Assessing the Competitiveness of Italian, German, Canadian, and U.S. States:

The Transatlantic Subnational Innovation Competitiveness Index (TASICI)

Stephen Ezell
Vice President, Global Innovation Policy, ITIF

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Purpose

- Long-term economic growth depends on **subnational innovation ecosystems**

- Quantify subnational **strengths and weaknesses**
- **Targeted** policymaking
- Promote **transatlantic competitiveness** and partnership

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The Transatlantic Subnational Innovation Competitiveness Index

VIKTOR LÁZÁR, IAN CLAY, STEPHEN EZELL, SHELBY LAUTER, AXEL PLÜNNECKE, STEFANO DA EMPOLI, LORENZO PRINCIPALI, MICHELE MASULLI, AND AARON WUDRICK | NOVEMBER 2022

Innovation ecosystems are increasingly complex and diverse, but there are common markers of core strength. In this report, the Information Technology and Innovation Foundation, the German Economic Institute, the Institute for Competitiveness, and the Macdonald-Laurier Institute benchmark 96 states and provinces across Germany, Italy, the United States, and Canada.

KEY TAKEAWAYS

- Governments at all levels are introducing strategies to stimulate national and regional innovation capacity to improve their competitive positions in the race for leadership in the technology- and innovation-driven global economy.
- Based on 13 indicators of strength in knowledge, globalization, and innovation capacity, the five top-ranked states are Massachusetts, California, Baden-Württemberg, Berlin, and Washington. The bottom five are Apulia, West Virginia, Sicily, Calabria, and Mississippi.
- German states generally perform much better than those of the United States, Canada, and Italy; however, three of the top five are in the United States.
- On knowledge economy indicators, America outperforms peers in higher-education attainment, and Canada attracts the most skilled immigrant workers, while Germany exhibits strength in scientific, technical, and professional employment.
- In the globalization category, Canada, followed by the United States, leads in inward foreign direct investment (FDI), while Germany and Italy produce greater levels of high-tech exports relative to regional gross domestic product (GDP).
- In measurements of innovation capacity, Germany and the United States have clear leadership in research and development (R&D) intensity and venture capital (VC), while Italy performs well in R&D personnel and business creation.
- Governments should consider these unique strengths, weaknesses, challenges, and opportunities to craft region-specific policies to bolster innovation competitiveness.

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Indicators

Knowledge Economy (33%)

- Highly Educated Population
- Skilled Immigration
- Professional, Technical, Scientific (PTS) Employment
- Manufacturing Labor Productivity

Globalization (13%)

