Executive Version

Global Innovation Index 2024

WIPO

Welcome to the 17th edition of WIPO's flagship *Global Innovation Index* (GII), our guide to the innovative performance of 133 countries, as well as the world's top 100 science and technology clusters. This year's special theme, *Unlocking the Promise of Social Entrepreneurship*, explores the link between innovation and social enterprises, and the impact this delivers for our world.

Daren Tang, Director General
World Intellectual Property Organization (WIPO)

GII 2024 at a glance

The Global Innovation Index 2024 captures the innovation ecosystem performance of 133 economies and tracks the most recent global innovation trends.

Global leaders in innovation, 2024

Top three innovation economies by region

Latin America and the Caribbean

1. Brazil
2. Chile
3. Mexico

Sub-Saharan Africa*

1. South Africa
2. Botswana
3. Senegal

Northern Africa and Western Asia†

1. Israel
2. United Arab Emirates
3. Türkiye

South East Asia, East Asia, and Oceania

1. Singapore
2. Republic of Korea
3. China

Northern America

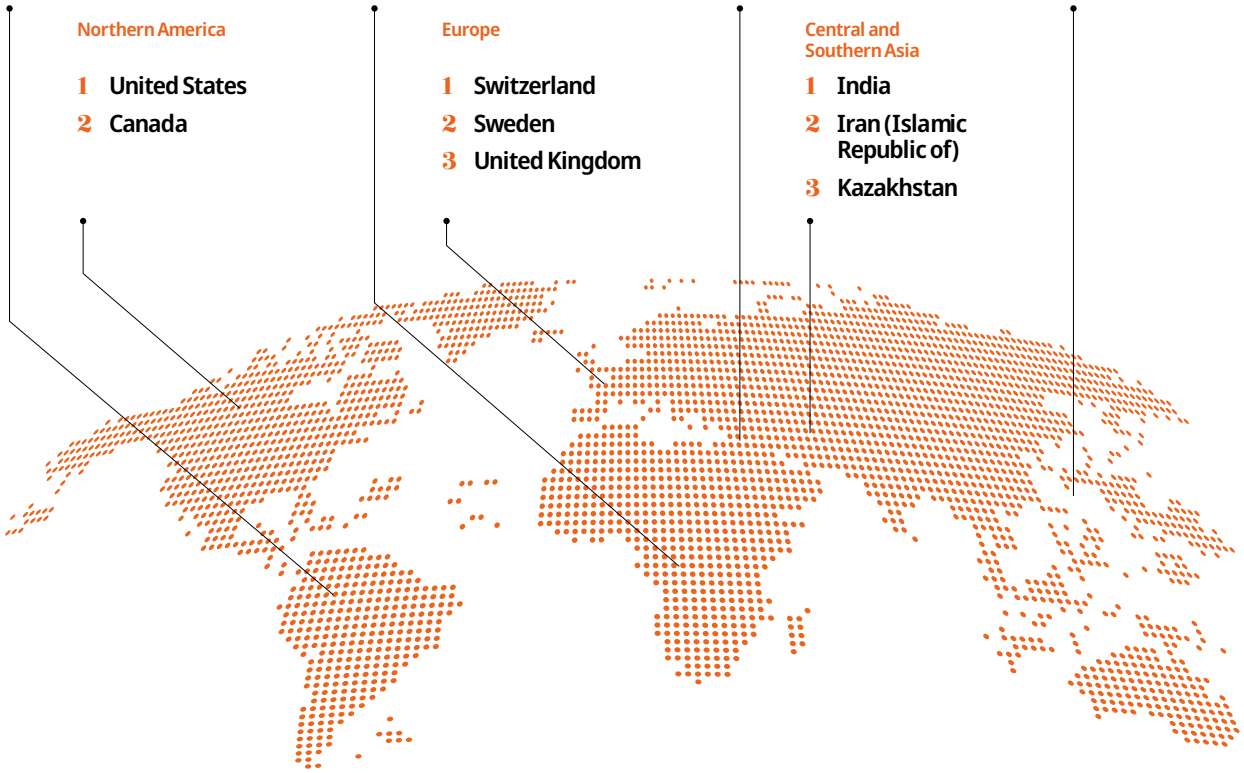
1. United States
2. Canada

Europe

1. Switzerland
2. Sweden
3. United Kingdom

Central and Southern Asia

1. India
2. Iran (Islamic Republic of)
3. Kazakhstan



Top three innovation economies by income group

High-income

1. Switzerland
2. Sweden
3. United States

Upper middle-income

1. China
2. Malaysia
3. Türkiye ☆

Lower middle-income

1. India
2. Viet Nam
3. Philippines ☆

Low-income ^

1. Rwanda
2. Togo
3. Uganda ☆

☆ Indicates a new entrant into the top three in 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), Botswana (3rd), Cabo Verde (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), Madagascar (2nd), Togo (3rd) and Uganda (4th).

Notes: World Bank Income Group Classification (July 2023). Year-on-year changes in GII rank are influenced by performance and methodological considerations (see Appendix I).

Source: Global Innovation Index Database, WIPO, 2024.

Global Innovation Index 2024 rankings

GII rank	Economy	Score	Income group rank	Region rank
1	Switzerland	67.5	1	1
2	Sweden	64.5	2	2
3	United States of America	62.4	3	1
4	Singapore	61.2	4	1
5	United Kingdom	61.0	5	3
6	Republic of Korea	60.9	6	2
7	Finland	59.4	7	4
8	Netherlands (Kingdom of the)	58.8	8	5
9	Germany	58.1	9	6
10	Denmark	57.1	10	7
11	China	56.3	1	3
12	France	55.4	11	8
13	Japan	54.1	12	4
14	Canada	52.9	13	2
15	Israel	52.7	14	1
16	Estonia	52.3	15	9
17	Austria	50.3	16	10
18	Hong Kong, China	50.1	17	5
19	Ireland	50.0	18	11
20	Luxembourg	49.1	19	12
21	Norway	49.1	19	12
22	Iceland	48.5	21	14
23	Australia	48.1	22	6
24	Belgium	47.7	23	15
25	New Zealand	45.9	24	7
26	Italy	45.3	25	16
27	Cyprus	45.1	26	2
28	Spain	44.9	27	17
29	Malta	44.8	28	18
30	Czech Republic	44.0	29	19
31	Portugal	43.7	30	20
32	United Arab Emirates	42.8	31	3
33	Malaysia	40.5	2	8
34	Slovenia	40.2	32	21
35	Lithuania	40.1	33	22
36	Hungary	39.6	34	23
37	Türkiye	39.0	3	4
38	Bulgaria	38.5	4	24
39	India	38.3	1	1
40	Poland	37.0	35	25
41	Thailand	36.9	5	9
42	Latvia	36.4	36	26
43	Croatia	36.3	37	27
44	Viet Nam	36.2	2	10
45	Greece	36.2	38	28
46	Slovakia	34.3	39	29
47	Saudi Arabia	33.9	40	5
48	Romania	33.4	41	30
49	Qatar	32.9	42	6
50	Brazil	32.7	6	1
51	Chile	32.6	43	2
52	Serbia	32.3	7	31
53	Philippines	31.1	3	11
54	Indonesia	30.6	8	12
55	Mauritius	30.6	8	1
56	Mexico	30.4	10	3
57	Georgia	30.4	10	7
58	North Macedonia	29.9	12	32
59	Russian Federation	29.7	13	33
60	Ukraine	29.5	4	34
61	Colombia	29.2	14	4
62	Uruguay	29.1	44	5
63	Armenia	29.0	15	8
64	Iran (Islamic Republic of)	28.9	5	2
65	Montenegro	28.9	16	35
66	Morocco	28.8	6	9
67	Mongolia	28.7	7	13
68	Republic of Moldova	28.7	17	36
69	South Africa	28.3	18	2
70	Costa Rica	28.3	18	6
71	Kuwait	28.1	45	10
72	Bahrain	27.6	46	11
73	Jordan	27.5	8	12
74	Oman	27.1	47	13
75	Peru	26.7	20	7
76	Argentina	26.4	21	8
77	Barbados	26.1	48	9
78	Kazakhstan	25.7	22	3
79	Jamaica	25.7	22	10
80	Bosnia and Herzegovina	25.5	24	37
81	Tunisia	25.4	9	14
82	Panama	24.7	49	11
83	Uzbekistan	24.7	10	4
84	Albania	24.5	25	38
85	Belarus	24.2	26	39
86	Egypt	23.7	11	15
87	Botswana	23.1	27	3
88	Brunei Darussalam	22.8	50	14
89	Sri Lanka	22.6	12	5
90	Cabo Verde	22.3	13	4
91	Pakistan	22.0	14	6
92	Senegal	22.0	14	5
93	Paraguay	21.9	28	12
94	Lebanon	21.5	16	16
95	Azerbaijan	21.3	29	17
96	Kenya	21.0	17	6
97	Dominican Republic	20.8	30	13
98	El Salvador	20.6	31	14
99	Kyrgyzstan	20.4	18	7
100	Bolivia (Plurinational State of)	20.2	19	15
101	Ghana	20.0	20	7
102	Namibia	20.0	32	7
103	Cambodia	19.9	21	15
104	Rwanda	19.7	1	9
105	Ecuador	19.3	33	16
106	Bangladesh	19.1	22	8
107	Tajikistan	18.6	23	9
108	Trinidad and Tobago	18.4	51	17
109	Nepal	18.1	24	10
110	Madagascar	17.9	2	10
111	Lao People's Democratic Republic	17.8	25	16
112	Côte d'Ivoire	17.5	26	11
113	Nigeria	17.1	27	12
114	Honduras	16.7	28	18
115	Algeria	16.2	29	18
116	Zambia	15.7	30	13
117	Togo	15.6	3	14
118	Zimbabwe	15.6	31	14
119	Benin	15.4	32	16
120	United Republic of Tanzania	15.3	33	17
121	Uganda	14.9	4	18
122	Guatemala	14.6	34	19
123	Cameroon	14.4	34	19
124	Nicaragua	14.0	35	20
125	Myanmar	13.8	36	17
126	Mauritania	13.2	37	20
127	Burundi	13.2	5	20
128	Mozambique	13.1	6	22
129	Burkina Faso	12.8	7	23
130	Ethiopia	12.3	8	24
131	Mali	11.8	9	25
132	Niger	11.2	10	26
133	Angola	10.2	38	27

High-income
Upper middle-income
Lower middle-income
Low-income
Europe
Northern America
Latin America and the Caribbean
South East Asia, East Asia, and Oceania
Northern Africa and Western Asia
Sub-Saharan Africa
Central and Southern Asia

Source: Global Innovation Index Database, WIPO, 2024.

Innovation performance at different income levels, 2024

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

Source: Global Innovation Index Database, WIPO, 2024.

Key takeaways

What is the current state of global innovation? Is innovation accelerating or slowing down? How is innovation coping in the face of higher interest rates and geopolitical conflicts?

Results of the Global Innovation Tracker 2024

The Global Innovation Tracker 2024 provides a comprehensive analysis of the current state of global innovation. Findings highlight progress as well as challenges across four key stages of the innovation cycle: science and innovation investment, technological progress, technology adoption, and the socioeconomic impact of innovation.

1. Innovation investments witnessed a major downturn in 2023, a reversal of the 2020–2022 boom

Following a boom between 2020 and 2022, science and innovation investment experienced a significant downturn in 2023 (see the Global Innovation Tracker Dashboard).

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	–5.3% (2022 → 2023)	5% (2021 → 2022); 2.9%* (2022 → 2023)	6.1%* (2022 → 2023)	–9.5% (2022 → 2023)	–39.7% (2022 → 2023)	–1.8% (2022 → 2023)

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	60.0% (2021 → 2023)	13.6% (2022 → 2023)	–3.9% (2021 → 2022)	–3.5% (2021 → 2022)	–13.7% (2022 → 2023)	–8.1%* (2021 → 2023)	9.5% (2022 → 2023)

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles	Cancer radiotherapy
		Fixed broadband	5G			
Short term	1.4% (2021 → 2022)	4.5% (2022 → 2023)	22.6% (2022 → 2023)	12.2% (2021 → 2022)	53.8% (2022 → 2023)	2.7% (2022 → 2023)

Socioeconomic impact

	Labor productivity	Poverty	Life expectancy	Global warming
Short term	1% (2022 → 2023)	–5% (2021 → 2022)	0.9% (2021 → 2022)	+1.17°C (2023)

Notes: See the Data notes at the end of this section for a definition of the indicators and their data sources. Long-term annual growth refers to the compound annual growth rate(CAGR) over the indicated period. 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 (*). n.a. indicates not available. Short-term rates for Moore's Law and the Cost of genome sequencing refer to the CAGR between 2021 and 2023.

