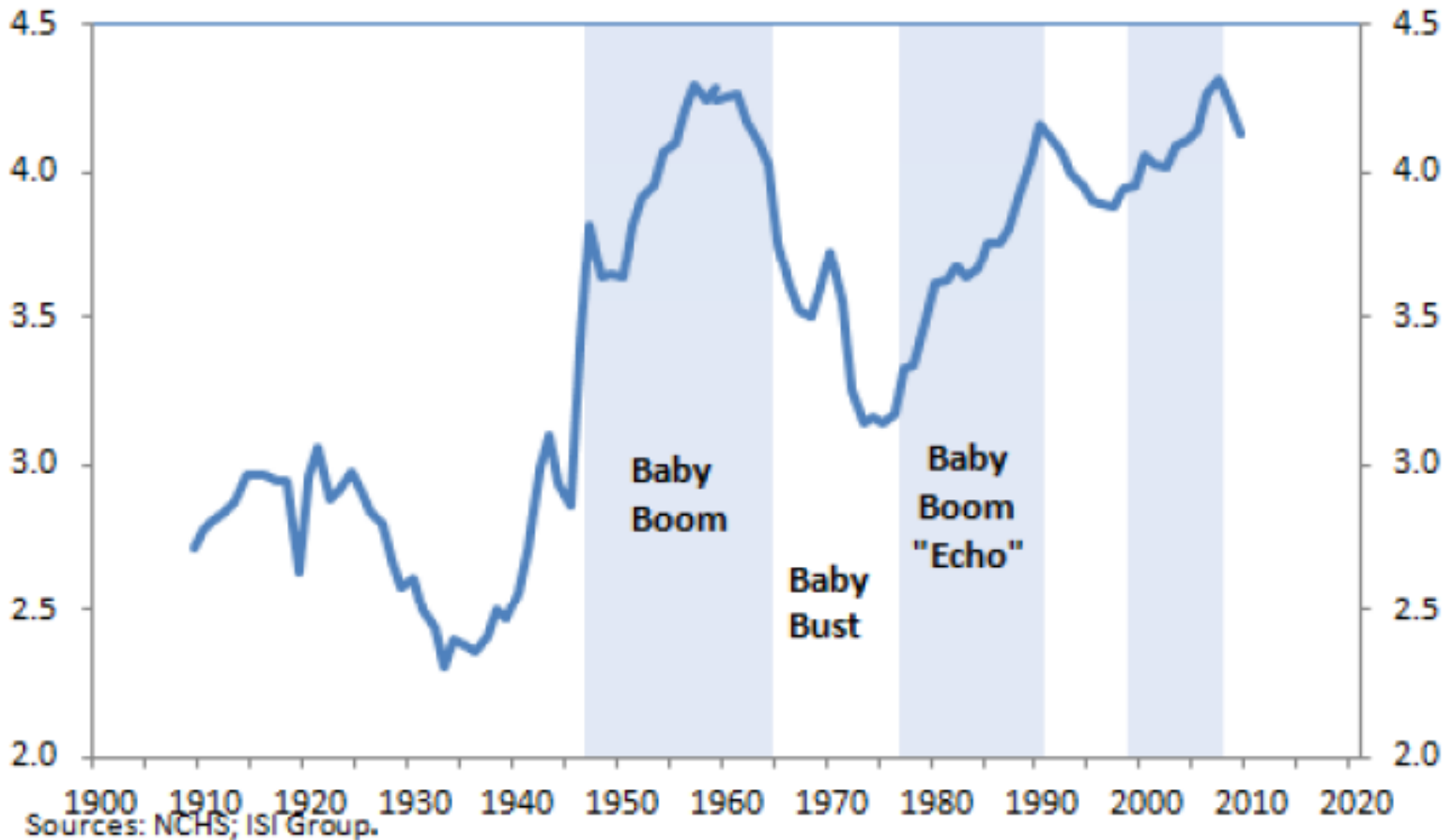
GLOBAL DEMOGRAPHICS

- More than 50% of the world now lives in an urban location and may grow to 70% by 2050
- More than 50% of the world's population lives within 200km of a coastline
- About half of all nations have birth rates below replacement levels
- Of all kids born today, around 50% will celebrate their 100th birthday
- Baby boomers are retiring and their parents are still alive. First time ever to have multiple generations of retired households

Source: ISI; Census; various international agencies

DEMOGRAPHICS

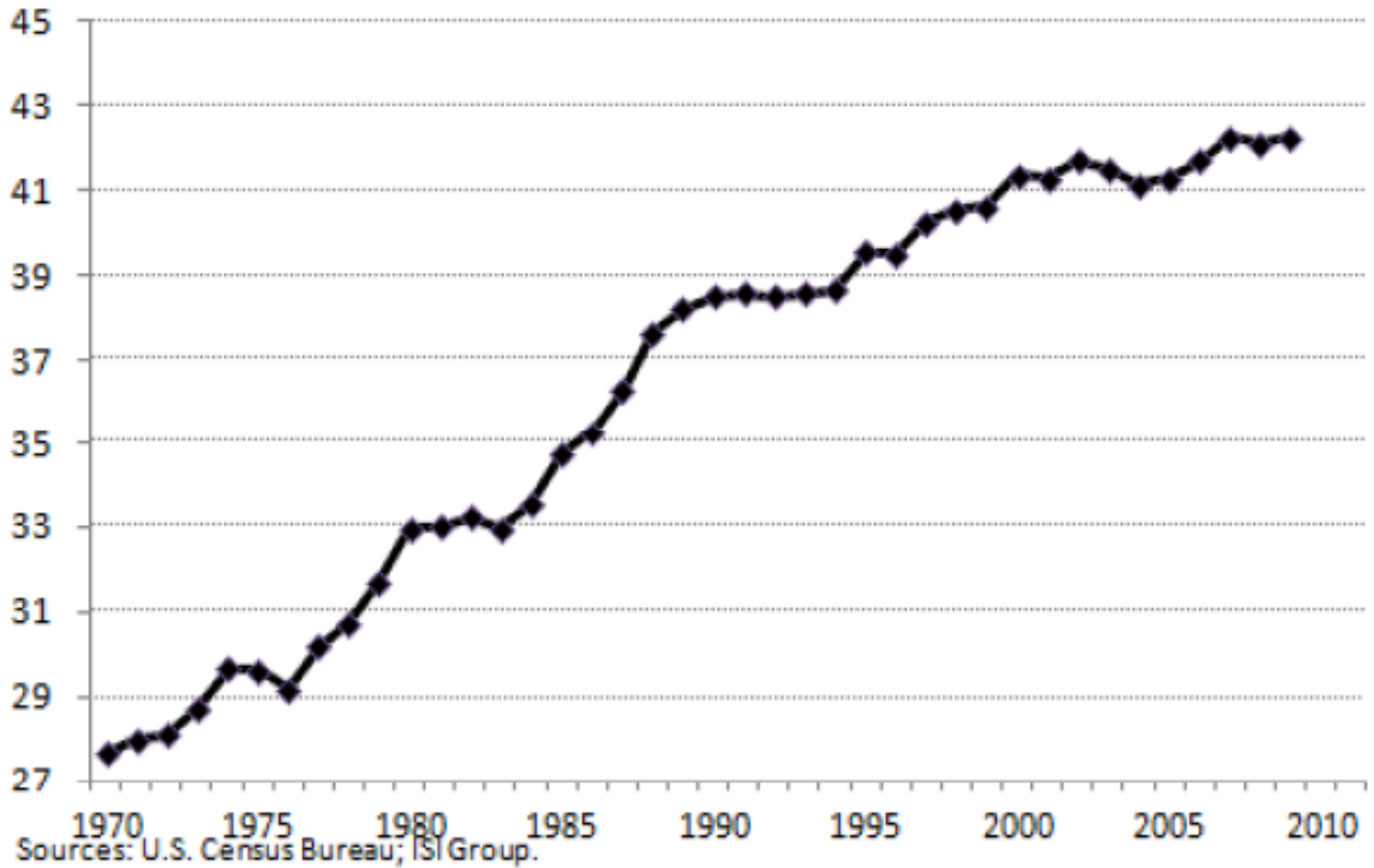
US: Number of Live Births in Millions



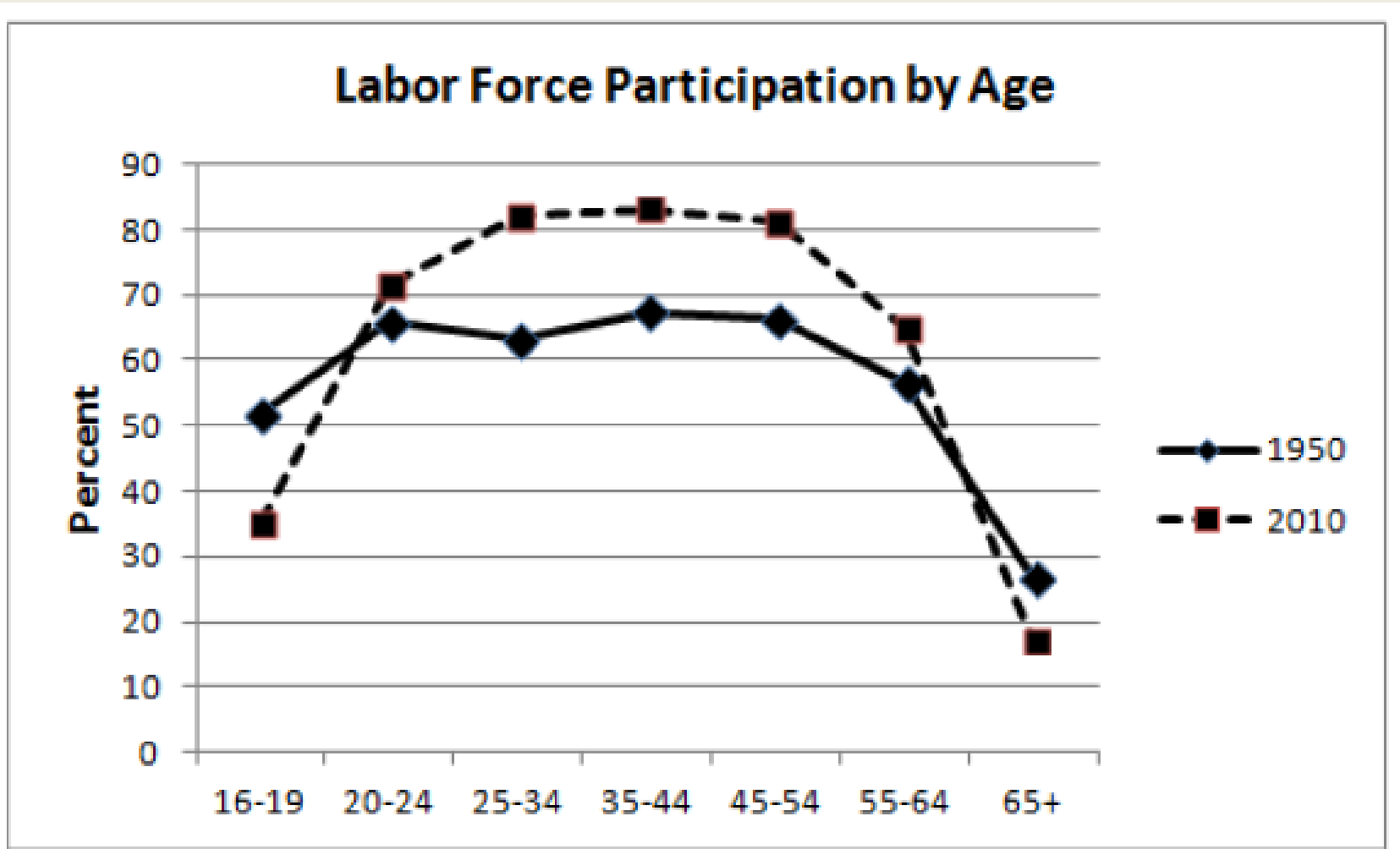
DEMOGRAPHICS

U.S. Households with more MONEY than TIME

(Number of U.S. Families with Two or More Earners)