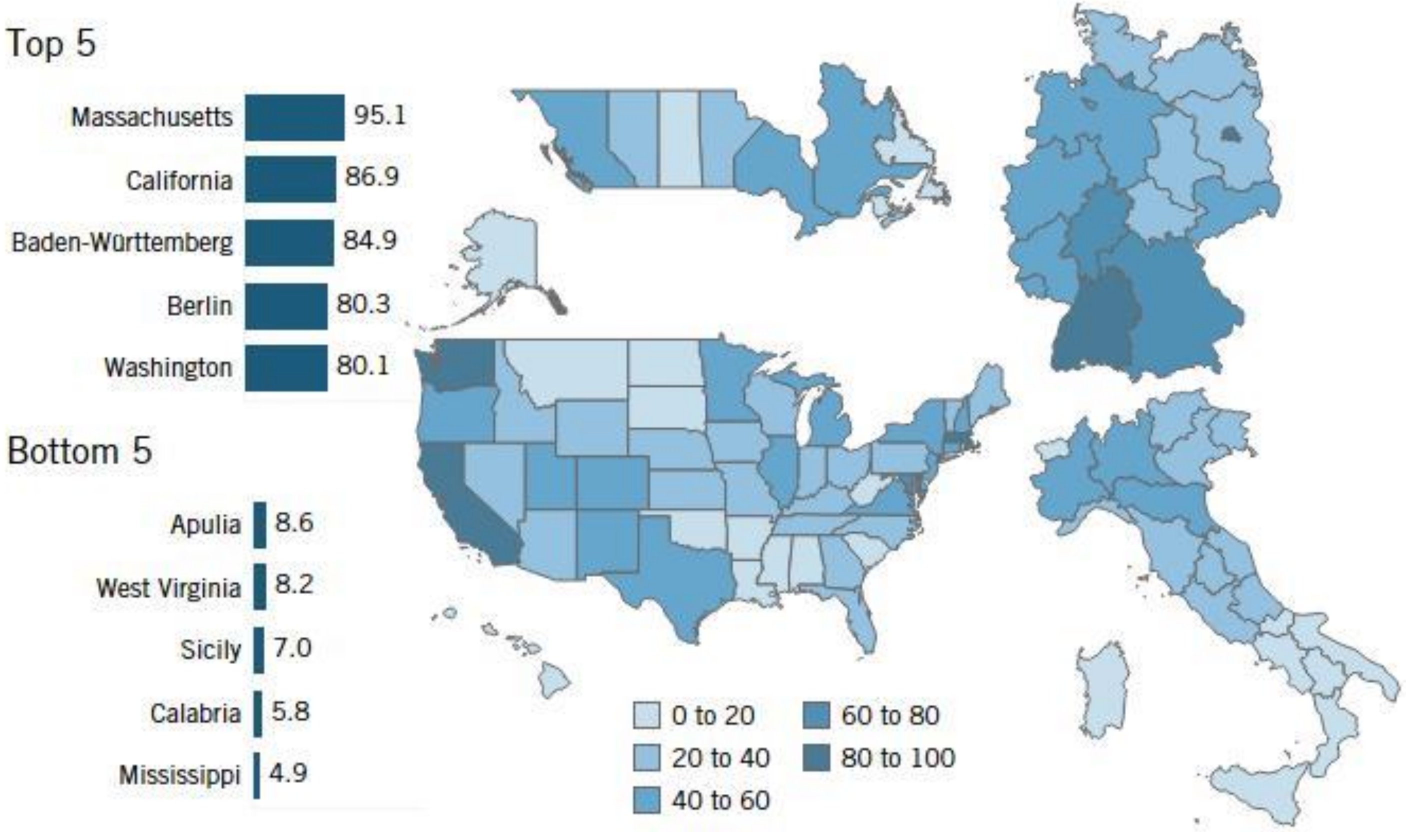
- High-tech Exports
- Inward Foreign Direct Investment

Innovation Capacity (54%)

- Broadband Access
- R&D Intensity
- R&D Personnel
- Patent Applications
- Business Creation
- Carbon Efficiency
- Venture Capital

TASICI Results

Country	Median Overall Score	Median Knowledge Score	Median Globalization Score	Median Capacity Score
Canada	**21**	**30**	**39**	**23**
Germany	**44**	**42**	**51**	**47**
Italy	**25**	**24**	**38**	**32**
USA	**34**	**39**	**36**	**33**
ALL	**33**	**35**	**40**	**34**



Germany performs best overall, followed by the United States, Italy, and Canada

TASICI Data Visualization

Transatlantic Subnational Innovation Competitiveness Index: Canada, Germany, United States, Italy

