Executive Version

Global Innovation Index 2025

WIPO

Welcome to the 18th edition of WIPO's flagship Global Innovation Index (GII), which takes the pulse of innovation across 139 economies, providing a useful resource for government, industry, researchers and anyone with a stake in developing innovation ecosystems around the world. It also ranks the world's top 100 innovation clusters, with venture capital data integrated for the first time, sharpening the focus on the world's most dynamic innovation ecosystems.

Daren Tang
Director General
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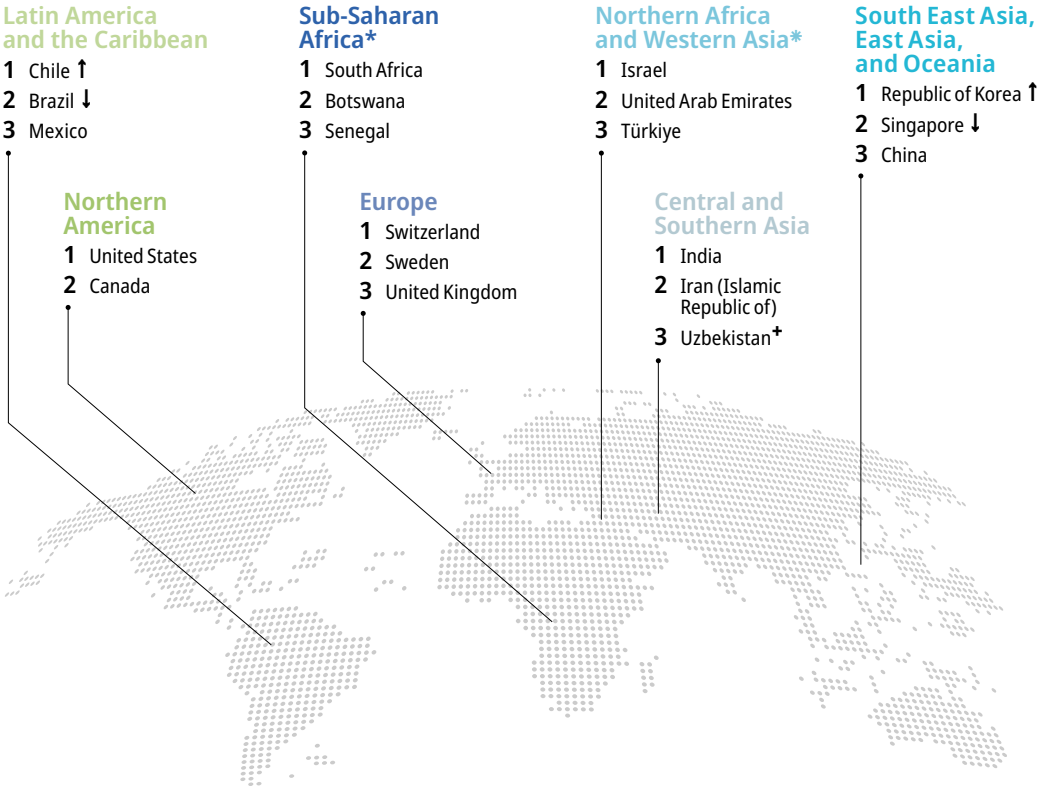
GII 2025 at a glance

The Global Innovation Index 2025 provides comprehensive analysis of innovation ecosystems across 139 economies, tracking global innovation trends through investment patterns, technological progress, adoption rates, and socioeconomic impacts.

Global leaders in innovation, 2025

Top three innovation economies by region



Top three innovation economies by income group

High-income	Upper middle-income	Lower middle-income	Low-income ^
1 Switzerland	1 China	1 India	1 Rwanda
2 Sweden	2 Malaysia	2 Viet Nam	2 Togo
3 United States	3 Türkiye	3 Philippines	3 Uganda

\+ Indicates a new entrant into the top three in 2025.
↑↓ Indicates movement in rank (up or down) within the top three, relative to 2024.
* Top three in Sub-Saharan Africa (SSA) – excluding island economies. The top five in the region, including all economies, comprise Mauritius (1st), South Africa (2nd), Seychelles (3rd), Botswana (4th) and Senegal (5th).
❋ Top three in Northern Africa and Western Asia (NAWA) – excluding island economies. The top four in the region, including all economies, are as follows: Israel (1st), Cyprus (2nd), United Arab Emirates (3rd) and Türkiye (4th).
^ Top three in the low-income group – excluding island economies. The top four in the low-income group, including all economies are as follows: Rwanda (1st), Togo (2nd), Madagascar (3rd), and Uganda (4th).

Source: Global Innovation Index Database, WIPO, 2025.

Global Innovation Index 2025 rankings

GII rank	Economy	Score	Income group rank	Region rank
1	Switzerland	66.0	1	1
2	Sweden	62.6	2	2
3	United States	61.7	3	1
4	Republic of Korea	60.0	4	1
5	Singapore	59.9	5	2
6	United Kingdom	59.1	6	3
7	Finland	57.7	7	4
8	Netherlands (Kingdom of the)	57.0	8	5
9	Denmark	56.9	9	6
10	China	56.6	1	3
11	Germany	55.5	10	7
12	Japan	53.6	11	4
13	France	53.4	12	8
14	Israel	52.3	13	1
15	Hong Kong, China	51.5	14	5
16	Estonia	51.1	15	9
17	Canada	51.1	16	2
18	Ireland	50.4	17	10
19	Austria	50.1	18	11
20	Norway	49.2	19	12
21	Belgium	48.5	20	13
22	Australia	48.0	21	6
23	Luxembourg	47.3	22	14
24	Iceland	47.0	23	15
25	Cyprus	45.5	24	2
26	New Zealand	45.5	25	7
27	Malta	45.4	26	16
28	Italy	44.9	27	17
29	Spain	44.6	28	18
30	United Arab Emirates	44.2	29	3
31	Portugal	43.9	30	19
32	Czech Republic	42.0	31	20
33	Lithuania	40.8	32	21
34	Malaysia	40.6	2	8
35	Slovenia	40.1	33	22
36	Hungary	40.0	34	23
37	Bulgaria	39.1	35	24
38	India	38.2	1	1
39	Poland	37.7	36	25
40	Croatia	37.7	37	26
41	Latvia	37.5	38	27
42	Greece	37.4	39	28
43	Türkiye	37.2	3	4
44	Viet Nam	37.1	2	9
45	Thailand	36.7	4	10
46	Saudi Arabia	36.0	40	5
47	Slovakia	35.5	41	29
48	Qatar	34.6	42	6
49	Romania	34.3	43	30
50	Philippines	33.6	3	11
51	Chile	33.1	44	1
52	Brazil	32.9	5	2
53	Mauritius	32.5	6	1
54	Serbia	31.7	7	31
55	Indonesia	31.3	8	12
56	Georgia	31.2	9	7
57	Morocco	31.1	4	8
58	Mexico	30.5	10	3
59	Armenia	30.5	11	9
60	Russian Federation	30.3	45	32
61	South Africa	30.1	12	2
62	Bahrain	30.0	46	10
63	North Macedonia	29.8	13	33
64	Montenegro	29.8	14	34
65	Jordan	29.7	5	11
66	Ukraine	29.7	15	35
67	Albania	29.6	16	36
68	Uruguay	28.8	47	4
69	Oman	28.7	48	12
70	Iran (Islamic Republic of)	28.5	17	2
71	Colombia	28.5	18	5
72	Costa Rica	28.4	19	6
73	Kuwait	28.2	49	13
74	Republic of Moldova	27.4	20	37
75	Seychelles	27.2	50	3
76	Tunisia	27.0	6	14
77	Argentina	26.8	21	7
78	Mongolia	26.7	22	13
79	Uzbekistan	26.5	7	3
80	Peru	26.5	23	8
81	Kazakhstan	26.3	24	4
82	Panama	25.9	51	9
83	Jamaica	25.2	25	10
84	Barbados	25.1	52	11
85	Belarus	25.1	26	38
86	Egypt	24.7	8	15
87	Botswana	24.6	27	4
88	Brunei Darussalam	24.5	53	14
89	Senegal	23.8	9	5
90	Lebanon	23.6	10	16
91	Namibia	23.5	28	6
92	Bosnia and Herzegovina	23.4	29	39
93	Sri Lanka	22.9	11	5
94	Azerbaijan	22.9	30	17
95	Cabo Verde	22.6	12	7
96	Kyrgyzstan	22.6	13	6
97	Dominican Republic	22.6	31	12
98	El Salvador	22.2	32	13
99	Pakistan	22.1	14	7
100	Cambodia	22.0	15	15
101	Ghana	21.9	16	8
102	Kenya	21.4	17	9
103	Paraguay	21.4	33	14
104	Rwanda	21.1	1	10
105	Nigeria	21.1	18	11
106	Bangladesh	21.0	19	8
107	Nepal	20.2	20	9
108	Tajikistan	20.2	21	10
109	Lao People's Democratic Republic	20.1	22	16
110	Côte d'Ivoire	19.7	23	12
111	Bolivia (Plurinational State of)	19.6	24	15
112	Zambia	19.6	25	13
113	Ecuador	19.5	34	16
114	Trinidad and Tobago	19.3	54	17
115	Algeria	18.9	35	18
116	Cameroon	18.2	26	14
117	Togo	18.1	2	15
118	Benin	17.8	27	16
119	Honduras	17.7	28	18
120	Madagascar	17.6	3	17
121	United Republic of Tanzania	17.5	29	18
122	Myanmar	17.3	30	17
123	Guatemala	17.1	36	19
124	Uganda	17.1	4	19
125	Malawi	16.0	5	20
126	Burkina Faso	15.9	6	21
127	Burundi	15.8	7	22
128	Mozambique	15.4	8	23
129	Zimbabwe	15.4	31	24
130	Nicaragua	15.4	32	20
131	Mauritania	15.4	33	25
132	Lesotho	14.9	34	26
133	Guinea	14.9	35	27
134	Ethiopia	14.4	9	28
135	Mali	14.0	10	29
136	Venezuela (Bolivarian Republic of)	13.7		21
137	Congo	13.6	36	30
138	Angola	13.0	37	31
139	Niger	11.9	11	32

Low-income
Lower middle-income
Upper middle-income
High-Income

Sub-Saharan Africa
Central and Southern Asia
South East Asia, East Asia, and Oceania
Nothern Africa and Western Asia

Latin America and the Caribbean
Northern America
Europe

Note: The World Bank classified Venezuela (Bolivarian Republic of) as an upper-middle income economy until 2021 and has been unclassified since then due to the unavailability of data.

Source: Global Innovation Index Database, WIPO, 2025.

Innovation performance at different income levels, 2025

High-income group	Upper middle-income group	Lower middle-income group	Low-income group
Performance above expectation for level of development			
Switzerland	China	India	Rwanda
Sweden	Thailand	Viet Nam	Madagascar
United States	Brazil	Philippines	Malawi
Republic of Korea	Indonesia	Morocco	Burundi
United Kingdom	South Africa	Jordan	
Finland	Ukraine	Tunisia	
Netherlands (Kingdom of the)		Uzbekistan	
Denmark		Senegal	
Germany			
Japan			
France			
Israel			
Estonia			
Canada			
Performance in line with level of development			
Singapore	Malaysia	Egypt	Togo
Hong Kong, China	Türkiye	Lebanon	Uganda
Ireland	Mauritius	Sri Lanka	Burkina Faso
Austria	Serbia	Cabo Verde	Mozambique
Norway	Georgia	Kyrgyzstan	
Belgium	Mexico	Pakistan	
Australia	Armenia	Cambodia	
Iceland	North Macedonia	Ghana	
Cyprus	Montenegro	Kenya	
New Zealand	Albania	Nigeria	
Malta	Iran (Islamic Republic of)	Bangladesh	
Italy	Colombia	Nepal	
Spain	Republic of Moldova	Tajikistan	
United Arab Emirates	Mongolia	Lao People's Democratic Republic	
Portugal	Peru	Côte d'Ivoire	
Czech Republic	Jamaica	Zambia	
Lithuania	Botswana	Cameroon	
Slovenia	Namibia	Benin	
Hungary	El Salvador	United Republic of Tanzania	
Bulgaria			
Poland			
Croatia			
Latvia			
Greece			
Chile			
Barbados			
All other economies			
Luxembourg	Costa Rica	Bolivia (Plurinational State of)	Ethiopia
Saudi Arabia	Argentina	Honduras	Mali
Slovakia	Kazakhstan	Myanmar	Niger
Qatar	Belarus	Zimbabwe	
Romania	Bosnia and Herzegovina	Nicaragua	
Russian Federation	Azerbaijan	Mauritania	
Bahrain	Dominican Republic	Lesotho	
Uruguay	Paraguay	Guinea	
Oman	Ecuador	Congo	
Kuwait	Algeria	Angola	
Seychelles	Guatemala		
Panama			
Brunei Darussalam			
Trinidad and Tobago			

Note: The World Bank classified Venezuela (Bolivarian Republic of) as an upper-middle income economy until 2021 and has been unclassified since then due to the unavailability of data.

Source: Global Innovation Index Database, WIPO, 2025.

Key takeaways

1. In 2024, innovation investments largely positive – except for venture capital. Yet, innovation investment growth is at an historically low level

In 2024, innovation investments are largely positive – except for venture capital. Yet, innovation investment growth is at an historically low level. After the downturn of 2023, innovation investment showed signs of recovery in 2024 – but the recovery remains fragile; most innovation investments are below the long-term growth trend.