Source: Global Innovation Index Database, WIPO, 2024.

- Scientific publications dropped by 5 percent in 2023, following growth rates above 8 percent annually in 2020 and 2021, and a slowdown in 2022.
- Global R&D grew at a rate of 5 percent in 2022 – slightly down from 2021 – but is projected to slow to about 3 percent in 2023 (all in real terms).
- Worldwide, R&D expenditure by the highest R&D-spending corporations grew by around 6 percent in real terms in 2023, below the long-term growth rate for the last 6 years (around 8 percent) and down strongly from peaks of 10 to 13 percent between 2019–2021, and also from pre-pandemic growth rates (all in real terms).
- Venture capital (VC) and scientific publications have declined sharply back to pre-pandemic levels, with a pronounced impact on emerging regions such as Latin America and Africa. Reflecting a deteriorating climate for risk finance, the value of VC investments has been falling from the exceptionally high levels of 2021, with a 36 percent drop in 2022 followed by a further 39 percent drop in 2023. The number of VC deals has also decreased, experiencing a downturn of 9.5 percent in 2023.
- International patent filings – which had stagnated since 2021 – saw a decline of 1.8 percent in 2023, marking the first such decline since 2009.

Looking forward, while some central banks have started cutting interest rates, tighter conditions for innovation finance might continue to weigh on innovation investment in the near term.

2. Technology continues to progress rapidly, technology adoption is growing, and the socioeconomic impact of innovation has mostly turned positive again. However, green technology and environmental indicators have either been progressing more slowly than before or have declined.

- **Technological progress** remained strong in 2023, particularly in health-related fields such as genome sequencing, as well as computing power and electric batteries. However, the rate of progress in green technologies lagged behind average growth for the decade, highlighting the challenge in reducing supercomputers' energy consumption and a slower reduction in renewable energy prices.
- **Technology adoption** increased across all indicators in 2023, especially in 5G, robotics, and electric vehicles. Overall penetration levels have increased compared to a decade ago, but there are exceptions, for example, the rate of adoption of safe sanitation has also significantly slowed.
- In terms of the **socioeconomic impact of innovation**, the situation is starting to look more positive again. Many indicators have returned to growth relative to what was reported in the 2023 GII edition, but some have yet to return to pre-pandemic levels.
    - Labor productivity has seen an increase, albeit at a rate below the average for the past decade.
    - Significant progress has been made in reducing poverty, with the number of people in extreme poverty in 2022 being half what is was in 2005. However, levels of poverty are still higher than those recorded in 2018.
    - Life expectancy saw a rise in 2022, but nonetheless remains at 2015 levels.
    - On environmental impact, though, the world is falling behind. Carbon emissions are growing once again after a temporary COVID-19 hiatus. 2023 was the hottest year on record, underlining the need for urgent and effective climate action.

Results of the Global Innovation Index 2024 rankings

3. Switzerland, Sweden, the United States, Singapore, and the United Kingdom lead the GII 2024; China, Türkiye, India, Viet Nam, the Philippines, Indonesia, the Islamic Republic of Iran and Morocco are the middle-income economies that have climbed the fastest in the GII ranking since 2013.

- Switzerland ranks first in the GII for the 14th consecutive year. Sweden and the United States (US) maintain 2nd and 3rd positions, respectively. Singapore (4th) moves further into the top 5, followed by the United Kingdom (UK) (5th).
- China – still the only middle-income economy within the GII top 30 – moves up the ranking to edge closer to the top 10, reaching 11th position.

- Japan remains firm in 13th – a position it has held since 2021.
- Canada rises up the rankings to 14th position, its best rank since 2014, and representing a comeback.
- Ireland (19th) and Luxembourg (20th) enter the top 20, climbing three ranks and one rank, respectively.
- Australia (23rd) and New Zealand (25th) continue moving ahead within and, respectively, towards the top 25.
- European Union (EU) economies the Czech Republic (30th) enters, and Cyprus (27th) and Spain (28th) move up within the top 30, while Poland (40th) enters the top 40.
- There are only four other middle-income economies, apart from China, among the top 40 economies, namely, Malaysia (33rd), Türkiye (37th), Bulgaria (38th), and India (39th). However, Thailand (41st) and Viet Nam (44th) move closer too.
- Brazil (50th) remains in the top 50 in 2024.
- Saudi Arabia (47th) and Qatar (49th) continue climbing up in the top 50; the two economies in the Middle East that have moved up the rankings this year.
- The Philippines (53rd) and Indonesia (54th) move closer to the top 50, with Indonesia making one of the strongest GII upward spurts recorded over the last three years.
- Morocco (66th) in Northern Africa and Western Asia moves ahead in the top 70.
- Beyond the top 100, Tajikistan (107th), Algeria (115th) and Burundi (127th) have progressed the most in the rankings.
- In the last five years, Indonesia, Mauritius (55th), Saudi Arabia, Qatar, Brazil and Pakistan (91st) have climbed most in the GII, in terms of rank progression.
- China, India, Indonesia, the Islamic Republic of Iran (64th), the Philippines, Türkiye, Viet Nam and Morocco are the middle-income economies within the GII top 70 that have climbed the most in the GII ranking since 2013.

4. Singapore, the United States and China score best in particular innovation indicators

- Singapore takes the lead in 2024 in terms of number of GII innovation indicators for which it ranks top globally, ranking 1st in the world on 14 out of 78 indicators.
- The United States (9 out of 78 indicators) and China (8 out of 78) follow.
- Select middle- and low-income economies excelled in various domains. Relative to GDP, trade or population, the Plurinational State of Bolivia, Cambodia and Nepal, for example, rank 1st in Loans from microfinance institutions, Malaysia in Graduates in science and engineering, and Mexico in Creative goods exports. Relatively, Morocco leads in Industrial designs, the Islamic Republic of Iran in Trademarks, and Namibia in Expenditure on education.

5. The regional GII leaders in innovation are Switzerland, the United States, Brazil, India, Singapore, Israel, and Mauritius; India and Rwanda continue to lead their income groups. Türkiye and the Philippines are newcomers to the top 3 for their income group.

- In the South East Asia, East Asia and Oceania (SEAO) regions, Singapore, the Republic of Korea (6th) and China (11th) lead. Four additional SEAO economies are world innovation leaders ranking in the top 25, namely, Japan (13th), Hong Kong, China (18th), Australia (23rd) and New Zealand (25th).
- In Northern Africa and Western Asia, Israel (15th) leads the region and is followed by Cyprus (27th), the United Arab Emirates (32nd) and Türkiye (37th). Eight economies within the region move up the ranking. Saudi Arabia (47th) and Qatar (49th) each move ahead one spot to consolidate themselves in the top 50. Georgia moves up to 57th place, entering the top 60, while Armenia (63rd) enters and Morocco (66th) consolidates its position in the top 70.
- In Latin America and the Caribbean, the regional top three remains unchanged: Brazil (50th) maintains top position, followed by Chile (51st, up by one rank) and Mexico (56th, up by two ranks).
- Seven additional economies within the region also improved their ranking: Colombia (61st) – one of the largest jumps in the region, matched only by Paraguay (93rd), Uruguay (62nd), Costa Rica (70th), Peru (75th), Panama (82nd) and Honduras (114th).
- In Central and Southern Asia, India continues to lead, moving one place forward to 39th position, the Islamic Republic of Iran (64th), Kazakhstan (78th) and Uzbekistan (83rd) come next. In addition to India and Kazakhstan, three additional economies within the region go up in the ranking: Sri Lanka (89th), Kyrgyzstan (99th) and Tajikistan (107th).

- In Sub-Saharan Africa, Mauritius (55th) is followed by South Africa (69th), Botswana (87th), Cabo Verde (90th) and Senegal (92nd). Kenya (96th) gains four places in the ranking, consolidating its position within the top 100. Zambia (116th), Benin (119th), Mauritania (126th), and Burundi (127th) also move up the GII ranking.
- In the GII 2024, Türkiye enters the top 3 for the upper middle-income group, behind China and Malaysia (33rd).
- India leads the lower middle-income group, followed by Viet Nam (44th) and the Philippines (53rd) – a newcomer to this income group's top 3.
- Rwanda (104th) leads the low-income group, followed by Madagascar (110th), Togo (117th) and Uganda (121st).

6. Several developing economies are performing above expectation on innovation relative to their level of economic development.

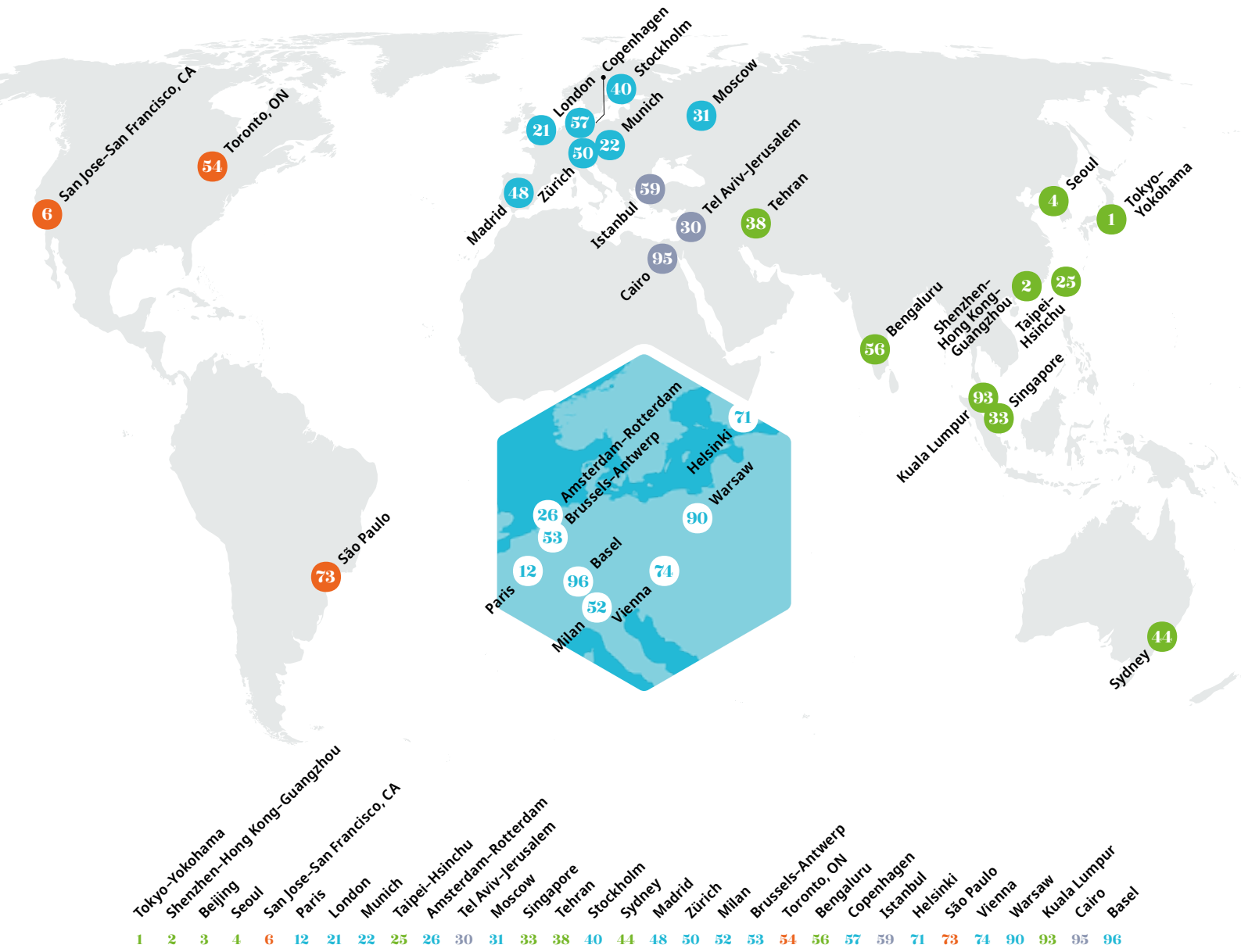
- In the GII 2024, 19 economies outperform on innovation relative to their level of development, the majority still located in Sub-Saharan Africa and South East Asia, East Asia, and Oceania.
- India, the Republic of Moldova (68th), and Viet Nam continue to lead as the longest-standing innovation overperformers, for a 14thconsecutive year.
- Indonesia, Pakistan, and Uzbekistan maintain their overperformer status for a third consecutive year, and Brazil for a fourth.
- Conversely, 41 economies are performing below expectation on innovation, the majority from Latin America and the Caribbean and Sub-Saharan Africa.

