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## German States Outpace Regional Peers in US, Canada, Italy, on ‘Innovation Competitiveness’, New Ranking Finds

BRUSSELS—With its gleaming technology hubs and trillion-dollar companies, the United States might appear to be far ahead of Europe when it comes to regional innovation ecosystems. But on closer inspection German states are better positioned than U.S. states, on average, while Italy’s subnational regions are ahead of Canada’s provinces.

These findings come in the new “[Transatlantic Subnational Innovation Competitiveness Index](#),” released jointly by four independent think tanks—the US-headquartered Information Technology and Innovation Foundation (ITIF), the German Economic Institute (IW), the Institute for Competitiveness (I-Com) in Italy, and the Macdonald-Laurier Institute (MLI) in Canada.

The index examines the innovation ecosystems of 96 states, provinces, and subnational regions across the 4 countries using 13 indicators of competitive strength in 3 categories: the knowledge economy, globalization, and innovation capacity.

**The findings are scheduled to be presented and discussed at a roundtable briefing in the European Parliament on Monday, 14 November, at 18:00 CET.** Distinguished policymakers will join expert researchers to discuss indicators of competitive success and best practices for regional innovation ecosystems in today’s globalized, innovation-driven economy.

**The event is open to the press and public via Webex ([registration required](#)). Join the discussion and submit questions via [Slido.com](#) using the code [#innovationindex](#).**

Among the study’s findings:

- German states generally perform better than those of the United States, Italy, and Canada; however, three of the top five in the overall ranking are U.S. states.
- The top five states overall are Massachusetts, California, Baden-Württemberg, Berlin, and Washington. The bottom five overall are Apulia, West Virginia, Sicily, Calabria, and Mississippi.
- On knowledge economy indicators, U.S. states outperform their 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, Canadian provinces, followed by U.S. states, lead in inward foreign direct investment (FDI), while German states and Italian regions 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.

**Co-author Stephen Ezell, vice president for global innovation policy at ITIF, commented:** “Policymakers should take account of unique regional strengths, weaknesses, challenges, and opportunities to craft region-specific approaches to bolster innovation competitiveness. But there are no shortcuts. All of the foundational areas we examine in this index are important.”

**Co-author Prof. Dr. Axel Plünnecke, head of cluster education, immigration and innovation at IW, said:** “Innovation enables sustainable prosperity. It opens up growth opportunities—and in coming decades innovation will play an especially important role in developing clean energy solutions to address the climate challenge. Policymakers should invest more in education and research and development to improve the framework conditions for innovation and to encourage the establishment of new companies.”

**Co-author Stefano da Empoli, president and principal policy analyst at I-Com, said:** “Though some of the relevant policy measures fall under the realm of national level competences and a holistic approach is needed according to a multilevel governance principle, it shouldn’t be underestimated how regions and municipalities play an essential role in creating business and human capital conditions fit for a sound competitiveness and innovation outlook.”

**Co-author Aaron Wudrick, director of domestic policy at MLI, said:** “Governments the world over are seized with innovation policy, and this index helps provide important insights as to policy strengths and weaknesses in various jurisdictions. Policymakers should take note of where they might learn from best practices elsewhere—and in particular in which areas they might be squandering existing advantages.”

### *The Study Shows Large Regional Variations*

The index reveals differences among individual states within each country: In the United States, coastal regions are ahead; in Italy, the north sets the pace; and in Canada, British Columbia, Ontario, and Quebec are the leaders.

Massachusetts and California, home of Silicon Valley, come out ahead of Baden-Württemberg and Berlin. The state of Washington, home to Amazon and Microsoft, completes the top five.

The performance of Canadian states in the index is more similar to those of Italian states than to German or American ones. The formulation of the composite innovation competitiveness index regards innovation capacity as the main driver of innovation performance. Thus, California, Berlin, and Washington score extremely well overall, despite weaker performances on the globalization indicators.

### *The Authors Recommend State- and Region-Specific Solutions*

The overall results of the study show that governments need to apply region-specific solutions in their policies to increase innovation competitiveness based on their unique strengths, weaknesses, challenges, and opportunities.

For example, the authors suggest that Germany should continue to build on its strengths by supporting its education system and businesses in adopting digital technologies and by increasing R&D expenditures. And Italy should target the dimensional growth of companies, by strengthening the capitalization of SMEs.

Meanwhile, Canada should incentivize R&D more intensively, invite technology-intensive FDI, and focus on bolstering its productivity levels. In the United States, Congress needs to ensure that the vast panopoly of programs and initiatives envisioned in the CHIPS and Science Act of 2022 are appropriated and enacted in full, particularly the \$10 billion authorized to create 20 geographically distributed technology and innovation hubs. Also, U.S. states should develop

their own innovation and competitiveness strategies, particularly with regard to developing their own Industry 4.0 strategies.