Global Innovation Tracker Dashboard

Science and innovation investment

	Scientific publications	R&D investments		Venture capital		International patent filings
		Global total	Top corporate R&D spenders	Deal numbers	Deal values	
Short term	5.6% 2023→2024	2.9%* 2023→2024	3.2%* 2023→2024	↓ –4.4% 2023→2024	7.7% 2023→2024	0.5% 2023→2024

Technological progress

	Computing power		Costs of renewable energy		Electric battery price	Cost of genome sequencing	Drug approvals
	Moore's Law	Green supercomputers	Solar photovoltaic	Wind			
Short term	36.9% 2022→2024	65.7% 2023→2024	–12.4% 2022→2023	–3.4% 2022→2023	–20.1% 2023→2024	↓ –11.1%* 2022→2024	↓ –18.8% 2023→2024

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric cars	High-speed rail network	Cancer radiotherapy
		Fixed broadband	5G				
Short term	1.2% 2023→2024	6.3% 2023→2024	15.1% 2023→2024	9.7% 2022→2023	45% 2023→2024	5.1% 2022→2023	1.3% 2023→2024

Socioeconomic impact

	Labor productivity	Poverty	Life expectancy	Global warming
Short term	2.5% 2023→2024	–0.6% 2023→2024	0.7% 2022→2023	↓ +1.29°C 2024

Notes: See the Data notes at the end of this section for a definition of the indicators and their data sources. Historic data may have been updated and might differ from last year's Global Innovation Tracker. Figures are rounded. Estimates or incomplete data are indicated by an asterisk (*). Short-term rates for Moore's Law and the cost of genome sequencing refer to the CAGR between 2022 and 2024.

Source: Global Innovation Index Database, WIPO, 2025.

Below we note historical trends (2013-2024) highlighted in the Global Innovation Tracker as follows: ↑ Recent growth above the 10-year trend; ↗ Growth is continuing but below the historical trend; ↘ Declining levels.

↑ **Overall picture more positive in 2024:** Compared to previous GII editions, where results were more mixed, this year the picture appears more uniformly positive. Overall, only three indicators – venture capital (VC) deal counts, drug launches and global warming – overall are in decline in 2024.

↑ **Scientific publications surge:** Research output hit a record-breaking 2 million articles in 2024, driven by China's remarkable 14 percent growth and India's solid 7.6 percent increase. The global science engine is running strong.

↗ **R&D grows – but at the slowest pace since 2010:** Global R&D spending is projected to rise by 2.9 percent in 2024 – a slowdown from the 4.4 percent increase recorded in 2023 and the lowest rate since 2010. Public R&D showed a modest recovery, while business R&D outside of the United States and China grew only 1.4 percent, reflecting weak momentum in many high-income and middle-income economies.

↗ **Corporate R&D at a record high, yet slowing sharply:** Corporate R&D spending reached a record USD 1.3 trillion in 2024. However, growth in nominal terms slowed to 3.2 percent – or 1 percent in real terms – far below the 8 percent average for the past decade. The contrast is sectoral: ICT-related firms (particularly within AI-intensive sectors), and software and pharmaceutical firms expanded R&D budgets, whereas traditional manufacturing firms, such as the automotive sector and consumer goods, cut R&D spending, often in response to harshly reduced company revenues.

↘ **Venture capital: still in a downturn – outside of AI and the United States**: VC investment showed a deceptive rebound. Deal values rose 7.7 percent in 2024, largely driven by US-based megadeals and surging investment in generative AI. However, excluding these, VC activity would have contracted. Most tellingly, the number of VC deals fell 4.4 percent globally – a third consecutive year of decline – signaling persistent investor caution outside a narrow set of sectors and geographies. VC, which had been gradually expanding into a wider set of non-ICT sectors and emerging markets, now appears to be retreating back its traditional core – namely, the United States and AI- and ICT-related investments. This marks a missed opportunity to sustain the earlier momentum toward broader sectoral and geographical diversification.

↗ **International patent filings stabilize – but growth is low:** Following a rare decline in 2023, patent filings increased slightly by 0.5 percent in 2024. Growth remains fragile, with wide disparities across countries and regions, and filing growth soft.

In sum, only scientific publications are truly thriving. Most innovation investments show positive but below-trend growth, while VC deal numbers are in decline.

2. Technology has advanced rapidly, while adoption slowed

Technology advanced on almost every front in 2024, with only novel drug development moving backward. Supercomputing efficiency and battery prices led the charge with impressive gains, though progress in wind power and genome sequencing could not match the dramatic improvements of the past decade.

↑ **Supercomputing leaps forward**: Green supercomputer efficiency soared over 60 percent, showcasing the relentless march of computational power and energy efficiency.

↑ **Battery revolution accelerates**: Battery prices plummeted 20 percent, accelerating the clean energy transition and making electric vehicles more accessible.

↑ **Moore's Law defies doubters**: Transistor counts grew 37 percent, staying remarkably close to the decade-long trend that many predicted would falter.

↗ **Solar power dominance**: Solar power costs have dropped 90 percent since 2010, making it now 56 percent cheaper than fossil fuels, with renewable energy costs continuing on a downward trajectory.

↗ **Genomics advances**: Genome sequencing costs continue to fall, opening new possibilities for personalized medicine and biological research.

↘ **Drug development challenges**: Drug approvals declined 19 percent, reflecting the innate complexity of pharmaceutical innovation, despite technological advances.

In sum, technological progress remains robust across all fields, with the exception of drug approvals, and is particularly strong in computing and energy technology.

While technology adoption expanded across all indicators in 2024, every single metric fell short of its long-term growth trend – a clear signal that adoption momentum is decelerating, despite continued technological progress.

↗ **Electric vehicle expansion**: Global Electric Vehicle (EV) stock grew by 18 million units (+45 percent), but growth is notably decelerating in key markets, with China and emerging economies increasingly driving adoption.

↗ **5G reaches half the world**: 5G now covers half the world's population, yet expansion has slowed and access remains starkly unequal between regions.

↗ **Industrial progress**: Robots have gained important ground in the last few years, while high-speed rail has gained ground, but only modestly, led largely by China; and – both – at rates below historical trends from 2023 to 2024.

↗ **Health and infrastructure**: Progress continues in safe sanitation and cancer therapy technologies, but faces persistent infrastructure gaps in lower-income economies.

In sum, technology adoption is broad-based, but showing clear signs of slowing momentum. High costs, regional disparities, and market maturation are creating headwinds even as the underlying technologies continue to improve rapidly. At the same time, for relatively new technologies, it is only natural that growth diminishes over time and after initial rapid expansion: as the base grows, percentage increases fall (thus explaining the growth below the historical trend). But this is not necessarily the full story: take the example of electric vehicles; the slowdown comes way before even medium levels of penetration are attained; other inhibitors – such as the removal of subsidies, a change in attitudes, etc. – are at stake.

3. Socioeconomic impact of innovation is once again largely positive

Innovation is delivering tangible improvements in human welfare and economic performance, with the recovery from COVID-19 disruption firmly on track. The overall impact story is positive despite some environmental concerns.

↑ **Productivity surge**: Labor productivity rose 2.5 percent in 2024, exceeding its 10-year trend.

↑ **Life expectancy increases**: Global life expectancy continues its upward trajectory to reach 73 years, with solid recovery from the COVID-19 shock demonstrating the resilience of health systems and medical innovation.

↗ **Poverty reduction continues**: Extreme poverty fell to 817 million people in 2024, less than half the total in 2004, representing sustained progress in one of humanity's greatest challenges.

↘ **Global heating continues**: Global temperatures set a new record in 2024 and are on track to break that record once again in 2025, though CO_2 emissions are starting to decline among major emitters like the United States and the European Union.

The socioeconomic impact of innovation remains largely positive, with strong gains in productivity, health outcomes, and poverty reduction. While climate challenges persist, the overall trajectory shows innovation delivering meaningful benefits to human welfare.

In conclusion, we are seeing record-breaking research output and technological breakthroughs, yet investment patterns suggest increasing caution and selectivity. The path forward requires navigating this new reality – maintaining the momentum of scientific discovery while addressing the uneven distribution of benefits and the urgent environmental challenges that innovation must help solve.

4. Switzerland, Sweden, the United States of America, the Republic of Korea, and Singapore are the top-ranked economies; China joins the top 10

- Switzerland (1st), Sweden (2nd) and the United States (3rd) remain the top innovation economies in 2025. The Republic of Korea (4th) reaches its highest rank ever. Singapore (5th) rounds out the top five, leading globally in 10 innovation indicators. These top performers share common strengths: high R&D intensity, world-class institutions, a strong educational system and a strongly innovative private sector.
- China enters the top 10 for the first time (ranking 10th). It overtakes Switzerland in Knowledge and technology outputs, ranks 2nd in R&D expenditure, and leads in patent filings. Independently, it also hosts some of the top innovation clusters globally.
- Among other high performers that have improved their innovation ranking are Japan (12th) – its best result since 2011 – along with Israel (14th), and Hong Kong, China (15th).

5. A wave of middle-income economies – led by India, Türkiye, Viet Nam, the Philippines, Indonesia, Morocco, Albania, and the Islamic Republic of Iran – continue their climb since 2013, Saudi Arabia, Qatar, Brazil, Mauritius, Bahrain and Jordan show gains since 2019

- China (10th), India (38th), Türkiye (43rd), Viet Nam (44th), the Philippines (50th), Indonesia (55th), Morocco (57th), Albania (67th) and the Islamic Republic of Iran (70th) are the middle-income economies within the GII top 70 which have climbed fastest in the ranking since 2013.
  - The Philippines climbs to 50th, and into the top 50; it ranks 1st in high-tech exports.
  - Morocco (57th) posts its best result ever, rising nine places, thanks to strong industrial designs, education investment, and intangible asset development.
- Since 2019, Saudi Arabia (46th), Qatar (48th), Brazil (52nd), Mauritius (53rd), Bahrain (62nd) and Jordan (65th) have been the fastest innovation climbers.
- A growing number of other middle- and low-income economies are steadily improving, thanks to focused investments into education, digital infrastructure, and business sophistication. Among them:
  - Tunisia (76th) and Uzbekistan (79th) continue on an upward trend, with the latter recognized as an overperformer for a fourth year in a row.
  - Senegal (89th), Rwanda (104th) and newcomer Malawi (125th) show growing innovation capacity, especially in business sophistication, and knowledge absorption.

6. Singapore, the United States, Israel and Hong Kong, China, lead the world in specific innovation fields

- Singapore leads globally in the number of GII indicators ranked 1st – 10 out of 78 – including High-tech manufacturing, Unicorn valuation, and GitHub commits.
- The United States ranks 1st on nine indicators, notably in Late-stage VC deals, Software spending, and Intangible asset intensity.
- Israel and Hong Kong, China, both rank 1st globally in seven indicators, Israel tops in VC received, while Hong Kong, China, leads in FDI inflows.
- Among upper and lower middle-income economies, Namibia (91st) tops Education expenditure, Nigeria (105th) ranks 1st in Unicorn valuation, and Malaysia leads in Graduates in science and engineering.
- Cambodia (100th) and Nepal (107th) remain leaders in Loans from microfinance penetration, while the Philippines and Viet Nam (44th) continue to excel in High-tech exports.

7. Regional leaders are Switzerland, the United States, Chile, India, the Republic of Korea, Israel and Mauritius; Switzerland, China, India and Rwanda lead their respective income groups

- In Europe, Switzerland, Sweden and the United Kingdom top the rankings.
- In Eastern Europe and the Baltics, Estonia (16th), Lithuania (33th) and Latvia (41st) showcase the power of digital readiness, education and having a vibrant startup ecosystem.
- In Northern America, the United States (3rd) leads, followed by Canada (17th).
- South East Asia, East Asia, and Oceania is led by the Republic of Korea (4th), Singapore (5th) and China (10th), with Japan (12th), Hong Kong, China (15th), and Australia (22nd) close behind.
- India (38th) leads Central and Southern Asia, ahead of the Islamic Republic of Iran (70th) and Uzbekistan (79th). For the first time, this region surpasses Latin America and the Caribbean in the regional rankings, driven by strong innovation outputs from India, Uzbekistan and Kazakhstan (81st).
- In Northern Africa and Western Asia, Israel (14th) leads, followed by Cyprus (25th), the United Arab Emirates (30th), Türkiye (43rd) and Saudi Arabia (46th). Morocco (57th) achieves its highest-ever rank.
- Innovation is advancing across the Middle East, with Bahrain (62nd), Jordan (65th) and Oman (69th) among this year's fastest climbers, benefitting from better infrastructure, growing R&D and improving linkages between business and academia.
- Chile (51st) leads Latin America and the Caribbean, followed by Brazil (52nd) and Mexico (58th).

- Mauritius (53rd) leads Sub-Saharan Africa, ahead of South Africa (61st), Seychelles (75th), Botswana (87th) and Senegal (89th).
- By income group, China (10th) leads upper middle-income economies, India (38th) the lower middle-income group and Rwanda (104th) the low-income group.

