

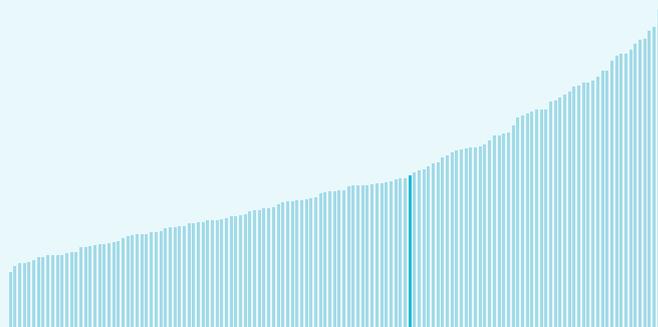
Global Innovation Index 2025



Serbia ranking in the Global Innovation Index 2025

Serbia ranks **54th** among the 139 economies featured in the GII 2025.

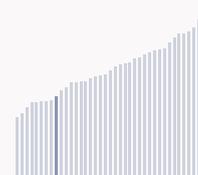
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Serbia ranks 7th among the 36 Upper middle-income group economies.



Serbia ranks 31st among the 39 economies in Europe.



> Serbia GII Ranking (2020-2025)

The table shows the rankings of Serbia over the past six years. Data availability and changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Serbia in the GII 2025 is between ranks 52 and 65.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	53rd	58th	56th
2021	54th	50th	57th
2022	55th	55th	58th
2023	53rd	41st	64th
2024	52nd	47th	60th
2025	54th	56th	57th

Serbia performs worse in innovation outputs than innovation inputs in 2025.

This year Serbia ranks 56th in innovation inputs. This position is lower than last year.

Serbia ranks 57th in innovation outputs. This position is higher than last year.

Serbia has no clusters in the world's top innovation clusters of the Global Innovation Index.

Global Innovation Index 2025



> Global Innovation Tracker

The Global Innovation Tracker 2025 shows what is the current state of innovation in Serbia, how rapidly is technology being embraced and what are the resulting societal impacts.



For Serbia, 4 indicators have improved in the short-term and 5 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	0 % 2023 - 2024	▼ -0.8 % 2022 - 2023	▼ -60 % 2023 - 2024	▼ -25 % 2023 - 2024
Long term (annual growth)	▲ 1.8 % 2014 - 2024	▲ 5.8 % 2013 - 2023	▼ -20.5 % 2020 - 2024	▲ 6.8 % 2014 - 2024

Technology adoption

	Safe sanitation	Connectivity	Robots	Electric vehicles
		Fixed broadband	5G	
Short term	▼ -1.4% 2023 - 2024	▲ 6.6% 2022 - 2023	n/a	▲ 33.4% 2022 - 2023
Long term (annual growth)	▼ -1.2% 2014 - 2024	▲ 5.9% 2013 - 2023	n/a	▲ 46.3% 2013 - 2023
Penetration	24.1 per 100 inhabitants in 2024	31.3 per 100 inhabitants in 2023	n/a	n/a

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▲ 3.3 % 2023 - 2024	▲ 1.7 % 2022 - 2023	+ 3.4 °C 2024
Long term (annual growth)	▲ 1.5 % 2014 - 2024	▲ 0.2 % 2013 - 2023	+ 1.6 °C 2014
Level	61,868.9 USD in 2024	76.8 years in 2023	n/a

Notes: Not all indicators of the Global Innovation Tracker are used to calculate the Global Innovation Index. Long-term annual growth refers to the compound annual growth rate (CAGR) over the indicated period. For each variable, a one-year growth rate is set for the short run, and ten-year CAGR is set for the long run; time windows might differ when gaps exist in data availability. The end period corresponds to the most recent available observation, which may differ among countries. Temperature change is an exception: it indicates the change in degrees Celsius with respect to the average temperature in the countries, from 1951–1980. Figures are rounded.

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Expected vs. Observed Innovation Performance

The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.



Relative to GDP Serbia performs at expectations for its level of development.

> Innovation overperformers relative to their economic development



Global Innovation Index 2025



Effectively translating innovation investments into innovation outputs

The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.



Serbia produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs



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Overview of Serbia's rankings in the seven areas of the GII in 2025

The chart shows the ranking for each of the seven areas that the GII comprises. The strongest areas for Serbia are those that rank above the GII (shown in blue) and the weakest are those that rank below.