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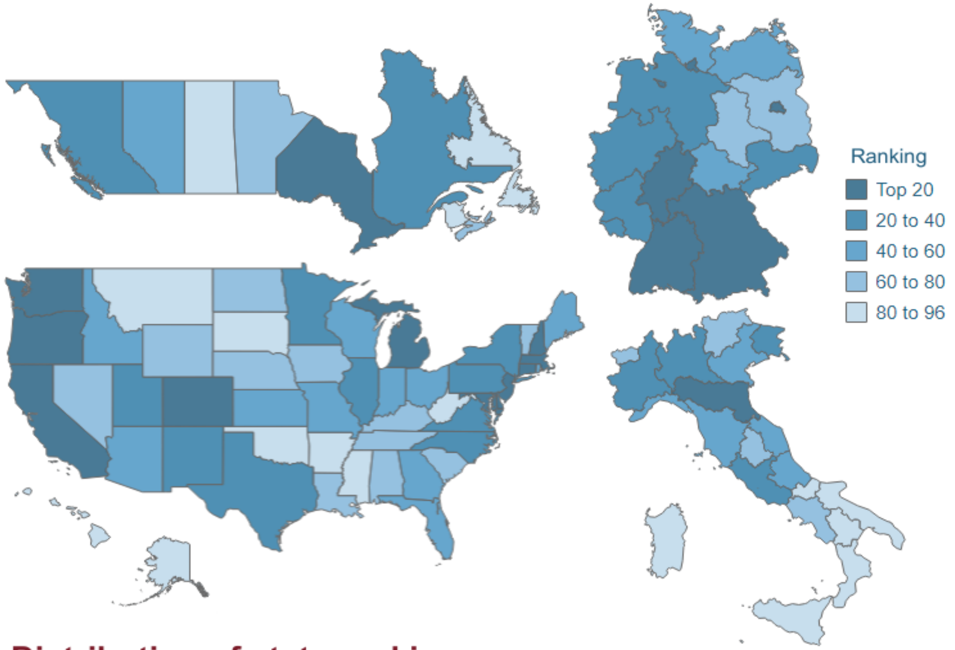
Select country: All

Select state: (None)

Choose indicator: Composite Score



Distribution of state rankings

Top 10