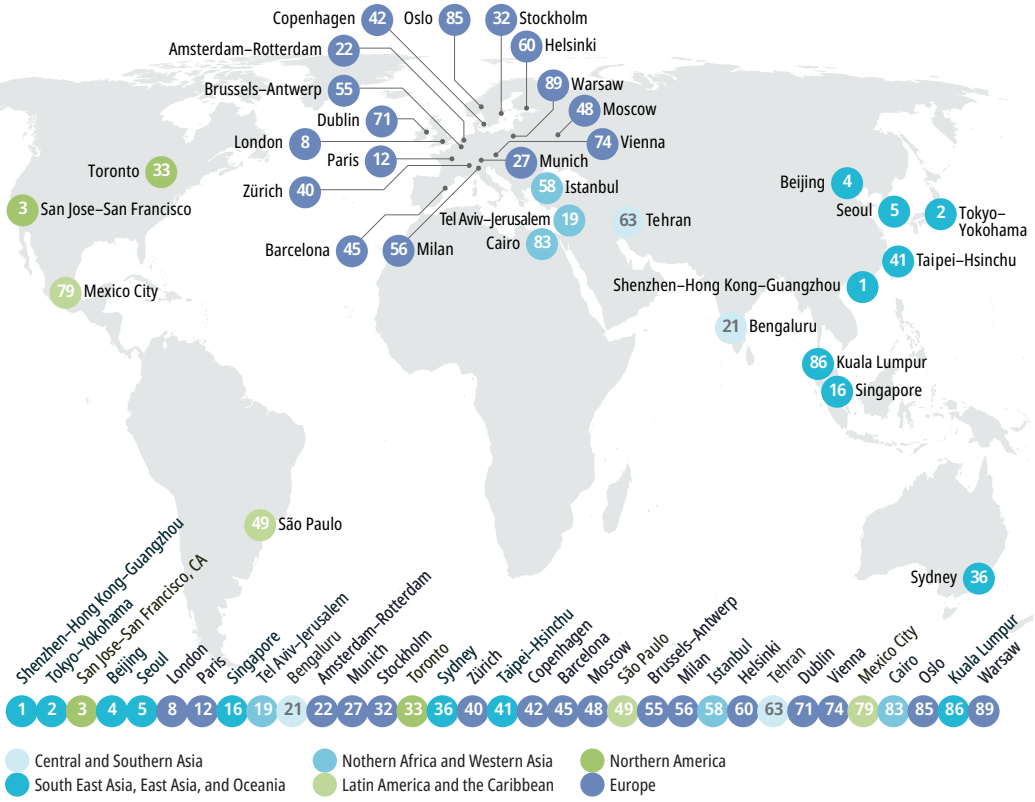
8. Seventeen middle- and low-income economies are innovation overperformers

- India and Viet Nam remain the longest-standing overperformers, performing above expectation for their level of development for the 15th year, with Rwanda and Ukraine close behind.
- Brazil, Indonesia, Morocco, South Africa, Uzbekistan and Senegal maintain their overperformer status, joined in 2025 by Tunisia and Malawi.
- Overperformers are found in all regions, with the highest number in Sub-Saharan Africa, followed by South East Asia, East Asia and Oceania and Northern Africa and Western Asia.
- In contrast, 38 economies underperform in 2025 relative to their level of development, with most located in Latin America and the Caribbean.

9. The world's top innovation clusters span six out of seven continents, with Shenzhen–Hong Kong–Guangzhou leading globally

- This year's top GII 100 innovation cluster ranking methodology incorporates venture capital (VC) deal data as a third metric alongside patent filings and scientific publications, better capturing entrepreneurial activity and innovation finance.
- Following this new approach, Shenzhen–Hong Kong–Guangzhou (China and Hong Kong, China) tops the global rankings, followed by Tokyo–Yokohama (Japan), San Jose–San Francisco (United States), Beijing (China) and Seoul (Republic of Korea). New York City, London and Los Angeles now join the top 10, propelled by the inclusion of VC as a new variable and their performance in this metric.

Top innovation cluster by economy or cross-border region ranked among the top 100, 2025



Note: Circles with numbers show cluster ranks.
Source: Global Innovation Index Database, WIPO, 2025.

- China, for a third consecutive year, leads with the most clusters (24) within the top 100. The United States follows closely with 22 clusters, then Germany with seven, and India and the United Kingdom with four each.
- São Paulo (Brazil); Cairo (Egypt), the sole top 100 innovation cluster within Africa; Bengaluru, Delhi, Mumbai and Chennai (India); Tehran (Islamic Republic of Iran); Kuala Lumpur (Malaysia) and its cross-border cluster shared with Singapore; Istanbul (Türkiye); and newcomer Mexico City (Mexico) are the middle-income economy clusters outside of China that are within the top 100. Three of India's four clusters achieved remarkable advances relative to last year's cluster ranking also benefiting from the inclusion of VC activity into the mix: Bengaluru rose to 21st, Delhi to 26th, and Mumbai to 46th position.
- The top 100 innovation clusters demonstrate strong concentration, collectively accounting for roughly 70 percent of global PCT filings and VC deal activity, and about half of all scientific publications. The leading 10 clusters alone generate around 40 percent of PCT filings and 35 percent of VC deal activity.
- Ten clusters entered the top 100 for the first time, including three in the United States (Miami; Phoenix; Salt Lake City), two in China (Ningbo; Ningde); three economies are represented in the top 100 for the first time owing to the inclusion of the following innovation clusters: Dublin (Ireland), Mexico City (Mexico) and Oslo (Norway).

10. San Jose–San Francisco is the most innovation-intensive cluster worldwide

- San Jose-San Francisco (United States) and Cambridge (United Kingdom) are the two most innovation-intensive clusters relative to population density. Boston-Cambridge (United States), Ningde (China) and Oxford (United Kingdom) follow.
- Ningde's remarkable rise to fourth place globally is driven by Contemporary Amperex Technology Co., Limited (CATL), a global leader in energy technologies.
- Helsinki (Finland) ranks ninth as the highest-ranking European Union cluster by intensity.

GII 2025 results

The GII unveils the world's innovation leaders and measures the performance of 139 economies.

This results section showcases the leading findings from the Global Innovation Index (GII) 2025, highlighting the top-performing economies across income groups and world regions. It identifies who are innovation leaders and who are the innovation overperformers achieving results beyond expectations.

The GII 2025 rankings primarily reflect data from 2023 to 2025 (representing approximately 80 percent of all data points). Appendix I provides comprehensive guidance on how to properly interpret these results, explaining the methodological considerations that affect a direct comparison being made between annual rankings.

Innovation leaders in 2025

Switzerland remains the world's innovation leader in 2025. China enters the top 10 for the first time, while middle-income economies – India, Türkiye, Viet Nam, the Philippines, Indonesia, Morocco, Albania and Iran – are the fastest climbers since 2013.

Switzerland tops the Global Innovation Index (GII) for a 15th consecutive year (Figure 1). It remains the global leader in the Creative outputs pillar and secures a top five position across all other pillars, except for Human capital and research (6th).

Sweden and the **United States of America** retain their 2nd and 3rd positions for the third year in a row.

Sweden ranks 2nd globally in both Business sophistication and Creative outputs and leads in the indicators Researchers (1st), Global brand value (2nd), Gross expenditure on R&D (3rd) and Knowledge-intensive employment (3rd).

The United States holds the top spot in both Market and Business sophistication. It leads in gross expenditure on R&D (4th), in Global corporate R&D investors (1st) and performs exceptionally well in R&D performed and financed by business (4th and 5th, respectively), underscoring the central role of the private sector in driving innovation. It is backed by having one of the world's largest Domestic market scales (2nd), robust Domestic credit to the private sector (4th) and dynamic startup funding. However, its performance in Infrastructure (32nd) remains lower in comparison. The United States is also home to 22 innovation clusters, characterized by having a high level of Venture Capital (VC) activity, vibrant startup ecosystems and close ties between universities and industry (Clusters section). The San Jose–San Francisco cluster ranks 3rd globally and leads in innovation intensity (1st), driven by Silicon Valley's tech giants and strong patent and VC output.

The **Republic of Korea** climbs to 4th place in 2025 – its highest position to date. It leads globally in the Human capital and research pillar and ranks among the top three worldwide for Researchers (2nd), overall R&D expenditure (2nd), R&D performed by business (1st), Researchers in businesses (1st), and PCT patents by inventor origin (3rd).

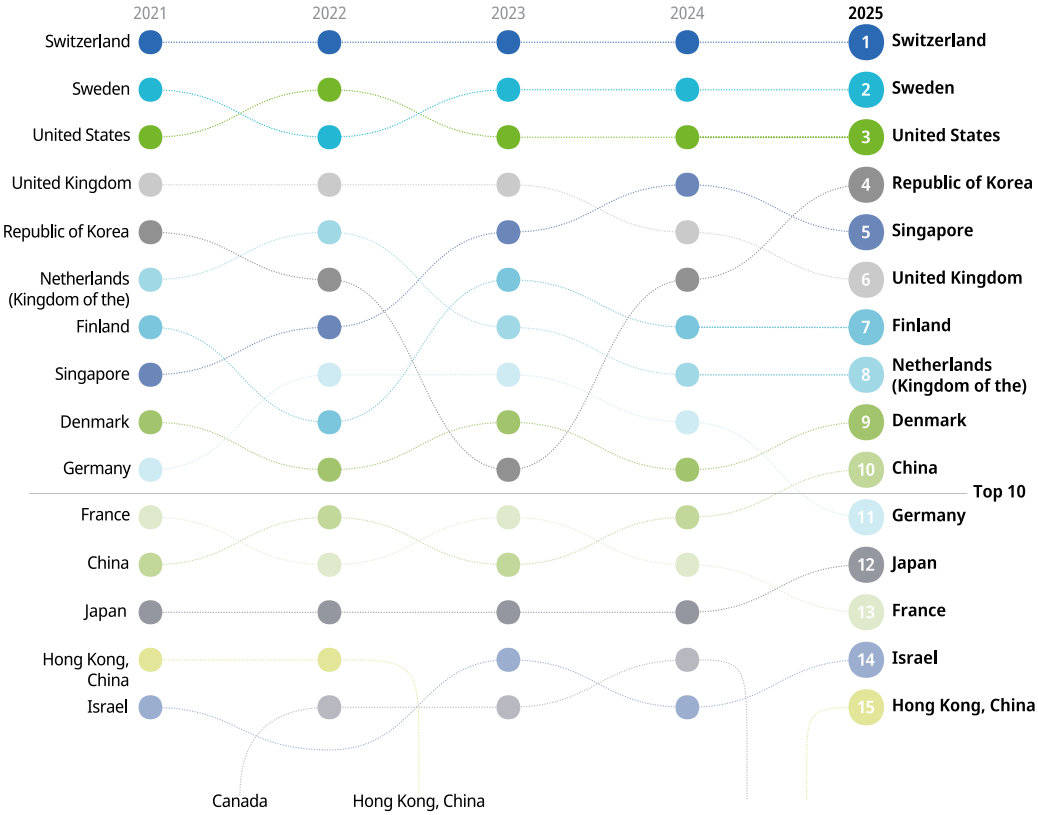
Singapore remains within the top 5, despite slipping down one rank to 5th in 2025. It maintains its position as the economy with the greatest number of GII indicators ranked 1st globally (10 out of 78), ahead of both the United States and China. Singapore continues to lead in innovation inputs overall, but still trails the top four in Innovation outputs, particularly in Creative outputs (15th).

Finland (7th) and **the Netherlands** (8th) maintain a strong position within the top 10. Finland excels in Infrastructure (3rd), while the Netherlands ranks 6th in Creative outputs, reflecting a balanced innovation ecosystem. Denmark advances one position to 9th, supported by a top-tier performance in Institutions (2nd), ICT access (1st), and Online creativity (5th).

China enters the GII top 10 for the first time, leading globally in Knowledge and technology outputs. As the only middle-income economy within the top 30, China continues to lead its income group and ranks 3rd in its region, behind Singapore and the Republic of Korea. China is set to become the top R&D spender in 2024, according to WIPO estimates. China

leads globally in patent filings and hosts the most top 100 innovation clusters (24), including Shenzhen–Hong Kong–Guangzhou – now ranked 1st – and Beijing, both hotspots for patents, science and, increasingly, VC. Its high-tech exports and position within global value chains continue to strengthen, especially within strategic sectors such as AI, semiconductors and green technologies. While traditionally lagging in terms of private innovation finance, China is quickly closing the gap. It now ranks 2nd in both Late-stage VC deals and business-financed R&D, and 3rd among the world's top corporate R&D investors – underscoring the growing role of its private sector in driving innovation.

Figure 1 The GII dynamo: the top 15 innovators, 2021–2025



Note: Changes in methodology and variations in data availability may affect the year-to-year comparison of GII rankings. The GII model undergoes periodic refinements, which should be a consideration when interpreting longitudinal performance trends.

Source: Global Innovation Index Database, WIPO, 2025.

Japan moves up one position to 12th in 2025 – its highest rank since 2011. It continues to excel in high-technology and R&D, ranking 2nd in Patent families and 3rd in R&D performed by business. Strong results in Business sophistication (6th) further reflect the depth of Japan's industrial innovation capabilities. Israel climbs one position to 14th. It ranks 1st in overall R&D expenditure, VC received, University–industry R&D collaboration, and R&D performed by business, showcasing a vibrant and well-funded innovation ecosystem.

Hong Kong, China rises three positions to 15th – its highest since 2018 – reflecting its enduring strength as a financial and logistics hub. It performs particularly well in Market sophistication (2nd) and Institutions (8th). Moreover, Shenzhen–Hong Kong–Guangzhou is the globally first ranked innovation cluster this year.

Estonia holds 16th place and continues to lead among smaller economies. It ranks 2nd in ICT use and 3rd in Government online services, underscoring its digital leadership. Estonia also leads in VC, ranking 1st in both VC received and VC investors.