Highest Rankings

Serbia ranks highest in Knowledge and technology outputs (35th), Infrastructure (39th) and Human capital and research (49th).



Lowest Rankings

Serbia ranks lowest in Business sophistication (98th), Creative outputs (87th) and Market sophistication (77th).



The full WIPO Intellectual Property Statistics profile for Serbia can be found on <https://www.wipo.int/edocs/statistics-country-profile/en/rs.pdf>

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Benchmark of Serbia against other economy groupings for each of the seven areas of the GII Index



Upper middle-income economies

Serbia performs above the Upper middle-income group average in Institutions, Human capital and research, Infrastructure, Knowledge and technology outputs.



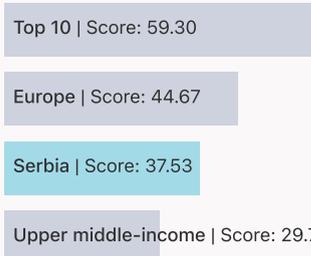
Europe

Serbia performs below the regional average in all pillars.

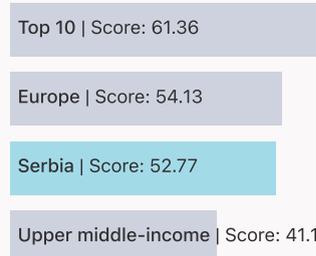
Institutions



Human capital and research



Infrastructure



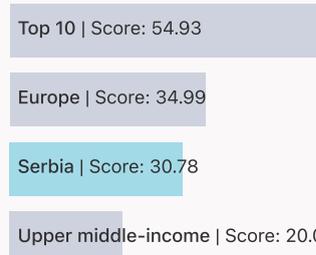
Market sophistication



Business sophistication



Knowledge and technology outputs



Creative outputs



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Innovation strengths and weaknesses in Serbia

The table below gives an overview of the indicator strengths and weaknesses of Serbia in the GII 2025.



Serbia's best-ranked innovation strengths are **ISO 14001 environment/bn PPP\$ GDP** (rank 2), **Pupil–teacher ratio, secondary** (rank 3) and **ISO 9001 quality/bn PPP\$ GDP** (rank 4).

Strengths

Rank	Code	Indicator name
2	3.3.3	ISO 14001 environment/bn PPP\$ GDP
3	2.1.5	Pupil–teacher ratio, secondary
4	6.3.5	ISO 9001 quality/bn PPP\$ GDP
9	6.3.4	ICT services exports, % total trade
10	2.2.2	Graduates in science and engineering, %
12	7.2.1	Cultural and creative services exports, % total trade
13	6.2.1	Labor productivity growth, %
14	6.1.4	Scientific and technical articles/bn PPP\$ GDP
16	4.3.2	Domestic industry diversification
21	5.3.4	FDI net inflows, % GDP

Weaknesses

Rank	Code	Indicator name
123	5.1.3	Youth demographic dividend, %
120	6.2.3	Software spending, % GDP
107	4.2.2	Venture capital (VC) received, deal count/bn PPP\$ GDP
101	2.1.1	Expenditure on education, % GDP
88	5.1.5	GERD financed by business, %
81	7.1.3	Global brand value, top 5,000, % GDP
78	7.1.1	Intangible asset intensity, top 15, %
63	5.3.5	Research talent, % in businesses
53	6.2.2	Unicorn valuation, % GDP
44	2.3.3	Global corporate R&D investors, top 3, mn USD

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Serbia's innovation system

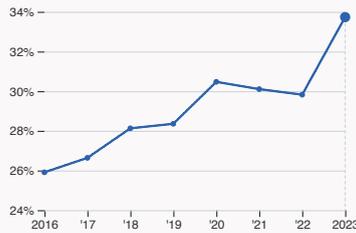
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Serbia



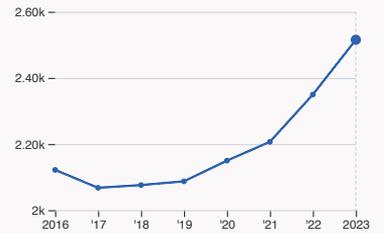
2.1.1 Expenditure on education

was equal to 3.24 % GDP in 2022, down by 0.06 percentage points from the year prior – and equivalent to an indicator rank of 101.