### The Transatlantic Subnational Innovation Competitiveness Index: Rankings and Scores

Overall Rank	Region	Country	Overall Score	Knowledge Rank	Knowledge Score	Globalization Rank	Globalization Score	Capacity Rank	Capacity Score
1	Massachusetts	USA	95.1	3	87.4	12	70.7	2	93.2
2	California	USA	86.9	6	77.4	42	43.0	4	91.6
3	Baden-Württemberg	DEU	84.9	19	54.4	4	83.1	1	95.2
4	Berlin	DEU	80.3	1	95.1	46	40.5	5	78.2
5	Washington	USA	80.1	14	61.6	68	29.9	3	92.6
6	Hamburg	DEU	73.5	2	93.5	13	69.4	10	62.2
7	Bavaria	DEU	71.6	20	53.6	2	90.4	6	74.6
8	Hesse	DEU	66.1	15	61.6	5	81.2	8	63.6
9	Maryland	USA	62.8	5	77.4	64	31.3	12	59.6
10	Bremen	DEU	58.9	10	64.5	47	40.2	11	60.5
11	New Jersey	USA	57.9	4	82.3	80	23.5	19	50.5
12	Oregon	USA	57.9	30	46.1	33	49.9	7	65.4
13	Connecticut	USA	54.7	9	65.4	24	56.5	22	47.6
14	Colorado	USA	53.9	12	62.3	21	60.8	20	49.3
15	Delaware	USA	53.0	21	52.4	36	48.3	15	56.4
16	Ontario	CAN	51.9	8	65.4	3	86.5	35	40.3
17	Emilia-Romagna	ITA	50.2	48	35.1	9	74.2	14	56.5
18	New Hampshire	USA	49.9	39	40.5	18	66.3	16	54.1
19	Michigan	USA	49.0	37	40.9	59	34.5	13	57.4
20	North Rhine-Westphalia	DEU	48.6	27	47.1	19	63.5	21	49.2
21	Minnesota	USA	48.6	23	50.9	40	43.9	18	51.1
22	Utah	USA	48.1	31	46.0	38	47.1	17	51.9
23	New York	USA	47.7	16	60.1	35	48.6	31	41.2
24	New Mexico	USA	47.2	51	33.6	70	27.4	9	63.1
25	Virginia	USA	46.1	7	75.2	32	50.1	53	32.4
26	Illinois	USA	45.7	18	58.3	22	58.4	37	40.0
27	Texas	USA	45.6	13	62.1	15	68.3	50	33.3
28	Lombardy	ITA	44.9	35	41.8	1	94.8	33	40.8
29	Lower Saxony	DEU	44.6	33	42.7	39	44.9	23	47.1
30	British Columbia	CAN	44.3	17	58.8	17	66.7	45	36.1
31	Rhineland-Palatinate	DEU	43.7	41	40.0	31	50.4	24	46.6
32	Saxony	DEU	43.3	40	40.4	23	56.6	28	43.6
33	Saarland	DEU	42.1	46	36.0	14	69.4	26	44.2
34	Quebec	CAN	40.6	28	46.8	28	52.8	36	40.2
35	Piedmont	ITA	40.0	63	29.4	6	78.2	27	43.7
36	Lazio	ITA	39.9	29	46.2	44	42.9	30	41.6
37	North Carolina	USA	39.6	24	50.7	82	20.8	40	39.2
38	Pennsylvania	USA	39.1	26	47.2	52	37.9	42	37.6
39	Friuli-Venezia Giulia	ITA	38.2	69	27.2	11	71.1	29	43.2
40	Arizona	USA	37.5	38	40.8	48	39.8	39	39.4
41	Thuringia	DEU	37.1	49	34.2	30	50.8	41	38.7
42	Idaho	USA	36.1	74	24.6	54	36.6	25	46.5
43	Missouri	USA	35.6	47	35.7	8	74.5	52	32.6
44	Wisconsin	USA	35.5	61	29.4	25	56.3	38	39.8
45	Rhode Island	USA	34.9	43	38.0	37	48.1	46	35.6
46	Alberta	CAN	34.6	11	64.4	51	38.6	64	24.1
47	Veneto	ITA	34.4	73	24.7	20	62.1	34	40.5
48	Schleswig-Holstein	DEU	33.4	50	34.2	43	42.9	47	35.0