Ireland rises one rank to 18th and solidifies its place within the top 20. It continues to benefit from its strong ICT sector, ranking 1st in ICT services exports and Intellectual property (IP) payments, 2nd in Intangible asset intensity, and 3rd in Software spending.

Belgium climbs three positions to 21st – its best result since 2013. It stands out in Business sophistication (10th), with a particularly strong performance in R&D performed by business (6th), Knowledge-intensive employment (11th), Researchers in businesses (11th), and University–industry and international engagement (14th). Australia ranks 22nd and continues its upward trend within the top 25. It performs exceptionally well in university quality (3rd), the impact of its Scientific publications (6th), and Tertiary inbound mobility (5th), reinforcing its appeal as a hub for global talent and research.

Economies soaring to new heights in innovation in 2025

Several economies soar to new heights in innovation in 2025 (Figure 2).

Norway enters the top 20 at 20th place. It leads the world in Infrastructure (1st) and performs strongly in Institutions (9th), supported by a robust innovation input profile.

The **United Arab Emirates** advances to 30th place, in 2025, marking continued progress and its best rank to date. The United Arab Emirates has top-tier rankings in Institutions (7th), Business sophistication (28th), plus a highly internationalized higher education system. It performs well in Business environment (2nd) and remains a benchmark in areas such as ICT access (6th), ICT use (7th) and Government online services (16th).

Croatia (40th) makes it into the top 40.

Figure 2 Economies soaring to new heights in innovation, 2025

Note: Year-on-year comparisons of GII rankings must take into account changes to the GII model that have occurred overtime, as well as data availability.

Source: Global Innovation Index Database, WIPO, 2025.

The **Philippines** (50th) continues to improve, breaking into the top 50, and reinforcing its position as one of the most consistent innovation climbers in South East Asia, East Asia, and Oceania. It also claims 3rd place among lower middle-income economies (Table 1).

A defining strength of the Philippine innovation ecosystem is its integration into global markets and its trade driven economy, that is both producing and absorbing advanced technologies and digital services and increasingly focused on applied innovation. The Philippines leads the world in High-tech exports (1st), ranks 4th in High-tech imports, and performs strongly in Creative goods exports (16th) and ICT services exports (20th). Though infrastructure and R&D spending remain relatively weak, the presence of high-tech manufacturing (20th), a growing production complexity and a budding creative sector – including an increasingly recognized brand landscape, and notable improvements in Intangible asset intensity (35th) – suggest that innovation is being embedded across multiple industries and reflects ongoing progress within knowledge-based sectors.

Morocco climbs to 57th place, joining the top 60 and marking its highest rank to date and major milestone in its long-term innovation trajectory. Morocco's progress reflects its industrial capacity, IP generation, and knowledge investment. At the heart of Morocco's progress is a shift toward high value-added production. Its economy has gradually moved beyond providing raw materials and low-cost manufacturing toward more sophisticated outputs – ranking 12th globally in High-tech manufacturing, which now accounts for nearly 50 percent of its total manufacturing output. The country performs strongly in industrial designs relative to GDP (6th), in Trademarks (24th) and Intangible asset intensity (26th), reflecting a private sector that is increasingly able to build brand value and move up the value chain. It has also top ranks in Expenditure on education (16th) and Labor productivity growth (24th).

Armenia (59th) makes notables strides and enters the top 60.

Bahrain (62nd), **Jordan** (65th) and **Oman** (69th) are making big strides; all three entering the top 70. These economies share a common foundation of strong institutions, expanding infrastructure and a growing pool of human capital. Bahrain shows strong performance in Infrastructure (15th), and particularly in ICT (11th), ranking 1st in ICT access, 11th in ICT use and 23rd in Government online service. It also stands out for having a highly supportive business environment, placing 7th in Entrepreneurship policies and culture, Policy stability for doing business, and Business environment overall. Oman stands out for its human capital, ranking high for its share of Graduates in science and engineering (12th).

Albania (67th) joins the top 70.

Tunisia moves up in the rankings this year, rising to 76th place and entering the top 80. Its 2025 improvement signals a renewed momentum and potential for future gains. Tunisia continues to leverage its strong human capital base and emerging innovation ecosystems, particularly in higher education and science. It holds top ranks for its Graduates in science and engineering (2nd) and its Scientific and technical articles (17th).

Uzbekistan rises to 79th – its best position ever and entering the top 80. It performs well in Labor productivity growth (6th), a sign of rising economic efficiency, and stands out for its growing pool of Graduates in science and engineering (13th). Uzbekistan also shows strength in creating an enabling Business environment, ranking 9th in this sub pillar, and continues to make progress in education financing – ranking 24th in Expenditure on education.

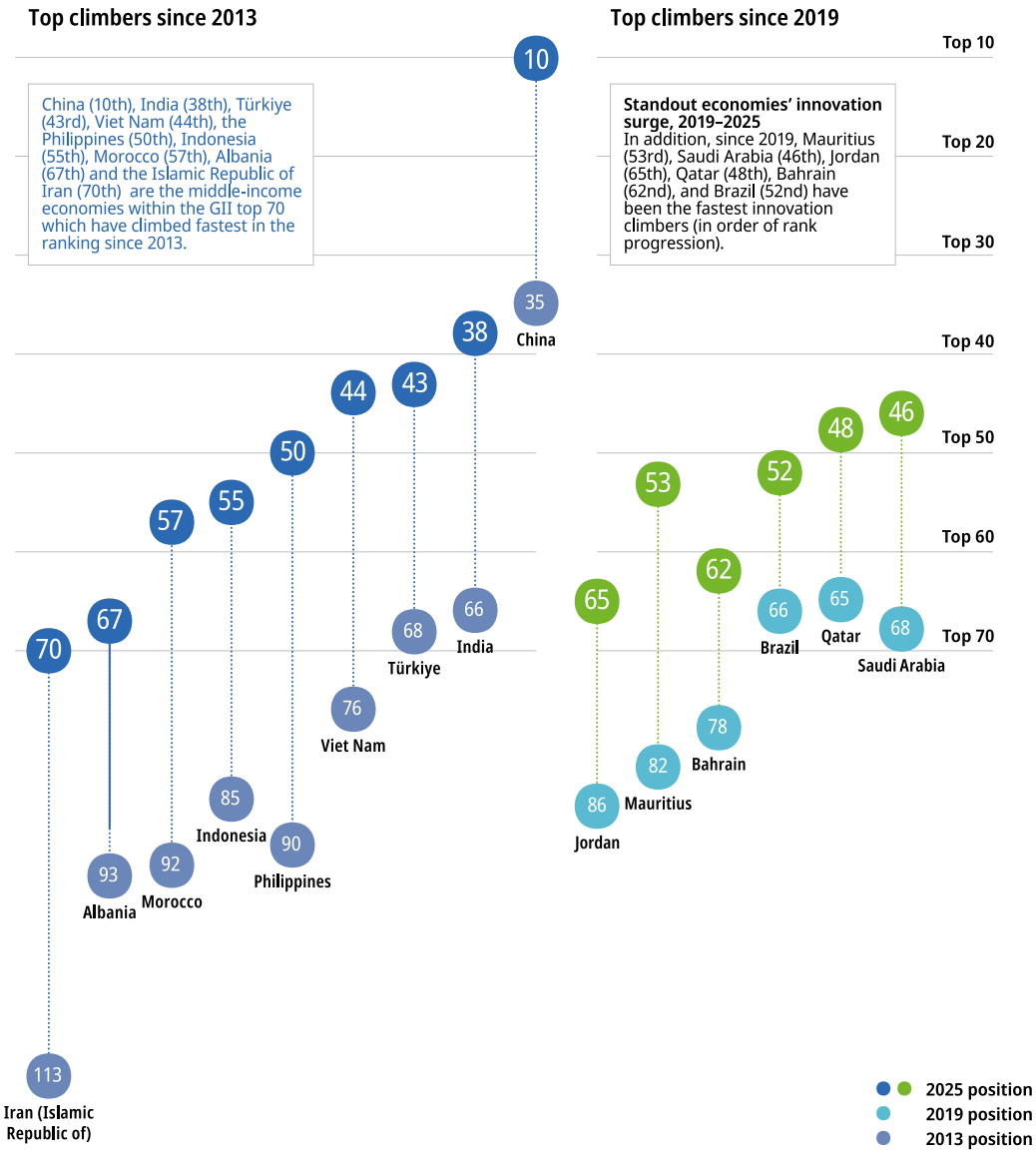
Seychelles (75th) returns to the GII in 2025, re-entering the rankings for the first time since 2015 and landing within the top 80. It establishes itself as one of the stronger performers in Sub-Saharan Africa.

Innovation climbers

China (10th), India (38th), Türkiye (43rd), Viet Nam (44th), the Philippines (50th), Indonesia (55th), Morocco (57th), Albania (67th) and the Islamic Republic of Iran (70th) are the middle-income economies within the GII top 70 which have climbed fastest in the ranking since 2013 (Figure 3).

Since 2019, Saudi Arabia (46th), Qatar (48th), Brazil (52nd), Mauritius (53rd), Bahrain (62nd) and Jordan (65th) have been the fastest innovation climbers. Bahrain and Jordan join this group thanks to progress made in 2025 (Figure 3).

Figure 3 Economies climbing the ladder in global innovation



Note: Year-on-year comparisons of GII rankings must take into account changes to the GII model that have occurred overtime, as well as data availability.

Source: Global Innovation Index Database, WIPO, 2025.

China continues to lead all middle-income economies (Table 1).

India strengthens its lead in Central and Southern Asia, rising to 38th place. It performs exceptionally well in areas such as ICT services exports (1st), Late-stage VC deals (4th), Intangible asset intensity (8th), and Unicorn valuation (11th), reflecting its growing innovation-driven economy.

Brazil ranks 52nd and continues to overperform relative to its level of development, anchored by strong research infrastructure, sustained R&D investment, and strong academic and corporate research capabilities. The São Paulo innovation cluster remains among the top 50 globally, reinforcing Brazil's regional leadership in scientific output and technological development.

Table 1 Top 10 economies by income group

Income Group Rank	GII Rank	Economy	Income Group Rank	GII Rank	Economy
High-income economies (54 in total)			**Upper middle-income economies (36 in total)**		
1	1	Switzerland	1	10	China
2	2	Sweden	2	34	Malaysia
3	3	United States	3	43	Türkiye
4	4	Republic of Korea	4	45	Thailand
5	5	Singapore	5	52	Brazil
6	6	United Kingdom	6	53	Mauritius
7	7	Finland	7	54	Serbia
8	8	Netherlands (Kingdom of the)	8	55	Indonesia
9	9	Denmark	9	56	Georgia
10	11	Germany	10	58	Mexico
Lower middle-income economies (37 in total)			**Low-income economies (11 in total)**		
1	38	India	1	104	Rwanda
2	44	Viet Nam	2	117	Togo
3	50	Philippines	3	120	Madagascar
4	57	Morocco	4	124	Uganda
5	65	Jordan	5	125	Malawi
6	76	Tunisia	6	126	Burkina Faso
7	79	Uzbekistan	7	127	Burundi
8	86	Egypt	8	128	Mozambique
9	89	Senegal	9	134	Ethiopia
10	90	Lebanon	10	135	Mali

Source: Global Innovation Index Database, WIPO, 2025.

Innovation momentum is rising in Northern Africa and Western Asia – especially in the Middle East – and in Sub-Saharan Africa

The Northern Africa and Western Asia region is building innovation momentum in 2025, with 14 economies improving their ranking. In Northern Africa, Morocco climbs nine ranks, marking one of the most significant improvements within the region.

Innovation performance in the Middle East is also gaining ground. The United Arab Emirates advances to 30th place in 2025. Saudi Arabia moves up to 46th, while Qatar (48th) continues its ascent within the top 50. Saudi Arabia and Qatar also benefit from high input scores – ranking 31st and 34th, respectively – driven by strengths in areas such as market sophistication, policy stability, and university–industry collaboration. Qatar stands out for attracting international talent, ranking 1st globally in Tertiary inbound mobility, and shows strong ICT use.

Ten out of the 32 economies from Sub-Saharan Africa covered this year have improved their ranking. Namibia (91st) has made the biggest improvement in the region, followed by South Africa (61st) and Nigeria (105th).

Sub-Saharan Africa leads in the number of economies overperforming on innovation, with six economies: South Africa (61st), Senegal (89th), Rwanda (104th), Madagascar (120th), Malawi (125th), and Burundi (127th). Malawi is a new entrant to this group.

Five Sub-Saharan African economies enter the GII in 2025, thanks to improved data collection: Seychelles (75th), Malawi (125th), Lesotho (132nd), Guinea (133rd) and Congo (137th) (Box 1), with Congo joining for the first time.

Singapore tops the most indicators globally, ahead of the United States and China; middle-income economies like Cambodia, Namibia, Nepal and Nigeria stand out in specific areas

Singapore maintains its leadership position in 2025, ranking 1st globally in 10 out of 78 innovation indicators (Figure 4). It excels in Government effectiveness, Policy stability for doing business, FDI net inflows, Unicorn valuation, High-tech manufacturing, and GitHub commits.

The United States follows closely, ranking 1st worldwide in nine indicators (unchanged from 2024). It leads in Late-stage VC deals, Global brand value, Global corporate R&D investors, Unicorn valuation, Software spending, and Intangible asset intensity. Israel and Hong Kong, China, share third place, each dominating seven innovation indicators. Israel tops indicators that include VC received and Unicorn valuation, while Hong Kong, China, leads in FDI net inflows and University industry and international engagement. China ranks fourth, achieving top position in six indicators, including Creative goods exports, Utility models, Trademarks, and Industrial designs. Iceland and Cyprus tie for fifth place, each ranking 1st in five indicators – Iceland excels in Low-carbon energy use, while Cyprus leads in Mobile app creation.