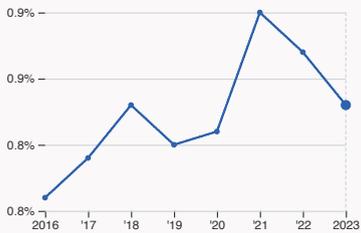
2.2.2 Graduates in science and engineering

was equal to 33.73 % of total graduates in 2023, up by 3.91 percentage points from the year prior – and equivalent to an indicator rank of 10.



2.3.1 Researchers

was equal to 2515.36 FTE per million population in 2023, up by 7.05% from the year prior – and equivalent to an indicator rank of 38.



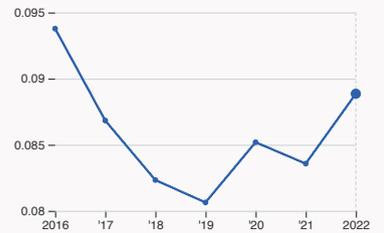
2.3.2 Gross expenditure on R&D

was equal to 0.88 % GDP in 2023, down by 0.04 percentage points from the year prior – and equivalent to an indicator rank of 44.



2.3.4 QS university ranking

was equal to an average score of 5.67 for the top three universities in 2024, up by 5% from the year prior – and equivalent to an indicator rank of 77.



4.3.2 Domestic industry diversification

was equal to an index score of 0.089 in 2022, up by 6.32% from the year prior – and equivalent to an indicator rank of 16.



5.1.1 Knowledge-intensive employment

was equal to 31.78 % of total workforce in 2024, up by 1.08 percentage points from the year prior – and equivalent to an indicator rank of 46.

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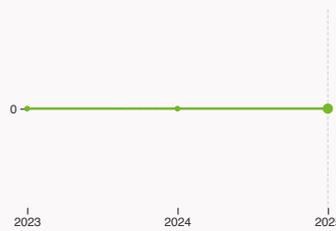


> Innovation outputs in Serbia



6.1.1 Patents by origin

was equal to 132 patents in 2023, down by 5.04% from the year prior – and equivalent to an indicator rank of 63.



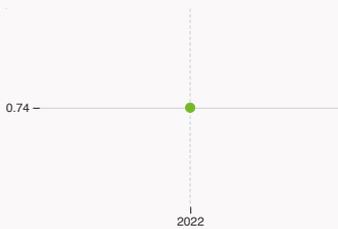
6.2.2 Unicorn valuation

The country does not have unicorns in 2025.



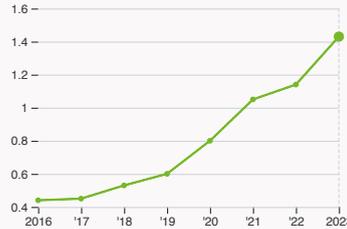
6.2.4 High-tech manufacturing

was equal to 8.11 high-tech manufacturing output in billion USD in 2022, up by 0.37% from the year prior – and equivalent to an indicator rank of 55.



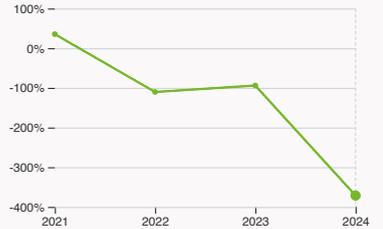
6.3.2 Production and export complexity

was equal to a score of 0.74 in 2022 – and equivalent to an indicator rank of 35.



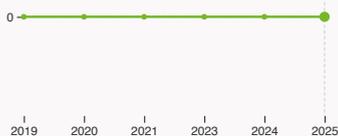
6.3.3 High-tech exports

was equal to 1.43 billion USD in 2023, up by 25.44% from the year prior – and equivalent to an indicator rank of 52.



7.1.1 Intangible asset intensity, top 15

was equal to -371.3% for the top 15 companies in 2024, down by 277.17 percentage points from the year prior – and equivalent to an indicator rank of 78.



7.1.3 Global brand value, top 5,000

The country does not have any brands that make the top 5,000 ranking in 2025.



7.2.2 National feature films

was equal to 12 films in 2023 with no change from the year prior – and equivalent to an indicator rank of 53.



7.3.3 Mobile app creation

was equal to 79.88 million global downloads of mobile apps in 2024, down by 33.1% from the year prior – and equivalent to an indicator rank of 32.

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Serbia's innovation top performers

Data not available for 2.3.3 Global corporate R&D investors, 6.2.2 Top Unicorn Companies and 7.1.3 Global brand value, top 5,000.

Disclaimer: This section contains only the top performers per country. For the complete list, please visit the [GII Innovation Ecosystems and Data Explorer website](#).

