Global Innovation Index 2025

Japan ranking in the Global Innovation Index 2025

Japan ranks 12th 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.

Japan ranks 11th among the 54 High-income group economies.

Japan ranks 4th among the 17 economies in South East Asia, East Asia, and Oceania.

Japan GII Ranking (2020-2025)

The table shows the rankings of Japan 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 Japan in the GII 2025 is between ranks 12 and 13.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	16th	12th	18th
2021	13th	11th	14th
2022	13th	11th	12th
2023	13th	11th	14th
2024	13th	12th	14th
2025	12th	12th	14th

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

This year Japan ranks 12th in innovation inputs. This position is the same as last year.

Japan ranks 14th in innovation outputs. This position is the same as last year.

Japan has 3 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 Japan, how rapidly is technology being embraced and what are the resulting societal impacts.

For Japan, 8 indicators have improved in the short-term and 3 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	▼ -0.1 % 2023 - 2024	▲ 3 % 2022 - 2023	▲ 4.4 % 2023 - 2024	▼ -1.2 % 2023 - 2024
Long term (annual growth)	▲ 0.5 % 2014 - 2024	▲ 1 % 2013 - 2023	▲ 2.3 % 2020 - 2024	▲ 1.3 % 2014 - 2024

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	0% 2023 - 2024	▲ 4.3% 2022 - 2023	▲ 1.6% 2022 - 2023	▲ 5.1% 2022 - 2023	▲ 14.8% 2023 - 2024
Long term (annual growth)	▲ 0.1% 2014 - 2024	▲ 2.7% 2013 - 2023	n/a	▲ 3.7% 2013 - 2023	▲ 18.8% 2014 - 2024
Penetration	99.2 per 100 inhabitants in 2024	38.6 per 100 inhabitants in 2023	98.1 per 100 inhabitants in 2023	n/a	1 per 100 cars in 2024

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▲ 0.6 % 2023 - 2024	▲ 0.8 % 2022 - 2023	+ 2.2 °C 2024
Long term (annual growth)	▲ 0.7 % 2014 - 2024	▲ 0.2 % 2013 - 2023	+ 0.5 °C 2014
Level	96,702.2 USD in 2024	84.7 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.