Several economies demonstrate exceptional performance in specific areas. Namibia leads in Expenditure on education, while Malaysia tops Graduates in science and engineering. Qatar and the United Arab Emirates lead in Tertiary inbound mobility, whereas Saudi Arabia dominates ICT use. Cambodia and Nepal rank 1st in Loans from microfinance institutions, while the Philippines and Viet Nam excel in High-tech exports. Nigeria achieves top position for Unicorn valuation, and India leads in ICT services exports.

Figure 4 Economies with the most GII indicators ranked top, 2025

Economy	Inputs	Outputs	Total
Singapore	6	4	10
United States	3	6	9
Israel	5	2	7
Hong Kong, China	6	1	7
China	2	4	6
Iceland	3	2	5
Cyprus	2	3	5

Note: More than one economy can share the top rank for a given indicator under the GII methodology. For details, see the Economy briefs and profiles and Appendix I.

Source: Global Innovation Index Database, WIPO, 2025.

Box 1 outlines important "dos and don'ts" to bear in mind when using the GII to improve an economy's innovation performance.

Box 1 How to use the Global Innovation Index: a strategic guide

The Global Innovation Index (GII) has grown from a benchmarking tool into a resource for shaping innovation policy used worldwide. According to a 2024 WIPO survey, 77 percent of member states now draw on the GII to inform national innovation strategies – a 20 percent surge from 2022. Uptake spans global regions, and the use of the GII has increased markedly in Africa (from 50 percent to 80 percent), the Arab States (60 percent to 75 percent) and Latin America (68 percent to 75 percent), in particular.

To nurture global engagement at scale, WIPO's GII team conducts up to 60 national and regional events annually, facilitating interministerial task forces across continents. The GII promotes evidence-based policymaking through a two-step methodology:

1. **Data-driven assessment** – Bringing together policymakers, statisticians and innovation actors to analyze national innovation performance.
2. **Strategic optimization** – Identifying strengths and weaknesses and designing coordinated policy responses with public and private actors.

Key implementation practices

- **Policy integration:** Embed innovation in national development frameworks and establish interministerial task forces operating through a "whole of government approach," reporting to top-level leadership.
- **Stakeholder engagement:** Consult broadly with startups, universities, IP offices and innovation clusters to ensure alignment across sectors; align national IP policies with broader innovation strategies for maximum synergy.
- **Measurable outcomes:** Set clear, quantifiable targets that enable systematic evaluation and course correction.
- **Realistic target-setting:** Focus on gradual system improvements, rather than immediate shifts in ranking; allow time for policy effects to materialize.

Building data infrastructure

The GII helps strengthen national innovation data systems, by relying on data from international sources like the UNESCO Institute for Statistics, rather than direct country submissions. The GII Innovation Ecosystems & Data Explorer 2025 supports countries in identifying data gaps and improving their innovation metrics.

Expanding use at the sub-national level

Several countries are now applying GII principles at both the regional and the city scale. Efforts include adapting core indicators, assessing local data availability, and addressing challenges around metrics such as creative outputs or access to finance. WIPO supports this trend through knowledge exchange workshops and through WIPO's (2024) Intellectual Property and Innovation Ecosystems Sector (IES) toolkit titled *Enabling Innovation Measurement at the Sub-National Level*, which has been designed for sub-national application.[1]

Innovating innovation metrics

To address persistent gaps in the data, the *GII iLens Innovation Data Lab* was launched in 2023. It explores emerging metrics in areas such as innovation finance, entrepreneurship, linkages, and deep science (e.g. genome sequencing). Using new data sources and analytical methods – for example, web scraping or geospatial analysis – the Lab's early findings are already informing the development of future GII editions and expanding the toolkit for innovation measurement.

1 The study and toolkit explore the transferability of core GII metrics to city, regional and provincial contexts; evaluates data availability;and highlights challenges when applying indicatorssuch as creative outputs and microfinanceat the local scale. A localized approach such as this enables the precise targeting of innovation policies at the most relevant geographical scale.

Innovation overperformers: a consistent group amid global competition

India and Viet Nam remain the longest-standing innovation overperformers, having maintained this status for 15 consecutive years. Rwanda and Ukraine follow closely, while Tunisia and Malawi are new entrants to the group of overperformers

The GII 2025 identifies 17 economies – two less than in 2024 – performing above expectation relative to their development level, thereby establishing themselves as the year's innovation overperformers (Figure 5 and Table 2).

India (38th) and Viet Nam (44th) maintain their remarkable streak as innovation overperformers for a 15th consecutive year since 2011. These lower middle-income economies outperform their income group across all seven GII pillars, even surpassing upper middle-income benchmarks.

Table 2 Innovation overperformers in 2025: income group, region and years as an innovation overperformer

Economy	Income group	Region	Years as an innovation overperformer (total)
India	Lower middle-income	Central and Southern Asia	2011–2025 (15)
Viet Nam	Lower middle-income	South East Asia, East Asia, and Oceania	2011–2025 (15)
Ukraine	Upper middle-income	Europe	2012, 2014–2025 (13)
Rwanda	Low-income	Sub-Saharan Africa	2012, 2014–2025 (13)
Thailand	Upper middle-income	South East Asia, East Asia, and Oceania	2011, 2014–2015, 2018–2025 (11)
Malawi	Low-income	Sub-Saharan Africa	2012, 2014-2021, 2025 (10)
Jordan	Lower middle-income	Northern Africa and Western Asia	2011–2015, 2022–2025 (9)
Madagascar	Low-income	Sub-Saharan Africa	2016–2018, 2020–2025 (9)
Senegal	Lower middle-income	Sub-Saharan Africa	2012–2015, 2017, 2023–2025 (8)
South Africa	Upper middle-income	Sub-Saharan Africa	2018–2025 (8)
Morocco	Lower middle-income	Northern Africa and Western Asia	2015, 2020–2025 (7)
Philippines	Lower middle-income	South East Asia, East Asia, and Oceania	2019–2025 (7)
Burundi	Low-income	Sub-Saharan Africa	2017, 2019, 2022–2025 (6)
Tunisia	Lower middle-income	Northern Africa and Western Asia	2018, 2020–2023, 2025 (6)
Brazil	Upper middle-income	Latin America and the Caribbean	2021–2025 (5)
Uzbekistan	Lower middle-income	Central and Southern Asia	2022–2025 (4)
Indonesia	Upper middle-income	South East Asia, East Asia, and Oceania	2022–2025 (4)

Note: Income group classification follows the World Bank Income Group classification (July 2024). Geographical regions correspond to the United Nations publication on standard country or area codes for statistical use (M49).

Source: Global Innovation Index Database, WIPO, 2025.

South Africa (61st) and Senegal (89th) secure their overperformer status for an eighth time, both advancing in this year's rankings. Senegal excels in areas such as capital formation (1st), microfinance (9th), and VC received (32nd), signaling a relatively healthy investment climate for startups and enterprises. It also has one of the highest unicorn valuations relative to GDP in the world (10th), pointing to a private sector that can scale new technologies within a context of constrained infrastructure and R&D capacity.

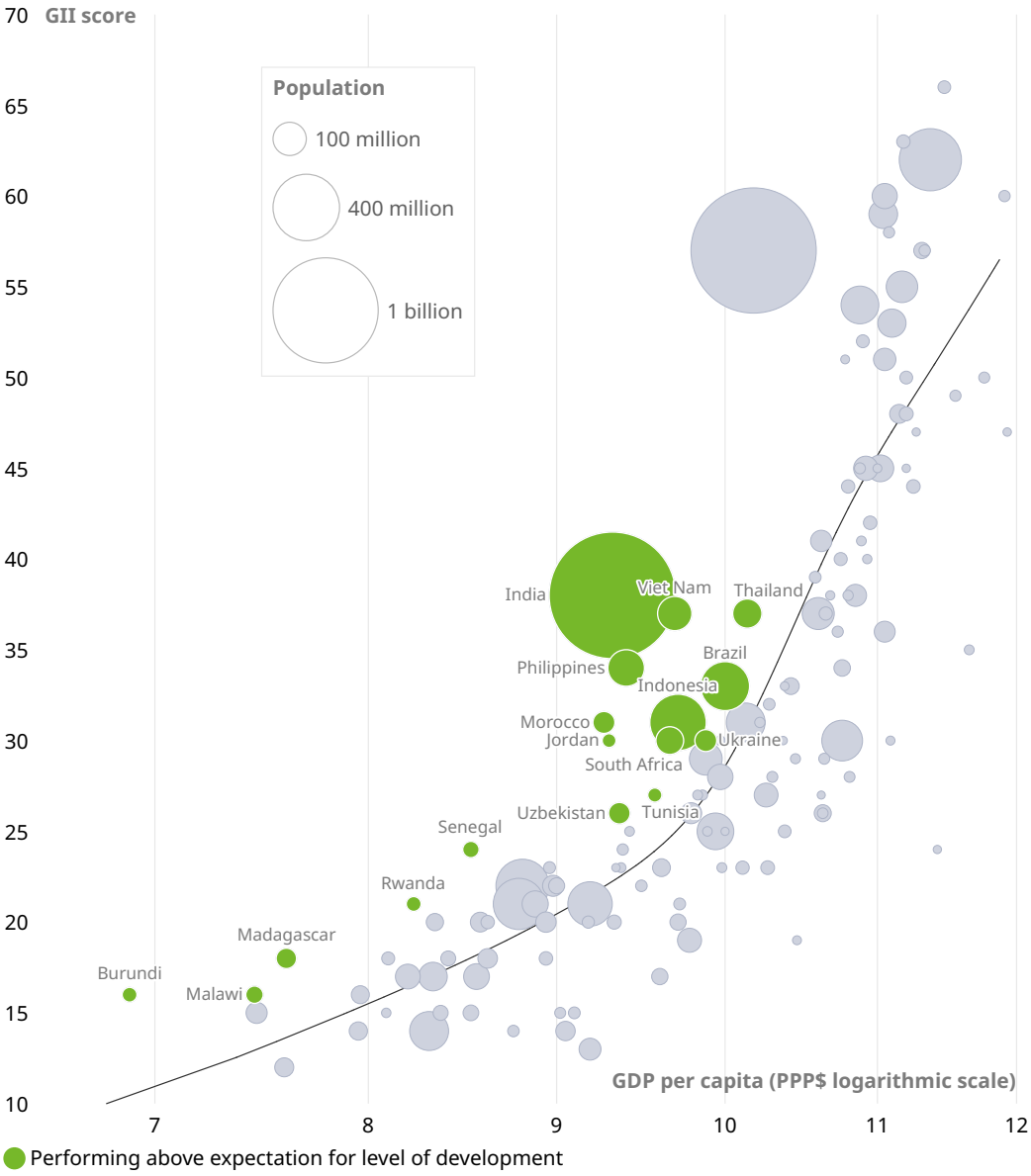
Morocco (57th) retains its overperformer designation this year and now breaks into the top 60.

Brazil (52nd) is an overperformer for a fifth consecutive year, while Indonesia (55th) and Uzbekistan are overperformers for a fourth year in a row. Tunisia (76th) and Malawi (125th) join this prestigious group in 2025.

Regionally, Sub-Saharan Africa leads in overperformers, with six economies (Table 2).

Conversely, 38 economies underperformed on innovation relative to expectations in 2025, with Latin America and the Caribbean having the largest share (13 economies). Among high-income economies that perform below their expected innovation levels, resource-driven economies from Northern Africa and Western Asia predominate, including Saudi Arabia (46th), Qatar (48th), Bahrain (62nd), Oman (69th) and Kuwait (73rd). Nevertheless, most of these economies (Kuwait excepted) improved in the innovation rankings in 2025, with Bahrain and Oman breaking into the top 70. The lower middle-income group includes 10 underperforming economies, six of which are in Sub-Saharan Africa.

Figure 5 Innovation overperformers, relative to economic development



Note: Bubbles are sized according to population. The cubic spline trendline shows the expected level of innovation performance at different levels of GDP per capita for all economies covered in the GII 2025.

Source: Global Innovation Index Database, WIPO, 2025.