2.3.4 QS university ranking of Serbia's top universities

Rank	University	Score
731-740	UNIVERSITY OF BELGRADE	17.00
1001-1200	UNIVERSITY OF NOVI SAD	8.70
1201-1400	UNIVERSITY OF NIS	5.60

Source: QS Quacquarelli Symonds Ltd (<https://www.topuniversities.com/university-rankings/world-university-rankings/2024>).

Note: QS Quacquarelli Symonds Ltd annually assesses over 1,200 universities across the globe and scores them between [0,100].

Ranks can represent a single value 'x', a tie 'x=' or a range 'x-y'.

5.2.3 University industry and international engagement, top 5 universities

Rank	University	Score
1	UNIVERSITY OF NOVI SAD	47.65
2	UNIVERSITY OF BELGRADE	39.55
3	UNIVERSITY OF KRAGUJEVAC	29.65

Source: Times Higher Education (THE), World University Rankings 2025.

Note: Rank corresponds to within economy ranks. The score is calculated as the average of the International Outlook score (encompassing international staff, students, and co-authorship) and the industry score (reflecting industry income and patent citations). The 2025 ranking corresponds to data from the academic year that ended in 2022.

7.1.1 Top 15 intangible-asset intensive companies in Serbia

Rank	Firm	Intensity, %
1	SJAJ U TAMI A.D.	17.18
2	REVNOST A.D.	39.90
3	POLJOPRIVREDNA SAVETODAVNA I STRUCNA SLUZBA SUBOTICA AD	--

Source: Brand Finance (<https://brandirectory.com/reports/gift-2024>).

Note: Brand Finance only provides within economy ranks.