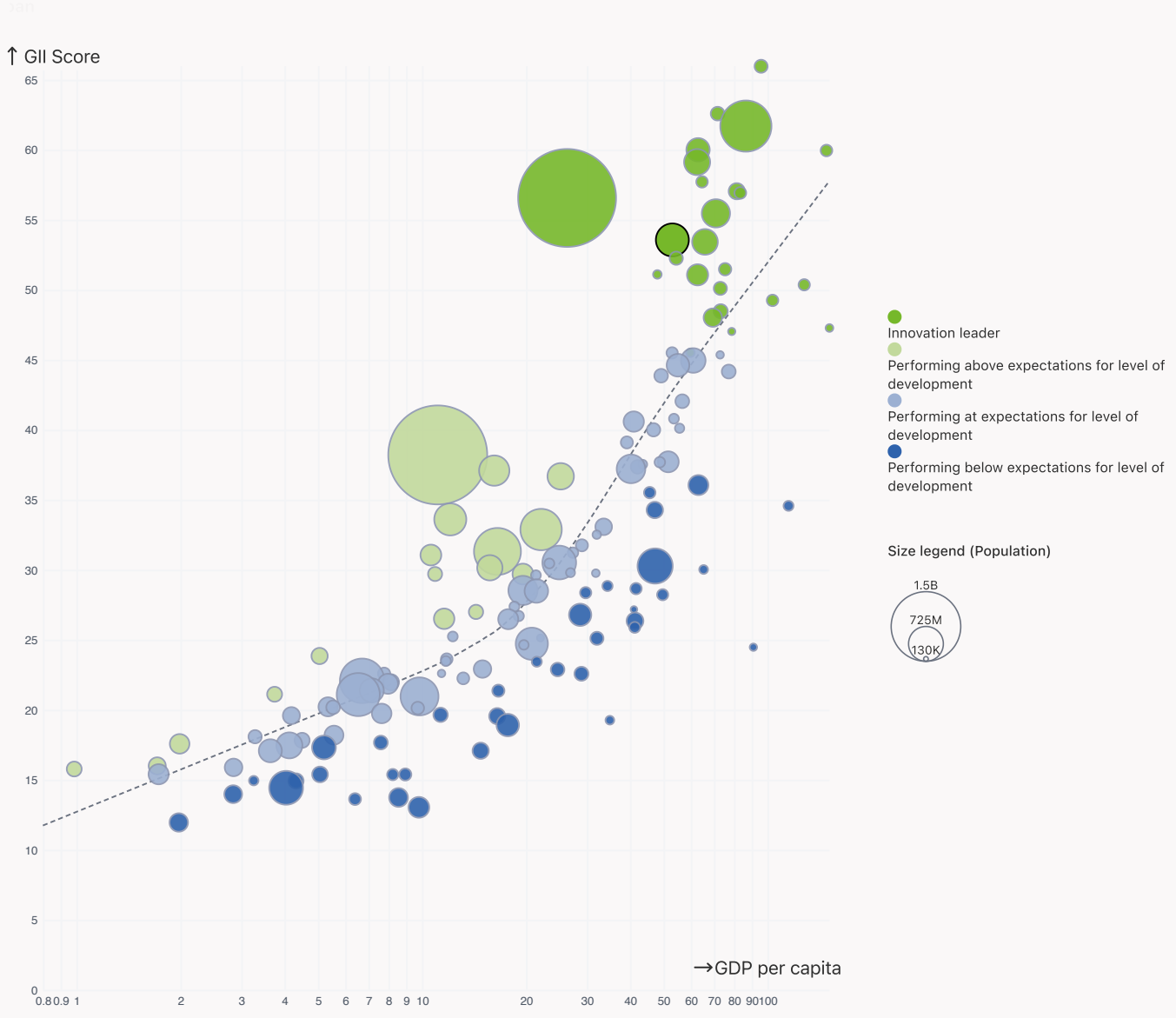
Global Innovation Index 2025

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.

Japan is an Innovation leader, ranking in the top 25 of the GII.

> 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.

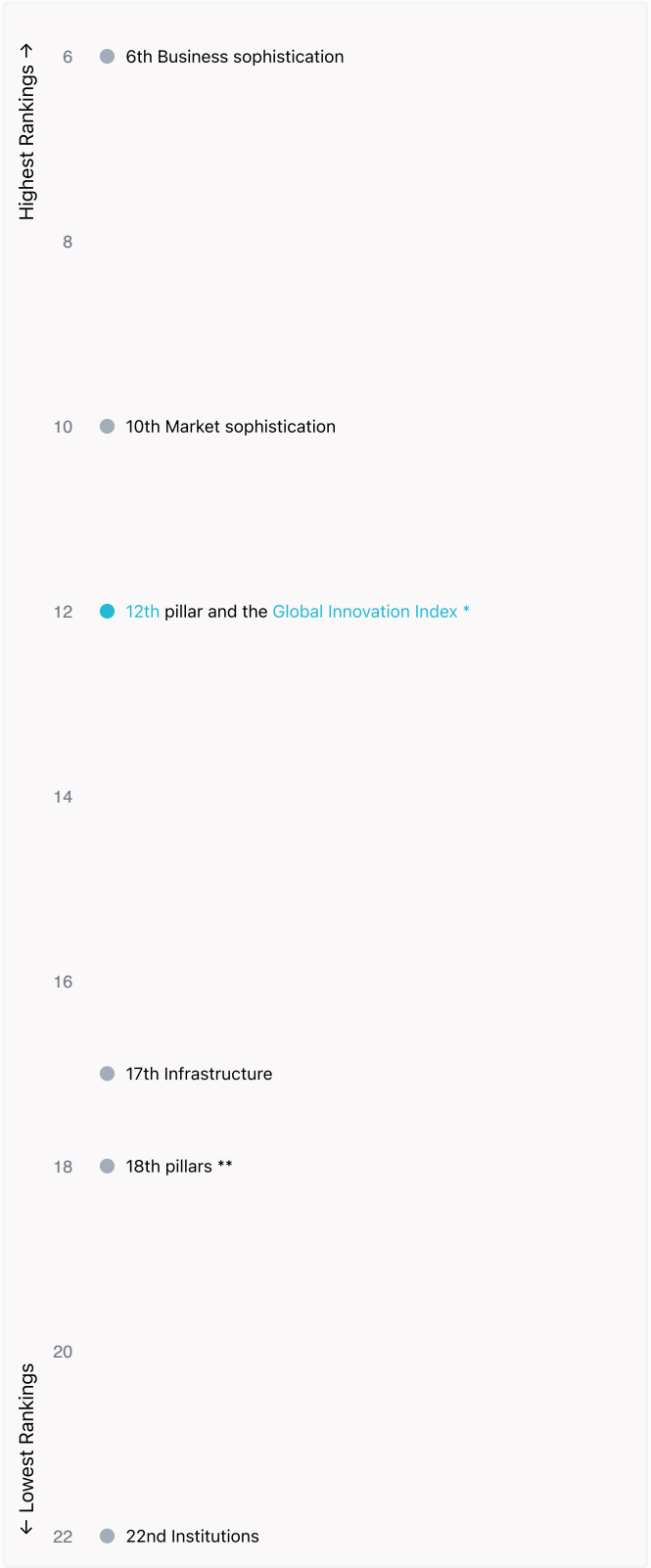
Japan produces more innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