Innovation efficiency leaders: maximizing output from available inputs

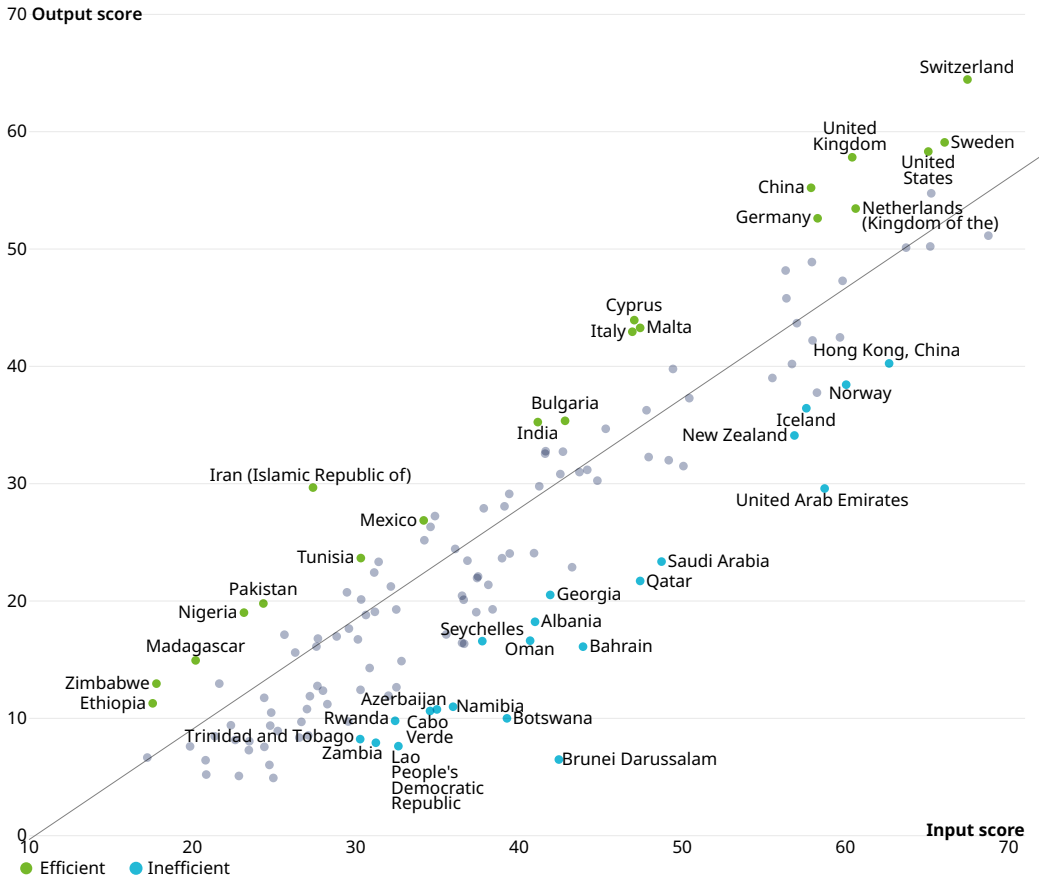
China surpasses several high-income economies in terms of innovation output, while other middle-income economies – the Islamic Republic of Iran, India, Mexico, Tunisia and Nigeria – demonstrate an enhanced innovation efficiency

Switzerland (1st) leads high-income economies in the transformation of innovation inputs into exceptional outputs, outperforming Sweden (2nd), the United States (3rd) and the United Kingdom (6th). The United Kingdom generates stronger outputs than Finland (7th), the Netherlands (8th) and Denmark (9th), achieving greater efficiency with lower input levels. Germany (11th) and Italy (28th) similarly demonstrate a high level of efficiency in output generation relative to input investment (Figure 6).

China (10th) dominates the upper middle-income group, producing innovation outputs that match or exceed those of several high-income economies, among them Singapore (5th), Germany (11th) and Australia (22nd), while deploying fewer resources. The Islamic Republic of Iran (70th) delivers outputs that exceed expectations based on its input level, surpassing Brazil (52nd) and the Russian Federation (60th). Mexico (58th) maintains robust output levels relative to inputs, outperforming Indonesia (55th), Chile (51st) and Colombia (71st).

In the lower middle-income category, India (38th), Tunisia (76th), Pakistan (99th), Nigeria (105th) and Zimbabwe (129th) emerge as efficient economies, converting limited innovation inputs into disproportionately high outputs. Madagascar (120th) continues to distinguish itself among low-income countries for innovation efficiency, while Ethiopia (134th) improves its efficiency in 2025, despite dropping in overall rank.

Figure 6 Innovation input to output performance, 2025



Note: Line corresponds to the fitted line between the input score and output score of all economies included in the GII 2025.

Source: Global Innovation Index Database, WIPO, 2025.

Box 2 Innovation linkages across income levels: spotlight on university rankings

Universities are central to innovation – producing knowledge, training talent, and linking academia, industry and government. They often anchor major innovation clusters (see Cluster ranking). Policymakers increasingly promote university collaboration with businesses and global partners in order to boost research impact and commercialization.

To capture this, the GII 2025 has this year introduced a new indicator: *University–industry and international engagement*. Based on Times Higher Education data, this indicator combines scores for industry ties and international collaboration across an economy's top five universities.

High-income economies lead on industry engagement and international outlook

The top 10 in this indicator are all stem from high-income economies (Box Table 1). The top universities in these 10 economies excel at fostering research–industry collaboration and cultivating globally-connected universities. Most top university locations within the top 10 economies are also home to leading innovation clusters — such as Shenzhen–Hong Kong–Guangzhou (ranked 1st), Paris (12th), Singapore (16th) (see Cluster ranking).

Emerging economies show strong potential

Among upper middle-income economies, universities from China (19th), South Africa (24th), and Türkiye (26th) lead. China, for instance, combines rapid university expansion with growing industry R&D activity, creating fertile ground for collaboration. In the lower middle-income group, Indian universities dominate in industry engagement, reflecting its dynamic startup ecosystem and R&D capabilities. Meanwhile, Jordan and Egypt's universities are among those who score highest on international outlook, showcasing global academic ties.

The ranking includes universities from several low-income economies, including from academic institutions in four Sub-Saharan African economies Uganda (63rd), Rwanda (73rd), Mozambique (84th), and Ethiopia (103rd). Among these, Uganda particularly distinguishes itself in terms of international engagement, with Makerere University achieving a high score (Box Table 2).

Box Table 1 Top 10 economies by average performance on university industry engagement and international outlook

Economy	Rank	University ranked first	University Location	Region
Hong Kong, China	1	City University of Hong Kong	Hong Kong	South East Asia, East Asia, and Oceania
Netherlands (Kingdom of the)	2	Maastricht University	Maastricht	Europe
Singapore	3	Nanyang Technological University, Singapore	Singapore	South East Asia, East Asia, and Oceania
Australia	4	The University of Queensland	Brisbane	South East Asia, East Asia, and Oceania
Switzerland	5	École Polytechnique Fédérale de Lausanne	Lausanne	Europe
United States	6	Massachusetts Institute of Technology	Cambridge	Northern America
United Kingdom	7	University of Oxford	Oxford	Europe
Canada	8	University of Alberta	Edmonton	Northern America
Austria	9	Medical University of Innsbruck	Innsbruck	Europe
France	10	Institut Polytechnique de Paris	Paris	Europe

Europe Northern America South East Asia, East Asia, and Oceania

Source: Global Innovation Index Database 2025, based on Times Higher Education (THE) World University Rankings 2025.

Box Table 2 Top 3 economies across middle- and low-income groups by average performance on university industry engagement and international outlook

Income group	Economy	Rank	University ranked first	University Location
Upper middle-income	China	19	Peking University	Beijing
Upper middle-income	South Africa	24	University of the Witwatersrand	Johannesburg
Upper middle-income	Türkiye	26	Sabancı University	Istanbul
Lower middle-income	Lebanon	40	American University of Beirut	Beirut
Lower middle-income	Jordan	42	Al-Ahliyya Amman University	Amman
Lower middle-income	India	52	Indian Institute of Science	Bengaluru
Low Income	Uganda	66	Makerere University	Kampala
Low Income	Rwanda	78	University of Rwanda	Kigali
Low Income	Mozambique	89	Universidade Eduardo Mondlane	Maputo

South East Asia, East Asia, and Oceania Northern Africa and Western Asia Sub-Saharan Africa Central and Southern Asia

Source: Global Innovation Index Database 2025, based on Times Higher Education World University Rankings 2025.

Several economies demonstrate enhanced innovation efficiency this year. Sweden, the United States, Malta (27th), India, Mexico, Tunisia, Nigeria and Ethiopia have advanced in terms of aligning innovation investment with output, optimizing their innovation ecosystems for a greater return.

Most innovation leaders (top 25) continue to showcase balanced strength across all seven pillars of the index – except for China – the only middle-income economy within the top 10, but which continues to perform less well on the Institutions pillar (ranked 44th) than it does on all other pillars. Beyond the top 10, Germany (11th), Japan (12th), France (13th), Hong Kong, China (15th), Canada (17th), Austria (19th), Norway (20th) and Australia (22nd) all exhibit a well-rounded ecosystem, excelling across both input and output dimensions (Table 3).

Table 3 Heatmap: GII 2025 rankings overall and by innovation pillar, 2025

Economy	Overall GII	Insti-tutions	Human capital and research	Infra-structure	Market sophist-ication	Business sophist-ication	Knowledge and technology outputs	Creative outputs
Switzerland	1	3	6	5	3	5	2	1
Sweden	2	12	3	4	9	2	4	2
United States	3	16	13	32	1	1	3	5
Republic of Korea	4	20	1	7	5	4	9	4
Singapore	5	1	2	19	6	3	7	15
United Kingdom	6	25	7	23	4	17	5	3
Finland	7	5	5	3	11	12	8	16
Netherlands (Kingdom of the)	8	11	14	30	12	7	10	6
Denmark	9	2	11	8	16	11	13	9
China	10	44	20	6	13	8	1	14
Germany	11	23	4	28	22	13	11	8
Japan	12	22	18	17	10	6	12	18
France	13	33	15	18	14	14	15	7
Israel	14	36	19	45	15	9	6	28
Hong Kong, China	15	8	12	21	2	23	30	17
Estonia	16	18	36	10	7	26	19	12
Canada	17	15	10	24	8	19	18	24
Ireland	18	10	24	13	36	15	14	21
Austria	19	21	9	12	30	16	21	23
Norway	20	9	22	1	21	20	32	22
Belgium	21	29	16	43	20	10	16	31
Australia	22	13	8	25	17	25	29	27
Luxembourg	23	4	27	57	23	21	53	10
Iceland	24	14	31	2	25	18	45	19
Cyprus	25	49	51	47	34	24	24	11
New Zealand	26	6	23	26	24	22	41	29
Malta	27	45	34	35	65	27	25	13
Italy	28	55	32	27	52	31	17	20
Spain	29	53	30	11	33	30	23	26
United Arab Emirates	30	7	17	9	19	28	57	35
Portugal	31	38	21	42	26	34	36	25
Czech Republic	32	34	37	33	73	29	20	43
Lithuania	33	19	45	29	32	35	33	48
Malaysia	34	30	46	54	18	38	34	41
Slovenia	35	48	26	20	63	36	27	53
Hungary	36	63	33	38	49	37	26	38
Bulgaria	37	81	64	22	35	50	28	32
India	38	58	54	61	38	64	22	42
Poland	39	68	43	51	64	32	42	33
Croatia	40	65	40	16	54	53	37	44
Latvia	41	46	47	34	56	47	51	36
Greece	42	60	29	41	57	65	43	40
Türkiye	43	100	38	44	41	41	48	30
Viet Nam	44	59	70	56	43	45	39	34
Thailand	45	76	53	59	27	42	44	39
Saudi Arabia	46	26	35	36	31	52	74	57
Slovakia	47	74	52	37	60	57	31	56
Qatar	48	17	44	14	48	90	83	60
Romania	49	85	72	31	62	59	40	52
Philippines	50	61	90	65	53	40	38	61
Chile	51	50	56	49	37	54	63	65
Brazil	52	107	48	60	71	39	50	50
Mauritius	53	32	78	84	28	103	97	37
Serbia	54	73	49	39	77	98	35	87
Indonesia	55	39	92	71	50	83	70	58
Georgia	56	28	61	73	59	69	66	76
Morocco	57	72	84	82	81	68	58	46
Mexico	58	104	67	77	68	72	54	49
Armenia	59	70	91	78	83	78	65	47
Russian Federation	60	131	28	76	76	46	62	55
South Africa	61	97	75	67	44	48	71	62
Bahrain	62	27	80	15	66	73	80	96

< 35 35–70 70–105 ≥ 105

Table 3 continued

Economy	Overall GII	Insti-tutions	Human capital and research	Infra-structure	Market sophist-ication	Business sophist-ication	Knowledge and technology outputs	Creative outputs
North Macedonia	63	78	71	53	69	80	52	78
Montenegro	64	88	59	50	45	96	75	69
Jordan	65	52	86	87	67	58	60	71
Ukraine	66	108	65	75	85	56	47	67
Albania	67	47	99	40	47	61	85	77
Uruguay	68	31	93	46	103	115	73	81
Oman	69	40	73	55	70	63	91	85
Iran (Islamic Republic of)	70	138	66	98	79	107	46	45
Colombia	71	86	62	74	75	60	78	72
Costa Rica	72	57	85	63	89	70	55	88
Kuwait	73	75	55	52	78	113	88	70
Republic of Moldova	74	91	69	95	88	131	67	63
Seychelles	75	37	94	88	58	89	133	64
Tunisia	76	111	50	116	84	123	56	66
Argentina	77	120	57	80	100	81	79	59
Mongolia	78	98	87	70	95	84	93	54
Uzbekistan	79	62	81	69	74	77	68	104
Peru	80	93	42	68	51	120	95	79
Kazakhstan	81	77	68	64	93	82	87	82
Panama	82	84	110	48	91	132	90	68
Jamaica	83	64	100	102	115	101	117	51
Barbados	84	56	89	121	127	51	61	90
Belarus	85	137	39	85	102	86	49	94
Egypt	86	96	101	92	86	93	84	75
Botswana	87	42	76	94	39	62	107	116
Brunei Darussalam	88	24	60	62	55	95	129	131
Senegal	89	71	97	79	90	112	77	111
Lebanon	90	133	63	120	42	71	59	102
Namibia	91	51	79	96	105	49	123	100
Bosnia and Herzegovina	92	121	77	72	80	130	72	99
Sri Lanka	93	105	109	66	109	121	89	84
Azerbaijan	94	41	88	105	72	111	110	108
Cabo Verde	95	43	106	83	106	75	111	109
Kyrgyzstan	96	119	58	89	82	117	103	89
Dominican Republic	97	54	111	81	112	87	113	97
El Salvador	98	92	122	113	87	122	104	73
Pakistan	99	127	123	123	101	94	69	80
Cambodia	100	90	114	93	29	133	92	113
Ghana	101	82	108	109	129	91	86	91
Kenya	102	95	124	119	121	92	64	101
Paraguay	103	94	119	58	111	104	122	93
Rwanda	104	35	83	108	131	114	106	120
Nigeria	105	126	125	126	128	55	76	83
Bangladesh	106	109	133	90	96	129	99	86
Nepal	107	113	127	101	61	124	98	103
Tajikistan	108	102	98	99	110	102	81	124
Lao People's Democratic Republic	109	83	121	100	46	76	127	125
Côte d'Ivoire	110	66	135	106	114	85	128	98
Bolivia (Plurinational State of)	111	134	41	124	40	106	126	106
Zambia	112	69	103	91	116	66	125	123
Ecuador	113	117	96	86	113	109	94	110
Trinidad and Tobago	114	80	74	110	98	135	121	127
Algeria	115	89	82	97	138	119	112	107
Cameroon	116	103	95	134	126	44	108	118
Togo	117	106	107	129	97	136	105	105
Benin	118	67	118	115	132	99	102	133
Honduras	119	130	113	107	94	126	96	122
Madagascar	120	128	116	137	117	116	124	74
United Republic of Tanzania	121	79	128	111	125	97	119	126
Myanmar	122	136	112	104	108	139	120	92
Guatemala	123	112	134	117	99	118	114	119
Uganda	124	87	131	125	123	88	118	121
Malawi	125	101	138	133	122	33	101	137