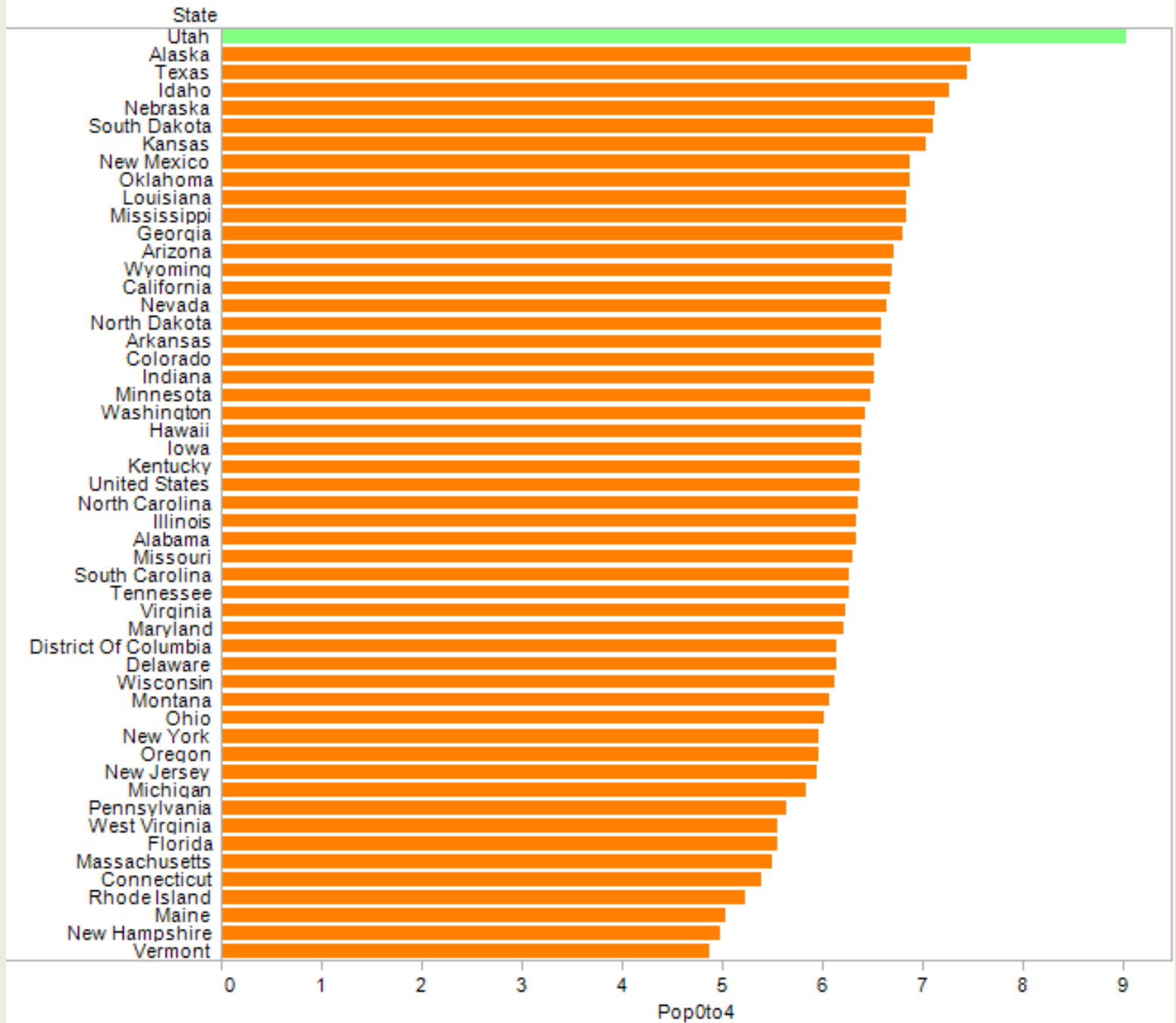


DEMOGRAPHICS



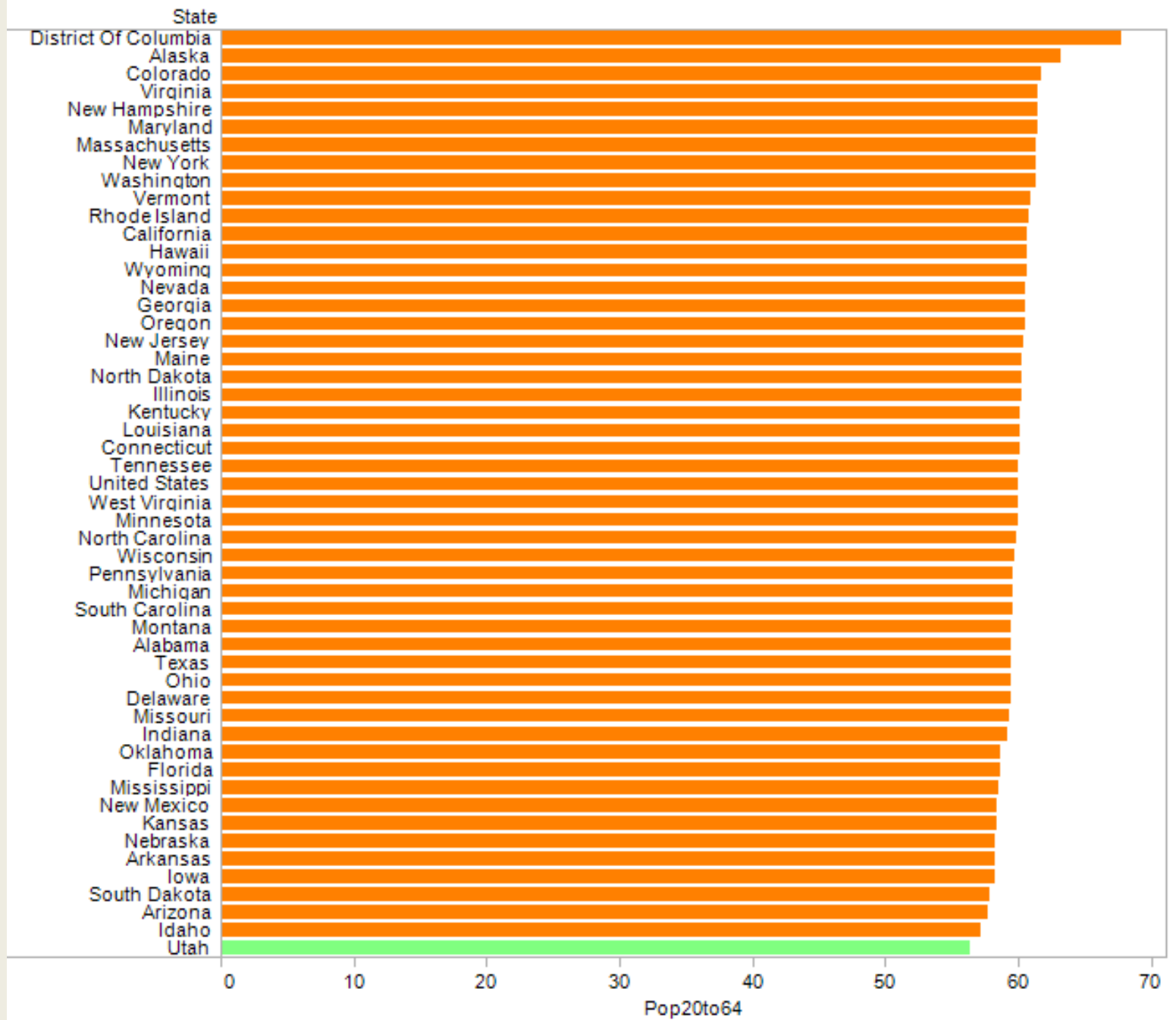
DEMOGRAPHICS

Percentage of the Population 0 to 4 Years Old



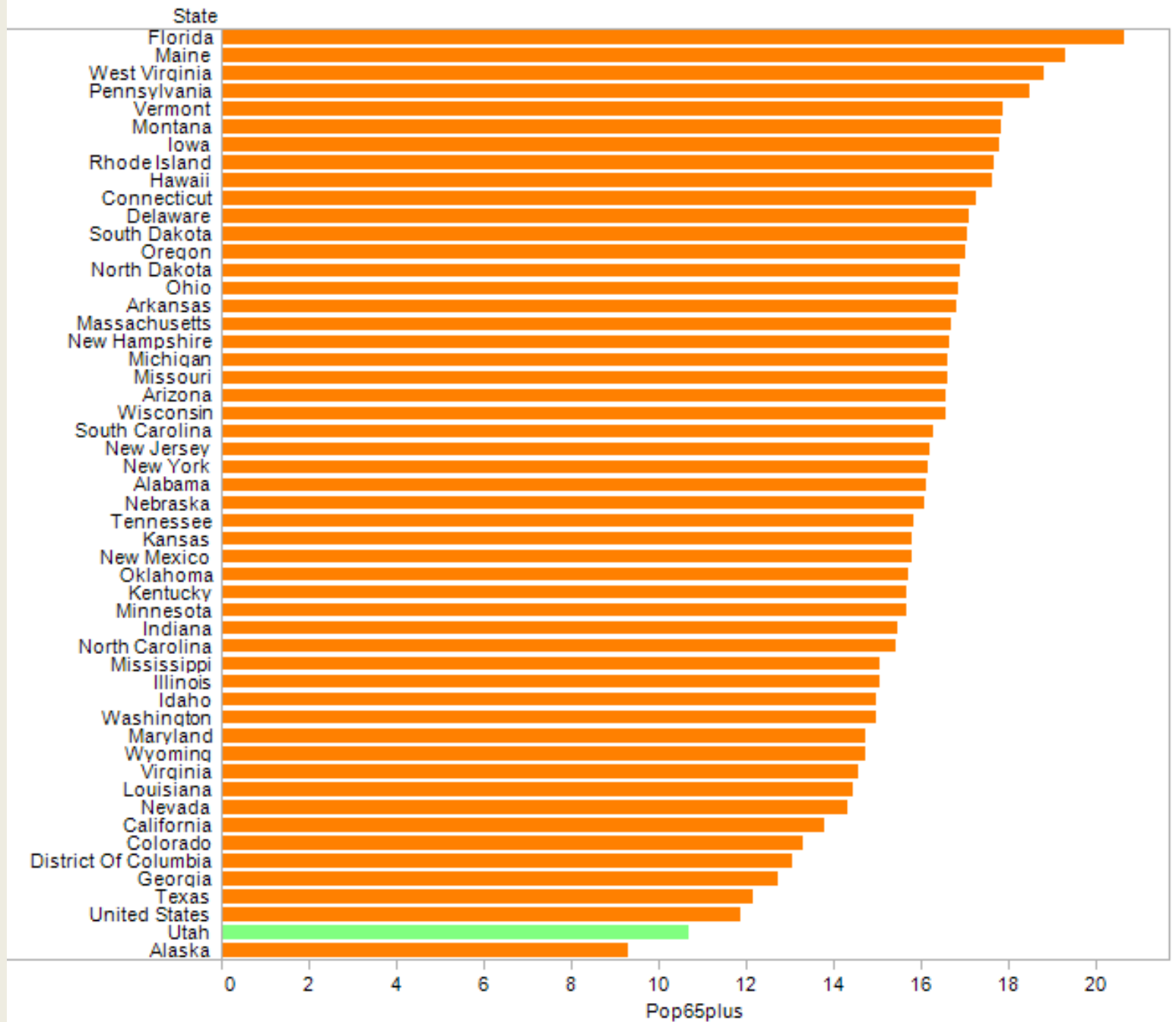
DEMOGRAPHICS

Percentage of the Population 20 to 64

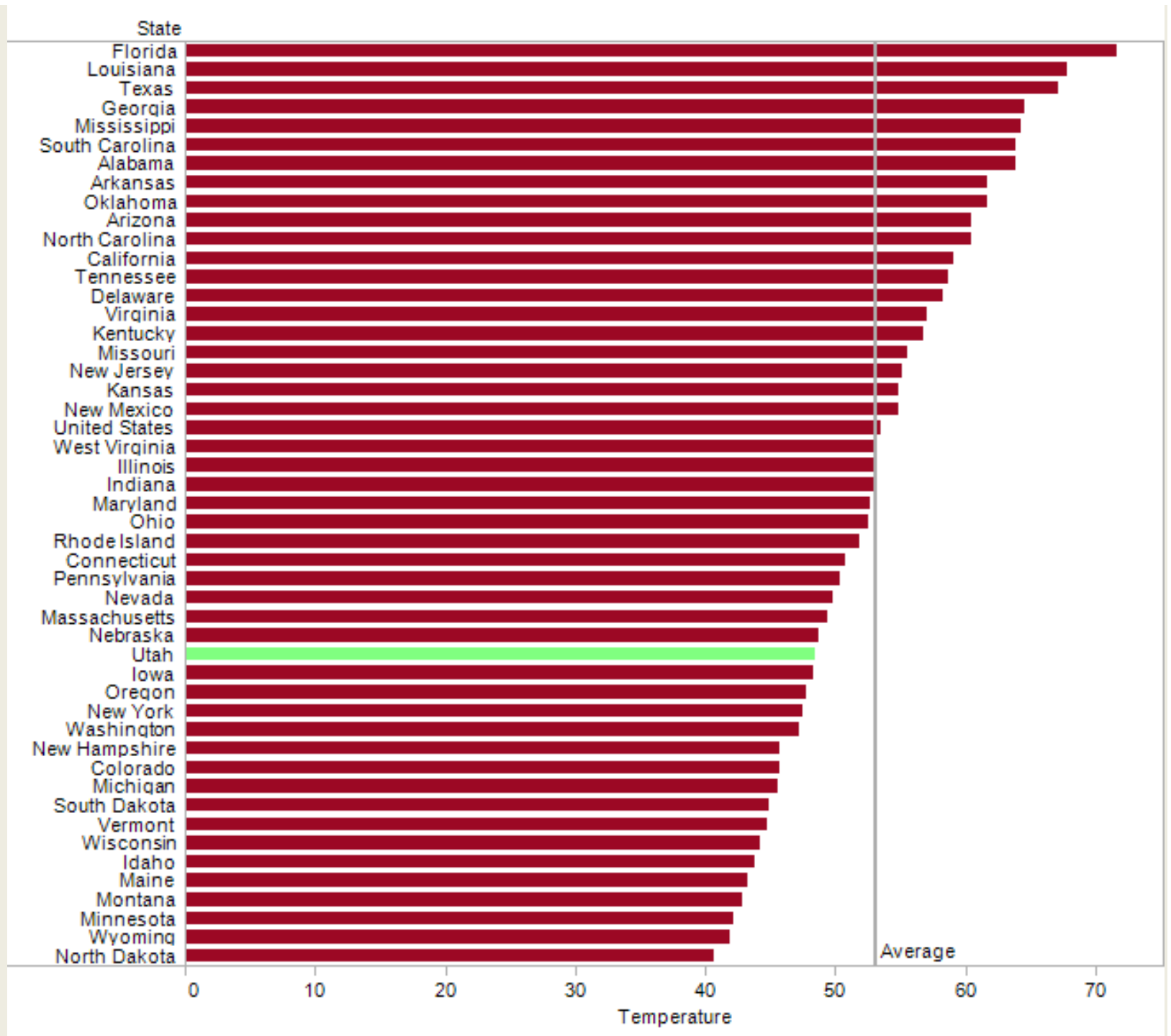


DEMOGRAPHICS

Percentage of the Population 65+

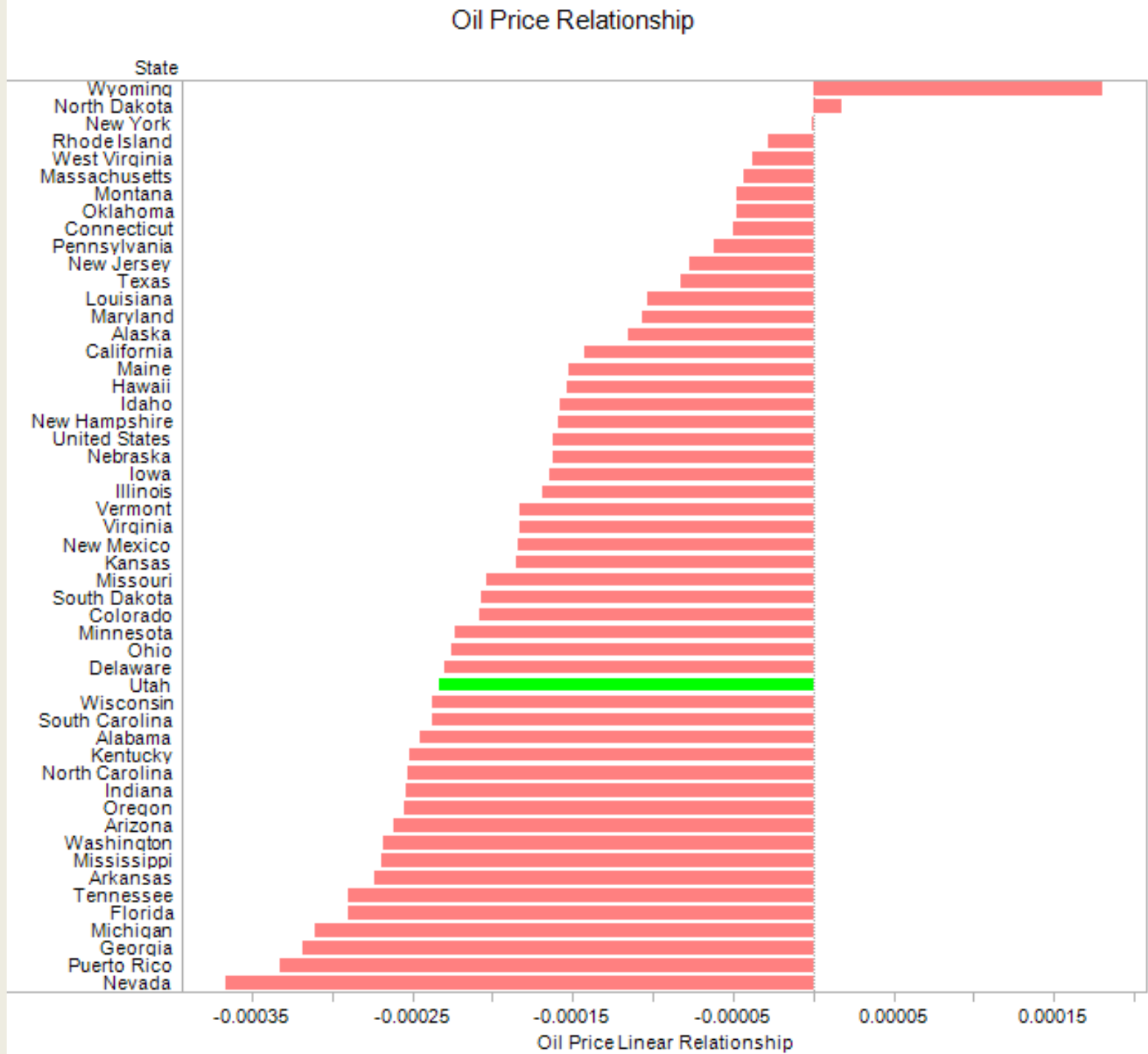


WEATHER: AVG. TEMPERATURE