Global Innovation Index 2025

Overview of Japan'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 Japan are those that rank above the GII (shown in blue) and the weakest are those that rank below.



Highest Rankings

Japan ranks highest in Business sophistication (6th), Market sophistication (10th) and Knowledge and technology outputs (12th).

Lowest Rankings

Japan ranks lowest in Institutions (22nd), Human capital and research, Creative outputs (18th) and Infrastructure (17th).

* Knowledge and technology outputs
** Human capital and research, Creative outputs

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

Global Innovation Index 2025

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

High-income economies

Japan performs above the High-income group average in all pillars.

South East Asia, East Asia, and Oceania

Japan performs above the regional average in all pillars.

Institutions

- Top 10 | Score: 78.63
- Japan | Score: 70.86
- High-income | Score: 65.99
- SEAO | Score: 60.86

Human capital and research

- Top 10 | Score: 59.30
- Japan | Score: 53.50
- High-income | Score: 45.45
- SEAO | Score: 39.16

Infrastructure

- Top 10 | Score: 61.36
- Japan | Score: 57.58
- High-income | Score: 54.18
- SEAO | Score: 48.25

Market sophistication

- Top 10 | Score: 61.82
- Japan | Score: 59.41
- SEAO | Score: 48.50
- High-income | Score: 47.12

Business sophistication

- Top 10 | Score: 59.10
- Japan | Score: 57.76
- High-income | Score: 42.22
- SEAO | Score: 39.02

Knowledge and technology outputs

- Top 10 | Score: 54.93
- Japan | Score: 48.24
- High-income | Score: 33.94
- SEAO | Score: 29.47

Creative outputs

- Top 10 | Score: 55.98
- Japan | Score: 46.35
- High-income | Score: 38.68
- SEAO | Score: 32.64

Global Innovation Index 2025

Innovation strengths and weaknesses in Japan

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

Japan's best-ranked innovation strengths are **Production and export complexity** (rank 1), **Public research–industry co-publications, %** (rank 1) and **Domestic credit to private sector, % GDP** (rank 2).

Strengths

Rank	Code	Indicator name
1	6.3.2	Production and export complexity
1	5.2.1	Public research–industry co-publications, %
2	4.1.2	Domestic credit to private sector, % GDP
2	6.3.1	Intellectual property receipts, % total trade
2	5.2.5	Patent families/bn PPP$ GDP
2	6.1.2	PCT patents by inventor origin/bn PPP$ GDP
3	5.1.5	GERD financed by business, %
3	5.1.4	GERD performed by business, % GDP
3	6.1.1	Patents by origin/bn PPP$ GDP
3	2.1.4	PISA scales in reading, maths and science

Weaknesses

Rank	Code	Indicator name
137	5.1.3	Youth demographic dividend, %
113	5.3.4	FDI net inflows, % GDP
102	2.1.1	Expenditure on education, % GDP
96	6.2.1	Labor productivity growth, %
85	2.2.2	Graduates in science and engineering, %
83	6.3.4	ICT services exports, % total trade
78	3.3.2	Low-carbon energy use, %
72	5.1.1	Knowledge-intensive employment, %
66	1.3.2	Entrepreneurship policies and culture†
64	7.2.1	Cultural and creative services exports, % total trade

Global Innovation Index 2025

Japan's innovation system

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

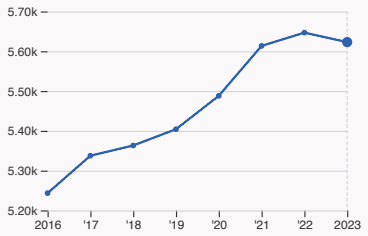
Innovation inputs in Japan

2.1.1 Expenditure on education

was equal to 3.24 % GDP in 2022, down by 0.1 percentage points from the year prior – and equivalent to an indicator rank of 102.

