

**CSPO Conversations:
Technology Policy and Regional Innovation**

April 5, 2024

Assessing Innovation Hubs and Regional Innovation Engines

Maryann Feldman



A New Era of Federal Investment in Place Based Innovation

Collectively \$3.8 Trillion in spending

American Rescue Plan Act (2021)

- Economic recovery and pandemic response, with regional economic stimulation programs and infrastructure funds (esp. **transportation, broadband**)
- Example programs: Economic adjustment assistance (**Build Back Better Regional Challenge; Good Jobs Challenge**)

Infrastructure Investment and Jobs Act (2021)

- Investments in America's critical infrastructure systems (transportation, broadband, water/wastewater, and energy)
- Example programs: **Regional hydrogen hubs; Regional direct air capture hubs; Regional commissions**

Inflation Reduction Act (2022)

- Investments and incentives in the energy sector, focused on American-made clean energy technologies
- Example programs: **Clean energy production tax credits; Solar and wind siting in low-income community credits**

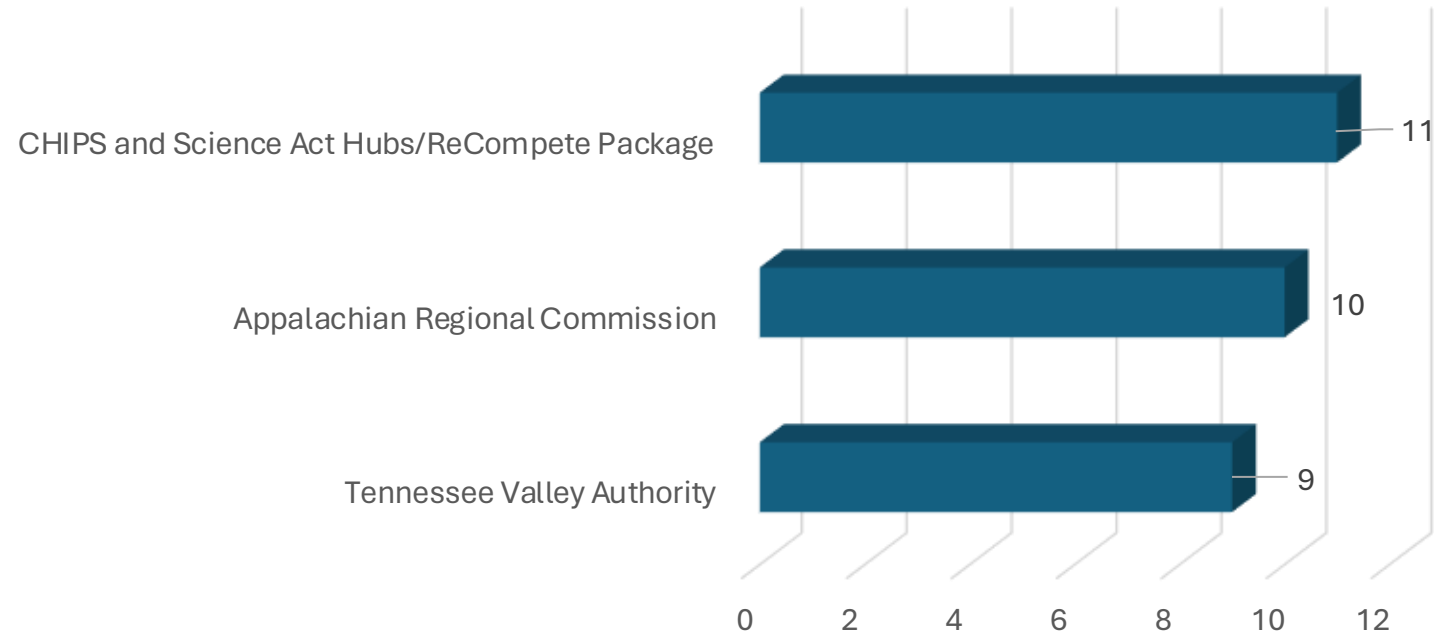
CHIPS and Science Act (2022)

- **Supporting US advanced manufacturing and supply chain resilience in emerging technologies through place-based investments**
- Example programs: **CHIPS for America Fund; Regional technology and innovation hubs; Regional innovation engines**

Historic Place-Based Investments

Total funding in billions (2022 \$) for select place-based policies¹

- \$80 Billion in place-based investments across ARPA, IIJA, and CHIPS and Science Act²
- \$11 Billion in the CHIPS and Science Act for Regional Technology and Innovation Hubs and Reconnect Pilot Program¹