ENERGY COSTS/COMMODITY PRICES

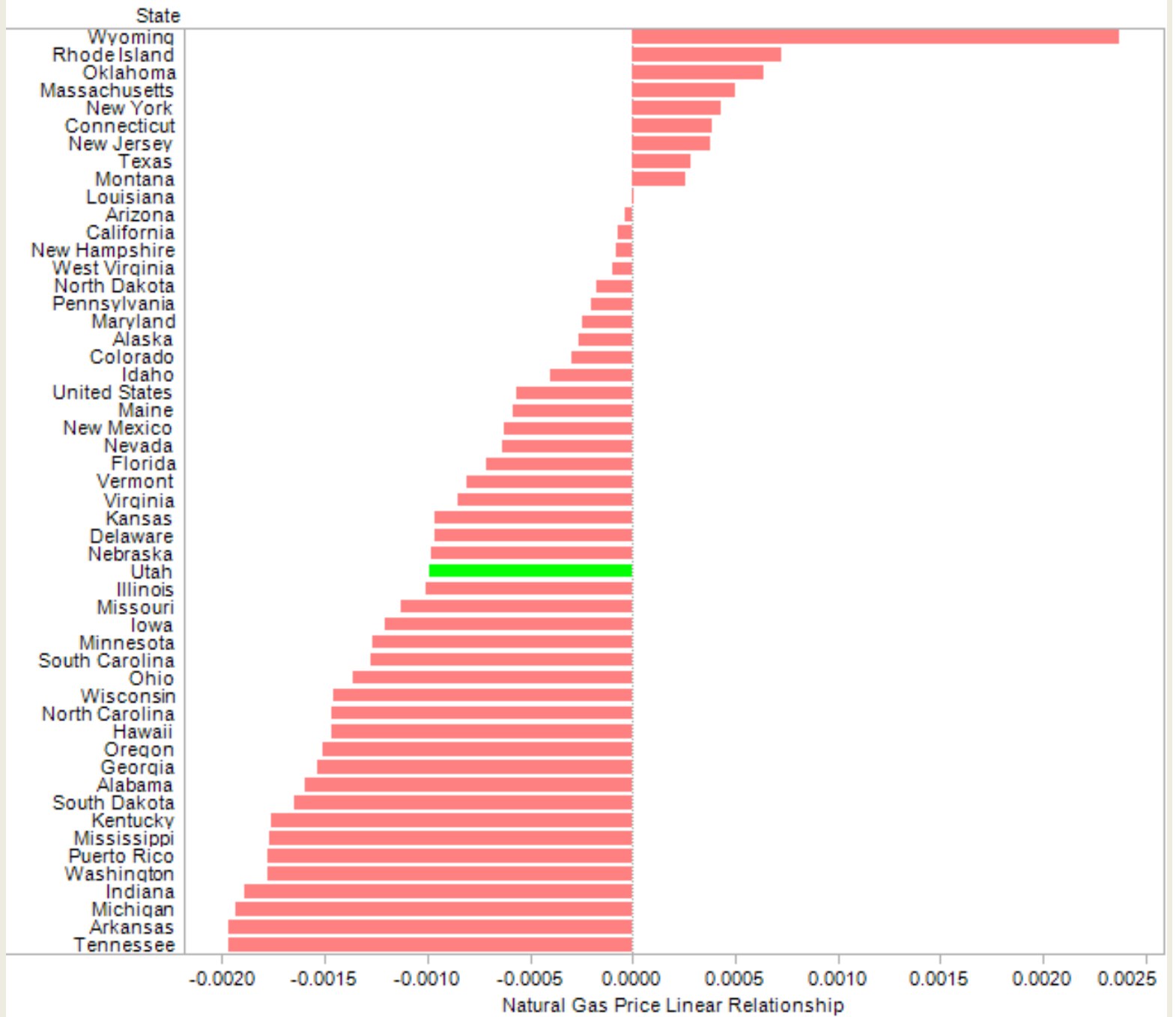
OIL



ENERGY COSTS/COMMODITY PRICES

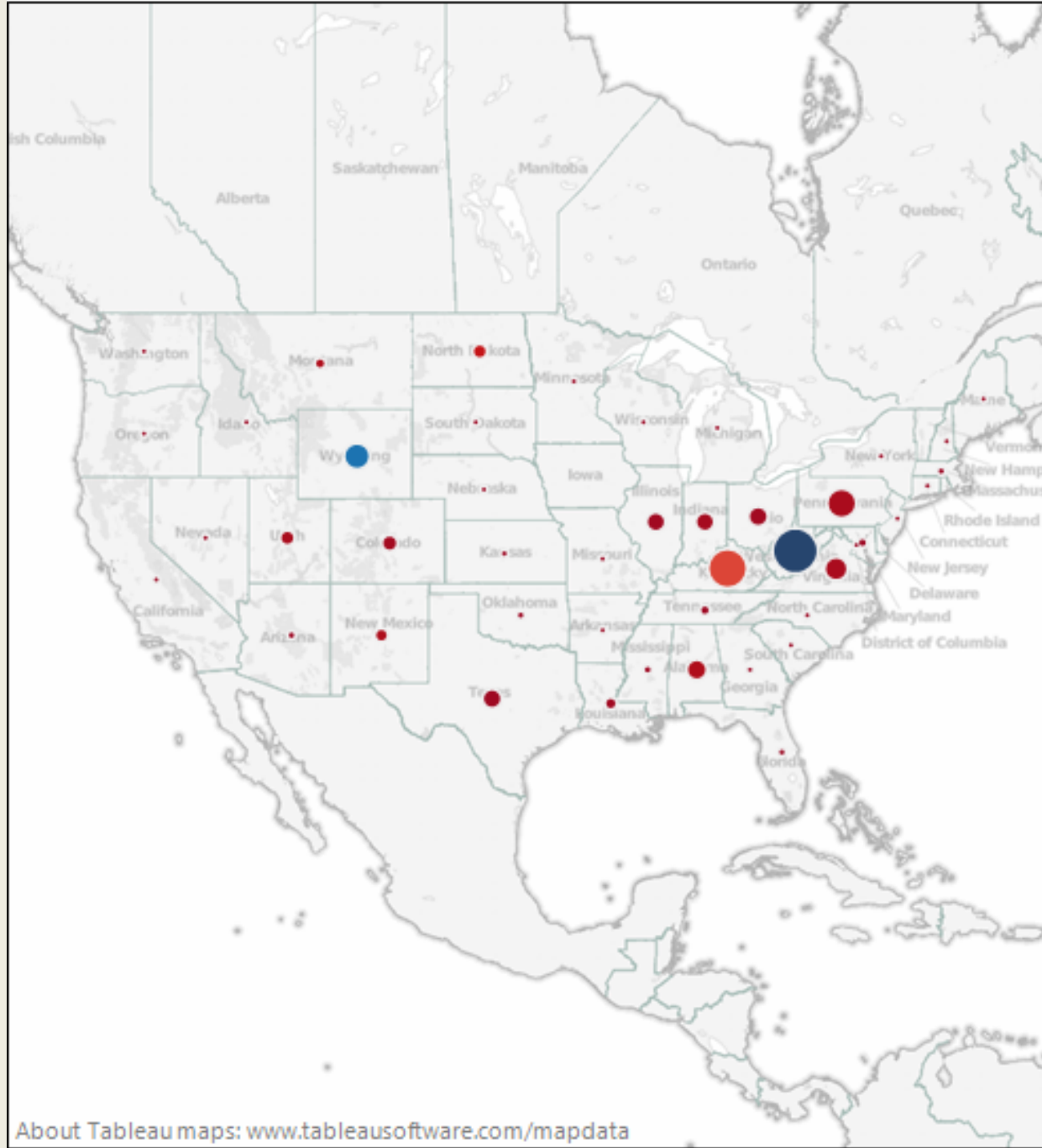
NATURAL GAS

Natural Gas Price Relationship



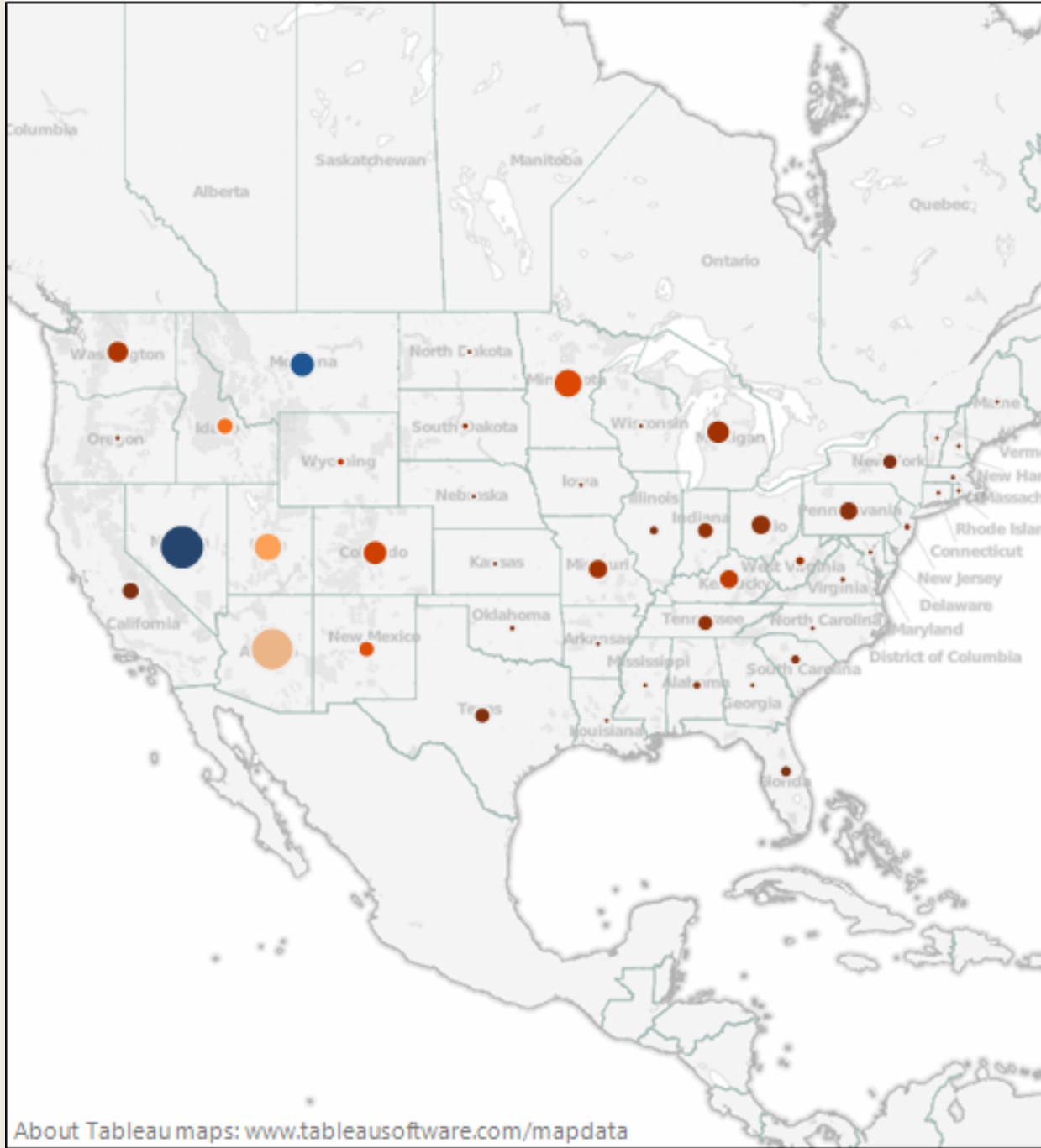
NATURAL RESOURCES/LAND COAL

Coal Mining



NATURAL RESOURCES/LAND METAL MINING

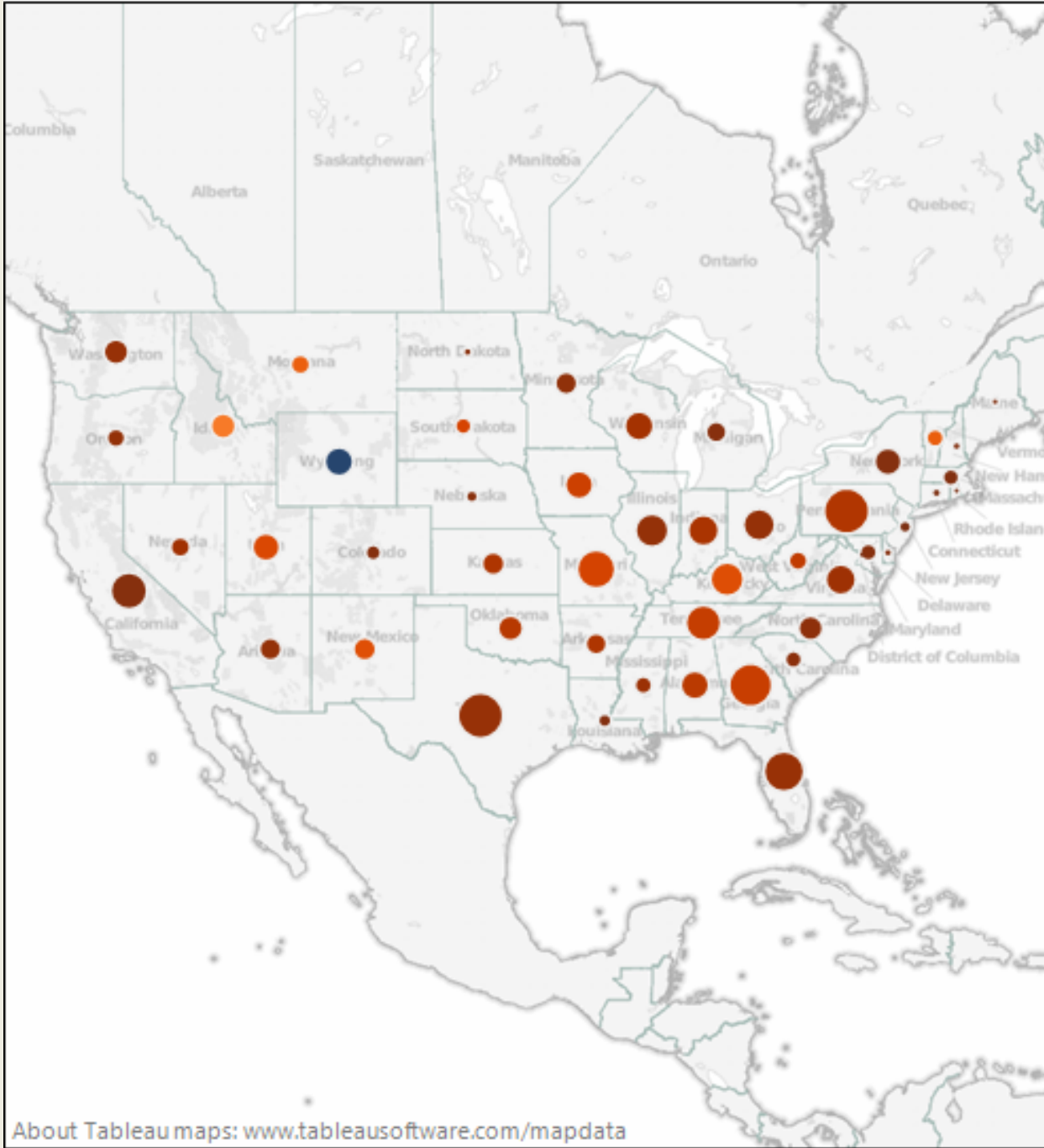
Metal Mining