Results of the global top 100 S&T cluster rankings

7. The world's five biggest science and technology clusters are all located in East Asia; Tokyo–Yokohama is the biggest S&T cluster globally, Cambridge the most S&T-intensive

- Tokyo–Yokohama (Japan) continues to lead, followed by Shenzhen–Hong Kong–Guangzhou (China and Hong Kong, China), Beijing (China), Seoul (Republic of Korea) and Shanghai–Suzhou (China).
- China, for a second consecutive year, leads with the most clusters (26) in the top 100. The United States follows, with 20 clusters, then Germany with eight.
- São Paulo (Brazil); newcomer Cairo (Egypt); Bengaluru, Delhi, Chennai and Mumbai (India); Tehran (Islamic Republic of Iran); Kuala Lumpur and Singapore; Istanbul and Ankara (Türkiye); and Moscow (Russian Federation) are the only middle-income economy clusters outside of China.
- Cambridge in the United Kingdom and San Jose–San Francisco, CA, in the United States are the two most S&T-intensive clusters relative to population density. Eindhoven (Kingdom of the Netherlands), Oxford (United Kingdom) and Boston–Cambridge, MA (United States) follow. In the Republic of Korea, Daejeon ranks the seventh most S&T-intensive cluster and is the only Asian cluster in the top 10 by intensity. Munich (Germany) maintains its rank as the 10th most S&T-intensive cluster globally.
- The GII 2024 identifies the top African S&T clusters within Africa beyond the global top 100. Egypt has the most clusters (11), followed by South Africa (8), Morocco (5), Nigeria (4), Tunisia (4), Ethiopia (2), Ghana (2) and Kenya (1) , with others following. These clusters are strong in scientific publications but weaker in international patenting, thus they continue to be more science rather than full-blown S&T clusters.

Top S&T cluster by economy or cross-boarder region ranked among the top 100, 2024



Note: Circles with dotted borders indicate the number of total clusters in that economy, for economies with three or more top 100 S&T clusters.

Source: Global Innovation Index Database, WIPO, 2024.

Results of the Special theme – Unlocking the promise of social entrepreneurship

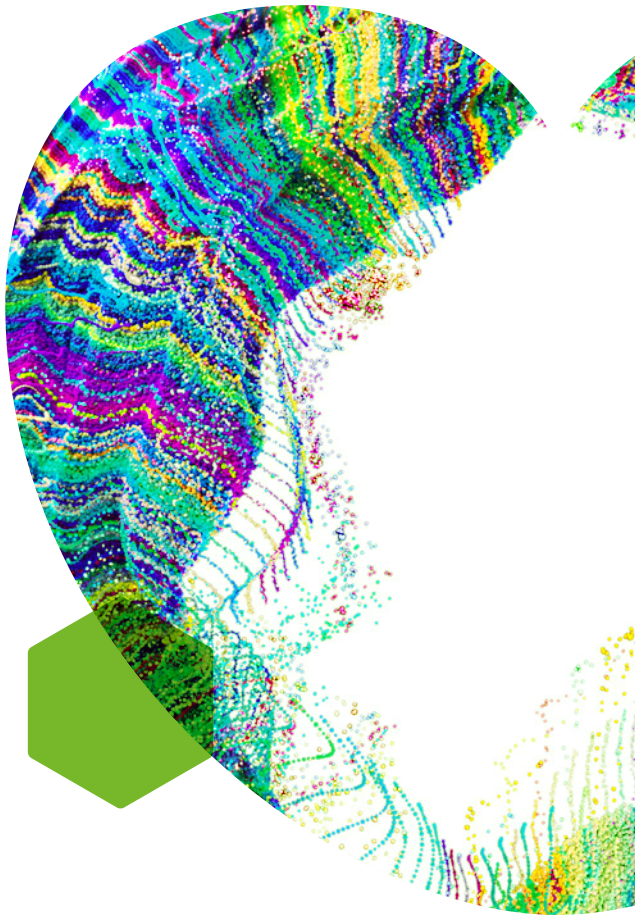
8. This year's special GII theme looks to the future of social entrepreneurship and asks: What will it take for social entrepreneurship to catalyze transformative innovation and societal impact?

- The special theme "Unlocking the promise of social entrepreneurship" emphasizes the rise and significance of social entrepreneurship as a global phenomenon aimed at addressing critical social and environmental issues through innovative business models. Social entrepreneurs aim to develop and fund solutions that address societal challenges while generating revenue within the confines of a market economy.
- This approach has gained momentum among young inventors and innovators seeking to align their work with positive social change, especially in areas overlooked by traditional businesses and governments.

- Current estimates suggest there are between 10 and 11 million social enterprises and up to 30 million social entrepreneurs globally, contributing roughly USD 2 trillion to global GDP.
- Social enterprises tackle various issues that include poverty, environmental sustainability and social injustice. For instance, Bandhu Tech in India provides housing for migrant workers using an AI-enhanced platform; Green Bio Energy in Uganda produces eco-friendly briquettes; Peek Vision offers mobile eye-health services in low-resource settings; Thaki refurbishes laptops for refugee education; and in India the Community Design Agency involves low-income communities in housing projects.
- Despite their impact made by these enterprises, traditional innovation models and policies have largely ignored such community-based ventures.
- Social entrepreneurship operates within diverse definitions and legal frameworks, reflecting the regional histories and policy environments in which they exist. These enterprises often face competing demands between social impact and financial success, beneficiaries and investors, and long-term systemic change versus short-term survival. However, such tensions also serve to drive their innovation potential, by combining aspects of the social sector and the market.
- Social enterprises create impact through various pathways, including customer-focused models that provide essential services to underserved populations, employee-focused models that hire and train marginalized individuals, product/service-focused models that develop sustainable products, and ecosystem-focused models that mobilize diverse stakeholders in order to effect systemic change. Examples include SOIL in Haiti, which provides sanitation services; iKure in India, offering primary health care through a hub-and-spoke model; Eco Femme in India, producing reusable menstrual pads; and WeRobotics in Switzerland, which connects local drone and AI experts with global organizations.
- Innovation in social entrepreneurship often involves process and product innovations tailored to fit local contexts, emphasizing collaboration and open-source strategies. Intellectual property (IP) activity varies, with some enterprises securing patents and trademarks.
- The report identifies several barriers to social entrepreneurship, including limited legal frameworks, financing challenges, and inadequate impact measurement.
- Policy recommendations include developing supportive legal and regulatory environments, investing in education and training programs, promoting data collection, assisting social entrepreneurs in reaching underserved communities, incubating social enterprise networks, and creating incentives for private investment. Public and private sector collaboration is crucial for addressing these barriers and unlocking the full potential of social entrepreneurship.
- At the same time, the onus for action and change is not only on the actors that surround social entrepreneurs. There is also scope for social entrepreneurs themselves to more actively drive innovation in their ventures. To some extent, this is a matter of social entrepreneurs recognizing the critical role that innovation plays and directing their attention toward key activities such as R&D, process innovation, and patenting and trademarking. But it also involves social entrepreneurs taking concrete actions to embed their enterprises in existing innovation ecosystems. They can do this, by tapping existing sources of scientific and technological knowledge, as well as venture capital, R&D tax credits, and other innovation finance tools, and by collaborating with universities, public research organizations and other entrepreneurs.
- Ultimately, social entrepreneurship offers a transformative approach to tackling global challenges, by merging business innovation with social goals. By investing in supportive policies, infrastructure and financing, it is possible to create an environment where social enterprises thrive, driving sustainable development and creating lasting positive impacts on a global scale.
- Innovation policy needs to be better designed to support social entrepreneurship, which requires a focus on institutional frameworks, human capital, infrastructure, networks, financing, and measurement. The 2024 edition of the GII addresses these gaps by highlighting the state of social entrepreneurship globally and the role of innovation in creating positive impacts, and offers policy recommendations for unlocking the sector's potential.

GII 2024 results

The GII unveils the world's innovation leaders, gauging the innovation performance of 133 economies.



This section presents the highlights of the Global Innovation Index 2024 (GII), including a discussion on the top ranked economies by income group and world region, as well as identifying those economies that are overperforming on innovation relative to their level of development.

The GII 2024 rankings are mainly derived from 2022 and 2023 data points (about 80 percent of all data). Appendix I provides details on how to interpret the results, cautioning against simple year-on-year comparison of the GII rankings.

Innovation leaders in 2024

Asian middle-income economies China, India, Indonesia and Türkiye surge ahead. Thailand and Viet Nam move closer to the top 40. Morocco joins the group of middle-income economies within the GII top 70 that have climbed fastest in the GII ranking since 2013.

Switzerland ranks 1st in the GII for the 14th consecutive year (Figure 16). It is still the global leader in innovation outputs, ranking 1st in both Knowledge and technology outputs and Creative outputs. It also ranks in the top 5 of all the other GII pillars, with the exception of Infrastructure (7th). Sweden and the United States (US) maintain their respective 2nd and 3rd positions for the second consecutive year. Sweden leads in Infrastructure (1st), Business sophistication (1st), Knowledge and technology outputs (2nd) and Human capital and research (3rd). It holds top positions for its Researchers (1st), Intellectual property (IP) payments and receipts (both 1st), its Knowledge-intensive employment (3rd), its Global brand value (3rd) and its Low-carbon energy use (4th). The United States scores best in the world in nine of the 78 GII 2024 innovation indicators – behind Singapore. It ranks 1st in the world in indicators that include the quality of its universities, the impact of its scientific publications (H-index), software spending and IP receipts (Box 1).

Singapore (4th) moves further into the top 5 and is the economy with the greatest number of GII indicators ranking 1st in the world for the first time (with 14 out of 78 indicators – Box 1), overtaking the United States. However, even if Singapore moves closer to the top 3, breaking into that group remains challenging. The top 3 economies share the characteristics of both excelling across all GII pillars and successfully balancing their innovation inputs and outputs (Table 4). Even though Singapore has already surpassed Switzerland, Sweden and the United States in terms of innovation inputs, the gaps between Singapore and the top 3 still remain large in innovation outputs, and especially in Creative outputs.

The Republic of Korea moves up to 6th position and ranks in the top 3 worldwide in key indicators including Researchers (2nd), R&D expenditures (2nd), R&D performed by business (1st) and Production and export complexity (3rd).

Box 1 GII innovation indicators – 2024 trailblazers

Singapore takes the lead in 2024 in terms of the number of GII innovation indicators in which it ranks top globally, ranking 1st in the world in 14 out of 78 indicators and overtaking the United States. It leads in Regulatory quality, Policy stability for doing business, ICT access, Logistics performance, Venture capital received, Venture capital investors, High-tech manufacturing and GitHub commits.

The United States follows Singapore globally, ranking 1st worldwide in nine indicators (four less than in 2023), including holding the top spot in Global corporate R&D investors, Unicorn valuation and Intangible asset intensity. China follows in 3rd place, leading in eight innovation indicators (two more than in 2023), including Utility models, Trademarks and Industrial designs. Switzerland comes next, in 4th place, attaining the top ranking in University–industry R&D collaboration, Intellectual property payments and receipts and PCT patents. Japan, Israel, Hong Kong, China and Luxembourg, tie in 5th place, ranking 1st in six indicators, including Public research–industry co-publications, GERD performed by business, High-tech imports and Knowledge-intensive employment, respectively. They are followed by Sweden, the Republic of

Korea and Iceland, tying in 9th place, leading in Researchers, Researchers working in the private sector (Research talent) and Low-carbon energy use, respectively.

In addition, certain middle- and low-income economies are excelling in various domains. Relative to other countries and to their own GDP or population, the Plurinational State of Bolivia, Cambodia and Nepal rank 1st in Loans from microfinance institutions, Malaysia in Graduates in science and engineering and Mexico in Creative goods exports. Correspondingly, Morocco leads in Industrial designs, the Islamic Republic of Iran in Trademarks and Namibia in Expenditure on education.