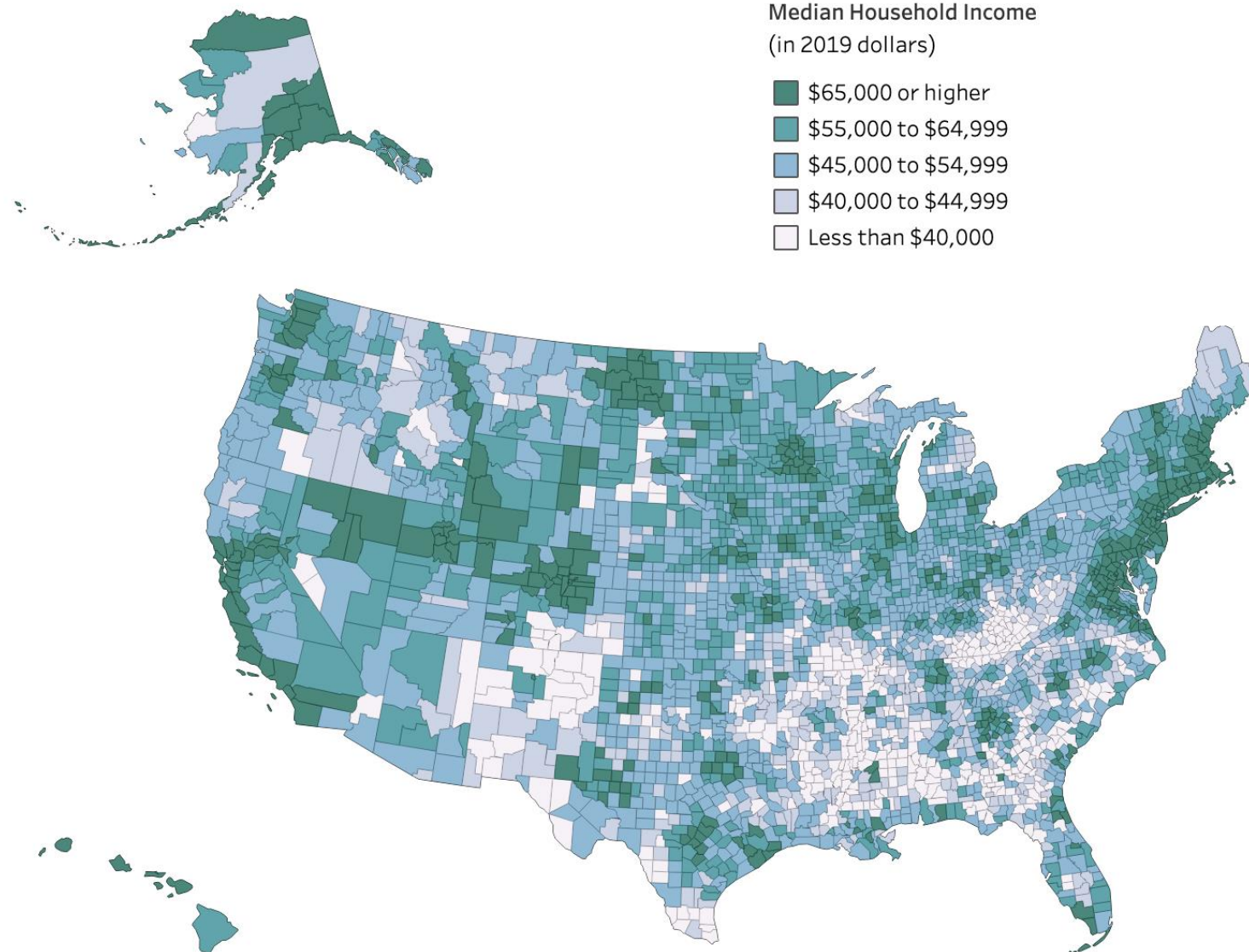


¹ Bartik, T., Asquith, B. and Bolter, K. (2022). *The CHIPS and Science Act offers funding for place-based policies unparalleled in U.S. History*. Upjohn Institute.

² Muro, M., Maxim, R., Parilla, J., de Souza Briggs, X. (2022). *Breaking down an \$80 Billion surge in place-based industrial policy*. Brookings Institution.