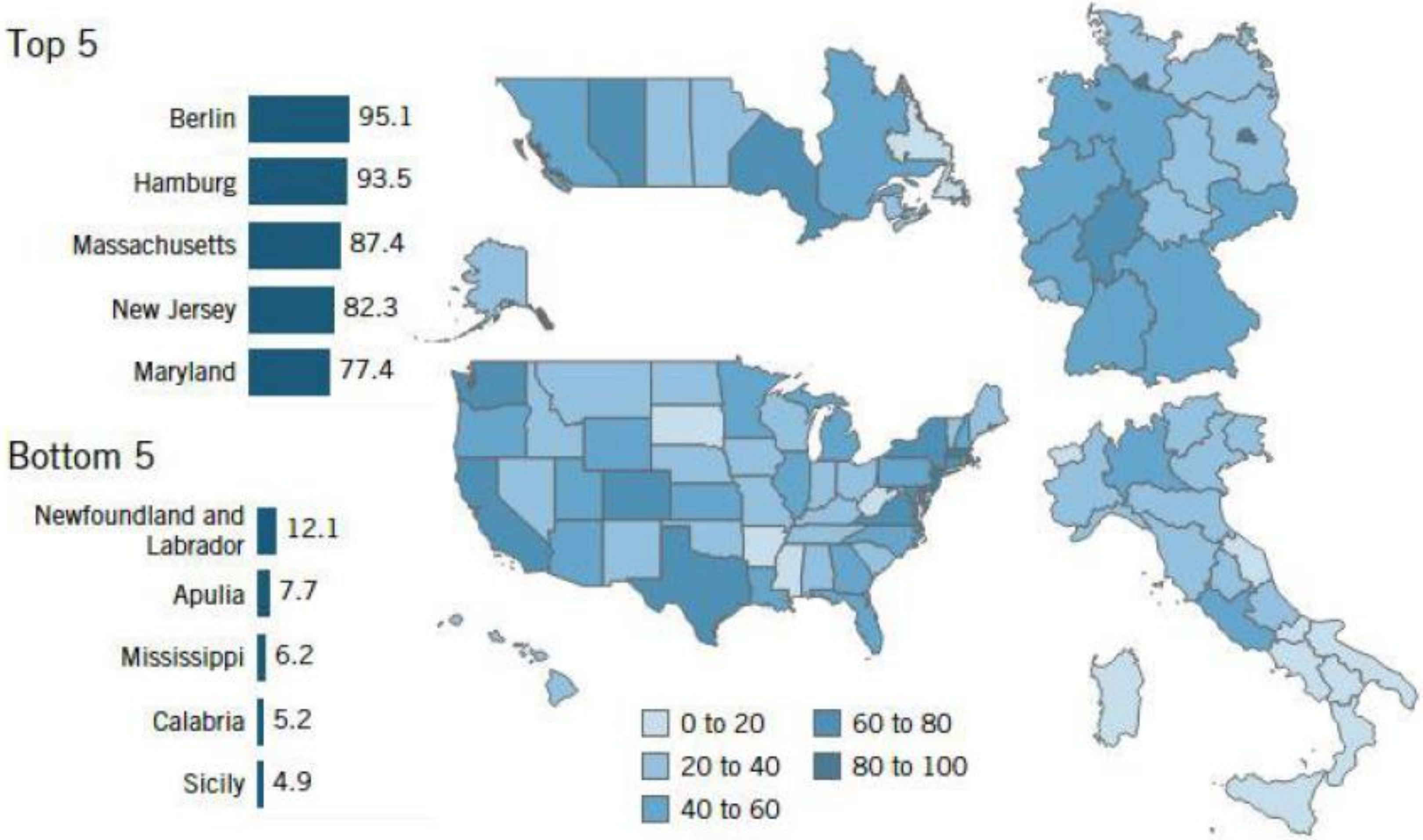
Rank	State	Country
1	Massachusetts	USA
2	California	USA
3	Baden-Württemberg	Germany
4	Berlin	Germany
5	Washington	USA
6	Hamburg	Germany
7	Bavaria	Germany
8	Hesse	Germany
9	Maryland	USA
10	Bremen	Germany