Box Table 1 Economies with the most GII indicators ranked top, 2024

Economy	Inputs	Outputs	Total
Singapore	9	5	14
United States	3	6	9
China	3	5	8
Switzerland	3	4	7
Japan	3	3	6
Israel	4	2	6
Hong Kong, China	4	2	6
Luxembourg	5	1	6
Sweden	2	3	5
Republic of Korea	2	3	5
Iceland	3	2	5

Note: The GII methodology allows multiple economies to rank 1st on any one indicator; see Economy profiles and Appendix I.

Source: Global Innovation Index Database, WIPO, 2024.

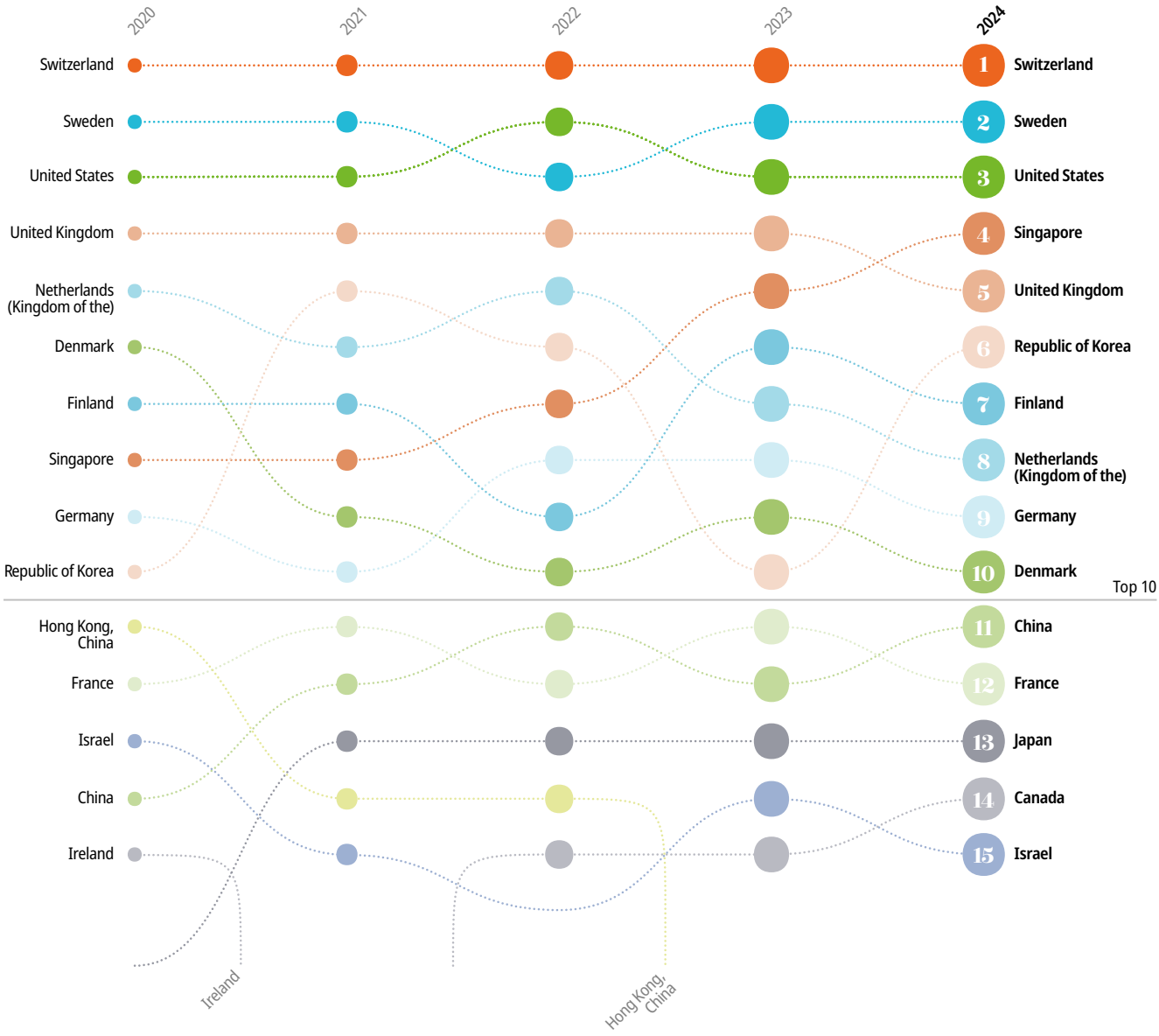
China moves up the ranking to 11th position, edging closer to the top 10 again. It maintains its 1st position among the upper middle-income group and 3rd position among economies in South East Asia, East Asia and Oceania, behind Singapore and the Republic of Korea. China is also the third economy with the greatest number of indicators ranked 1st, two more than in 2023, behind Singapore and the United States (Box 1). It ranks in the top 3 globally in indicators such as High-tech exports (1st), Global corporate R&D investors (2nd), Labor productivity growth (2nd) and GERD financed by business (3rd).

Japan remains firmly at the 13th rank – a position it has held since 2021. Canada makes a comeback, rising to 14th position, its best rank since 2014. It holds the highest rank globally in Venture capital (VC) recipients (1st), and Joint venture/strategic alliance deals (1st). It also holds tops ranks for the quality of its universities (4th) and the impact of its scientific publications (H-index – 4th).

Ireland (19th) and Luxembourg (20th) enter the top 20, climbing three ranks and one rank, respectively (Figure 17). In part influenced by the strong presence of foreign multinationals in the field of ICT, Ireland ranks top globally in ICT services exports (1st) and Intellectual property payments (1st) and ranks in the top 3 for its Intangible asset intensity (2nd).

Australia (23rd) and New Zealand (25th) also continue to move upward within the top 25. Australia excels in the quality of its universities (3rd), the impact of its scientific publications (6th) and its Knowledge-intensive employment (9th). New Zealand enters the top 25 with high rankings in Regulatory environment (5th), Firms offering formal training (5th) and Domestic credit to private sector (9th).

Figure 16 The GII dynamo: The top 15 innovators, 2020–2024



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

Source: Global Innovation Index Database, WIPO, 2024.

European Union (EU) economies Cyprus (27th), Spain (28th) and the Czech Republic (30th) move up within the top 30, while Poland (40th) makes it into the top 40 (Figure 17). Beyond the EU, European economies Serbia (52nd) and Montenegro (65th) continue to improve their ranking, with Montenegro entering the top 70.

Apart from China, there are only four other middle-income economies among the top 40 economies this year: namely, Malaysia (33th), Türkiye (37th), Bulgaria (38th) and India (39th). However, Thailand (41st) and Viet Nam (44th) move ahead, consolidating their positions in the top 45 and moving towards the top 40. With its best rank since 2009, Thailand is sustaining its long-term progression. Türkiye is also moving ahead, claiming 3rd position among the upper middle-income economies and overtaking Bulgaria. All these middle-income economies, with the exception of Bulgaria, moved up in the rankings this year.

The United Arab Emirates remains in 32nd place. Saudi Arabia (47th) and Qatar (49th) continue to climb upward into the top 50 and are the only two economies in the Middle East region to move up the ranking this year (Figure 17). Taking a broader view, among the Middle East economies, only the United Arab Emirates (32nd), the Islamic Republic of Iran (64th) and Oman (74th) have improved their position since 2013.

Georgia (57th) and Armenia (63rd) make important improvements, entering the top 60 and top 70, respectively. However, the position of both economies in the ranking has fluctuated over the years.

Northern African economies Morocco (66th) and Algeria (115th) experience notable improvements in their innovation ranking. Together with China, India, Indonesia (54th), the Islamic Republic of Iran (64th), the Philippines (53rd), Türkiye and Viet Nam, Morocco joins the group of middle-income economies within the GII top 70 that have made the biggest advances in the GII ranking since 2013 (Figure 17). Algeria ranks in the top 10 in Expenditure on education (10th), and in the top 20 globally for its Graduates in science and engineering (20th). It also made important progress in IP-related indicators including Patents (65th, up by 15 with its number of resident patent applications almost doubling in 2022), Trademarks (87th) and Industrial designs (46th).

Egypt holds the 86th position, with Cairo also entering the GII top 100 science and technology clusters ranking for the first time in 2024 (see Cluster ranking).

Brazil (50th) remains in the top 50 in 2024, keeping its leading position in Latin America and the Caribbean, ahead of Chile (51st) and Mexico (56th), both of which also move up the ranking. Moreover, Colombia (61st), Costa Rica (70th) and Paraguay (93rd) make the greatest headway in the region, with Costa Rica entering the top 70. Caribbean economy Barbados enters the GII in 2024 at the 77th position, after taking active steps to improve its innovation indicators (see Box 2).

The Philippines (53rd) and Indonesia (54th) continue to improve their GII ranking, with both entering the top 55. The Philippines claims 3rd position in the lower middle-income group. Indonesia enters the top 60 and is the economy in South East Asia, East Asia and Oceania that makes the greatest advancement in ranks in 2024. It makes notable improvements in Policy stability for doing business (13th) and key IP indicators, such as Industrial designs (64th), Trademarks (72nd) and PCT patents (82nd), even if these are still at moderate levels.

Ukraine (60th) drops by five positions and is now 4th among the lower middle-income group (Table 2). Its position is mostly affected by falls in indicators related to its Institutions (107th) and its Human capital and research (54th), including Tertiary enrolment (44th), School life expectancy (76th), Government effectiveness (99th) and Rule of law (115th). Foreign direct investment (FDI) inflows (88th) also dropped considerably.

In the last five years, Indonesia, Mauritius (55th), Saudi Arabia, Qatar, Brazil and Pakistan (91st) made the greatest advances in the GII, in order of their rank progression (Figure 17). Saudi Arabia performs relatively better in innovation inputs (36th) and excels in Market capitalization (1st), State of cluster development (2nd) and Global corporate R&D investors (16th). In contrast, Pakistan performs relatively well in innovation outputs, excelling in Mobile app creation (14th), ICT services exports (22nd) and Software spending (24th).

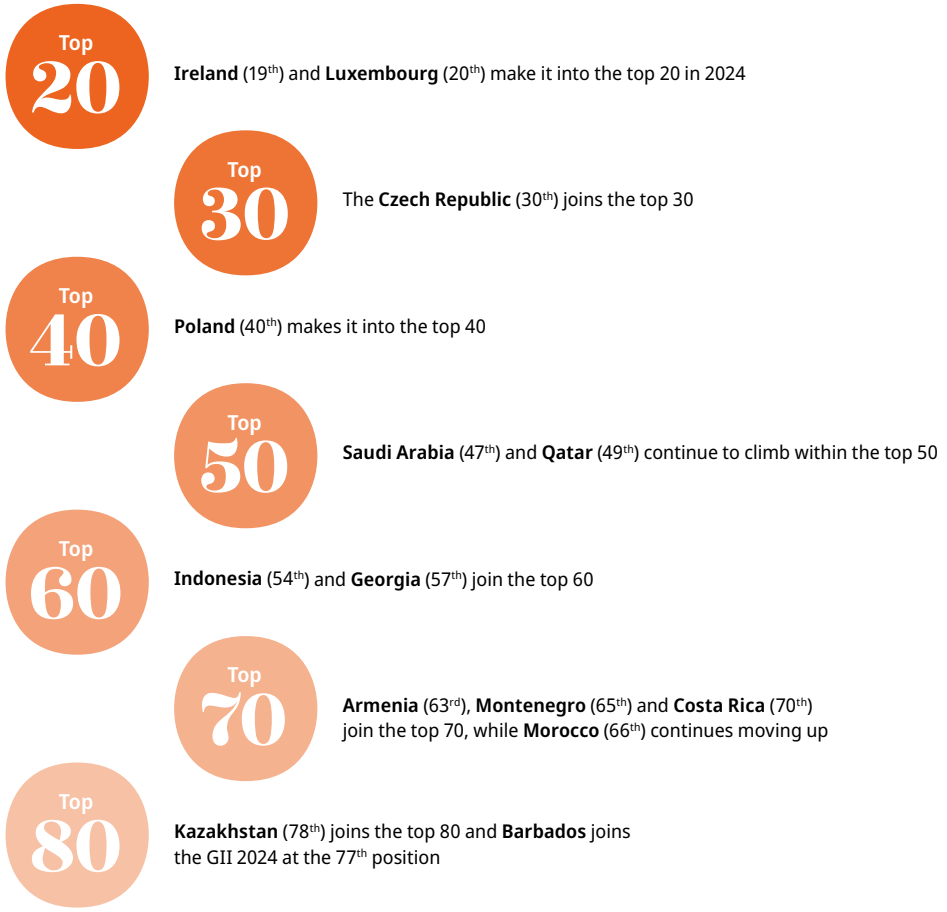
In Central and Southern Asia, Kazakhstan (78th) enters the top 80 (Figure 17). Kazakhstan performs better in innovation inputs (72nd), excelling in Government's online service (8th), Utility models (10th), E-participation (15th) and Entrepreneurship policies and culture (25th). Uzbekistan (83rd) remains in the top 85 and is the 10th ranking economy among the lower middle-income group (Table 2) – a significant improvement since 2013, when it held the 133rd spot. Sri Lanka (89th) consolidates its place in the top 90, while Kyrgyzstan (99th) takes a big stride into the top 100. Taking a longer term view, all economies in the region have made sustained progress in their rankings over the past decade. Uzbekistan, the Islamic Republic of Iran, Pakistan and India have made the largest advancements, in that order.