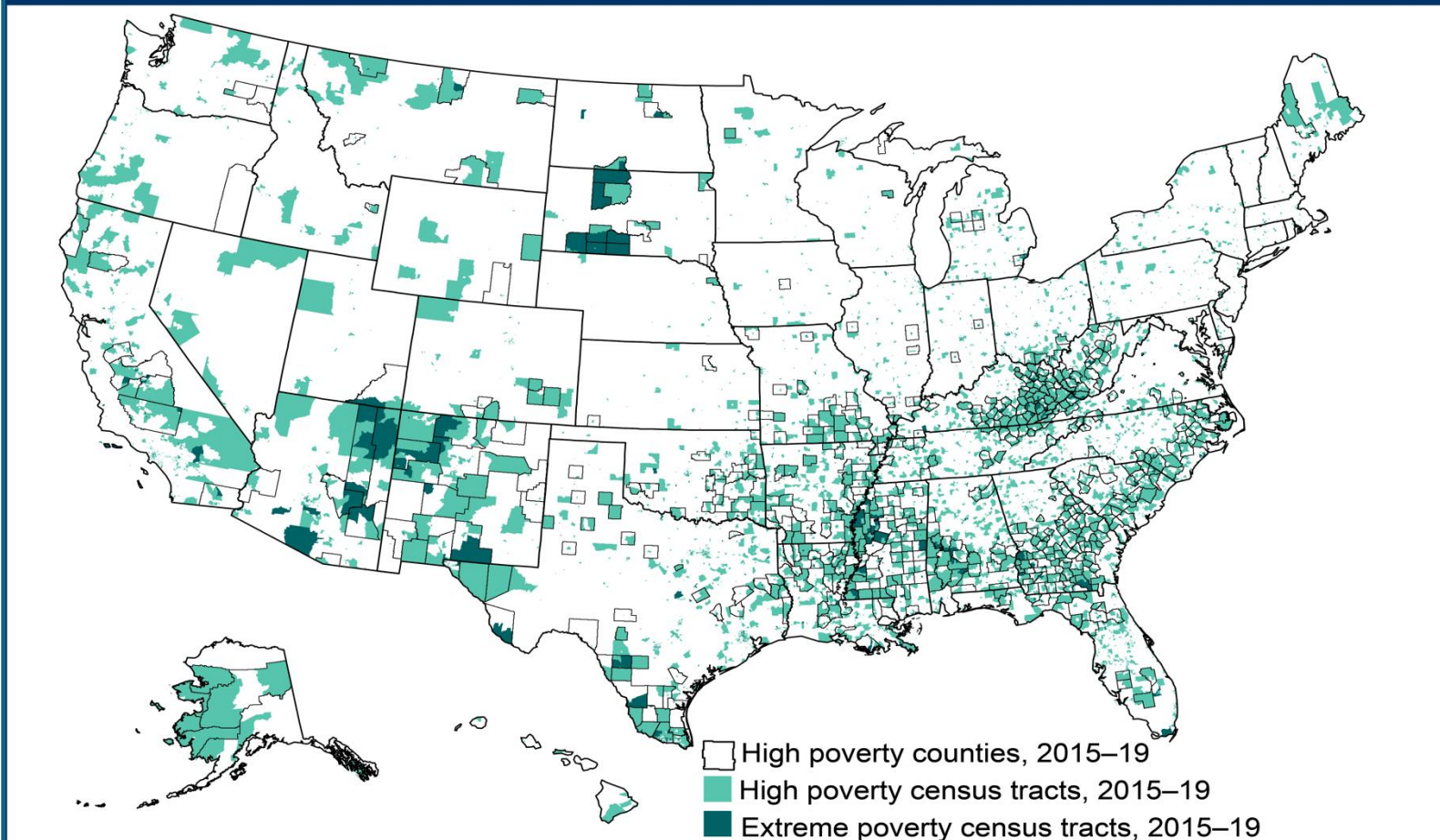
Regional Income Inequality

Median Household Income: 2015–2019



High Poverty Counties are Largely Non-Metro and Majority Communities of Color

High and extreme poverty census tracts within and outside of high poverty counties, 2015–19