< 35 35–70 70–105 ≥ 105

Table 3 continued

Economy	Overall GII	Insti-tutions	Human capital and research	Infra-structure	Market sophist-ication	Business sophist-ication	Knowledge and technology outputs	Creative outputs
Burkina Faso	126	110	105	139	104	128	100	128
Burundi	127	116	104	128	118	108	138	112
Mozambique	128	124	130	103	119	127	131	117
Zimbabwe	129	132	137	132	136	74	116	95
Nicaragua	130	135	129	118	92	67	115	135
Mauritania	131	99	115	114	130	110	134	134
Lesotho	132	115	102	112	107	137	136	136
Guinea	133	118	120	127	137	100	135	114
Ethiopia	134	122	139	130	133	134	82	129
Mali	135	114	126	131	124	79	132	138
Venezuela (Bolivarian Republic of)	136	139	25	138	135	105	137	115
Congo	137	129	117	135	139	43	130	132
Angola	138	123	132	122	120	138	139	130
Niger	139	125	136	136	134	125	109	139

< 35 35–70 70–105 ≥ 105

Notes: Dark green cells correspond to the 4th quartile (best performers, ranks 1st to 34th); light green correspond to the 3rd quartile (ranks 35th to 69th); light blue correspond to the 2nd quartile (ranks 70th to 104th); and dark gray to the 1st quartile (ranks 105th to 139th).

Source: Global Innovation Index Database, WIPO, 2025

Among lower-ranked economies, several stand out for their exceptional performance in individual innovation pillars. Rwanda (104th overall) performs notably well in Institutions (35th), while Kyrgyzstan (96th) scores much better in Human capital and research (58th) relative to its overall ranking. Paraguay (103rd) places well in Infrastructure (58th) and Cambodia (100th) ranks solidly in Market sophistication (29th). In terms of Business sophistication, Namibia (91st) and Nigeria (105th) both perform well (49th and 55th, respectively). The Philippines (50th overall) and the Islamic Republic of Iran (70th) perform relatively well in Knowledge and technology outputs (38th and 46th), while Mongolia (78th) scores well in Creative outputs (54th). These diverse strengths represent valuable innovation assets that these economies can leverage to improve their overall innovation performance and global ranking.

Innovation across the world's regions

Driven by stronger innovation outputs, Central and Southern Asia edges ahead of Latin America and the Caribbean, while Sub-Saharan Africa shows promising gains

For the first time, Central and Southern Asia overtakes Latin America and the Caribbean in the regional GII rankings, based on the unweighted average GII score of all the economies within a region. While Northern America and Europe continue to lead, followed by South East Asia, East Asia, and Oceania, and Northern Africa and Western Asia, the most notable shift has occurred between Central and Southern Asia and Latin America and the Caribbean. This shift represents a milestone and is largely driven by Central and Southern Asia's edge in innovation outputs, where the region now scores on average higher than Latin America and the Caribbean. In contrast, Latin America and the Caribbean still leads on innovation inputs, though the gap is narrowing.

Central and Southern Asia's performance has been buoyed by economies like India (38th), Uzbekistan (79th) and Kazakhstan (81st), which show improved results across knowledge creation, technological outputs, and human capital development. These economies have built a strong culture of technology adoption and entrepreneurship, and are demonstrating that a focus on innovation outputs – whether through high-tech exports, research linkages or entrepreneurship – can allow an economy to leap ahead in the rankings, even if that economy does not have the most advanced innovation system.

In contrast, many Latin American and Caribbean economies remain stuck in the "input–output" gap –often as a result of having weak linkages in the innovation ecosystem or a rigid

institutional environment. In this case, they invest in education and policy reforms, but struggle to connect these investments to innovation results.

Sub-Saharan Africa, while still behind other regions on average, now surpasses both Central and Southern Asia and Latin America and the Caribbean in the Institutions and Business sophistication pillars – a clear sign of an increasing potential and a deepening capacity within the region.

The sections that follow highlight the most significant economy-level developments happening across the seven world regions.

Northern America

Northern America remains the most innovative world region in 2025. Comprised of the United States and Canada, the region continues to maintain a wide lead over other global regions in terms of overall innovation capacity and output.

Canada ranks 17th in 2025, slipping three positions compared to last year. Despite this setback, Canada stands out for its innovation inputs, ranking 13th globally, backed by a robust institutional framework, a high-quality education and research base, and a vibrant VC ecosystem. Canada ranks among the top economies for Market sophistication (8th), University–industry R&D collaboration (6th), and Late-stage VC deals (8th). Its innovation ecosystem is anchored by world-class universities and dynamic firms. Conversely, Canada's shortcomings include lower Labor productivity growth (101st), fewer Industrial designs (95th) and Trademarks (85th), and modest High-tech exports (37th) relative to its peers. Nevertheless, with three major innovation clusters in Toronto, Montréal, and Vancouver, and relatively good Intangible asset intensity (17th) and Software spending (7th), Canada remains a dynamic innovation leader with room to boost its output performance.

Europe

Europe remains the world's leading region in terms of the number of economies ranked among the top 25 of the GII, with 15 economies in this elite group – including six within the top 10. While most of the top performers hold steady, 13 of the 39 European economies move up the ranking in 2025, a notable increase from nine last year: namely, Denmark (9th), Ireland (18th), Norway (20th), Belgium (21st), Malta (27th), Lithuania (33rd), Bulgaria (37th), Poland (39th), Croatia (40th), Latvia (41st), Greece (42nd), Montenegro (64th) and Albania (67th). Norway enters the top 20, Croatia the top 40 and Albania the top 70 (Figure 2).

Belgium moves up three ranks – one of the highest jumps within the region. It has a strong base of Researchers (7th) and high Gross expenditure on R&D (6th) – equaling 3.3 percent of its GDP in 2023 – with significant contributions from business (high ranks in GERD performed and financed by business, ranked 6th and 7th, respectively). It also ranks well in University industry and international engagement (14th), and in Research talent (11th) and Knowledge-intensive employment (11th).

Eastern European economies and the Baltic States continue to gain ground in the innovation landscape, with several showing marked improvement, and with Albania, Croatia and Lithuania gaining the most. Estonia (16th), Lithuania and Latvia increasingly position themselves as agile, digitally savvy economies. Estonia remains a digital pioneer, consistently ranked among the best globally for ICT infrastructure, e-government, and online services.

Lithuania stands out for its vibrant startup scene. It performs well in VC received (20th) and has the world's highest Unicorn valuation relative to GDP (1st), signaling an early-stage funding landscape with potential to scale-up its enterprises globally. Lithuania also excels in Females employed with advanced degrees (3rd) and Knowledge-intensive employment (16th). The country's performance in Mobile app creation (8th) and Knowledge impact (13th) further showcases its growing digital and innovation outputs.

Latvia continues to advance by leveraging a skilled workforce and its integration into European value chains, while maintaining solid performance in infrastructure. Bulgaria (37th) and Poland

(39th) are also making strides. Poland remains one of the most diversified economies in the region and continues to grow its digital technologies and creative exports.

Europe also contributes a diverse group of innovation clusters. Germany leads with seven clusters, including Munich, Berlin, and Stuttgart. In the United Kingdom, with four clusters, Cambridge and Oxford stand out for their high scientific productivity and intensity. Other strong performers by intensity include Helsinki (Finland), Eindhoven (the Netherlands), Stockholm, Copenhagen, and Dublin (Cluster section). However, European clusters generally rank lower than US counterparts, because of their weaker VC ecosystems.

South East Asia, East Asia, and Oceania

Six economies in the region rank among the world's innovation leaders in 2025 – one less than in 2024. They are the Republic of Korea (4th), Singapore (5th), China (10th), Japan (12th), Hong Kong, China (15th) and Australia (22nd).

This group continues to dominate global innovation indicators: the Republic of Korea leads in R&D performed by business, and Researchers in business; Singapore ranks 1st globally in Unicorn valuation, High-tech manufacturing and GitHub commits; China maintains its 1st place in Trademarks, Utility models, and Industrial designs, and newly claims 1st overall in the Knowledge and technology outputs pillar; Japan leads in Production and export complexity; Hong Kong, China, ranks 1st in High-tech imports; and Australia ranks 2nd in Regulatory quality.

Nine of the 17 economies covered in the region improved their rankings in 2025, with Hong Kong, China (15th), the Philippines (50th), Cambodia (100th) and Myanmar (122nd) making the greatest advances.

The Philippines advances to 50th(Figure 2), and claims 3rd place among lower middle-income economies (Table 1).

Cambodia (100th) leads in financial inclusion and access to credit. It ranks 1st worldwide in Loans from microfinance institutions, 2nd in Credit, and 10th in Domestic credit to the private sector. Other areas of strength include FDI net inflows (13th), Gross capital formation (15th) and Labor productivity growth (19th), underscoring Cambodia's transformation and capital investment momentum.

Lao People's Democratic Republic (109th) also moves up the ranking.

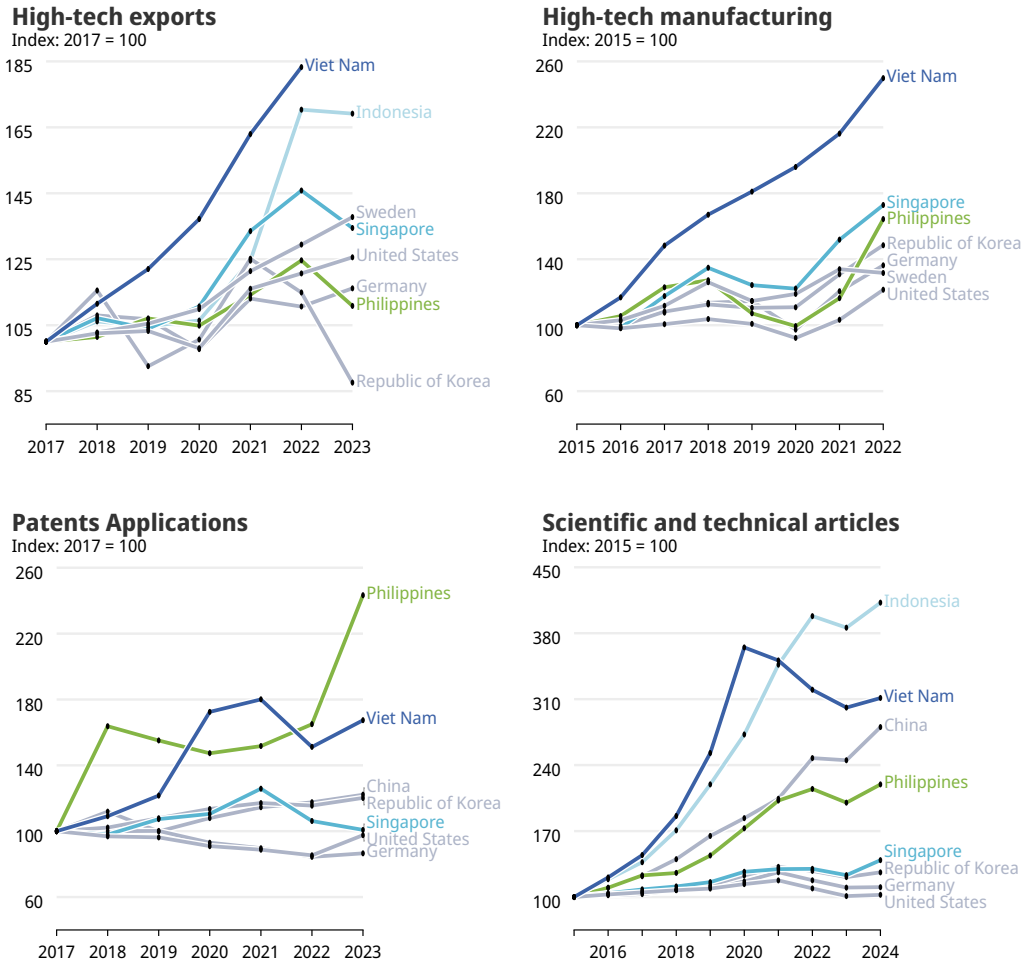
Box 3 ASEAN innovation performance – gains and global convergence

The Association of Southeast Asian Nations (ASEAN) is gaining ground in the global innovation landscape. Led by Singapore (5th), strong performers also include Malaysia (34th), Viet Nam (44th), Thailand (45th) and the Philippines (50th). What is more, Viet Nam and Indonesia (55th) continue to rank among the GII's innovation overperformers, for the 15th and 4th consecutive years, respectively.