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NATURAL RESOURCES/LAND NONMETAL MINING

Nonmetal Mining



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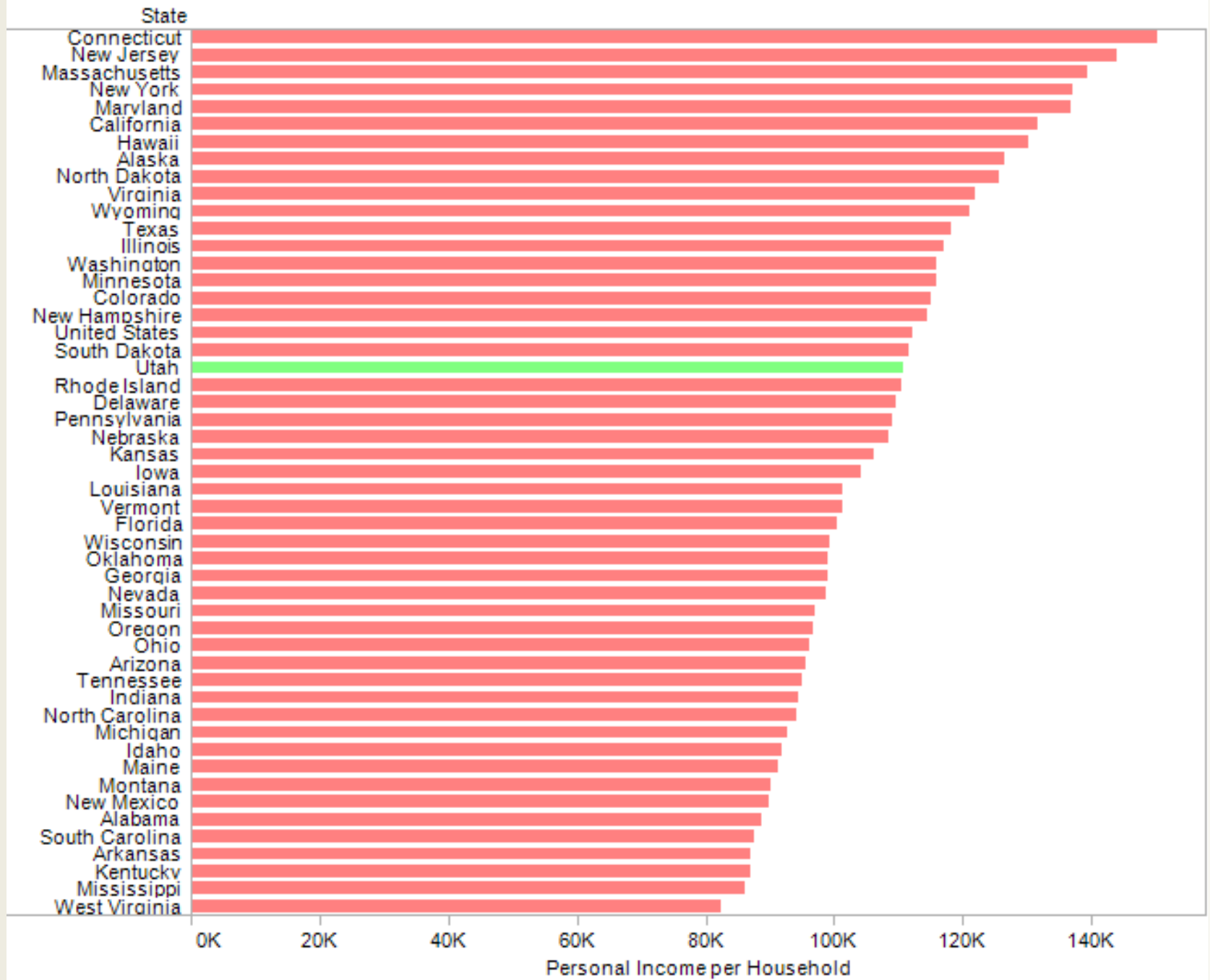
OTHER AREAS THAT MATTER

- Property rights (divorce law; bankruptcy law; corporation law)
- Licensing regulations;
- Work ethic/religion/culture;
- Geographic location;
- Currency strength;
- Inflation;
- Interest rates;
- Technology
- Infrastructure