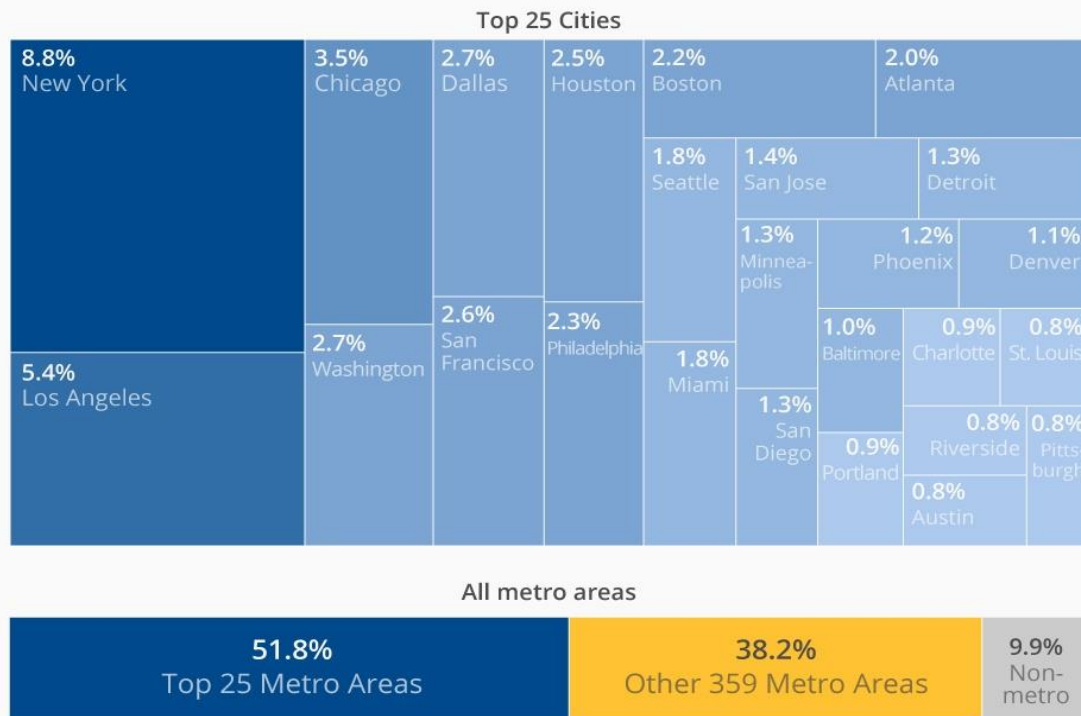


Source: USDA Economic Research Service and US Census Bureau, 2020.

25 Metropolitan Areas Produce Half of US GDP

The Top 25 Metro Areas Make Up Half of U.S. GDP

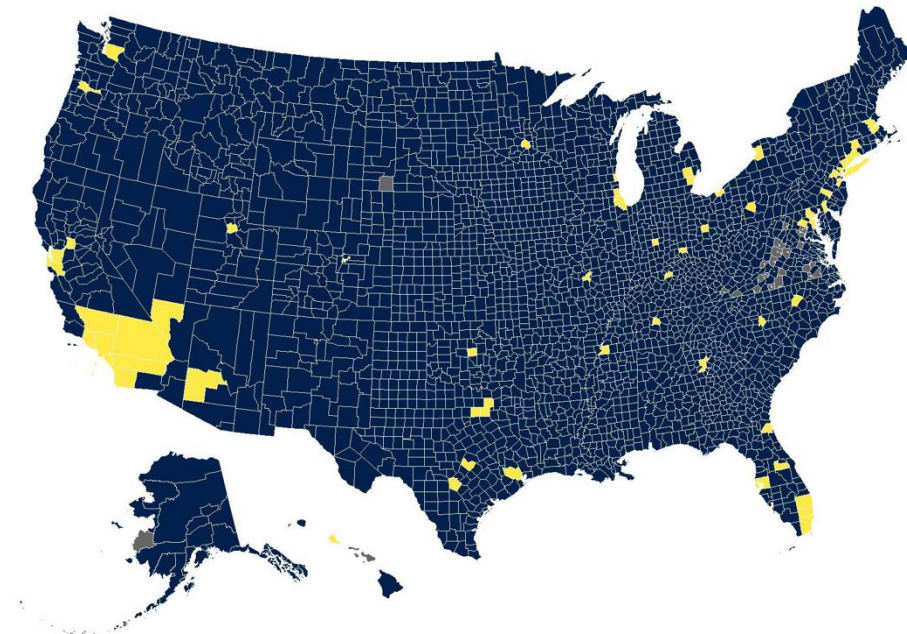
Percent of U.S. GDP in 2017 by metropolitan area



Source: Bureau of Economic Analysis (2019)

GDP Concentration: United States

Counties in yellow concentrate 50% of the Country's GDP



Source: Bureau of Economic Analysis (2019)

The Place-Based Policy Evaluation Challenge

Place-Based Evaluation Considerations

- Places are fluid & do not conform to administrative geographies
 - If the unit of analysis is too large, there will be no impact
 - If the unit of analysis is too small, important spillovers will be overlooked
- No pure treatment effects
 - Complex systems
 - Embedded autonomy (Evans 1995)
- Suitcase effect – multiple investments
 - Federal investments in broadband, apprenticeships, opportunity zones, etc.
 - Multi-level investments - state and local governments
- The most important things are not easily measured
 - Patents are an intermediate output & only relevant if commercialized
 - We care about firm growth – not the number of start-ups

Need new models to understand
the micro-foundations of economic development

“Economic development is the expansion of capacities that contribute to the realization of individual, firm and community potential. Economic development is measured by a sustained increase in prosperity & quality of life.”