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
57	56	Upper middle	Europe	6.7	191.6	29,038.9
			Score / Value Rank			
Institutions			48.1 73	Business sophistication 24.2 98		
1.1 Institutional environment			52.6 74	5.1 Knowledge workers 24.8 118		
1.1.1 Operational stability for businesses*			62 69	5.1.1 Knowledge-intensive employment, % 31.8 46 ◆		
1.1.2 Government effectiveness*			43.3 72	5.1.2 Females employed w/advanced degrees, % 17 46		
1.2 Regulatory environment			50.2 66	5.1.3 Youth demographic dividend, % 24.5 123 ○ ◇		
1.2.1 Regulatory quality*			49.9 67	5.1.4 GERD performed by business, % GDP 0.4 45		
1.2.2 Rule of law*			50.4 66	5.1.5 GERD financed by business, % 0.9 88 ○ ◇		
1.3 Business environment			41.4 73	5.2 Innovation linkages 19.6 93		
1.3.1 Policy stability for doing business†			41.4 77	5.2.1 Public research–industry co-publications, % 1.1 84		
1.3.2 Entrepreneurship policies and culture†			41.4 47	5.2.2 University–industry R&D collaboration† 27.2 93		
Human capital and research			37.5 49	5.2.3 University industry & international engagement, top 5* 17.5 72		
2.1 Education			58 44	5.2.4 State of cluster development† 41.5 83		
2.1.1 Expenditure on education, % GDP			3.2 101 ○	5.2.5 Patent families/bn PPP\$ GDP 0.1 54		
2.1.2 Government funding/pupil, secondary, % GDP/cap			n/a n/a	5.3 Knowledge absorption 28.2 65		
2.1.3 School life expectancy, years			15 52	5.3.1 Intellectual property payments, % total trade 1.4 23		
2.1.4 PISA scales in reading, maths and science			442.6 42	5.3.2 High-tech imports, % total trade 6.7 92		
2.1.5 Pupil–teacher ratio, secondary			7.5 3 ◆◆	5.3.3 ICT services imports, % total trade 1.9 41		
2.2 Tertiary education			43.7 23 ◆	5.3.4 FDI net inflows, % GDP 6.6 21 ●		
2.2.1 Tertiary enrolment, % gross			73.2 41	5.3.5 Research talent, % in businesses 11 63 ○		
2.2.2 Graduates in science and engineering, %			33.7 10 ◆◆	Knowledge and technology outputs 30.8 35 ◆		
2.2.3 Tertiary inbound mobility, %			4.6 55	6.1 Knowledge creation 22.4 46		
2.3 Research and development (R&D)			10.9 60	6.1.1 Patents by origin/bn PPP\$ GDP 0.7 63		
2.3.1 Researchers, FTE/mn pop.			2,515.4 38 ◆	6.1.2 PCT patents by inventor origin/bn PPP\$ GDP 0.2 44		
2.3.2 Gross expenditure on R&D, % GDP			0.9 44	6.1.3 Utility models by origin/bn PPP\$ GDP 0.4 34		
2.3.3 Global corporate R&D investors, top 3, mn USD			0 44 ○ ◇	6.1.4 Scientific and technical articles/bn PPP\$ GDP 30.3 14 ◆◆		
2.3.4 QS university ranking, top 3*			5.8 77	6.1.5 Citable documents H-index 16.6 50		
Infrastructure			52.8 39 ◆	6.2 Knowledge impact 26.1 65		
3.1 Information and communication technologies (ICTs)			83.7 49	6.2.1 Labor productivity growth, % 3.4 13 ◆◆		
3.1.1 ICT access*			86.5 64	6.2.2 Unicorn valuation, % GDP 0 53 ○ ◇		
3.1.2 ICT use*			82.1 49	6.2.3 Software spending, % GDP 0.04 120 ○		
3.1.3 Government's online service*			82.4 36	6.2.4 High-tech manufacturing, % 23.3 55		
3.2 General infrastructure			30.7 80	6.3 Knowledge diffusion 43.9 21 ◆		
3.2.1 Electricity output, GWh/mn pop.			5,889.6 35 ◆	6.3.1 Intellectual property receipts, % total trade 0.4 32 ◆		
3.2.2 Logistics performance*			31.8 71	6.3.2 Production and export complexity 65.4 35 ◆		
3.2.3 Gross capital formation, % GDP			23.5 71	6.3.3 High-tech exports, % total trade 3.1 52		
3.3 Ecological sustainability			43.9 9 ◆	6.3.4 ICT services exports, % total trade 8 9 ◆◆		
3.3.1 GDP/unit of energy use			8.6 92	6.3.5 ISO 9001 quality/bn PPP\$ GDP 19.9 4 ◆◆		
3.3.2 Low-carbon energy use, %			18.6 69	Creative outputs 17.3 87		
3.3.3 ISO 14001 environment/bn PPP\$ GDP			11 2 ◆◆	7.1 Intangible assets 5.9 115 ◇		
Market sophistication			34.6 77	7.1.1 Intangible asset intensity, top 15, % -371.3 78 ○ ◇		
4.1 Credit			24 81	7.1.2 Trademarks by origin/bn PPP\$ GDP 24.2 79		
4.1.1 Finance for startups and scaleups†			37.7 63	7.1.3 Global brand value, top 5,000, % GDP 0 81 ○ ◇		
4.1.2 Domestic credit to private sector, % GDP			33 89	7.1.4 Industrial designs by origin/bn PPP\$ GDP 0.5 84		
4.1.3 Loans from microfinance institutions, % GDP			n/a n/a	7.2 Creative goods and services 22.7 50		
4.2 Investment			2.2 [97]	7.2.1 Cultural and creative services exports, % total trade 2.3 12 ◆◆		
4.2.1 Market capitalization, % GDP			n/a n/a	7.2.2 National feature films/mn pop. 15–69 2.5 53		
4.2.2 Venture capital (VC) received, deal count/bn PPP\$ GDP			0.02 107 ○	7.2.3 Entertainment and media market/th pop. 15–69 n/a n/a		
4.2.3 Late-stage VC deal count, % global VC			n/a n/a	7.2.4 Creative goods exports, % total trade 0.5 61		
4.2.4 VC investors, deal count/bn PPP\$ GDP			0.06 83	7.3 Online creativity 34.8 42		
4.2.5 VC investor co-participation/bn PPP\$ GDP			0.03 73	7.3.1 Top-level domains (TLDs)/th pop. 15–69 6.3 56		
4.3 Trade, diversification and market scale			77.5 40	7.3.2 GitHub commits/mn pop. 15–69 26.4 38 ◆		
4.3.1 Applied tariff rate, weighted avg., %			1.6 58	7.3.3 Mobile app creation/bn PPP\$ GDP 71.7 32		
4.3.2 Domestic industry diversification			95.5 16 ●			
4.3.3 Domestic market scale, bn PPP\$			191.6 77			

NOTES: ● indicates a strength ○ a weakness ◆ an income group strength ◇ an income group weakness * an index † a survey question ● that the economy's data is outdated. Square brackets [] indicate the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level, n/a represents missing values, a dash - indicates an indicator which is not relevant to this economy and thus not considered for DMC thresholds.