From 2000 to 2023, ASEAN's R&D spending rose at a compound annual growth rate (CAGR) of 8.5 percent, reaching nearly USD 60 billion in real terms. ASEAN's High-tech exports more than doubled between 2015 and 2022, growing at 9.7 percent annually, and Global brand value reached 7 percent of regional GDP in 2023 – signaling a more sophisticated private sector. A 134 percent surge in venture capital funding received in 2021 also highlights ASEAN's expanding startup ecosystems.

At the economy level, key indicators – High-tech exports, High-tech manufacturing, Patents, and Scientific and technical articles – show the gap narrowing between ASEAN economies and the global innovation leaders (Box Figure 1). Viet Nam shows rapid gains, especially in high-tech exports, high-tech manufacturing, and publications. The Philippines is progressing in Patents and scientific output, while Singapore remains strong in high-tech manufacturing.

Box Figure 1 Closing the innovation gap: growth in key GII indicators in ASEAN vs. global innovation leaders, 2015–2024



Note: Dark grey lines represent selected innovation leaders for each indicator. High-technology exports contain technical products with a high intensity of R&D, as defined by Eurostat using the SITC Rev.4 and OECD classification. Key sectors include aerospace, chemicals and armaments, computers, electronics, electrical and non-electrical machinery, pharmaceuticals, scientific instruments, telecommunications. High-tech exports are measured in billion US dollars. High-tech manufacturing refers to high technology and medium-high technology (MHT) output based on the OECD classification of Technology Intensity Definition, itself based on International Standard Industrial Classification (ISIC) Rev.4 and Rev.3. High-tech manufacturing is measured in the local currency. Patent applications refer to the resident patent applications filed at a national or regional patent office.

Source: WIPO, the Global Innovation Index (GII) database, based on United Nations Comtrade Database, the United Nations Industrial Development Organization (UNIDO), Industrial Statistics Database INDSTAT 2 2023 and INDSTAT 4 2023, World Intellectual Property Organization, Intellectual Property Statistics, and Clarivate, Web of Science.

Central and Southern Asia

India continues to lead innovation within the Central and Southern Asia region, rising one spot to 38th place in 2025. It remains the top performing lower middle-income economy (Table 1). Its strengths lie in its scale, entrepreneurial activity and a growing ability to translate scientific knowledge into commercial impact. India ranks 1st in ICT services exports and has a strong business landscape backed by a dynamic VC scene – it is placed 4th in Late-stage VC deals and 9th in Finance for startups and scaleups. Indian Unicorn valuation (11th) and its growing Intangible asset intensity (8th), reflect its knowledge and tech-driven economy. Yet, challenges remain. India continues to lag in Infrastructure and R&D spending – equal to only 0.65 percent of its GDP in 2020, reflecting the need for further investment to be made.

Three other economies within the region move up the ranking: Uzbekistan (79th) –entering the top 80 for the first time– Kyrgyzstan (96th) and Nepal (107th). Uzbekistan retains the 3rd place within the region, behind the Islamic Republic of Iran (70th).

Kyrgyzstan standouts in Expenditure on education (5th globally) and ranks among the top 15 for Low-carbon energy use (14th), reflecting strengths in environmental sustainability. Nepal ranks 1st globally in Loans from microfinance institutions. It also performs well in Credit (7th) and Gross capital formation (11th), pointing to access to finance and capital investment.

Northern Africa and Western Asia

The Northern Africa and Western Asia region is building innovation momentum in 2025, with 14 economies improving their ranking.

Israel (14th) continues to lead the region, gaining one rank and reinforcing its position among the top 15 global innovation economies. It tops several critical indicators, including overall R&D expenditure, VC received, ICT services exports, and Unicorn valuation, reflecting a dynamic innovation ecosystem.

Innovation performance in the Middle East is also gaining ground, with eigth economies moving up. The United Arab Emirates rises two ranks to a new high of 30th, marking upward momentum. Bahrain (62nd), Jordan (65th) and Oman (69th) make the most strides and enter the top 70. Saudi Arabia (46th) and Qatar (48th) move one position.

Cyprus (25th) moves up 2 spots and Georgia (56th) moves one. Morocco (57th) and Armenia (59th) make notables strides and enter the top 60; while Tunisia (76th) enters the top 80 (Figure 2).

Morocco climbs nine ranks in 2025, marking one of the most significant improvements within the region – second only to Bahrain. Its innovation performance reflects a clear shift from traditional sectors toward a more diversified, value-added economy. Looking ahead, Morocco's key challenge will be to deepen investments into R&D, and improve its innovation linkages and infrastructure. While the country has proven to be an innovation overperformer, further progress will depend on strengthening investment, in order to scale and sustain its innovation gains over time.

Lebanon (90th) and Azerbaijan (94th) also climb the ranking, this year gaining four and one rank, respectively.

Latin America and the Caribbean

In Latin America and the Caribbean, momentum slowed in 2025, with most economies either losing ground or stagnating. The region's persistent innovation input–output gap underscores the need for stronger linkages between research institutions and the private sector, as well as improved innovation governance and more effective financing mechanisms.

Chile (51st) is followed by Brazil (52nd) and Mexico (58th) in the regional rankings.

Chile obtains strong results in Tertiary enrolment (7th), Market capitalization (17th), and FDI net inflows (22nd). Brazil (52nd) drops two places, but continues to anchor the region's innovation output capacity, ranking highest within the region in terms of Knowledge and technology outputs (50th) and Creative outputs (50th). It also ranks among the top 25 globally in Expenditure on education (23rd) and Global corporate R&D investors (24th). The country leverages its sizable Domestic market scale (7th) to attract Late-stage VC (16th) and ranks highly in High-tech imports (19th) and ICT services imports (17th), indicating there is a demand for advanced technologies and digital services. Brazil is the only economy within Latin America and the Caribbean that performs on innovation above expectations for its level of development and has kept this status since 2021 and for five consecutive years (Table 2).

Mexico (58th) also slips down two ranks, but remains a strong performer in trade-related innovation indicators. It ranks 6th in Creative goods exports, and performs strongly in High-tech imports (16th), High-tech exports (13th), and High-tech manufacturing (13th), reflecting the continued strength of its industrial base and export-led model. Mexico City enters the top 100 innovation clusters for the first time, debuting at 79th place.

Despite setbacks this year, Uruguay (68th), Colombia (71st) and Costa Rica (72nd) follow the region's top 3. Uruguay retains leading positions in Institutions (31st) and Infrastructure (46th). Colombia is an emerging hub for corporate R&D and startup development. It remains a strong performer in High-tech imports (15th) and Unicorn valuation (23rd). Panama (82nd), the Dominican Republic (97th) and El Salvador (98th) maintain a stable position in the 2025 rankings.

Panama continues to leverage its strategic geographical location and strong general infrastructure in support of trade, investment, and service-based innovation. It benefits from having a relatively strong financial sector, which helps attract foreign investment. Labor productivity growth (18th) is improving, and the country performs competitively in High-tech exports (21st). It also shows promise in the creative economy, with measurable outputs in Creative goods and services (24th) and Creative goods exports (21st), reflecting a growing cultural and digital industries base. While its research capacity remains limited, its service-based economy provides a platform for innovation.

The Bolivarian Republic of Venezuela returns to the GII for the first time since 2016 (136th).

Sub-Saharan Africa

Sub-Saharan Africa continues to make measured progress, with 10 economies improving in the ranking and several solidifying their position. Mauritius (53rd) remains the region's top performer. It leads in VC investors (5th), while maintaining top regional ranks in Institutions (32nd), Market sophistication (28th) and Creative outputs (37th). South Africa (61st), Seychelles (75th), Botswana (87th) and Senegal (89th) follow in the regional ranking – with all improving their ranking, except for Botswana. Seychelles returns to the GII in 2025, re-entering the rankings for the first time since 2015 and landing within the top 80.

Namibia (91st) registers the largest improvement in Sub-Saharan Africa, climbing 11 positions. It leads the world in Expenditure on education (1st) and ranks within the top 40 for FDI net inflows (10th), University–industry R&D collaboration (38th) and Public research–industry co-publications (31st), reflecting its emerging research partnerships and growing capacity. South Africa (61st) also advances in 2025 and continues to be a regional leader in Human capital and research (75th) and Infrastructure (67th). It performs strongly in ICT services imports (18th) and Global brand value (23th), underlining its growing branding ecosystem.

Senegal rises three positions and shows notable strengths in Unicorn valuation (10th), FDI net inflows (8th) and Loans from microfinance institutions (9th), signaling an expanding base for both startups and capital inflows. Nigeria (105th) emerges as one of Sub-Saharan Africa's fastest climbers in 2025. It ranks 1st globally in Unicorn valuation and performs well in Knowledge-intensive employment (35th), High-tech imports (8th) and Late-stage VC deals (26th) indicating a growing depth in its knowledge economy and entrepreneurial ecosystems. Cameroon (116th) also advances and performs well in Graduates in science and engineering (17th).

Rwanda (104th), Madagascar (120th), Malawi (125th), Senegal, South Africa and Burundi (127th) are innovation overperformers. Rwanda has been the longest overperforming economy within the region – overperforming for 13 years.

Five Sub-Saharan African economies join the GII this year, owing to improved data coverage: Seychelles, Malawi (125th), Lesotho (132nd), Guinea (133rd) and Congo (137th).

Conclusion

The 2025 edition of the Global Innovation Index reveals a world in transition, where innovation remains a critical driver of competitiveness and resilience – but one that is evolving rapidly in character and geography. While the group of top innovation leaders remain largely stable, the global innovation landscape is becoming more diverse, with several middle-income economies making steady progress and regional dynamics shifting.

Three broad messages emerge from this year's findings:

First, there is broad participation in innovation. Innovation capacity is expanding across regions and income groups. While it is not possible for every economy to rise in the rankings, several economies – from Central and Southern Asia to Sub-Saharan Africa, the Middle East, and Eastern Europe – are demonstrating stronger innovation performance. These economies are strengthening innovation through investment, education and business dynamism. Countries like India, Morocco, and the Philippines show that with focused strategies, they can build innovation capacity over time.

A standout development this year is the rise of Central and Southern Asia, which surpasses Latin America and the Caribbean in the regional GII rankings for the first time. This shift is driven by a strong output performance from India, Uzbekistan and Kazakhstan. In Sub-Saharan Africa, countries like Nigeria and Namibia have made notable gains, and the region as a whole now outperforms others in selected institutional and business sophistication indicators.

Momentum is also building in Northern Africa and Western Asia, with 14 economies improving their ranking. Morocco and Bahrain are among the fastest risers, while Israel and Türkiye continue to lead in R&D and intangible assets. In Eastern Europe, countries such as Croatia, Latvia, Lithuania and Albania post gains linked to investment into education, digital transformation and startup ecosystems.

Second, there is diversity in how economies engage in innovation. Some are leveraging strengths in high-tech manufacturing or digital services, while others are tapping into creative industries, natural resource linkages or regional market dynamics. This diversity means that there is no single path to innovation success. Rather, countries are finding ways to adapt innovation models to their unique economic structures and capabilities.

Northern America and Europe remain the most innovative regions globally, bolstered by strong ecosystems for research, VC and high-impact scientific outputs. China's remarkable trajectory to reach the top 10, reflects its sustained investment in R&D and technological leadership. India reinforces its role through having strong ICT service exports, startup dynamism and a large domestic R&D base. Türkiye, Viet Nam and Thailand – despite setbacks in 2025 – all edge closer to the top 40, supported by strengths in trade, their industrial base and high-tech manufacturing. The Philippines climbs thanks to global leadership in high-tech exports and ICT services.

Third, innovation ecosystems are increasingly shaped by agility and responsiveness. Economies that can adapt quickly – by embracing new technologies, supporting startups and strengthening linkages across sectors – are gaining ground. Innovation is no longer only about long-term investment into science, but also about the ability to act in response to global shifts, including digital transformation and sustainability. As the world navigates economic uncertainty, the ability to adapt and innovate across sectors and borders will remain a defining advantage.

Still, barriers remain. Long-term innovation capacity still depends on key investments. Moreover, many economies struggle to scale their innovation ecosystem, commercialize research, and integrate more fully into global value chains.

Policymakers, business leaders and academic institutions must together act decisively to unlock innovation's full potential. First, they must invest in long-term R&D and education systems that support frontier knowledge and its diffusion. Second, promote a deeper collaboration between universities and the private sector, in order to turn research into economic value. Third, ensure access to finance, especially for startups and high-growth firms in developing regions. Finally, improve measurement and data systems, so as to better track innovation performance and guide evidence-based policymaking.

As the global economy faces mounting sustainability and growth challenges, innovation remains the most powerful tool with which to respond. The GII will continue to serve as a platform for measuring progress and fostering cooperation across all sectors and regions.

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