2.2.2 Graduates in science and engineering

was equal to 19.63 % of total graduates in 2022, up by 0.12 percentage points from the year prior – and equivalent to an indicator rank of 85.



2.3.1 Researchers

was equal to 5623.006 FTE per million population in 2023, down by 0.42% from the year prior – and equivalent to an indicator rank of 14.

2.3.2 Gross expenditure on R&D

was equal to 3.44 % GDP in 2023, up by 0.04 percentage points from the year prior – and equivalent to an indicator rank of 5.

2.3.4 QS university ranking

was equal to an average score of 73.93 for the top three universities in 2024, down by 1.2% from the year prior – and equivalent to an indicator rank of 10.

4.3.2 Domestic industry diversification

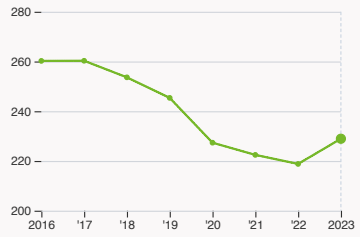
was equal to an index score of 0.106 in 2022, up by 0.53% from the year prior – and equivalent to an indicator rank of 32.

5.1.1 Knowledge-intensive employment

was equal to 21.34 % of total workforce in 2024, up by 0.46 percentage points from the year prior – and equivalent to an indicator rank of 72.

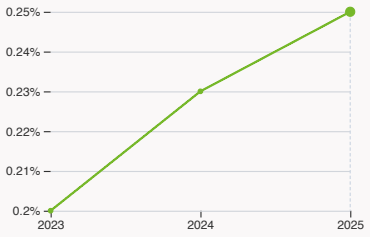
Global Innovation Index 2025

Innovation outputs in Japan



6.1.1 Patents by origin

was equal to 228.94 thousand patents in 2023, up by 4.63% from the year prior – and equivalent to an indicator rank of 3.

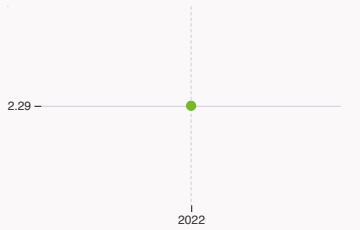


6.2.2 Unicorn valuation

was equal to 0.25 % GDP in 2025, up by 0.02 percentage points from the year prior – and equivalent to an indicator rank of 49.

6.2.4 High-tech manufacturing

was equal to 1.48 high-tech manufacturing output in trillion USD in 2022, down by 9.2% from the year prior – and equivalent to an indicator rank of 9.

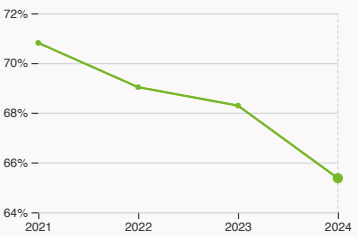


6.3.2 Production and export complexity

was equal to a score of 2.29 in 2022 – and equivalent to an indicator rank of 1.

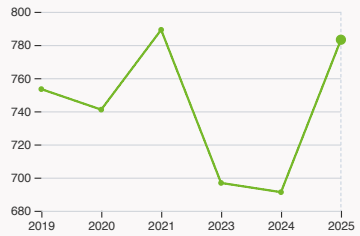
6.3.3 High-tech exports

was equal to 105.32 billion USD in 2023, down by 9.38% from the year prior – and equivalent to an indicator rank of 16.



7.1.1 Intangible asset intensity, top 15

was equal to 65.37 % for the top 15 companies in 2024, down by 2.92 percentage points from the year prior – and equivalent to an indicator rank of 25.



7.1.3 Global brand value, top 5,000

was equal to 783.19 billion USD in 2025, up by 13.3% from the year prior – and equivalent to an indicator rank of 5.

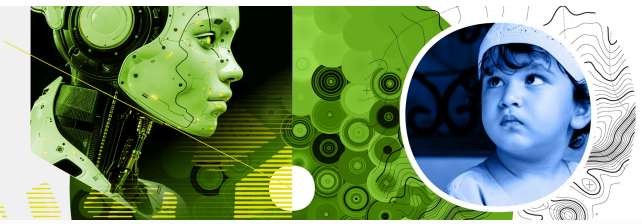
7.2.2 National feature films

was equal to 676 films in 2023, up by 6.62% from the year prior – and equivalent to an indicator rank of 17.