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Data Availability

The following tables list indicators that are either missing or outdated for Serbia.



Serbia has missing data for five indicators and outdated data for three indicators.

Missing data for Serbia

Code	Indicator name	Economy year	Model year*	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2021	UNESCO Institute for Statistics
4.1.3	Loans from microfinance institutions, % GDP	n/a	2023	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2022	World Federation of Exchanges; World Bank
4.2.3	Late-stage VC deal count, % global VC	n/a	2024	PitchBook Data, Inc.
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2024	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

Outdated data for Serbia

Code	Indicator name	Economy year	Model year*	Source
2.1.1	Expenditure on education, % GDP	2022	2023	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2022	2023	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2022	2023	UNESCO Institute for Statistics

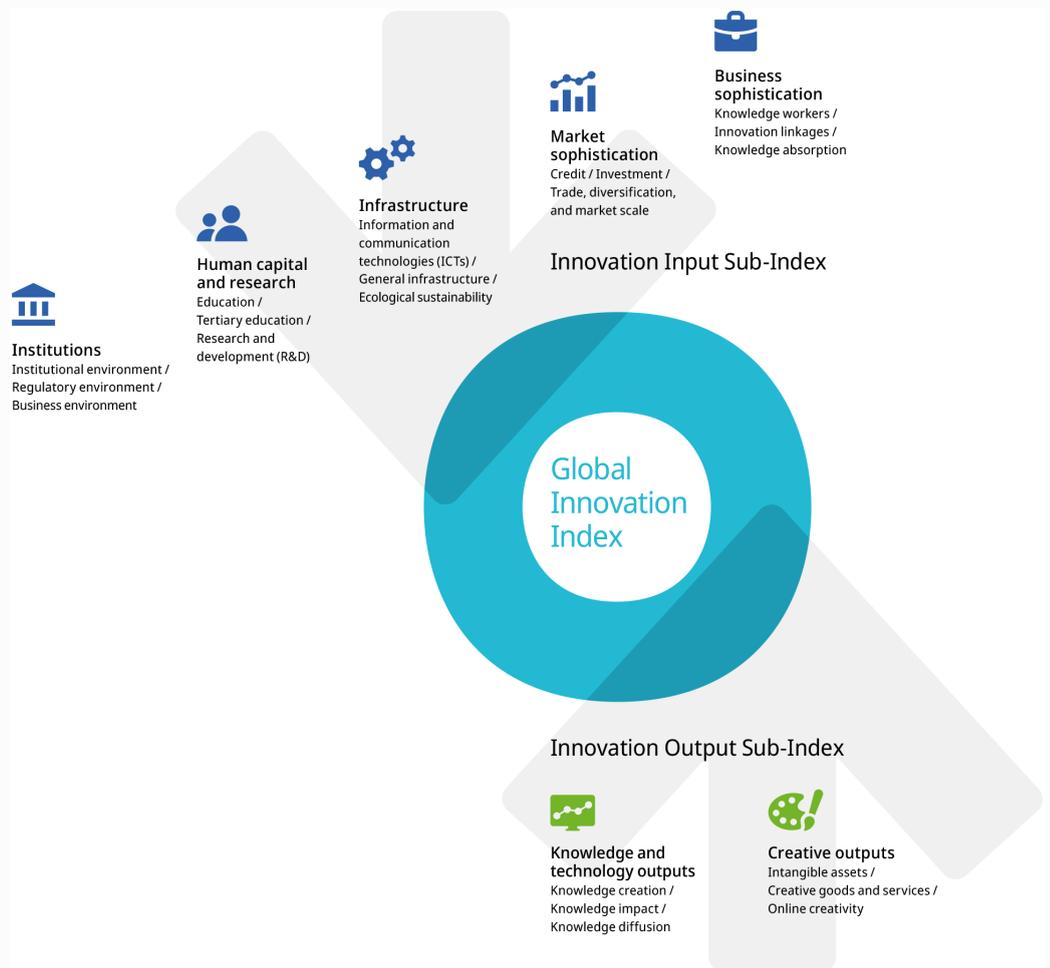
*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

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About the Global Innovation Index

- The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations.
- Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 140 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a “tool for action” for economies that incorporate the GII into their innovation agendas.



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include institutions, human capital and research infrastructure, credit, investment, linkages, the creation, absorption and diffusion of knowledge and creative outputs.

The GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each consisting of three sub-pillars.