ECONOMIC GROWTH MEASURES

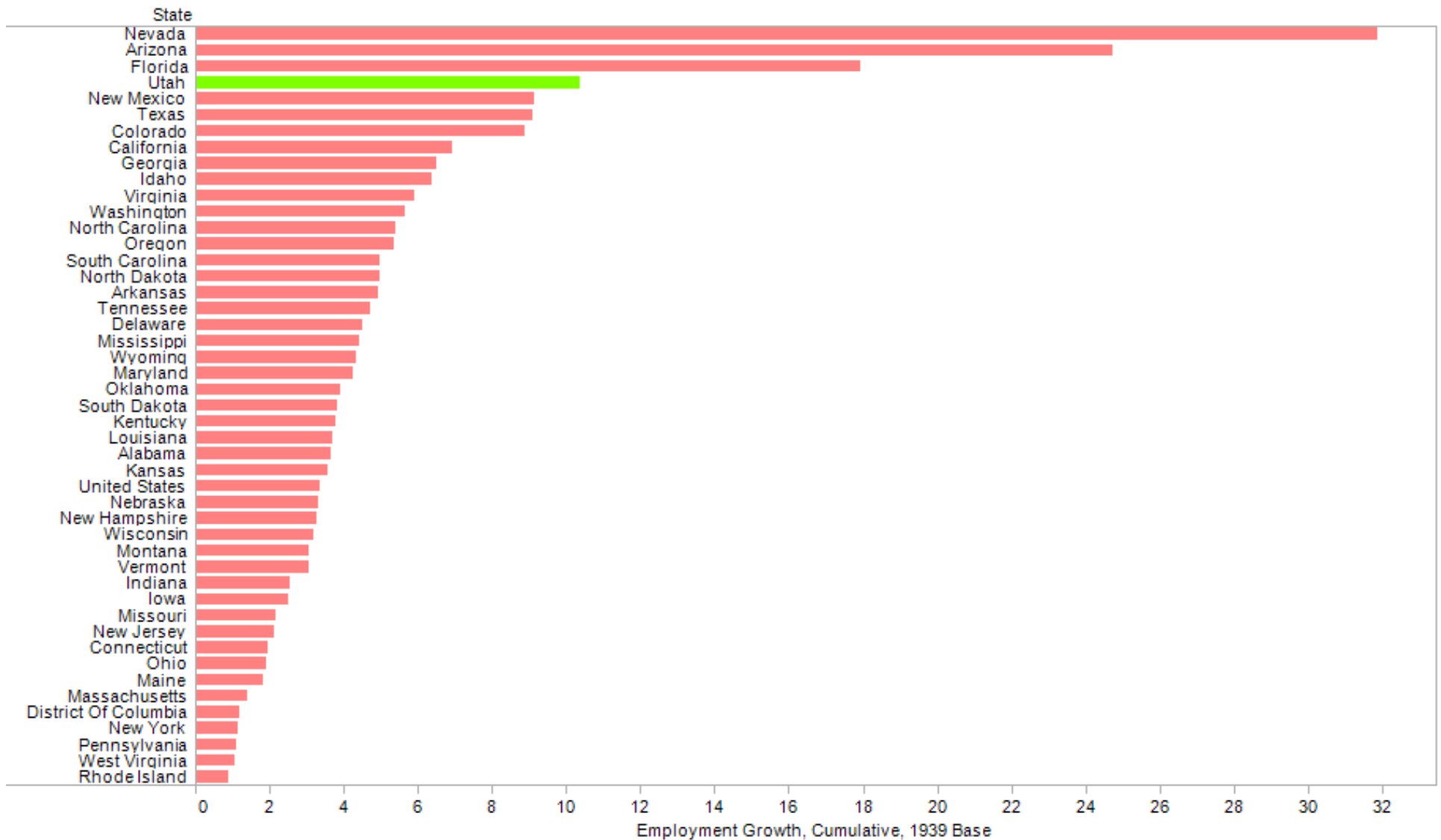
Personal Income per Household

PERSONAL INCOME PER HOUSEHOLD



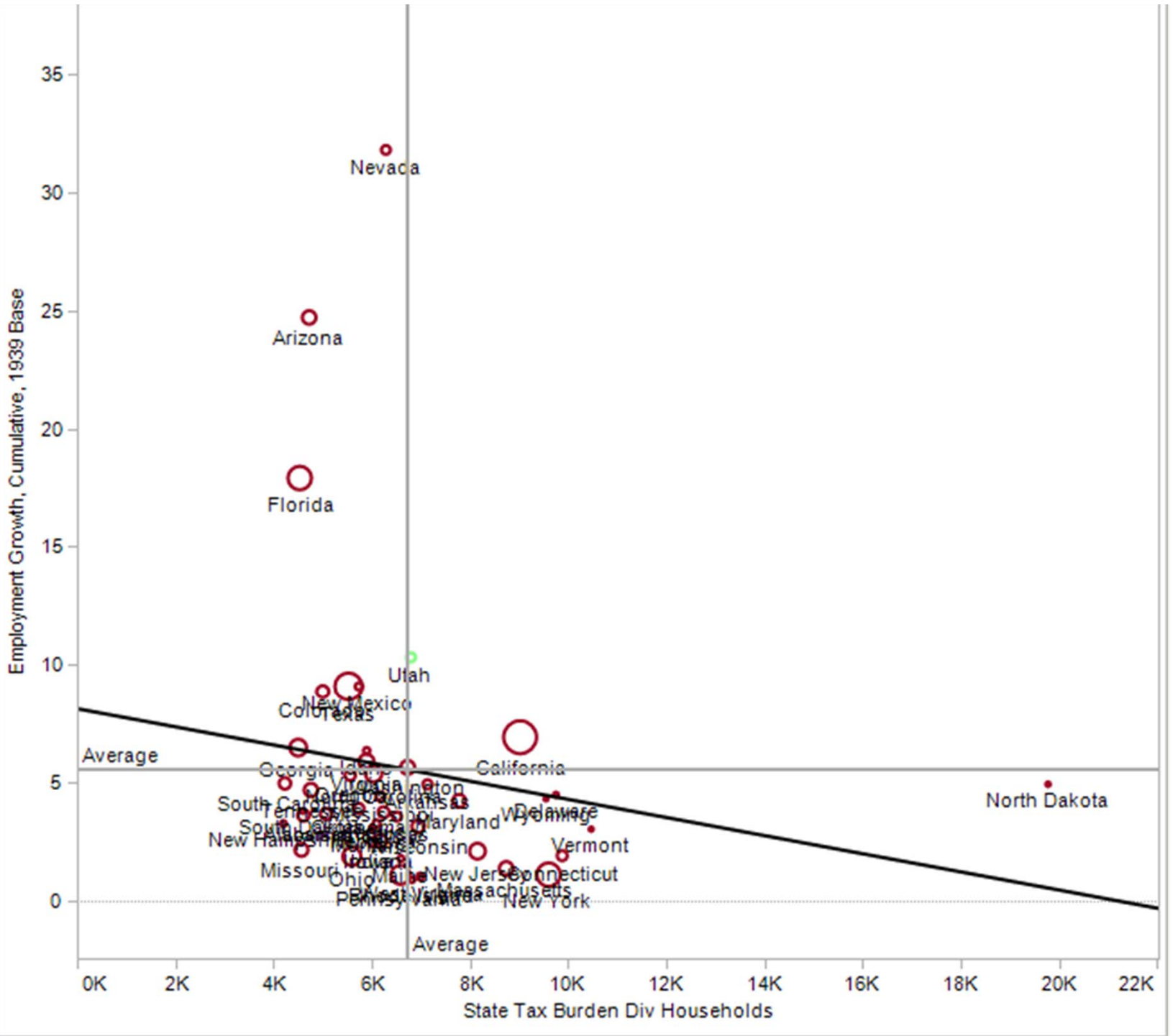
EMPLOYMENT GROWTH SINCE 1939

Employment Growth

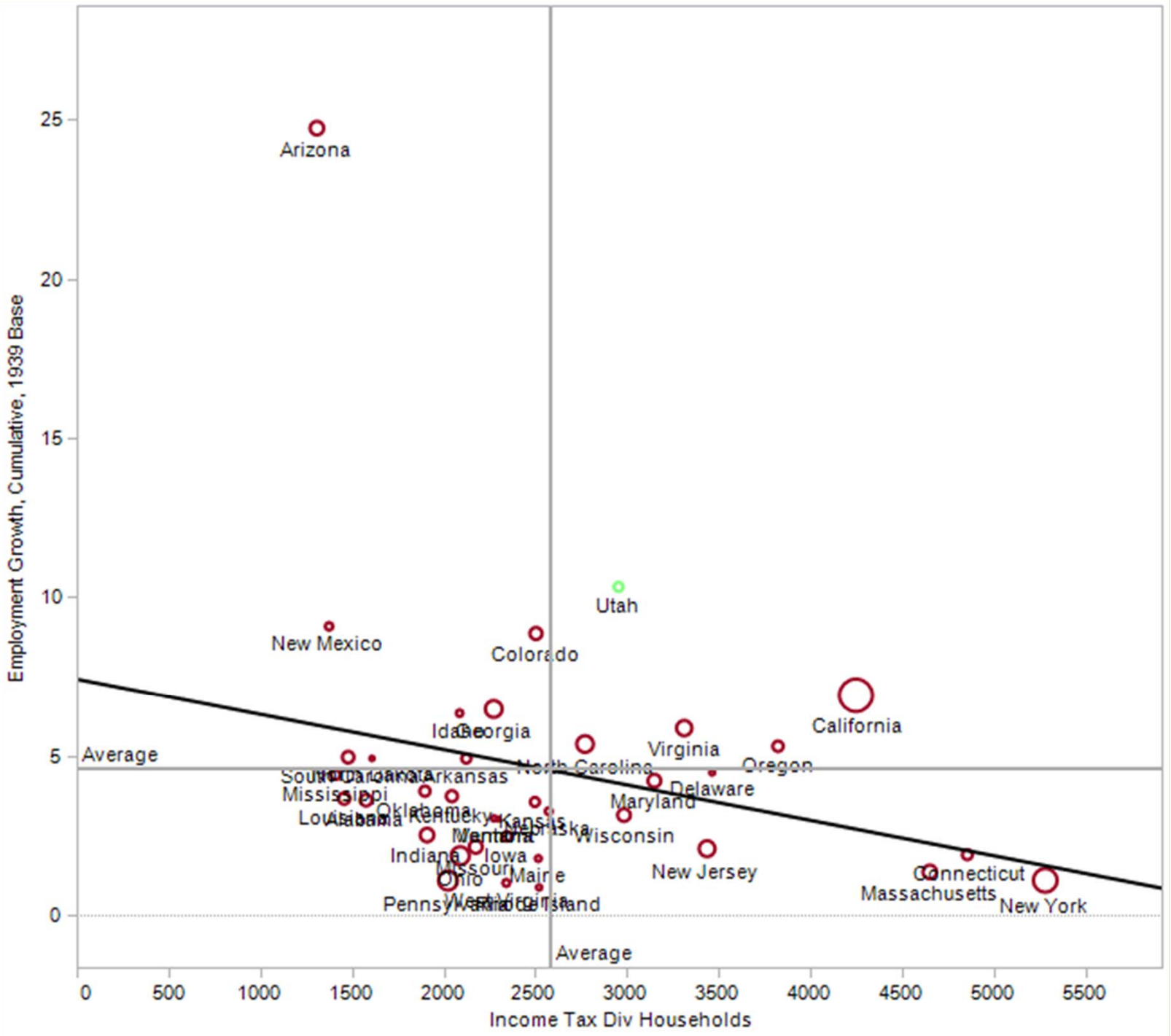


RELATIONSHIP BETWEEN FACTORS AND ECONOMIC GROWTH

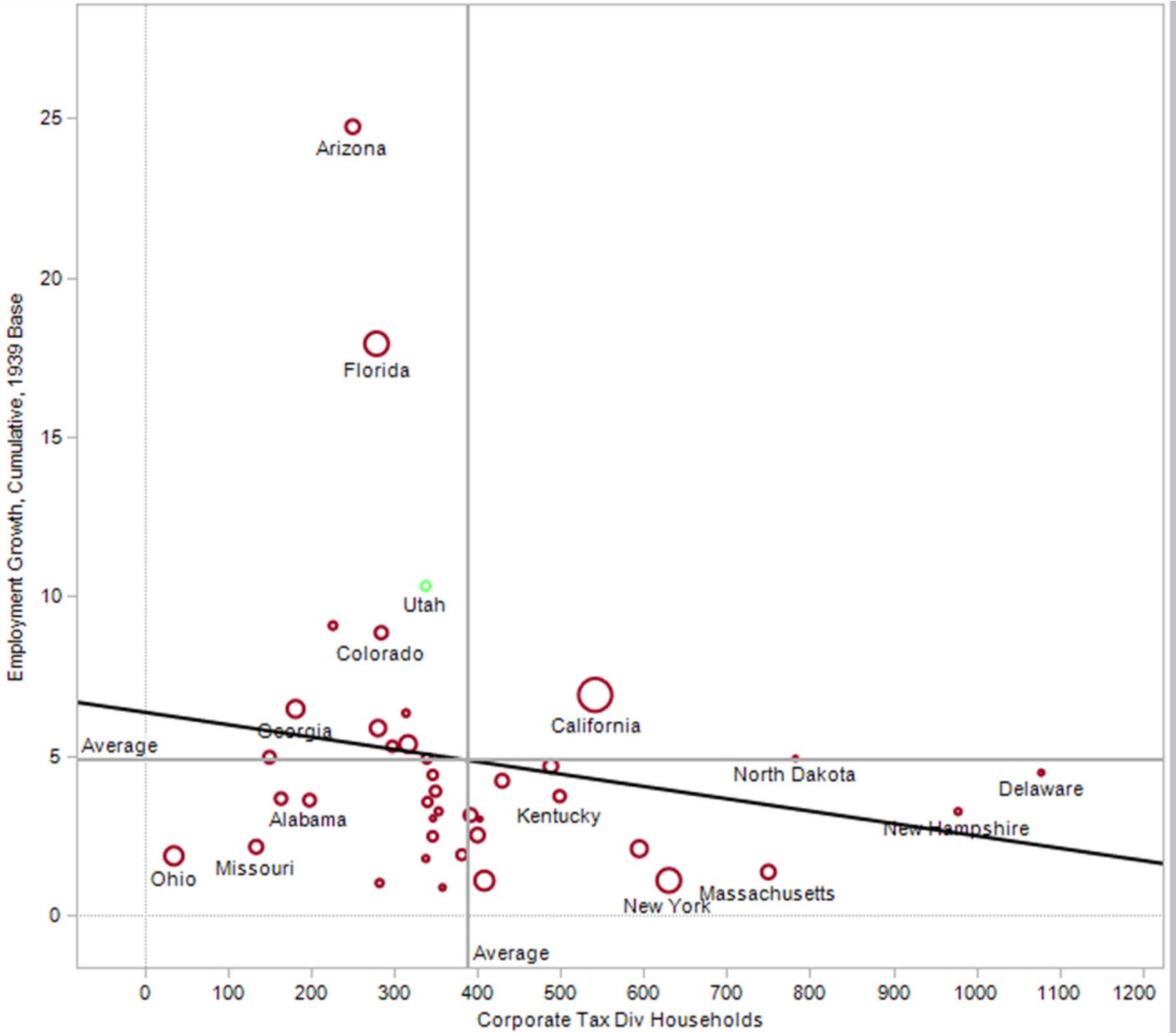
TAX POLICY: TOTAL STATE TAX



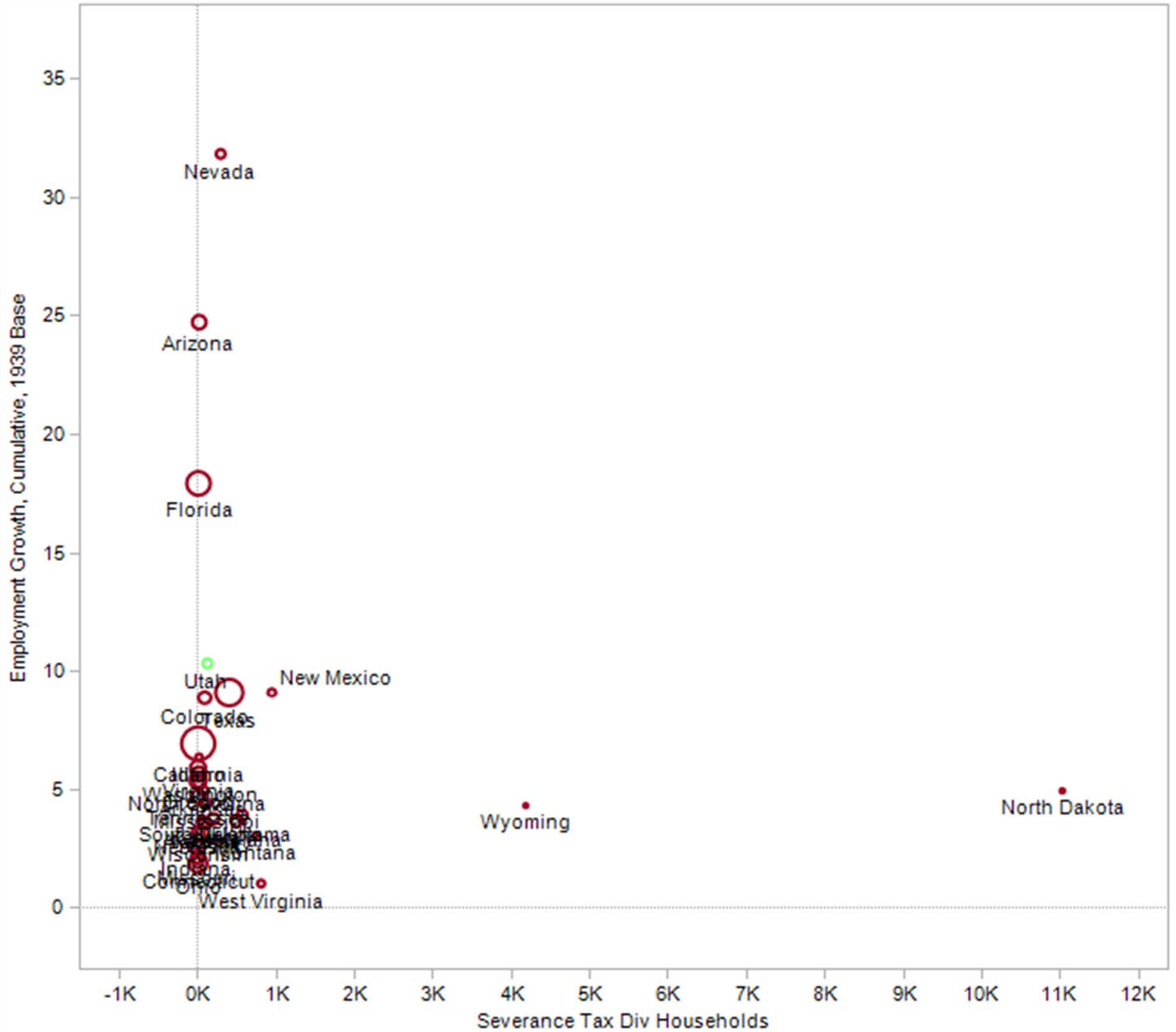
TAX POLICY: INCOME TAX



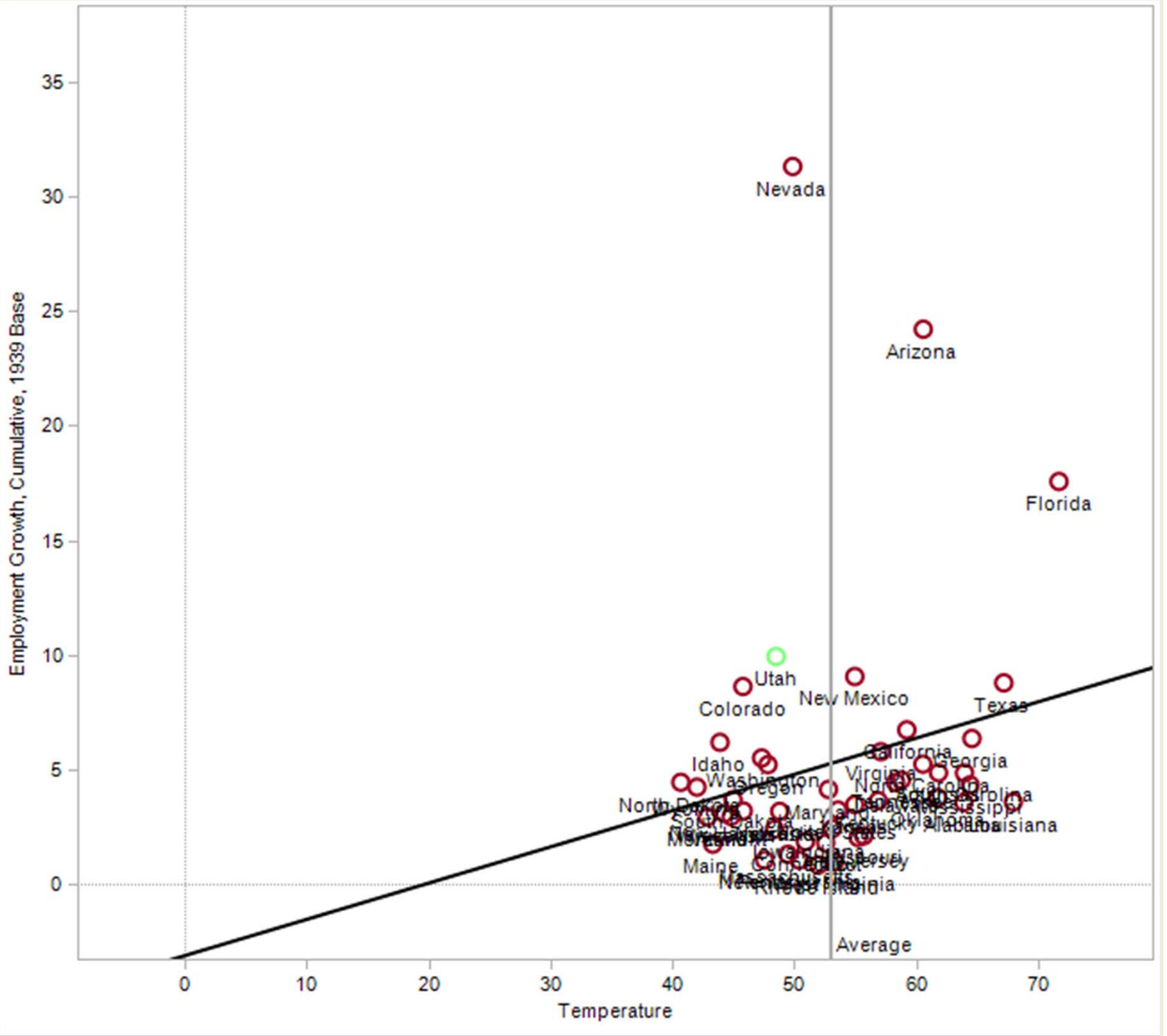
TAX POLICY: CORPORATE TAX



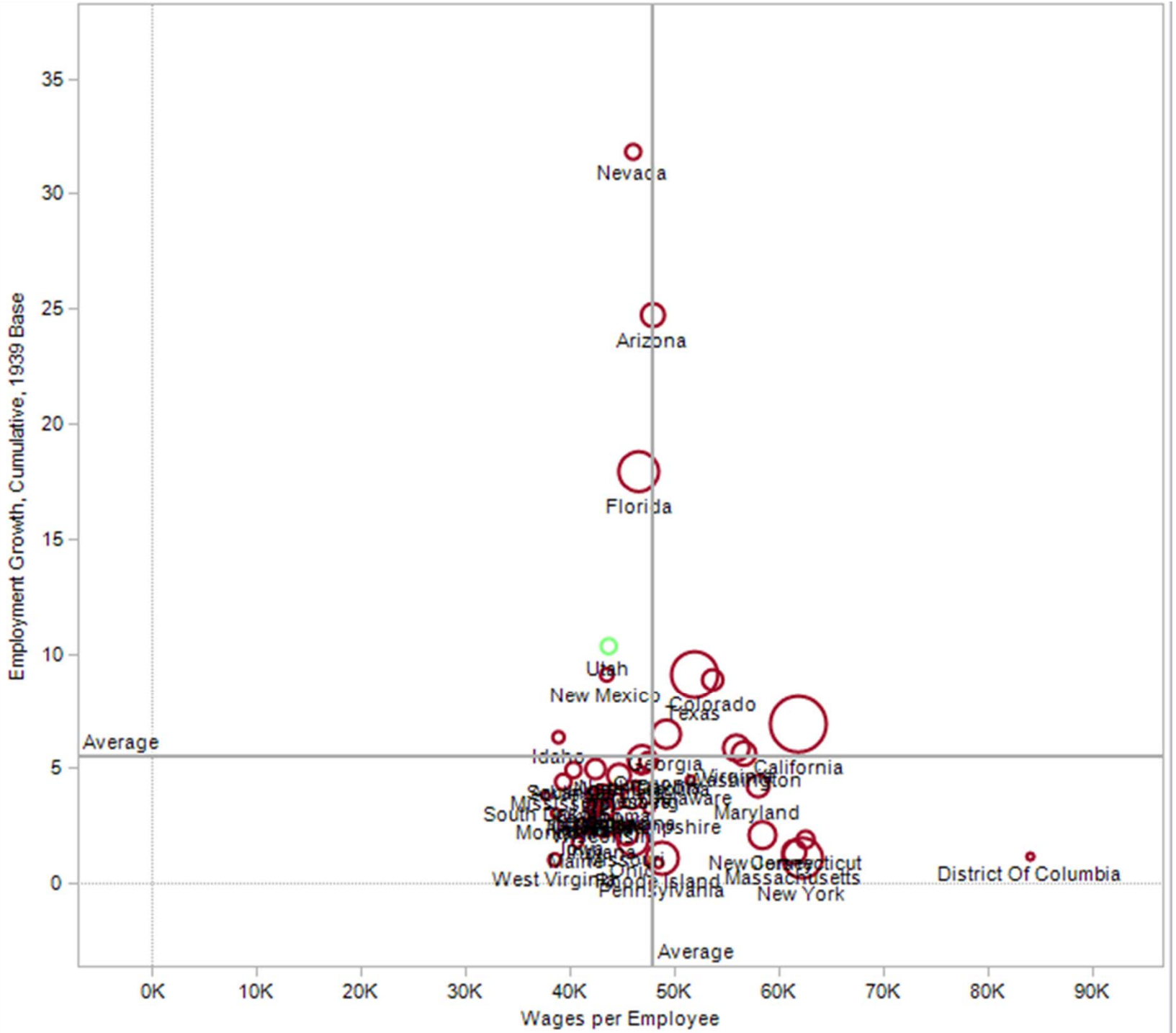
TAX POLICY: SEVERANCE TAX



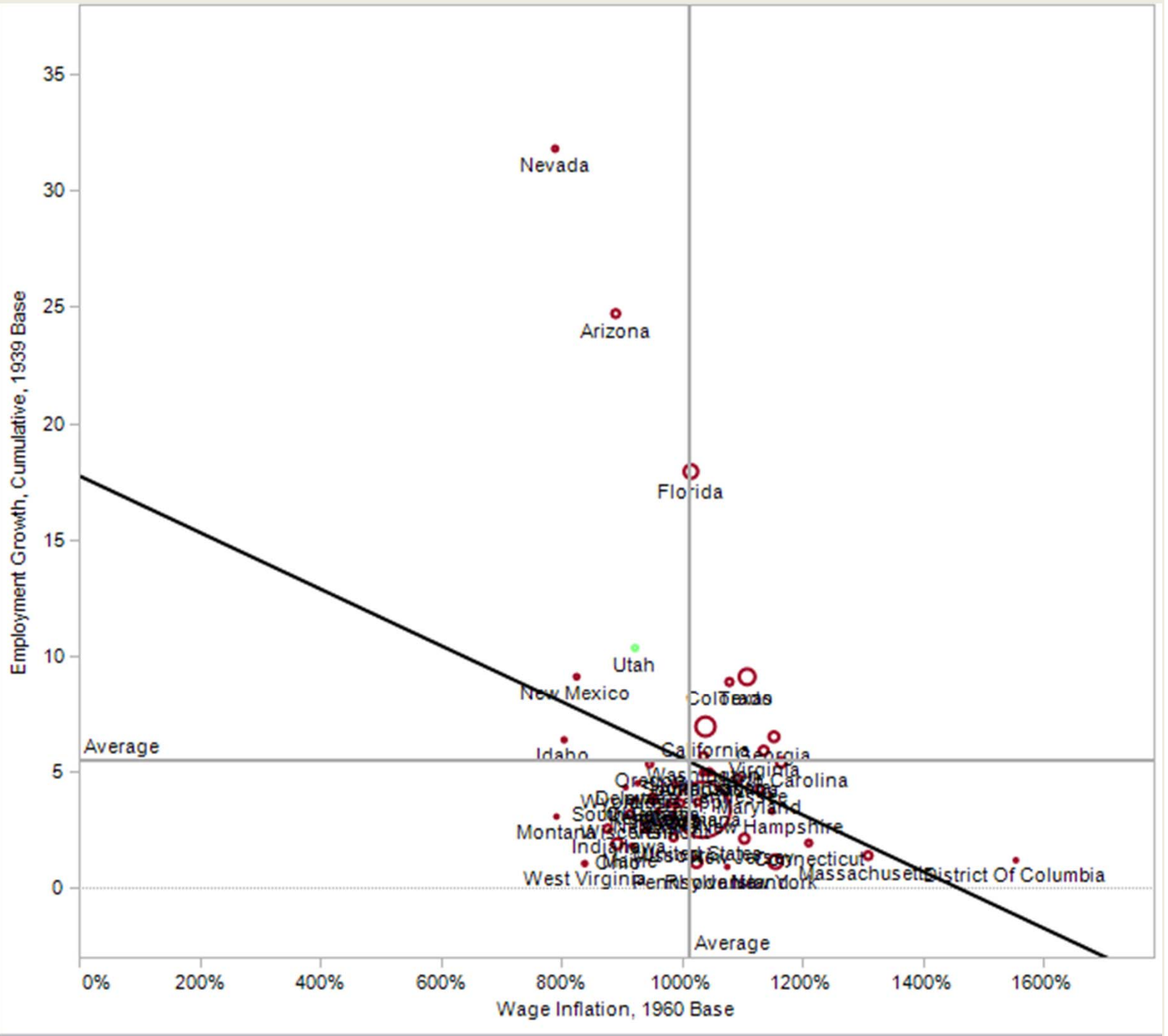
WEATHER: AVG. TEMPERATURE