Eight out of the 27 economies from Sub-Saharan Africa (SSA) covered this year improve their ranking. Mauritius (55th) moves forward into the top 55, Cabo Verde (90th) consolidates its place in the top 90 while Senegal (92nd) moves closer to it. Kenya (96th) makes the largest improvement in the region, advancing four ranks into the top 100. Kenya improves notably in innovation outputs (87th, up by four positions), and in particular in Knowledge and technology outputs. Its most notable improvements are in the IP-related indicators Utility models (15th), Patents by origin (49th) and PCT patents (69th), all of which go up by around 20 ranks. It also makes notable improvements in ICT services exports (17th).

Beyond the top 100, Tajikistan (107th), Algeria (115th) and Burundi (127th) have progressed the most in the rankings. Bangladesh (106th) and Madagascar (110th), despite setbacks in 2024, have demonstrated GII rank improvements over the long run.

Burundi is the only low-income economy that moved up the ranking this year, while Uganda's ranking remains unchanged, in 121st position globally and 4th among its income group (Table 2).

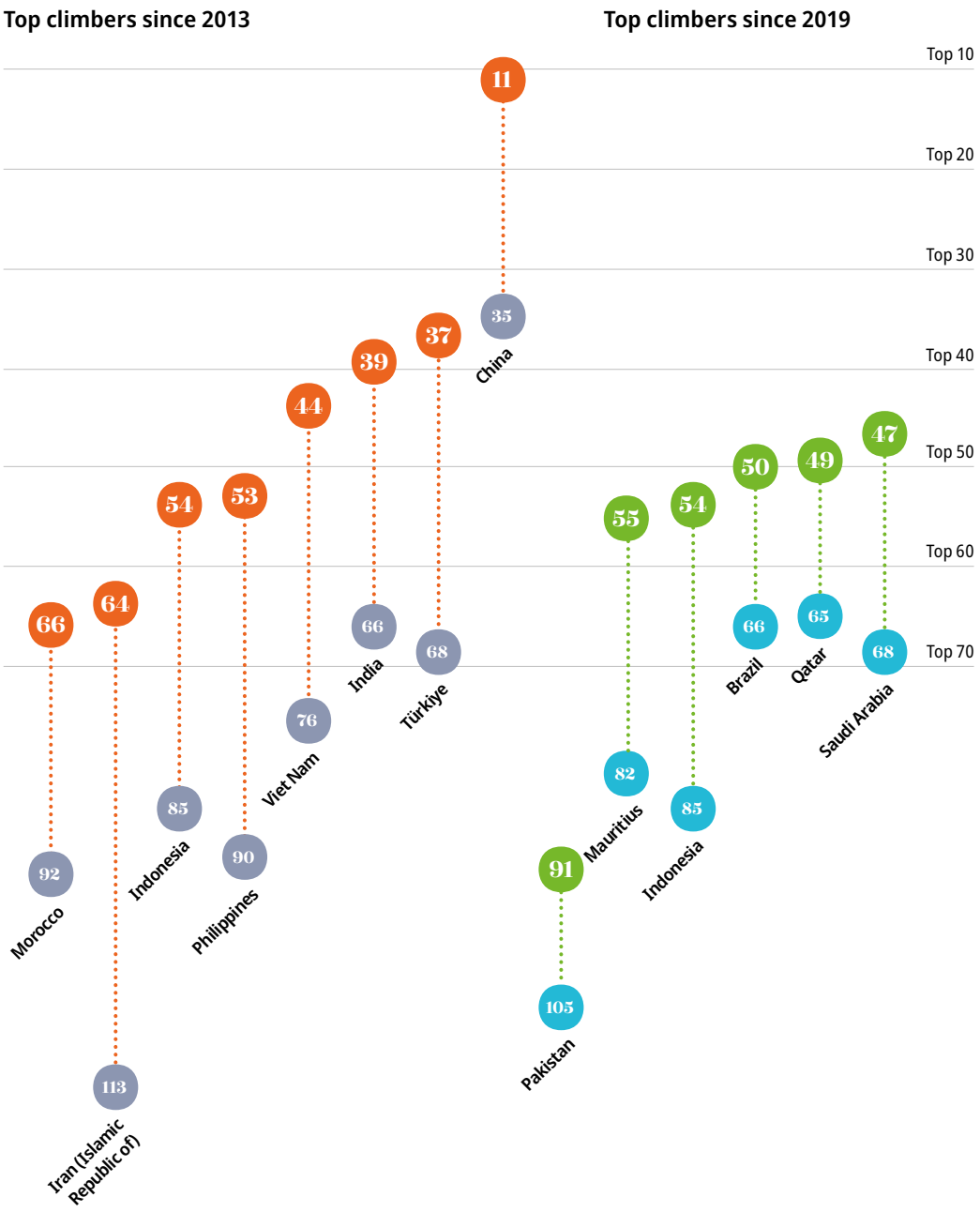
Figure 17a Breaking barriers: Economies soaring to new heights in innovation, 2024



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

Source: Global Innovation Index Database, WIPO, 2024.

Figure 17b Economies climbing the ladder



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

Source: Global Innovation Index Database, WIPO, 2024.

China (11th), Türkiye (37th), India (39th), Viet Nam (44th), the Philippines (53rd), Indonesia (54th), the Islamic Republic of Iran (64th) and Morocco (66th) are the group of middle-income economies within the GII top 70 which have climbed fastest in the ranking since 2013.

Standout economies' 5-year innovation surge, 2019–2024

In the last five years, Indonesia (54th), Mauritius (55th), Saudi Arabia (47th), Qatar (49th), Brazil (50th) and Pakistan (91st) ascended the most (in order of their rank progression).

Table 2 Top 10 Economies by income group

Income group rank	GII rank	**High-income economies** (51 in total)
1	1	Switzerland
2	2	Sweden
3	3	United States
4	4	Singapore
5	5	United Kingdom
6	6	Republic of Korea
7	7	Finland
8	8	Netherlands (Kingdom of the)
9	9	Germany
10	10	Denmark

Income group rank	GII rank	**Upper middle-income economies** (34 in total)
1	11	China
2	33	Malaysia
3	37	Türkiye
4	38	Bulgaria
5	41	Thailand
6	50	Brazil
7	52	Serbia
8	54	Indonesia
9	55	Mauritius
10	56	Mexico

Income group rank	GII rank	**Lower middle-income economies** (38 in total)
1	39	India
2	44	Viet Nam
3	53	Philippines
4	60	Ukraine
5	64	Iran (Islamic Republic of)
6	66	Morocco
7	67	Mongolia
8	73	Jordan
9	81	Tunisia
10	83	Uzbekistan

Income group rank	GII rank	**Low-income economies** (10 in total)
1	104	Rwanda
2	110	Madagascar
3	117	Togo
4	121	Uganda
5	127	Burundi
6	128	Mozambique
7	129	Burkina Faso
8	130	Ethiopia
9	131	Mali
10	132	Niger

Source: Global Innovation Index Database, WIPO, 2024.

Box 2 outlines important "dos and don'ts" to bear in mind when using the GII to improve an economy's innovation performance.

Box 2 How to best use the Global Innovation Index and what not to do

For many years, governments around the world have successfully used the GII to improve their economies' innovation performance and shape evidence-based innovation policies. A survey carried out by WIPO in 2024 showed that 77 percent of WIPO member states were using the GII to improve innovation ecosystems and metrics (up by roughly 20 percent in comparison to 2022, with 91 out of 118 responding member states using the GII), as well as it being a benchmark for national innovation policies or economic strategies across all world regions.

One major benefit of the GII is that it puts evidence and metrics at the core of conceiving, deploying and evaluating innovation policies. A first step brings together statisticians, innovation actors and policymakers to develop a clear understanding of a country's innovation performance. In a second step, the policy discussion turns to leveraging domestic innovation opportunities, while at the same time overcoming country-specific weaknesses. Both steps are an exercise in coordination among different public and private innovation actors, as well as between government entities. In a number of countries, the GII has facilitated such a dialogue between these actors.

Some dos:

- Ensure that innovation is embedded as a key priority in a country's pathway to national development and progress, possibly formulated within a clear innovation policy.
- Establish a cross-ministerial task force to pursue innovation policy matters through a "whole of government approach," ideally reporting to the top tier of government (for instance, the prime minister's office).
- Ensure that any innovation policy task force consults with innovation actors from both the private and public sectors, including startups, research universities and innovation clusters.
- Ensure that any national intellectual property (IP) policy is aligned with or integrated into the innovation law or strategy.
- Ensure that the targets of an innovation policy are clear, quantifiable and can be evaluated.

Some don’ts:

- Avoid nominating a single government entity to oversee the GII data and policy work, such as the intellectual property office or one ministry. This is a team effort involving different government entities, not the responsibility of one body working alone.
- Do not set overly ambitious, and therefore unrealistic, GII ranking targets. GII rankings rarely increase in leaps and bounds from one year to the next, particularly within the top 50.
- Do not expect policy changes to result in immediate improvement in GII indicator performance. There are significant lags between the formulation of innovation policy, its execution and its impact. The latest available innovation data is also rarely current, often lagging by a few years.
- Do not treat the GII as a mathematical exercise – that is, by attempting to collect or focus on specific indicators simply to climb the ranking. A country’s GII rank alone is only a partial reflection of a national innovation ecosystem and related progress. Moreover, the GII framework changes regularly. Note also that the year-on-year changes within the GII are influenced by relative performance in relation to other countries, together with other methodological considerations (see Appendix I). Setting objectives over a period of years (for example, three to five years) and then reviewing combined progress over several years is a more appropriate way of using the GII.

With these caveats in mind, the GII has become a catalyst for the national collection of innovation indicators. As detailed in Appendix III, the vast majority of GII data is not collected by the World Intellectual Property Organization (WIPO) itself directly from its member states. Instead, WIPO uses data submitted by economies to those organizations that are globally responsible for collection of specific data (for example, the UNESCO Institute for Statistics for data relating to R&D).[1] For all other data sets, the GII team can help countries identify missing and outdated data (marked clearly in the economy profiles and briefs) and advise data collectors on how to remedy the situation. This system has proven remarkably effective in building more global and inclusive innovation and related data sets in WIPO’s partner organizations, with better data coverage across all United Nations member states, effectively contributing to a useful public good that facilitates better innovation policymaking.

Finally, a new trend is the interest being expressed by countries in building sub-national innovation indices at the regional or city level that mirror the GII framework or comprise selected GII indicators.[2] WIPO is supporting this work in two ways: (i) by organizing workshops on the exchange of best practice, and (ii) by providing a background study on sub-national innovation indices. Member states are welcome to participate in these events and efforts, and to provide additional information on their sub-national innovation index plans and needs.

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1 The sole exception is the intellectual property data that WIPO collects annually from member states. See https://www.wipo.int/web/ip-statistics.

2 The recent WIPO study reviews the applicability of the GII framework to the development of sub-national innovation metrics. It analyses the existing sub-national innovation indices of WIPO member states who are pioneers in this field. It also determines which future innovation metrics are applicable to the measurement of innovation at the sub-national level, particularly those exploiting “big data” and new computational methods. See WIPO (2024a).

Innovation overperformers

India, the Republic of Moldova and Viet Nam continue to lead as the longest-standing innovation overperformers. Indonesia, Pakistan and Uzbekistan maintain their status as overperformers for a third consecutive year.

In the GII 2024, 19 economies are performing above expectation relative to their level of development – these are the GII innovation overperformers (Figure 18 and Table 3).