7.3.3 Mobile app creation

was equal to 2.99 billion global downloads of mobile apps in 2024, down by 8% from the year prior – and equivalent to an indicator rank of 38.

Global Innovation Index 2025



Japan's innovation top performers

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

2.3.3 Global corporate R&D investors from Japan

Rank	Firm	Industry	R&D [mn EUR]	R&D Growth [%]	R&D Intensity [%]
1	TOYOTA MOTOR	Automobiles & Parts	7,353	-3	3
2	HONDA MOTOR	Automobiles & Parts	5,971	12	5
3	NTT	Mobile Telecommunications	5,096	4	6
4	SONY	Leisure Goods	4,665	2	6

Source: WIPO, based on European Commission's Joint Research Centre (https://iri.jrc.ec.europa.eu/scoreboard/2024-eu-industrial-rd-investment-scoreboard) and Orbis database (https://www.moodys.com/web/en/us/capabilities/company-reference-data/orbis.html).
Note: Data is based on the 2024 EU Industrial R&D Investment Scoreboard from the European Commission's Joint Research Centre, which ranks the top 2,000 firms by R&D investment annually. For countries not represented in the Scoreboard, companies from Orbis with R&D expenditure above USD 50 million were identified and used to complement the dataset.

2.3.4 QS university ranking of Japan's top universities

Rank	University	Score
32	THE UNIVERSITY OF TOKYO	82.10
50	KYOTO UNIVERSITY	76.00
84	TOKYO INSTITUTE OF TECHNOLOGY (TOKYO TECH)	63.70

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	TOHOKU UNIVERSITY	79.95
2	TOKYO INSTITUTE OF TECHNOLOGY	78.80
3	OSAKA UNIVERSITY	75.35

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.

6.2.2 Top Unicorn Companies in Japan

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	PREFERRED NETWORKS	Industrials	Tokyo	2
1	SMARTNEWS	Media & Entertainment	Tokyo	2
3	SMARTHR	Enterprise Tech	Tokyo	2

Source: CBInsights, Tracker – The Complete List of Unicorn Companies: https://www.cbinsights.com/research-unicorn-companies.

7.1.1 Top 15 intangible-asset intensive companies in Japan

Rank	Firm	Intensity, %
1	HITACHI, LTD.	86.09
2	KEYENCE CORPORATION	76.03
3	SONY GROUP CORPORATION	60.10

Source: Brand Finance (https://brandirectory.com/reports/gift-2024).
Note: Brand Finance only provides within economy ranks.

7.1.3 Top 5,000 companies in Japan with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	TOYOTA	Automobiles	64,737.9
2	MITSUBISHI GROUP	Diversified	40,358.8
3	NTT GROUP	Telecoms	37,116.4

Source: Brand Finance (https://brandirectory.com).
Note: Rank corresponds to within economy ranks.

Japan

GII 2025 rank **12**

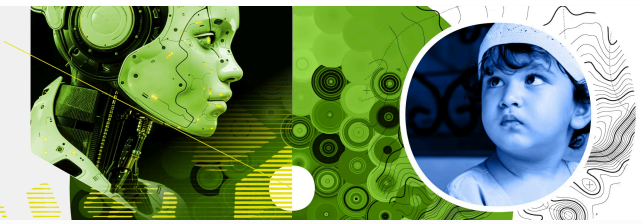
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
14	12	High	South East Asia, East Asia, and Oceania	123.8	6,572.2	53,059.4