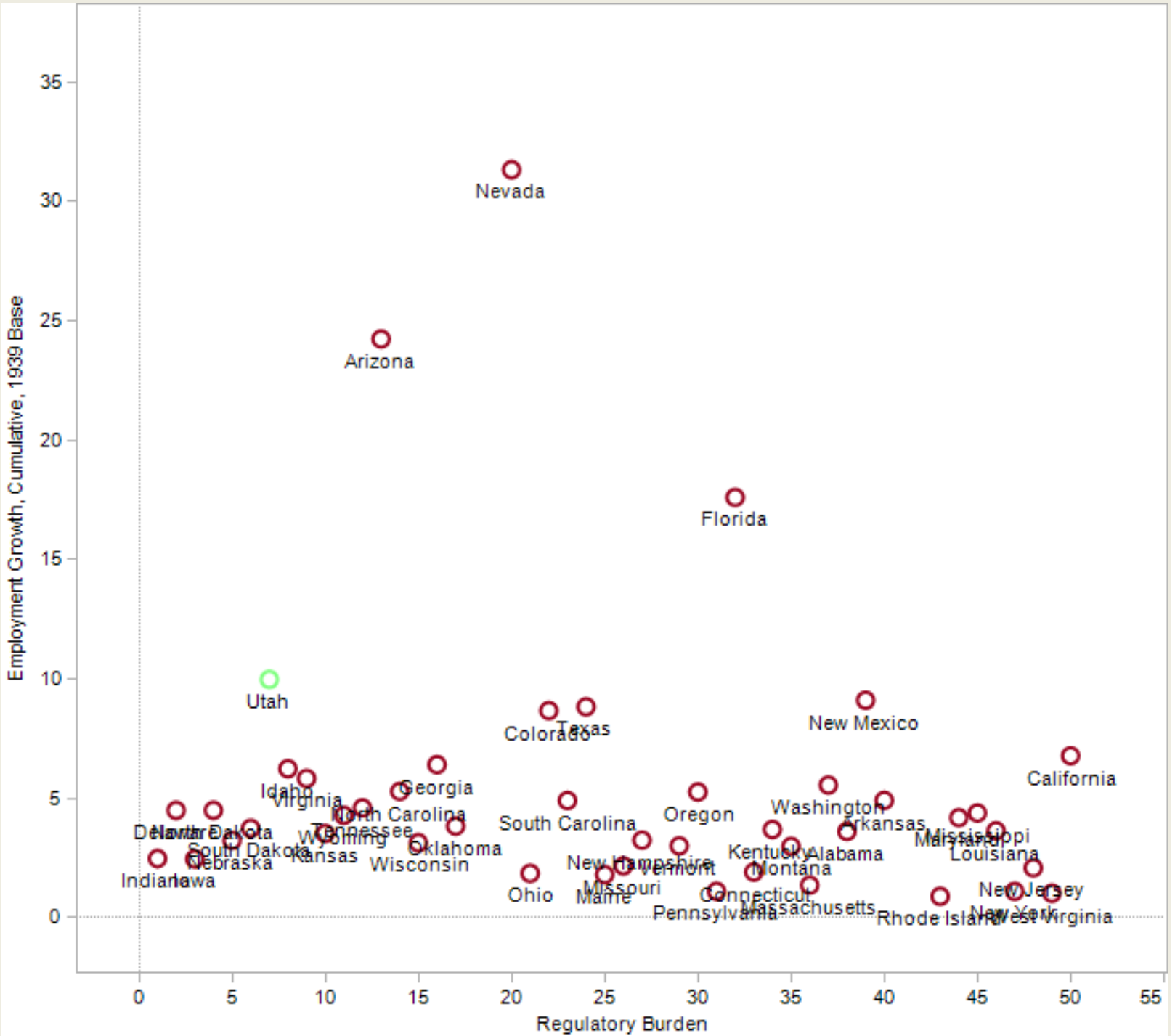
RELATIVE WAGE LEVELS



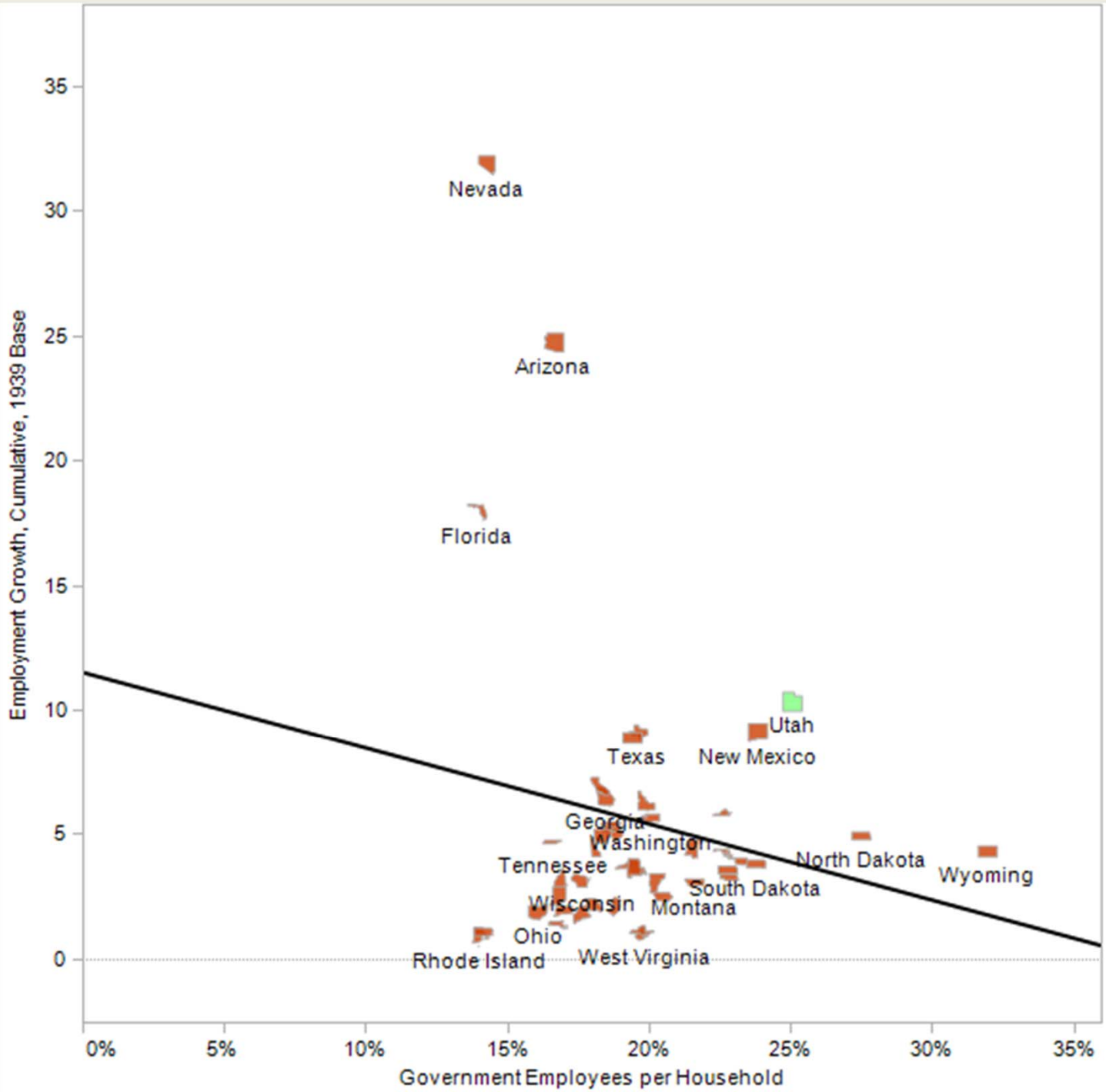
WAGE INFLATION



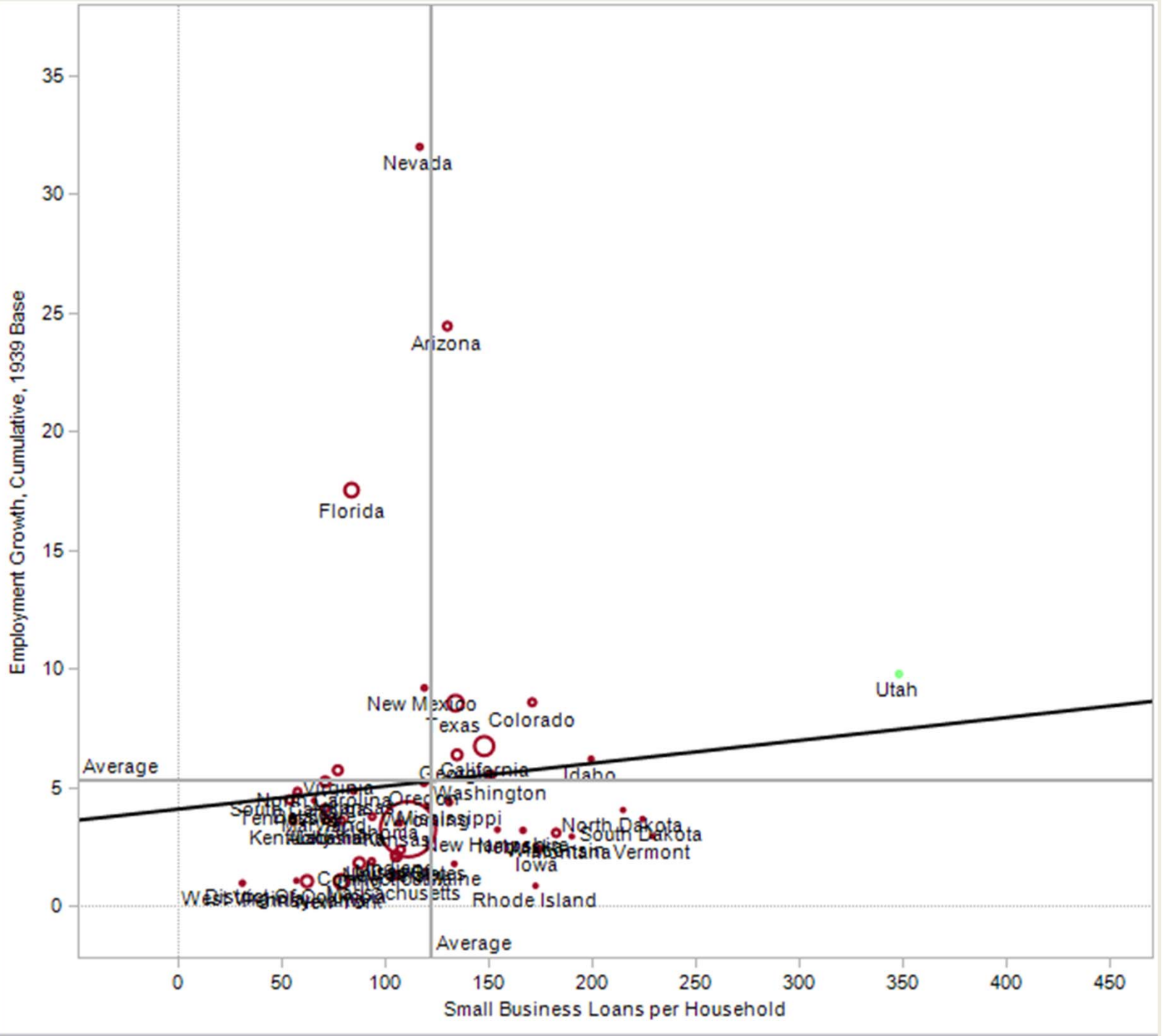
REGULATIONS AND LICENSING



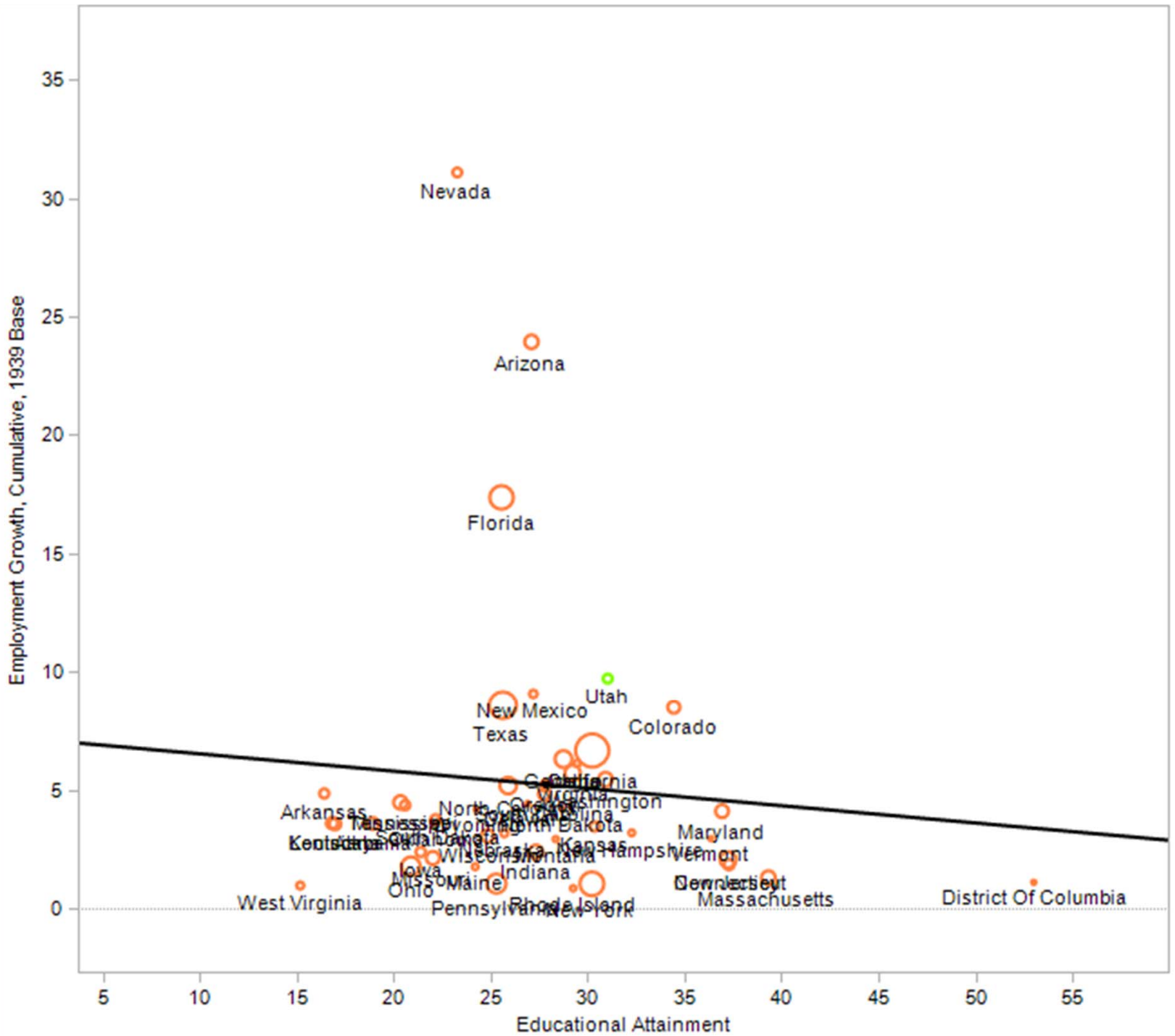
REGULATIONS AND LICENSING GOVERNMENT EMPLOYMENT



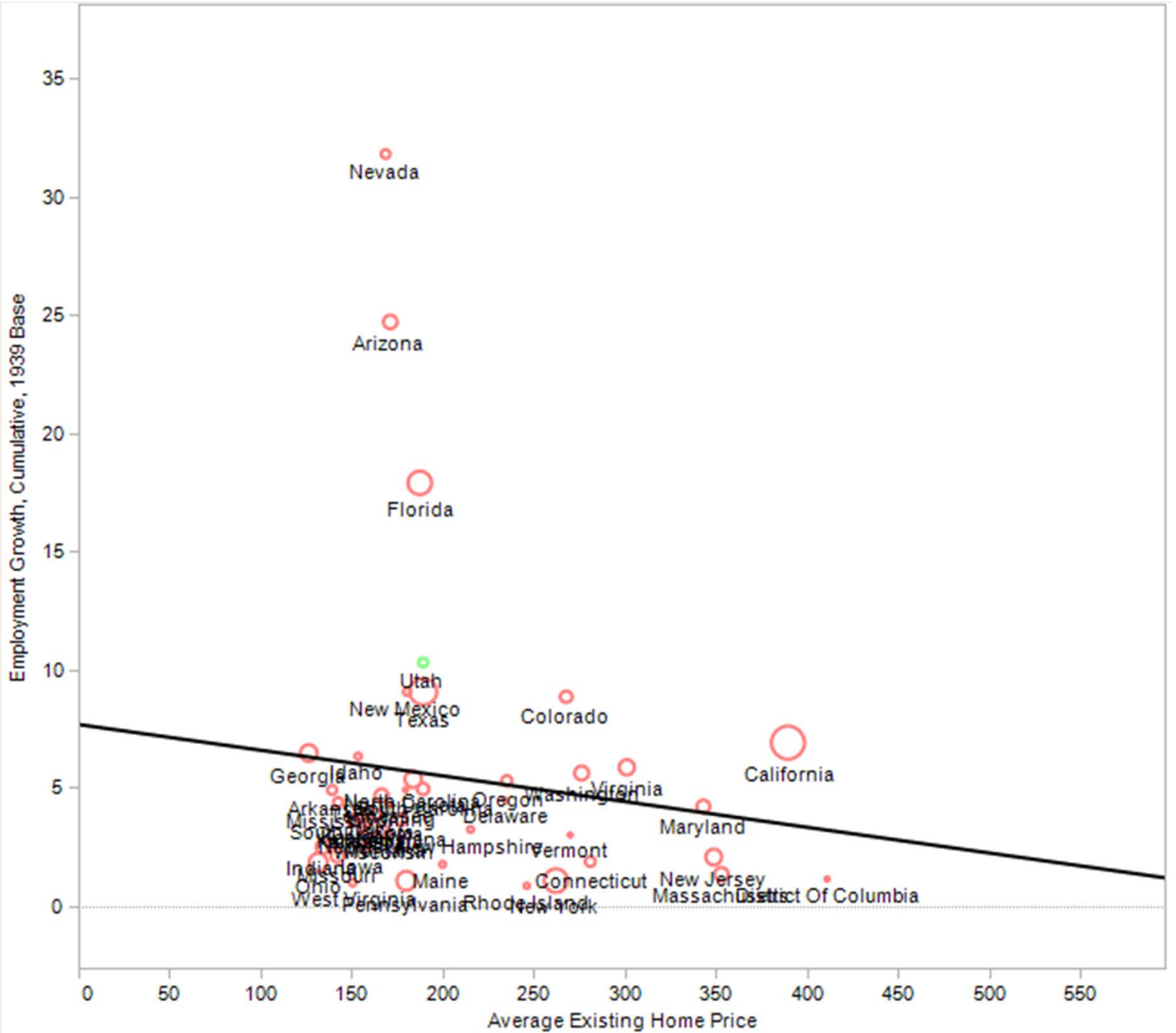
ENTREPRENEURSHIP



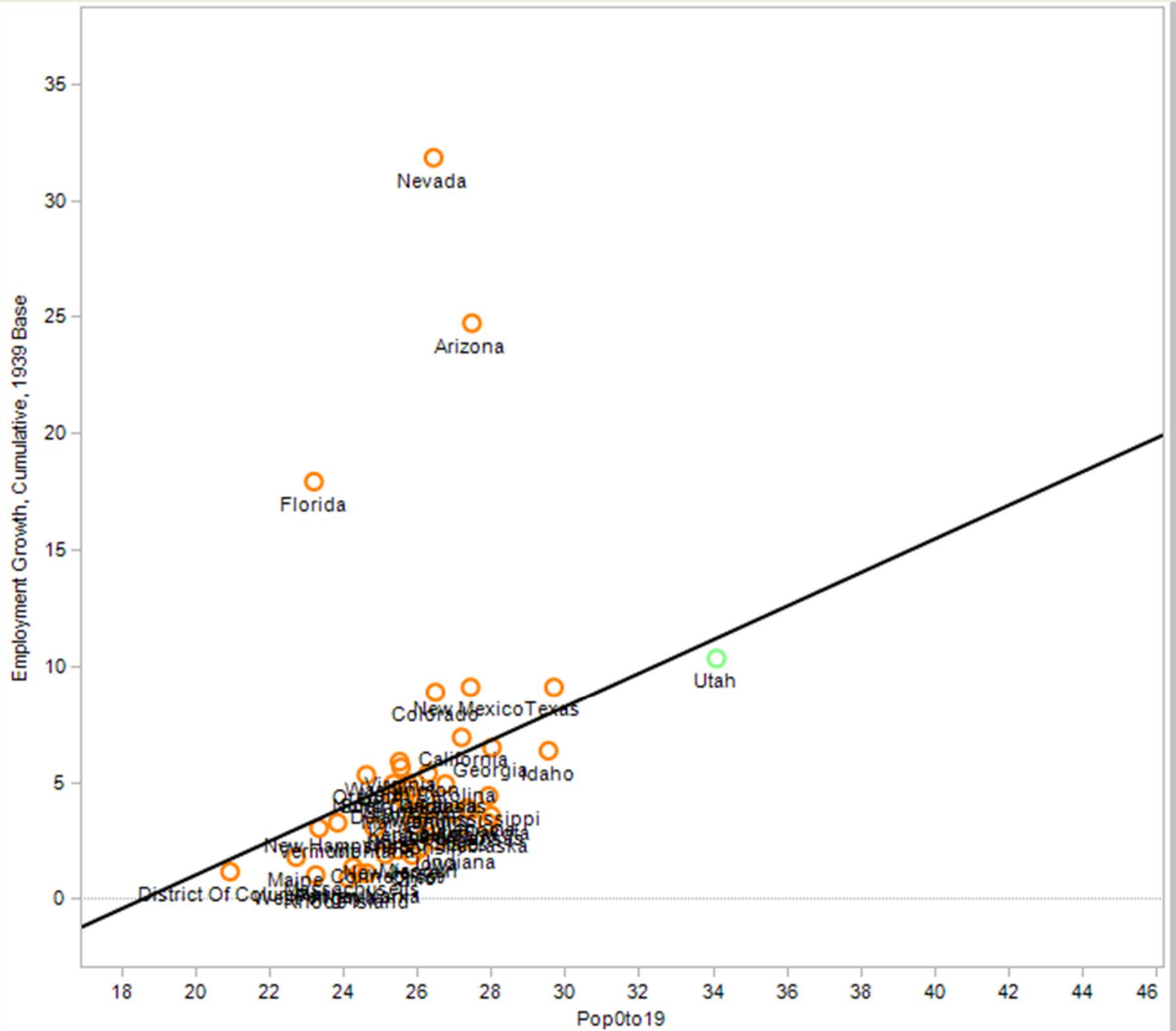
EDUCATION



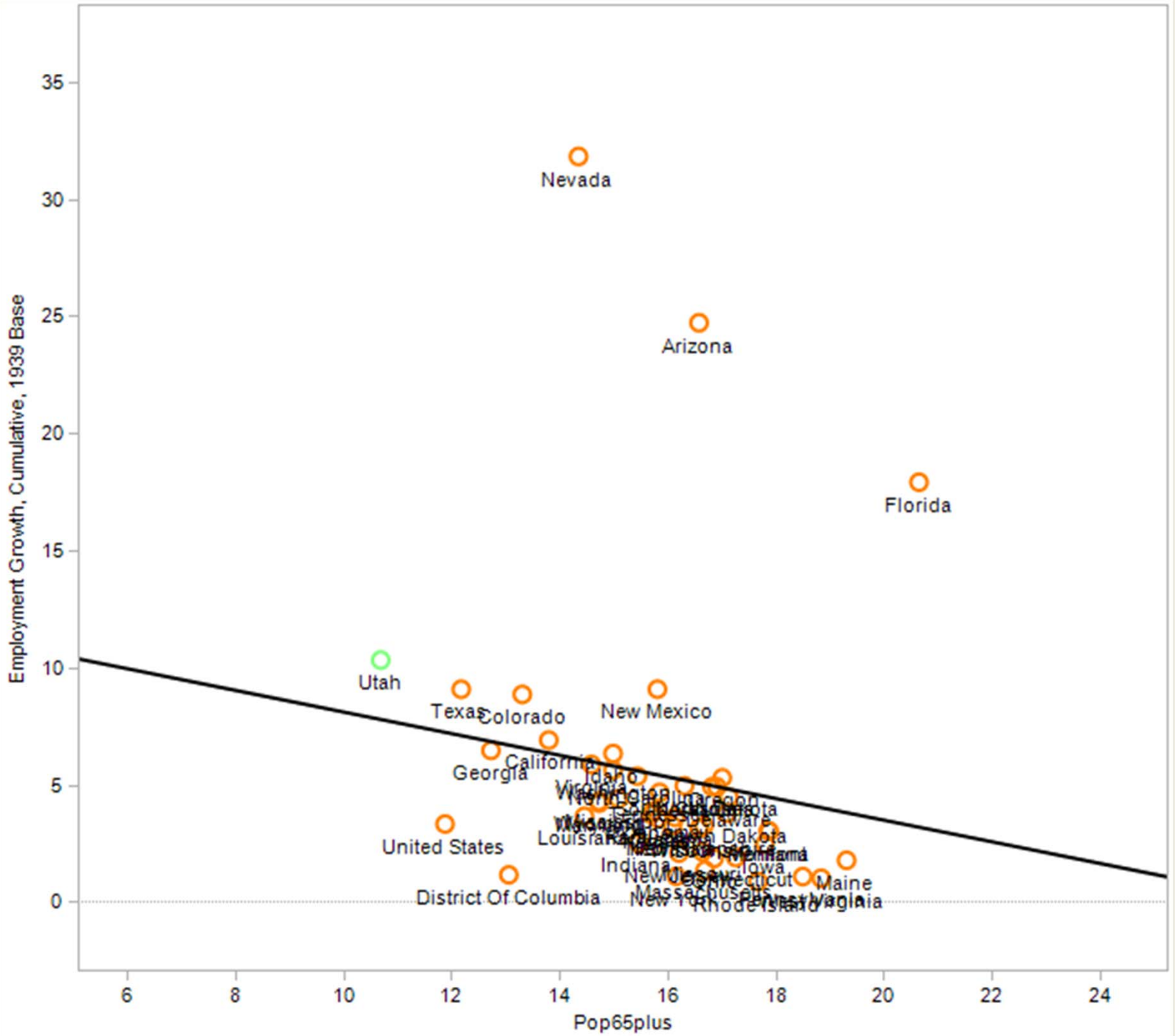
HOUSING COSTS



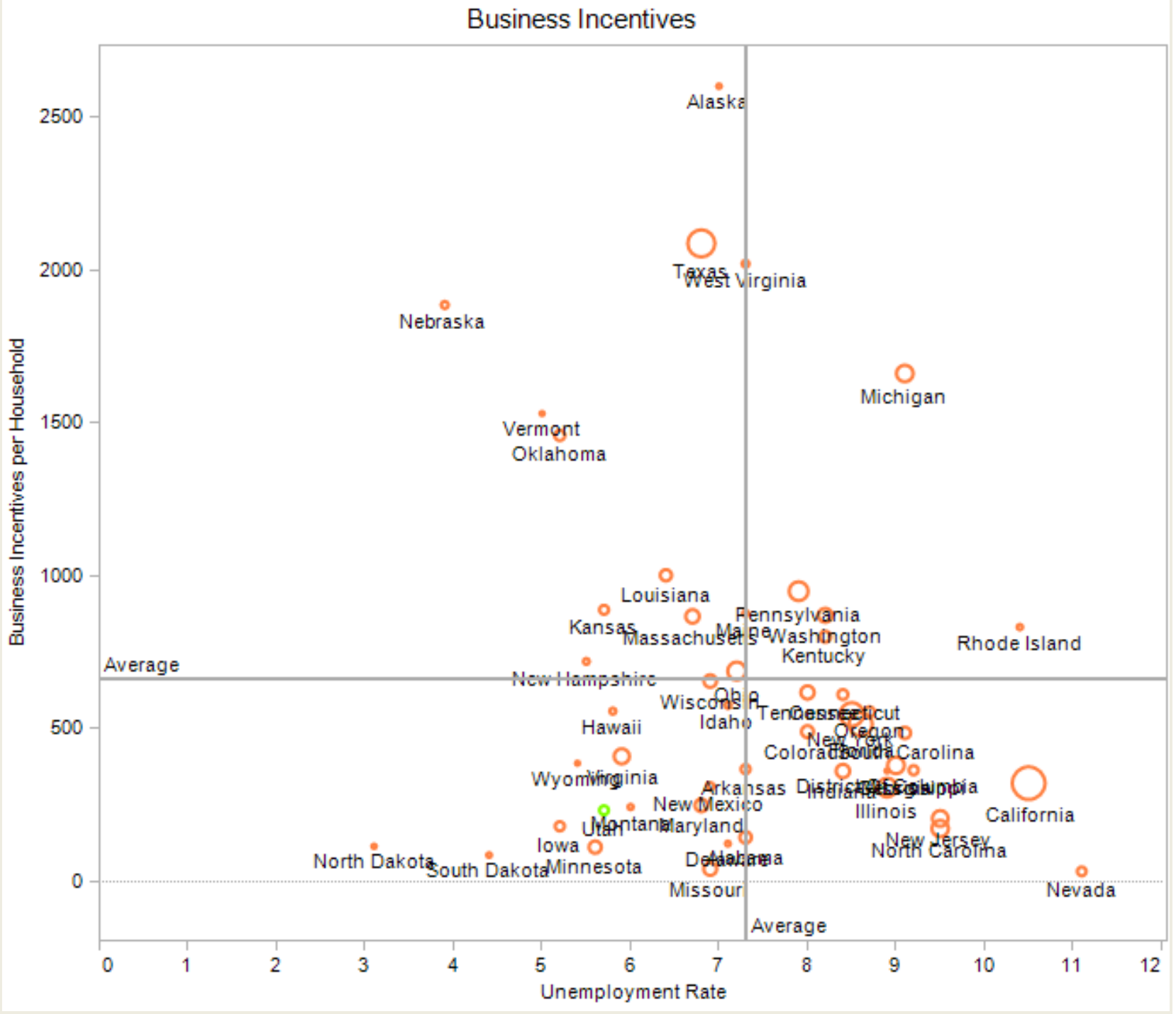
DEMOGRAPHICS



DEMOGRAPHICS



BUSINESS INCENTIVES



DYNAMIC PANEL, PROBIT REGRESSION RESULTS

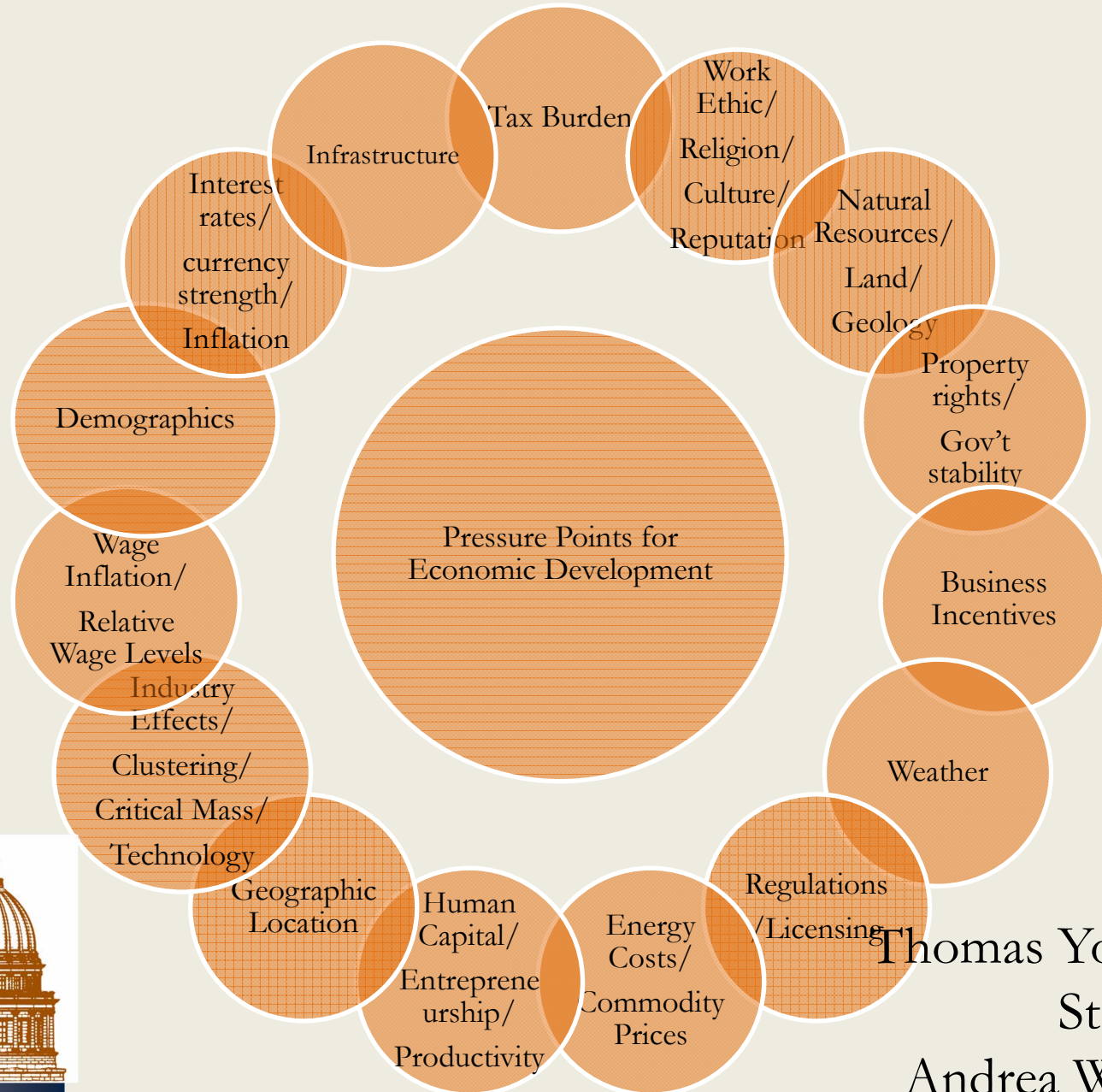
PANEL REGRESSION RESULTS

- Income tax per household: 0.0001316 (every dollar increase in income tax per household is correlated with a 0.0001316 increase in the unemployment rate) (70% confidence) (a \$200 million income tax increase equates to a change in unemployment from 5.0 to 5.03);
- Sales tax per household: 0.0005725 (every dollar increase in sales tax per household is correlated with a 0.0005725 increase in the unemployment rate) (80% confidence) (comparative figure XXXXX);
- Corporate tax per household results are inconsistent

PANEL/LOGIT REGRESSION RESULTS

- Regulatory rank: 0.0466484 (every rank increase in regulatory burden equates to a 0.047 increase in the unemployment rate) (99% confidence) (if Utah dropped from 7th or 8th best to 10th, then the unemployment rate correlated with that change would be from 5.0 to 5.08);
- Government employment per household: 4.65824 (every percent increase in government employment per household would equate to a 4.66 increase in the unemployment rate (80% confidence) (please note coefficient is too high);
- Depending on the regression format, educational attainment may or may not be associated with the an increased or decreased unemployment rate

Economic Pressure Points – What Matters for Growth?



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