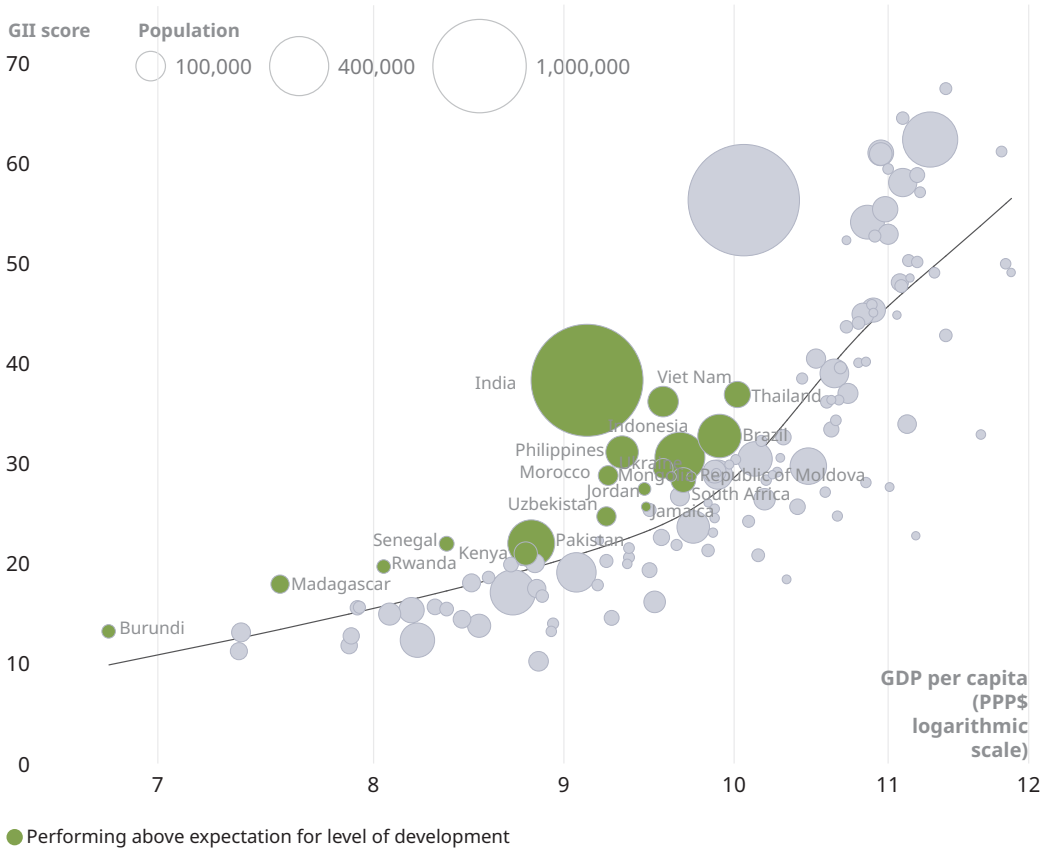
India, the Republic of Moldova and Viet Nam continue to be record holders by being innovation overperformers since 2011, for a 14th consecutive year. Viet Nam (44th) scores above its income level in all GII pillars, and even above the upper middle-income group, with the exception of

Human capital and research. The Philippines (53rd) and Morocco (66th) keep their innovation overperformer status for a sixth time, and both move up in the rankings this year. Senegal (92nd) retains its overperformer status again this year, after regaining its place in the prestigious list in 2023. In addition, Indonesia (54th), Uzbekistan (83rd) and Pakistan (91st) keep their overperformer status for a third consecutive year.

From a regional perspective, South East Asia, East Asia, and Oceania and Sub-Saharan Africa still have the same number of overperformers, with five each. Central and Southern Asia holds 3rd place, while Europe, Latin America and the Caribbean and Northern Africa and Western Asia tie in 4th place, with two overperforming economies each (Table 3).

Conversely, 41 economies are performing below expectation on innovation, the majority from Latin America and the Caribbean and Sub-Saharan Africa (both with 11 economies each). Among the high-income group, six are economies from Northern Africa and Western Asia: namely, the United Arab Emirates (32nd), Saudi Arabia (47th), Qatar (49th), Kuwait (71st), Bahrain (72nd) and Oman (74th), driven in large part by their natural-resource-driven high GDP per capita – a key factor for this analysis. In the upper middle-income group, three economies which perform below expectation are European economies, notably the Russian Federation (59th), Montenegro (65th) and Belarus (85th). In the lower middle-income group, 10 economies are performing below expectation for their level of development.

Figure 18 Innovation overperformers, relative to their economic development



Note: Bubbles 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 2024.

Source: Global Innovation Index Database, WIPO, 2024.

Table 3 Innovation overperformers in 2024: 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	2011–2024 (14)
Republic of Moldova	Upper middle-income	Europe	2011–2024 (14)
Viet Nam	Lower middle-income	South East Asia, East Asia, and Oceania	2011–2024 (14)
Mongolia	Lower middle-income	South East Asia, East Asia, and Oceania	2011–2015, 2018–2024 (12)
Rwanda	Low-income	Sub-Saharan Africa	2012, 2014–2024 (12)
Ukraine	Lower middle-income	Europe	2012, 2014–2024 (12)
Thailand	Upper middle-income	South East Asia, East Asia, and Oceania	2011, 2014–2015, 2018–2024 (10)
Jordan	Lower middle-income	Northern Africa and Western Asia	2011–2015, 2022–2024 (8)
Madagascar	Low-income	Sub-Saharan Africa	2016–2018, 2020–2024 (8)
Senegal	Lower middle-income	Sub-Saharan Africa	2012–2015, 2017, 2023–2024 (7)
South Africa	Upper middle-income	Sub-Saharan Africa	2018–2024 (7)
Morocco	Lower middle-income	Northern Africa and Western Asia	2015, 2020–2024 (6)
Philippines	Lower middle-income	South East Asia, East Asia, and Oceania	2019, 2020–2024 (6)
Burundi	Low-income	Sub-Saharan Africa	2017, 2019, 2022–2024 (5)
Brazil	Upper middle-income	Latin America and the Caribbean	2021–2024 (4)
Jamaica	Upper middle-income	Latin America and the Caribbean	2020, 2022–2024 (4)
Indonesia	Upper middle-income	South East Asia, East Asia, and Oceania	2022–2024 (3)
Pakistan	Lower middle-income	Central and Southern Asia	2022–2024 (3)
Uzbekistan	Lower middle-income	Central and Southern Asia	2022–2024 (3)

Note: Income group classification follows the World Bank Income Group Classification (July 2023). Geographical regions correspond to the United Nations publication on standard country or areas codes for statistical use (M49).

Source: Global Innovation Index Database, WIPO, 2024.

Efficiency champions: Converting innovation investment into tangible innovation output

Middle-income economies, such as China and Türkiye, outdo their high-income peers in innovation outputs

Among high-income economies, Switzerland (1st) leads in producing higher levels of outputs compared to Sweden (2nd), the United States (3rd) and Finland (7th), while the United Kingdom (5th) and the Republic of Korea (6th) produce higher levels of outputs than the United States, but with lower input levels (Figure 19).

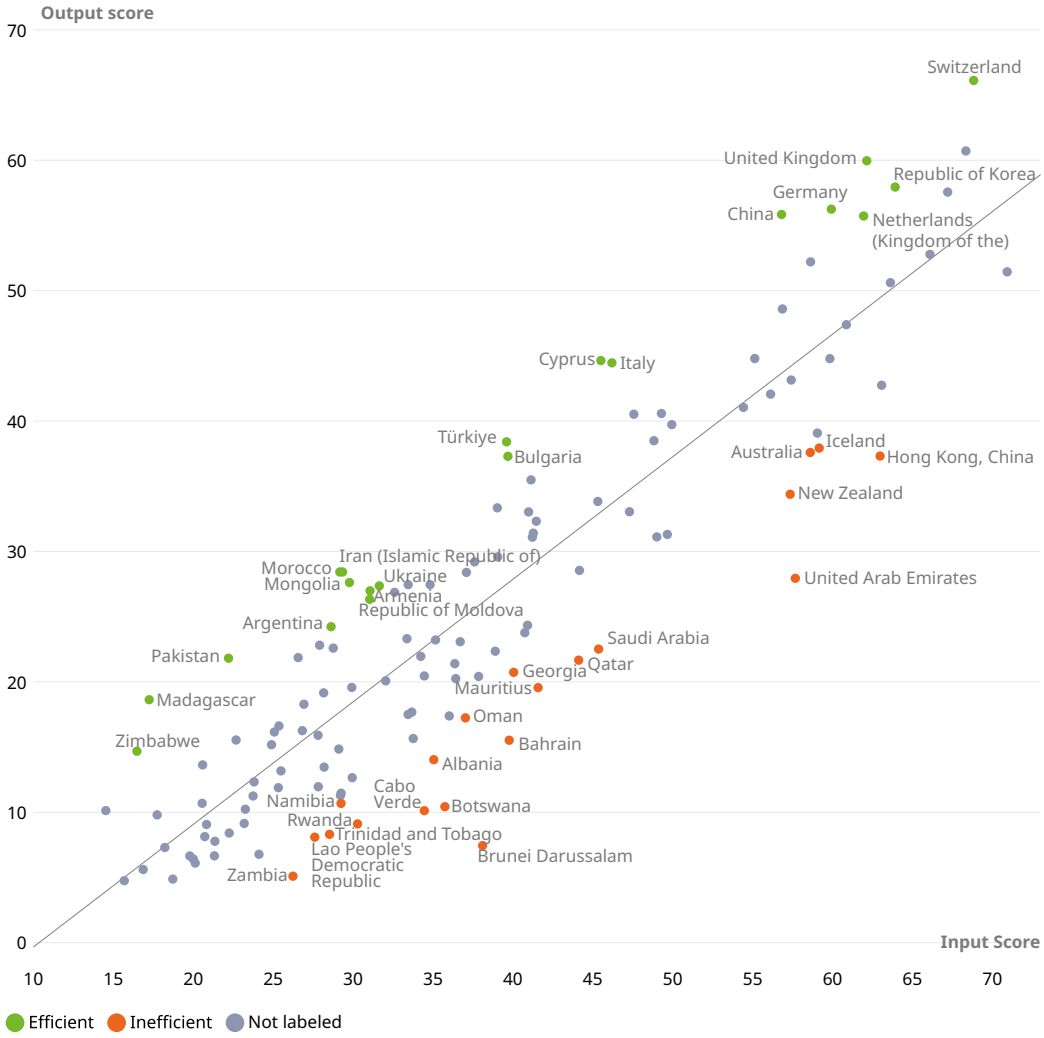
Among the upper middle-income group economies, China (11th) also shines, producing levels of outputs that are higher than those of high-income economies, such as Singapore (4th), Finland (7th), the Kingdom of the Netherlands (8th), Denmark (10th) and France (12th), but with fewer inputs. Türkiye (37th) does likewise relative to Iceland (22nd) and Australia (23rd); while Bulgaria (38th) also surpasses the level of outputs of New Zealand (25th) with lower input levels.

Among the lower middle-income group economies, the Islamic Republic of Iran (64th), Morocco (66th) and Pakistan (91st) are efficient innovators, while Madagascar (110th) stands out among the low-income group for its innovation efficiency.

However, certain economies, including Australia (23rd), the United Arab Emirates (32nd), Saudi Arabia (47th), Botswana (87th), Cabo Verde (90th) and Rwanda (104th), find it harder to translate inputs into outputs. This year, Serbia (52nd), Montenegro (65th), Peru (75th), Kazakhstan (78th), Azerbaijan (95th) and Kyrgyzstan (99th) have improved their performance in converting inputs into outputs.

Innovation leaders (top 25) demonstrate balanced and strong performance across all seven pillars. Beyond the top 10, which all have balanced ecosystems, this group includes France (12th), Japan (13th), Canada (14th), Estonia (16th), Austria (17th), Norway (21st) and Australia (23rd) (Table 4). Some lower ranked economies excel in specific innovation pillars, such as Botswana and Rwanda in Institutions (36th and 38th, respectively), Kyrgyzstan in Human capital and research (42nd), Albania (84th) in Infrastructure (31st) and the Islamic Republic of Iran and Cambodia in Market sophistication (17th and 39th, respectively). Barbados and Costa Rica rank relatively highly in Business sophistication (49th and 50th, respectively). India and Hungary excel in Knowledge and technology outputs (22nd and 25th, respectively), while Türkiye and Mongolia shine in Creative outputs (16th and 32nd, respectively). These examples showcase the diverse strengths of economies that are vibrant in innovation, which can be nurtured to enhance their overall rankings.