Overall Rank	Region	Country	Overall Score	Knowledge Rank	Knowledge Score	Globalization Rank	Globalization Score	Capacity Rank	Capacity Score
49	Ohio	USA	32.8	45	37.6	55	36.6	48	33.9
50	Tuscany	ITA	32.2	71	26.7	49	39.7	32	40.8
51	Indiana	USA	30.0	55	32.0	75	24.9	44	36.6
52	Liguria	ITA	29.8	59	30.3	34	48.9	49	33.6
53	Mecklenburg-Vorpommern	DEU	29.8	56	31.7	62	32.5	56	30.4
54	Kansas	USA	29.1	36	41.4	65	31.1	61	27.5
55	Georgia	USA	28.3	34	42.3	79	23.7	59	28.0
56	Florida	USA	27.3	32	43.3	81	23.0	63	24.3
57	Marche	ITA	26.2	85	19.2	63	32.2	43	37.2
58	Abruzzo	ITA	25.6	77	23.6	27	53.6	58	29.7
59	Maine	USA	25.3	64	29.1	7	75.5	84	19.6
60	Vermont	USA	25.1	58	30.5	16	67.5	76	21.3
61	Wyoming	USA	25.0	25	48.7	86	16.0	83	19.8
62	Brandenburg	DEU	24.7	42	39.4	85	16.0	60	27.7
63	Trentino	ITA	24.3	53	32.4	57	35.3	51	32.8
64	Umbria	ITA	23.8	76	23.7	66	30.6	54	31.6
65	Saxony-Anhalt	DEU	23.1	60	29.8	77	24.9	79	20.2
66	Iowa	USA	22.6	68	27.3	83	19.9	57	30.4
67	Tennessee	USA	22.2	52	32.9	72	27.1	70	22.6
68	Nebraska	USA	22.0	44	38.0	74	25.5	80	20.1
69	Kentucky	USA	21.5	78	23.3	10	71.9	85	18.2
70	Nevada	USA	21.1	70	27.2	67	30.6	69	22.7
71	Prince Edward Isle	CAN	21.1	81	21.5	26	56.3	67	23.0
72	Manitoba	CAN	21.0	57	31.0	53	37.3	72	21.8
73	Nova Scotia	CAN	21.0	65	28.9	50	38.9	68	22.7
74	North Dakota	USA	18.8	72	26.1	69	29.6	75	21.6
75	South Carolina	USA	18.2	67	28.1	78	23.9	74	21.7
76	Campania	ITA	17.5	90	12.5	84	17.8	55	31.2
77	Louisiana	USA	17.3	22	52.2	87	15.6	95	8.6
78	Alabama	USA	16.3	75	24.0	91	13.3	65	23.4
79	Aosta Valley	ITA	15.4	84	19.2	76	24.9	71	22.4
80	Montana	USA	15.2	54	32.0	94	9.4	87	17.2
81	Basilicata	ITA	15.1	87	16.3	41	43.2	78	20.3
82	Oklahoma	USA	14.9	79	23.0	58	35.1	86	17.5
83	New Brunswick	CAN	14.4	80	22.9	60	32.8	88	17.0
84	Newfoundland and Labrador	CAN	13.7	92	12.1	61	32.5	73	21.8
85	Hawaii	USA	13.4	66	28.3	95	8.9	90	15.0
86	Molise	ITA	13.2	91	12.4	93	13.0	62	25.8
87	Saskatchewan	CAN	12.8	62	29.4	92	13.1	89	15.2
88	Sardinia	ITA	12.2	89	12.8	90	14.6	66	23.1
89	South Dakota	USA	11.9	88	16.1	45	40.8	92	13.4
90	Alaska	USA	11.6	82	20.4	73	26.5	94	11.3
91	Arkansas	USA	9.0	86	17.3	71	27.2	91	14.2
92	Apulia	ITA	8.6	93	7.7	88	14.9	77	20.8
93	West Virginia	USA	8.2	83	19.3	29	51.5	96	4.8
94	Sicily	ITA	7.0	96	4.9	89	14.8	81	20.0
95	Calabria	ITA	5.8	95	5.2	96	5.2	82	20.0
96	Mississippi	USA	4.9	94	6.2	56	36.0	93	11.4
30	<b>Median German state</b>		44.1	37	41.5	31	50.6	24	46.9
47	<b>Median U.S. state</b>		33.8	41	39.3	56	36.3	51	32.9
61	<b>Median Italian region</b>		24.9	77	23.7	53	37.5	53	32.2
72	<b>Median Canadian province</b>		21.1	60	30.2	51	38.8	68	22.8

Overall Rank	Region	Country	Overall Score	Knowledge Rank	Knowledge Score	Globalization Rank	Globalization Score	Capacity Rank	Capacity Score
28	<b>Average German state</b>		50.4	32	49.9	34	53.5	28	51.1
47	<b>Average U.S. state</b>		35.6	44	41.9	53	39.3	51	36.1
60	<b>Average Canadian province</b>		27.5	50	38.1	44	45.6	64	26.2
62	<b>Average Italian region</b>		25.2	73	22.6	52	40.6	51	32.8

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