Bottom 10

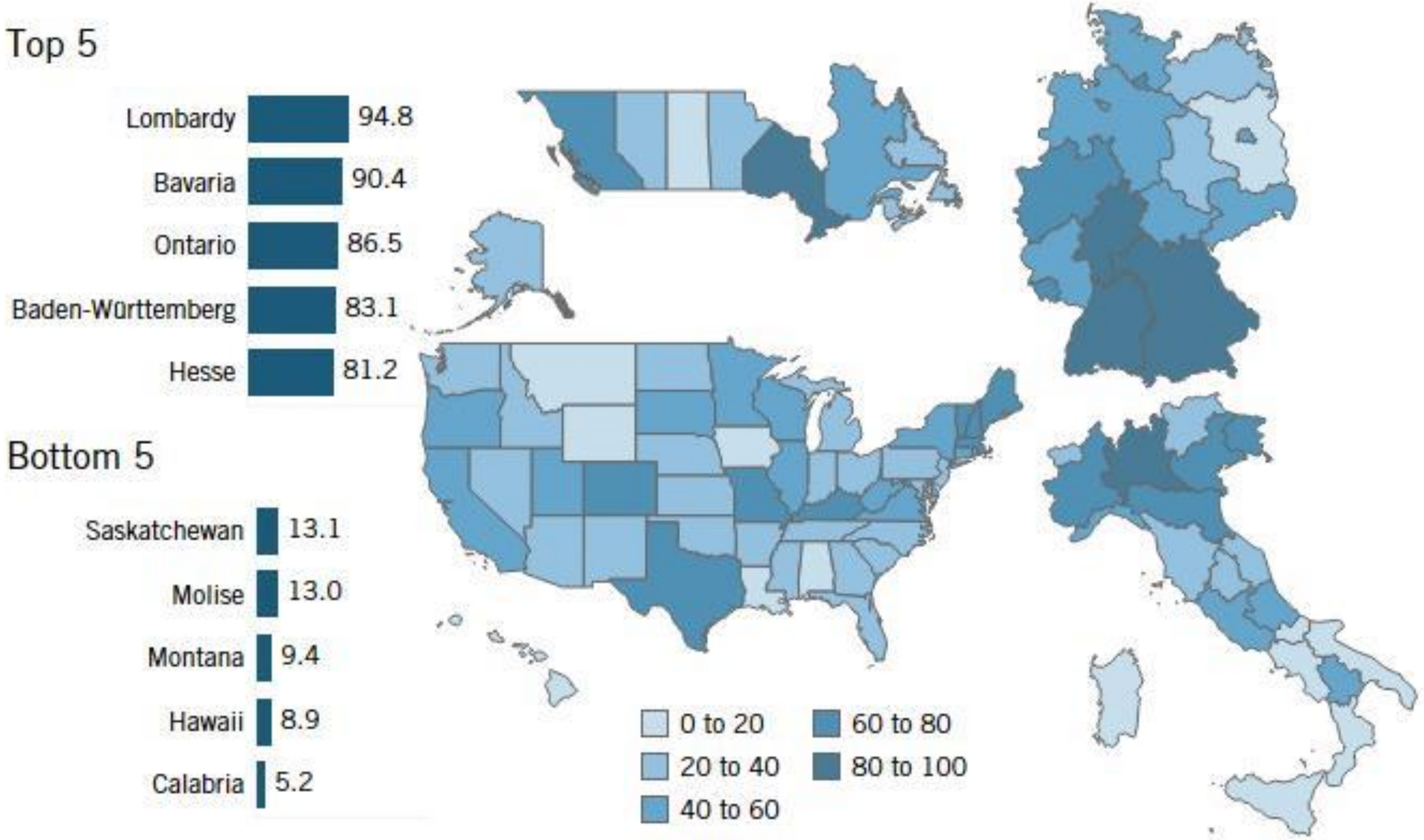
Rank	State	Country
87	Saskatchewan	Canada
88	Sardinia	Italy
89	South Dakota	USA
90	Alaska	USA
91	Arkansas	USA
92	Apulia	Italy
93	West Virginia	USA
94	Sicily	Italy
95	Calabria	Italy
96	Mississippi	USA