Figure 19 Innovation input to output performance, 2024



Note: Line corresponds to the fitted line between the input score and output score of all economies included in the GII 2024.

Source: Global Innovation Index Database, WIPO, 2024.

Innovation across the world's regions

Central and Southern Asia further narrows the gap with Latin America and the Caribbean, and outpaces it in innovation outputs

For yet another year, there are no changes in the rankings of the world's regions, based on an unweighted average GII score of all economies within a region. Northern America and Europe continue to lead, followed by South East Asia, East Asia, and Oceania (SEAO). Northern Africa and Western Asia follow, while Latin America and the Caribbean, Central and Southern Asia (CSA) and Sub-Saharan Africa follow at a greater distance. However, this year the distance dividing economies in Latin America and the Caribbean and CSA is very small – on average no more than 0.10 GII score points. In fact, on average, economies in CSA have already surpassed Latin American and Caribbean economies in innovation outputs (by an average of 1.3 GII score points) but remain behind in innovation inputs (by an average of 1.5 score points).

Northern America

Largely driven by the United States, Northern America, which comprises the United States and Canada, is still the most innovative world region, maintaining a comfortable performance gap in relation to Europe. The United States holds stable in 3rd position, while Canada moves up to 14th place. Canada performs well in Market sophistication (4th), Business sophistication (13th), Human

capital and research (11th) and Institutions (14th), ranking ahead of the United States in the latter two pillars. It continues to rank in the top 10 for its University–industry R&D collaboration (5th), its Researchers working in the private sector (Research talent, 8th) and its Intellectual property payments (9th).

Europe

Europe still hosts the highest number of innovation leaders among the top 25 – 15 in total, with seven among the top 10. Malta (29th) exits the group of innovation leaders this year. Out of the 39 European economies covered, only nine move up the ranking this year (10 fewer than last year): namely, Austria (17th), Ireland (19th) and Luxembourg (20th) (the latter two both entering the top 20), Spain (28th), the Czech Republic (30th) (entering the top 30), Poland (40th) (entering the top 40), Croatia (43rd), Serbia (52nd), and Montenegro (65th) (reaching the top 70).

Among economies that are improving, Austria excels in Domestic industry diversification (3rd), Production and export complexity (7th), R&D expenditures (8th), which reached 3.2 percent of GDP in 2022, and Public research–industry co-publications (8th). Spain is performing well in Software spending (12th), Industrial designs (13th) and Global corporate R&D investors (15th).

Serbia gets closer to the top 50 with a strong performance in Domestic industry diversification (11th), ICT services exports (12th), Scientific and technical articles (13th) and Cultural and creative services exports (14th).

South East Asia, East Asia, and Oceania

Seven South East Asia, East Asia, and Oceania (SEAO) economies are world innovation leaders – one more than in 2023 – namely, Singapore (4th), the Republic of Korea (6th), China (11th), Japan (13th), Hong Kong, China (18th), Australia (23rd) and New Zealand (25th). New Zealand goes up by two ranks and joins the innovation leaders. These seven economies continue to lead in key innovation indicators. Singapore leads globally (1st) in 14 indicators (Box 1) including Venture capital received, the Republic of Korea in Patents China in High-tech exports, Japan in PCT patents, Hong Kong, China in Market capitalization and Australia in School life expectancy.

Eleven economies within the SEAO region (out of 17 covered) improve their rankings this year, with Indonesia (54th) again making the greatest advance and entering the top 60. Indonesia excels in University–industry R&D collaboration (6th), Policy stability for doing business (13th) and Intangible asset intensity (13th).

Table 4 Heatmap: GII 2024 rankings overall and by innovation pillar, 2024

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	4	7	5	4	1	1
Sweden	2	16	3	1	9	1	2	6
United States	3	17	12	30	1	2	4	8
Singapore	4	1	2	11	7	3	9	19
United Kingdom	5	26	7	18	3	14	5	3
Republic of Korea	6	24	1	9	15	5	10	2
Finland	7	4	6	2	11	8	6	17
Netherlands (Kingdom of the)	8	9	14	25	14	7	8	7
Germany	9	19	5	27	13	18	11	5
Denmark	10	2	9	8	21	12	13	10
China	11	44	22	5	16	11	3	14
France	12	29	16	19	10	17	16	4
Japan	13	23	19	13	8	6	12	22
Canada	14	14	11	21	4	13	20	25
Israel	15	34	18	41	12	9	7	30
Estonia	16	12	31	6	6	27	21	15
Austria	17	18	8	10	32	23	18	24
Hong Kong, China	18	8	15	16	2	25	58	12
Ireland	19	11	25	20	48	16	14	28
Luxembourg	20	5	28	53	30	10	36	9

Table 4 *Continued*

Economy	Overall GII	Insti-tutions	Human capital and research	Infra-structure	Market sophist-ication	Business sophist-ication	Knowledge and technology outputs	Creative outputs
Norway	21	6	20	4	31	22	26	26
Iceland	22	13	26	3	22	21	37	21
Australia	23	15	10	15	20	26	28	29
Belgium	24	21	13	44	46	15	15	36
New Zealand	25	7	23	12	34	20	45	31
Italy	26	55	30	28	38	34	19	18
Cyprus	27	46	46	45	41	29	23	13
Spain	28	49	27	14	33	31	24	23
Malta	29	39	35	37	42	19	48	11
Czech Republic	30	30	32	24	75	30	17	33
Portugal	31	37	21	46	36	33	33	20
United Arab Emirates	32	10	17	17	26	24	56	40
Malaysia	33	27	38	52	18	36	35	49
Slovenia	34	41	24	26	62	32	27	48
Lithuania	35	22	44	38	28	38	29	55
Hungary	36	53	34	35	60	28	25	44
Türkiye	37	100	40	40	37	48	43	16
Bulgaria	38	83	62	22	50	44	30	27
India	39	54	51	72	23	58	22	43
Poland	40	73	36	51	61	35	47	35
Thailand	41	74	71	50	25	41	39	38
Latvia	42	42	45	33	53	40	51	39
Croatia	43	68	41	23	54	54	32	50
Viet Nam	44	58	73	56	43	46	44	34
Greece	45	57	29	42	66	65	40	41
Slovakia	46	63	52	47	68	43	31	58
Saudi Arabia	47	35	33	49	27	79	68	67
Romania	48	81	70	32	67	47	38	56
Qatar	49	20	48	39	59	68	82	61
Brazil	50	103	57	55	47	39	50	42
Chile	51	48	58	54	44	51	65	59
Serbia	52	67	50	29	40	63	41	85
Philippines	53	65	84	85	77	37	42	60
Indonesia	54	40	90	67	35	78	73	65
Mauritius	55	33	69	87	24	69	91	62
Mexico	56	106	63	71	56	56	55	47
Georgia	57	32	60	74	64	55	72	77
North Macedonia	58	75	77	43	69	52	53	72
Russian Federation	59	126	39	76	57	53	52	53
Ukraine	60	107	54	82	85	45	34	68
Colombia	61	80	87	64	70	42	61	66
Uruguay	62	31	83	48	94	70	69	81
Armenia	63	77	89	79	83	85	60	46
Iran (Islamic Republic of)	64	133	64	95	17	110	49	52
Montenegro	65	86	61	57	52	59	74	70
Morocco	66	78	81	88	82	125	70	37
Mongolia	67	93	86	73	106	61	86	32
Republic of Moldova	68	90	68	89	63	105	64	51
South Africa	69	91	79	75	49	57	63	63
Costa Rica	70	47	82	59	87	50	59	86
Kuwait	71	66	53	60	76	120	67	69
Bahrain	72	28	75	36	80	83	83	95
Jordan	73	52	85	90	55	72	76	76
Oman	74	43	66	63	73	86	87	82
Peru	75	85	49	62	51	77	95	74
Argentina	76	123	55	77	97	60	77	54
Barbados	77	50	80	108	107	49	57	89
Kazakhstan	78	76	65	68	86	66	85	83
Jamaica	79	59	98	104	110	75	94	45
Bosnia and Herzegovina	80	110	72	69	29	104	71	94
Tunisia	81	102	47	107	84	119	54	73
Panama	82	82	99	58	95	112	90	64
Uzbekistan	83	62	93	70	78	71	78	103
Albania	84	60	101	31	91	64	89	99
Belarus	85	132	43	84	98	81	46	92
Egypt	86	94	96	92	74	103	81	78
Botswana	87	36	74	97	79	62	112	108

Table 4 *Continued*

Economy	Overall GII	Insti-tutions	Human capital and research	Infra-structure	Market sophist-ication	Business sophist-ication	Knowledge and technology outputs	Creative outputs
Brunei Darussalam	88	25	56	65	105	82	115	124
Sri Lanka	89	101	110	66	109	87	79	84
Cabo Verde	90	45	102	34	103	89	100	111
Pakistan	91	118	119	125	90	73	66	71
Senegal	92	70	106	81	72	123	62	112
Paraguay	93	96	115	61	88	102	113	75
Lebanon	94	128	59	116	45	80	80	93
Azerbaijan	95	51	94	102	114	67	103	96
Kenya	96	87	118	106	101	93	75	101
Dominican Republic	97	61	104	83	116	97	106	91
El Salvador	98	99	109	101	89	90	101	80
Kyrgyzstan	99	119	42	78	81	117	107	104
Bolivia (Plurinational State of)	100	127	67	124	19	84	120	102
Ghana	101	71	113	105	129	76	116	79
Namibia	102	56	91	113	93	92	122	105
Cambodia	103	89	111	103	39	124	98	106
Rwanda	104	38	95	93	117	113	105	114
Ecuador	105	109	100	80	113	94	96	98
Bangladesh	106	108	128	86	92	126	92	88
Tajikistan	107	104	92	109	96	101	84	115
Trinidad and Tobago	108	72	37	110	128	111	104	121
Nepal	109	111	130	100	65	116	110	97
Madagascar	110	124	108	133	99	130	124	57
Lao People's Democratic Republic	111	88	121	96	58	106	108	123
Côte d'Ivoire	112	69	129	98	126	98	128	100
Nigeria	113	125	78	127	121	107	121	87
Honduras	114	122	88	112	100	100	99	110
Algeria	115	95	76	94	132	114	125	109
Zambia	116	92	97	91	112	95	131	131
Togo	117	112	116	126	108	121	111	107
Zimbabwe	118	130	127	128	119	91	97	90
Benin	119	64	112	118	123	108	117	129
United Republic of Tanzania	120	79	132	111	120	118	129	113
Uganda	121	84	123	120	124	129	102	116
Guatemala	122	114	126	117	111	88	109	125
Cameroon	123	98	114	129	130	74	119	117
Nicaragua	124	129	117	114	71	99	118	130
Myanmar	125	131	107	115	102	132	93	118
Mauritania	126	97	120	122	131	109	127	127
Burundi	127	115	105	119	118	122	132	120
Mozambique	128	121	122	99	104	127	130	128
Burkina Faso	129	105	103	132	115	131	114	126
Ethiopia	130	117	133	123	133	128	88	122
Mali	131	113	124	131	122	96	123	133
Niger	132	116	131	130	125	115	126	132
Angola	133	120	125	121	127	133	133	119

< 34 34–67 67–100 ≥ 100

Notes: Dark green = 4th quartile (best performers, ranks 1st to 33rd). Light green = 3rd quartile (ranks 34th to 66th). Light orange = 2nd quartile (ranks 67th to 99th). Dark orange = 1st quartile (ranks 100th to 133rd).

Source: Global Innovation Index Database, WIPO, 2024.

The Philippines goes up three ranks to reach the 53rd position. This year it has also attained 3rd position in the lower middle-income group (Table 2). Notable areas in which it excels are trade-related indicators, including High-tech exports (1st globally), High-tech imports (4th), Creative goods exports (14th) and ICT services exports (19th). It has also made advances, albeit at lower levels, in intangible assets, thanks to its strong Global brand value (34th) – and the intangible asset intensity of its companies (35th).

Thailand (41st) and Viet Nam (44th) continue to make advances towards the top 40. Both economies also excel in trade-related indicators. Viet Nam ranks 1st globally in High-tech exports, High-tech imports and Creative goods exports, while Thailand ranks 7th in Creative goods exports and 8th in High-tech exports. Thailand also excels in Utility models (5th) and

Domestic credit to private sector (8th), while Viet Nam stands out for its Labor productivity growth (3rd) and Mobile app creation (7th). Both economies also rank in the top 30 for their global brands, with Viet Nam reaching the 22nd position globally and Thailand the 26th position.

Australia (23rd), Malaysia (33rd) and Mongolia (67th) also move up the ranking.

Central and Southern Asia

Within Central and Southern Asia, India continues to lead, moving one spot forward to the 39th position. India leads the lower middle-income group (Table 2). It holds top ranking within the Central and Southern Asia region for Knowledge and technology outputs (22nd), Creative outputs (43rd), Institutions (54th) and Business sophistication (58th). India's strengths lie in key indicators such as ICT services exports (1st), Venture capital received (6th) and Intangible asset intensity (7th). India's unicorn companies also secure the country the 8th rank globally.

In addition to India, four other economies within the region move up the ranking: Kazakhstan (78th), Sri Lanka (89th), Kyrgyzstan (99th) and Tajikistan (107th). Kazakhstan retains the 3rd place in the region, behind the Islamic Republic of Iran (64th, down by two places). Kyrgyzstan excels in Expenditure on education (3rd), Loans from microfinance institutions (10th) and Low-carbon energy use (13th).

Uzbekistan (83rd) retains its 4th position within the region, with its top performance in Labor productivity growth (7th) and Graduates in science and engineering (12th).

Northern Africa and Western Asia

In Northern Africa and Western Asia, Israel (15th) leads the region, despite moving down one rank this year. It leads in several key innovation indicators, ranking 1st globally in R&D expenditure, Venture capital received, R&D performed by business, ICT services exports and Unicorn valuation.

Türkiye continues to forge ahead, gaining two ranks to reach 37th place. It also takes the 3rd position among the upper middle-income group (Table 2). Türkiye stands out in various areas, notably in Intangible assets (4th), where it ranks 1st globally in Trademarks and Industrial designs, and 9th in Intangible asset intensity – all these indicators showing an improvement this year.

Eight economies within the region move up the ranking. Saudi Arabia (47th) and Qatar (49th) move ahead one spot each, consolidating their positions in the top 50. Georgia moves up to 57th place, entering the top 60, while Armenia (63rd) enters and Morocco (66th) consolidates its position in the top 70. Morocco ranks 1st globally in Industrial designs and ranks in the top 30 on Expenditure on education (20th), Intangible asset intensity (22nd), Gross capital formation (27th), High-tech manufacturing (27th) and Trademarks (30th).

Cyprus (27th) and Algeria (115th) also gain one and four ranks, respectively.

Latin America and the Caribbean

In Latin America and the Caribbean, the regional top 3 remain unchanged: Brazil (50th) retains the top position, followed by Chile (51st) and Mexico (56th). Chile and Mexico improve their positions by one and two ranks, respectively. Chile holds top positions in Tertiary enrolment (7th), Market capitalization (17th) and FDI net inflows (19th). Mexico comes top in trade and high-tech indicators, including Creative goods exports (1st), High-tech exports (11th), High-tech imports (16th) and High-tech manufacturing (15th).

Seven additional economies within the region also improved their ranking: Colombia (61st) – one of the largest jumps in the region, matched only by Paraguay (93rd), Uruguay (62nd), Costa Rica (70th), Peru (75th), Panama (82nd) and Honduras (114th).

Colombia climbs five ranks this year, improving notably in the Innovation Output Sub-Index (62nd). It ranks 18th globally for the valuation of its three unicorn companies, whose joint value

represent about 2 percent of its GDP in 2024. It also leads in Intellectual property payments (11th) and High-tech imports (15th).

Uruguay is the regional leader in Institutions (31st) and Infrastructure (48th), Trinidad and Tobago leads in Human capital and research (37th), and Brazil is top of the region in Business sophistication (39th), Knowledge and technology outputs (50th) and Creative outputs (42nd).

Costa Rica leads in the top 10 in Labor productivity growth (10th) and ICT services exports (10th). Barbados rejoins the GII 2024 at the 77th position, leading globally (1st) in Patent families and PCT patents, and performing in the top 20 in Patents by origin (4th) and Venture capital recipients (16th).

This year, Brazil (50th) and Jamaica (79th) continue to perform above expectation for their level of development (Table 3).

Box 3 Innovation as the driver of the United Nations Sustainable Development Goals

The 2030 Agenda for Sustainable Development, with its 17 Sustainable Development Goals (SDGs), has set an ambitious agenda to drive sustainable development efforts around the world. While technology and innovation are key enablers for the delivery of sustainable and effective solutions to achieve all the SDGs, fostering innovation is integral to SDG 9 "Industry, innovation and infrastructure", with specific targets that aim to promote the increase of R&D expenditure as a proportion of GDP (9.5.1) and to increase the number of researchers per million inhabitants (9.5.2), both of which are also important GII indicators.[3]

In this context, the GII has been recognized as an authoritative benchmark for measuring innovation within the 2019, 2021 and 2023 UN General Assembly biennial resolutions on Science, Technology and Innovation for Sustainable Development. The resolution specifically encourages "efforts to increase the availability of data to support the measurement of national innovation systems (such as the existing GII) and empirical research on innovation and development to assist policymakers in designing and implementing innovation strategies".[4] This relevance of the GII and WIPO's work to the SDGs is further amplified by contributions to the ninth annual Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum) held in New York on May 9 and 10, 2024.[5]

Sub-Saharan Africa

In Sub-Saharan Africa, only Mauritius (55th) ranks among the top 60. Three of the region's other economies rank within the top 90 globally: namely, South Africa (69th), Botswana (87th) and Cabo Verde (90th). Two additional economies – Senegal (92nd) and Kenya (96th) – rank in the top 100. Eight of the region's economies move up the GII ranking, including Mauritius, Cabo Verde, Senegal, Kenya, Zambia (116th), Benin (119th), Mauritania (126th) and Burundi (127th).

Burundi, Madagascar (110th), Rwanda (104th), Senegal and South Africa are also innovation overperformers this year, with Rwanda's period of overperformance lasting longest, at 12 years (Table 3). Kenya gains four places and consolidates its place in the top 100. It performs well in Venture capital recipients (13th), Utility models (15th), ICT services exports (17th) and Labor productivity growth (29th).

3 See https://sdgs.un.org/goals/goal9.
4 Resolution adopted by the General Assembly on 19 December 2023, 78/160. Science, technology and innovation for sustainable development A/RES/78/160.
5 As part of the Forum's program, WIPO led an expert conversation on the post-pandemic state of the global innovation system, co-sponsored and co-organized by the Permanent Mission of India to the United Nations, the Confederation of Indian Industry and the Oxford University Saïd Business School; and co-led the organization of the Forum's dedicated session on gender and STI, focusing on advancing sustainable development with women-centered science and technology solutions, delving into the gender gap in STI and the limited consideration of women's perspectives in STI solutions. For more on the role of intellectual property in achieving SDGs, see WIPO (2023) and www.wipo.int/sdgs.

Mauritius ranks highest in the region in Institutions (33rd), Human capital and research (69th) and Market sophistication (24th). It leads worldwide in Venture capital received (1st) and ranks 2nd in Venture capital investors. Cabo Verde leads the region in Infrastructure (34th), ranking 1st in Gross capital formation. South Africa tops the region in Business sophistication (57th) and performs well in ICT services imports (18th) and Global brand value (24th).

Senegal leads the region in Knowledge and technology outputs (62nd). It also performs well in Gross capital formation (4th), Unicorn valuation (7th), Loans from microfinance institutions (9th), FDI net inflows (12th) and Venture capital received (22nd).

Finally, Madagascar heads the region in Creative outputs (57th), performing well in Industrial designs (14th) and Trademarks (21st), both of which show improvement this year.

Conclusion

The latest GII rankings highlight the following points:

- There have been shifts within the world's top innovators. Within the top 10, the top 3 remain unchanged, while Singapore and the Republic of Korea advance. China – the only middle-income economy among the innovation leaders – bounces back to 11th position, edging closer to the top 10 once again (after having dropped back by one place last year). Within the top 25, Canada, Austria, Ireland, Luxembourg, Australia and New Zealand ascend, with Ireland and Luxembourg entering the top 20, and New Zealand the top 25.
    - Europe still hosts the highest number of economies in the top GII ranking echelons – seven in the GII top 10 and 15 in the GII top 25.
- A small number of leading innovative middle-income economies are showing remarkable progress in their innovation performance.
    - China remains the frontrunner, but other key players previously identified by the GII, such as Indonesia (54th) (entering the top 60), the Philippines (53rd), Türkiye (37th), Viet Nam (44th) and India (39th), ordered by their rank progression in 2024, are also all climbing the ranks. Thailand (41st) is demonstrating increased potential, nearing the top 40 – its best rank since 2009 – and sustaining its progression over the long run. Additionally, Morocco (66th) has emerged as one of the fastest climbers within the top 70 since 2013. These middle-income economies, despite some of them suffering setbacks in their performance in the GII 2021 and 2022 (e.g. Viet Nam, the Philippines and Indonesia), exhibit resilience and strategic long-term focus on innovation, even amid the challenges posed by the economic recovery from the COVID-19 pandemic. Moreover, these economies share common traits: they are all Asian economies; they are emerging markets with potential for rapid growth due to industrialization, urbanization and globalization; all have diverse economic structures; and they are heavily integrated in global value chains and high-tech trade.
    - Other economies have also demonstrated great progress over the long term, albeit at lower rankings, sustaining their rank increases since 2013. This group, which demonstrates high potential – despite some short-term setbacks, includes notable long-term, climbers Uzbekistan (83rd), the Islamic Republic of Iran (64th), Pakistan (91st), Madagascar (110th) (the only low-income economy in this group), Bangladesh (106th) and Egypt (86th) (ordered by their rank progression since 2013).
- With no new additions, this year 19 economies are performing above expectation relative to their level of development. Indonesia, Pakistan and Uzbekistan have maintained their overperformer status for the third consecutive year, indicating a potentially sustainable positive trend.
    - In contrast, 41 economies are performing below expectation in 2024, most of which are in Latin America and the Caribbean and Sub-Saharan Africa.
    - More middle- and low-income economies would benefit from a systematic and gradual improvement of the set-up and performance of their innovation ecosystem.

- Nine economies in Latin America and the Caribbean have risen in the ranking, including top regional performers Chile and Mexico. While these advancements are undoubtedly positive, this year's results indicate that, on average, other world regions, such as Central and Southern Asia, will soon overtake Latin America and the Caribbean in terms of innovation performance. This should serve as a call to action for policymakers in Latin America and the Caribbean to sustain and enhance their long-term innovation efforts.
- In Sub-Saharan Africa, Mauritius remains the highest ranking economy, while eight economies, including Kenya and Senegal, have moved up the GII ranking in 2024. Madagascar, Côte d'Ivoire (112th) and Togo (117th) have made the greatest advances in the region since 2013. However, large economies, such as South Africa (69th), Nigeria (113th) and Ethiopia (130th) have lost ground in the ranking this year, and most of them (with the exception of Kenya) have not been able to sustain their rank progression over time.

The GII will continue to monitor the evolving innovation landscape. The dynamic ecosystems observed in key middle-income economies showcase remarkable resilience and strategic prioritization of innovation. The GII will persist in providing robust data and insights to inform evidence-based policymaking, ensuring that both high-income and emerging economies can navigate and bridge the innovation gap effectively.

The *Global Innovation Index 2024* (GII) takes the pulse of innovation against a background of steady but slow global economic growth, shrinking innovation finance and sluggish productivity.

Tracking the most recent global innovation trends, the GII finds that innovation investments have slowed in 2023, making the outlook for 2024 and 2025 more uncertain than ever. Yet, the picture is not entirely bleak. Technological progress and adoption continue unabated in fields as diverse as supercomputing, connectivity, health and green technologies.

The thematic focus of the 2024 report is social entrepreneurship. It looks at how a flurry of new ventures are finding innovative solutions directly addressing critical societal issues. Examples drawn from around the world showcase successful examples of social entrepreneurship, helping guide innovation policymakers and support schemes to better scale social entrepreneurship ventures for maximum systemic impact.

Core to its economic and social development mission, the GII 2024 reveals who is leading globally in innovation, ranking the innovation performance of 133 economies and highlighting their strengths and weaknesses. Governments around the world use the GII to benchmark innovation performance and improve innovation policy and its impact.

The underlying 133 GII economy profiles
can be accessed at www.wipo.int/gii-ranking

The full report can be downloaded at
www.wipo.int/global_innovation_index

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