https://itif.org/publications/2022/11/14/the-transatlantic-subnational-innovation-competitiveness-index-data-visualization/

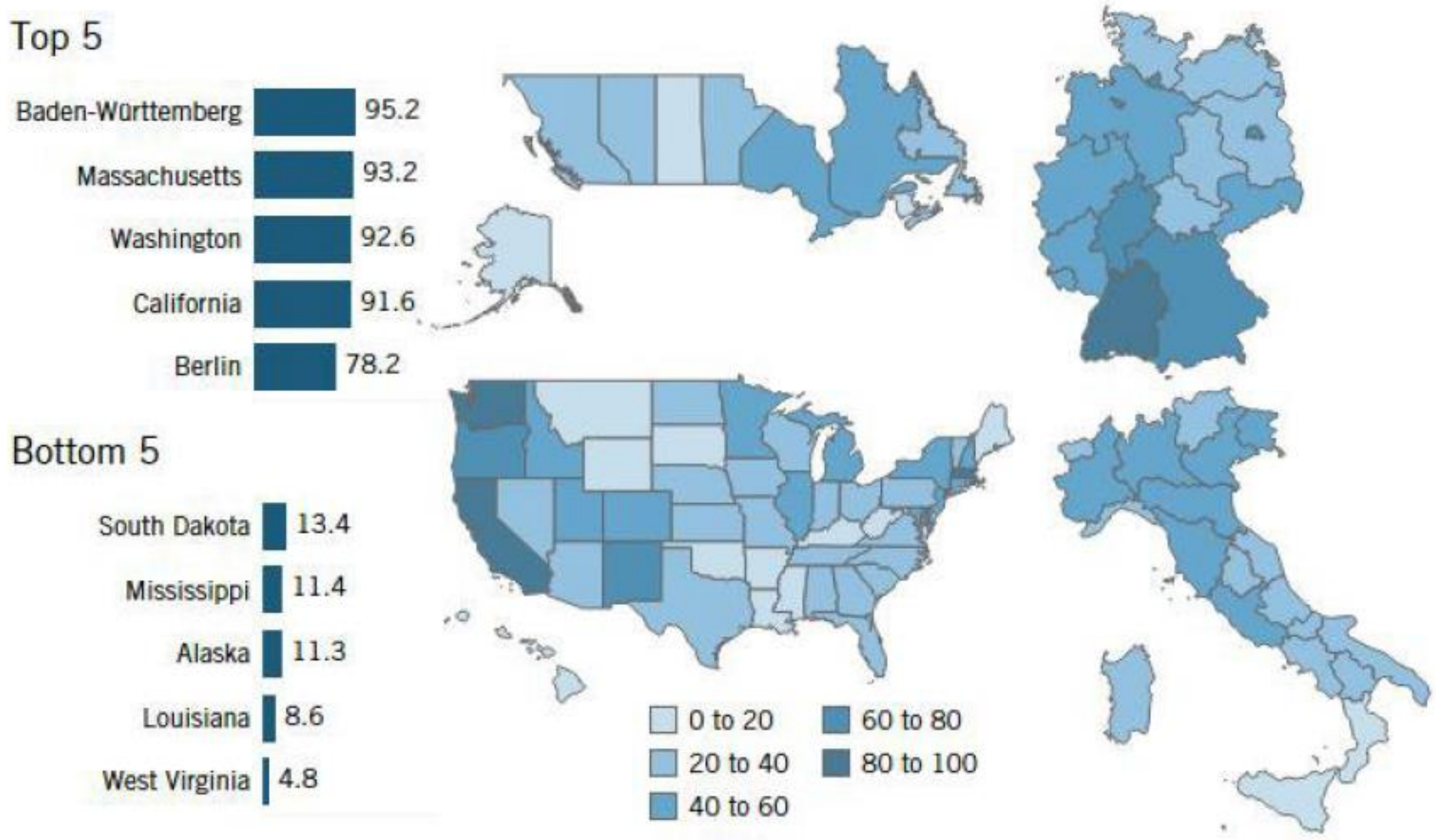
TASICI Knowledge Economy Scores



TASICI Globalization Scores



TASICI Innovation Capacity Scores



United States

Performance

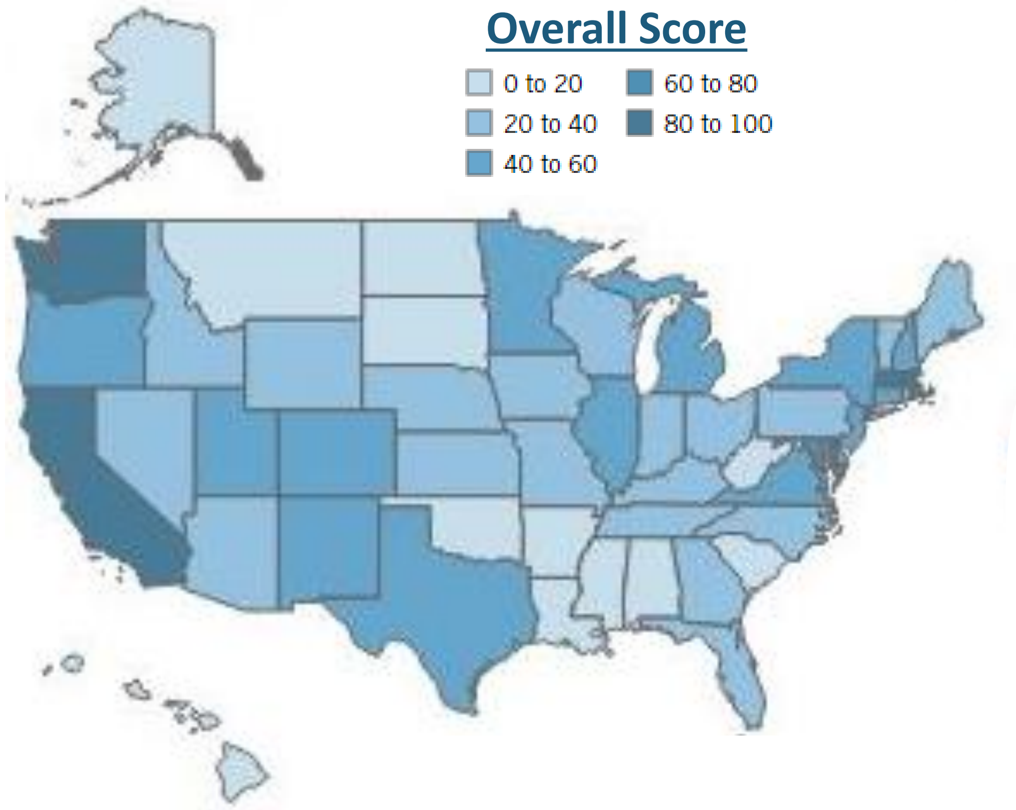
Higher education and labor productivity

PTS employment, high-tech export

Policy suggestions

Fully fund CHIPS and Science Act of 2022

Increase R&D tax credit and subsidy rate

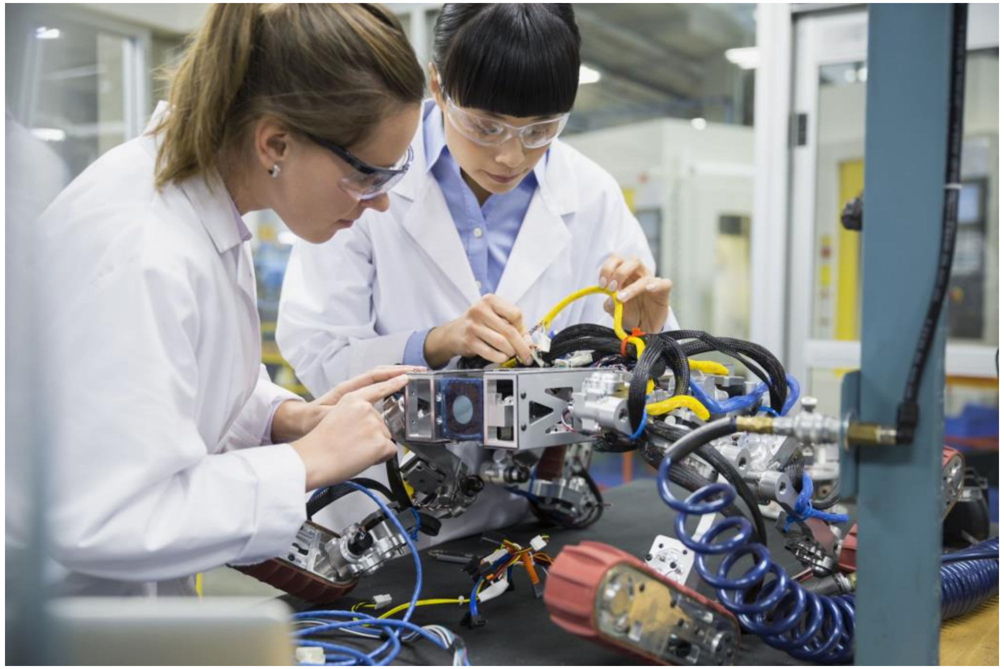


State-Level Innovation Policy Recommendations

- Develop state-level "Industry 4.0" mfg. digitalization strategies.
- Introduce innovation vouchers.
- Introduce collaborative R&D tax credits.
- Help universities launch innovation incubators/accelerators.
- Develop university commercialization/entrepreneurship rankings.
- Permit both faculty and student entrepreneurial leave.
- Ensure transatlantic data flows can move seamlessly.

Next Steps

- Expansion of subnational research to additional countries
- Transatlantic, GTIPA collaboration and data standardization
- Details in the report and the data visualization tool



„There is a way to do it better. Find it." – Thomas A. Edison

Thank You!

Stephen Ezell | sezell@itif.org | 202.465.2984

@ITIFdc @sjezell

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