	Score / Value	Rank	
Institutions	**70.9**	**22**	
1.1 Institutional environment	**84.9**	**10**	
1.1.1 Operational stability for businesses*	86.7	8	
1.1.2 Government effectiveness*	83.1	7	
1.2 Regulatory environment	**85.1**	**16**	
1.2.1 Regulatory quality*	80.6	15	
1.2.2 Rule of law*	89.5	14	
1.3 Business environment	**42.6**	**72**	◇
1.3.1 Policy stability for doing business†	57.7	51	
1.3.2 Entrepreneurship policies and culture†	27.5	66	○ ◇
Human capital and research	**53.5**	**18**	
2.1 Education	**66.1**	**13**	
2.1.1 Expenditure on education, % GDP	3.2	102	○ ◇
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3 School life expectancy, years	15.5	46	◇
2.1.4 PISA scales in reading, maths and science	532.7	3	● ◆
2.1.5 Pupil–teacher ratio, secondary	10.6	38	
2.2 Tertiary education	**27.4**	**77**	◇
2.2.1 Tertiary enrolment, % gross	64.6	50	
2.2.2 Graduates in science and engineering, %	19.6	85	○
2.2.3 Tertiary inbound mobility, %	5.1	51	
2.3 Research and development (R&D)	**66.9**	**7**	
2.3.1 Researchers, FTE/mn pop.	5,623	14	
2.3.2 Gross expenditure on R&D, % GDP	3.4	5	
2.3.3 Global corporate R&D investors, top 3, mn USD	83.9	6	
2.3.4 QS university ranking, top 3*	75.7	10	
Infrastructure	**57.6**	**17**	
3.1 Information and communication technologies (ICTs)	**93.2**	**14**	
3.1.1 ICT access*	96.9	30	
3.1.2 ICT use*	89.6	23	
3.1.3 Government's online service*	93.1	9	
3.2 General infrastructure	**53.2**	**15**	
3.2.1 Electricity output, GWh/mn pop.	7,833.5	20	
3.2.2 Logistics performance*	81.8	13	
3.2.3 Gross capital formation, % GDP	26.6	39	
3.3 Ecological sustainability	**26.4**	**50**	
3.3.1 GDP/unit of energy use	14.3	37	
3.3.2 Low-carbon energy use, %	16.5	78	○
3.3.3 ISO 14001 environment/bn PPP$ GDP	3.4	27	
Market sophistication	**59.4**	**10**	
4.1 Credit	**66.5**	**8**	
4.1.1 Finance for startups and scaleups†	55	39	
4.1.2 Domestic credit to private sector, % GDP	195.7	2	● ◆
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
4.2 Investment	**23.6**	**25**	
4.2.1 Market capitalization, % GDP	129.8	10	
4.2.2 Venture capital (VC) received, deal count/bn PPP$ GDP	0.2	37	◇
4.2.3 Late-stage VC deal count, % global VC	1.1	7	
4.2.4 VC investors, deal count/bn PPP$ GDP	0.3	37	◇
4.2.5 VC investor co-participation/bn PPP$ GDP	0.2	32	◇
4.3 Trade, diversification and market scale	**88.2**	**7**	
4.3.1 Applied tariff rate, weighted avg., %	1.4	51	
4.3.2 Domestic industry diversification	91.9	32	
4.3.3 Domestic market scale, bn PPP$	6,572.2	5	◆

	Score / Value	Rank	
Business sophistication	**57.8**	**6**	
5.1 Knowledge workers	**55.1**	**20**	
5.1.1 Knowledge-intensive employment, %	21.3	72	○ ◇
5.1.2 Females employed w/advanced degrees, %	22.9	24	
5.1.3 Youth demographic dividend, %	20.8	137	○ ◇
5.1.4 GERD performed by business, % GDP	2.7	3	●
5.1.5 GERD financed by business, %	78	3	● ◆
5.2 Innovation linkages	**68.6**	**6**	
5.2.1 Public research–industry co-publications, %	9.1	1	● ◆
5.2.2 University–industry R&D collaboration†	56.9	26	
5.2.3 University industry & international engagement, top 5*	70.9	23	
5.2.4 State of cluster development†	55.2	51	◇
5.2.5 Patent families/bn PPP$ GDP	12.3	2	● ◆
5.3 Knowledge absorption	**49.6**	**8**	
5.3.1 Intellectual property payments, % total trade	3	10	
5.3.2 High-tech imports, % total trade	13.8	17	
5.3.3 ICT services imports, % total trade	2.4	30	
5.3.4 FDI net inflows, % GDP	0.8	113	○
5.3.5 Research talent, % in businesses	74.9	5	◆
Knowledge and technology outputs	**48.2**	**12**	
6.1 Knowledge creation	**56.9**	**8**	
6.1.1 Patents by origin/bn PPP$ GDP	35.8	3	● ◆
6.1.2 PCT patents by inventor origin/bn PPP$ GDP	6.6	2	● ◆
6.1.3 Utility models by origin/bn PPP$ GDP	0.4	30	
6.1.4 Scientific and technical articles/bn PPP$ GDP	11.9	57	◇
6.1.5 Citable documents H-index	65.7	11	
6.2 Knowledge impact	**35**	**35**	
6.2.1 Labor productivity growth, %	0.1	96	○
6.2.2 Unicorn valuation, % GDP	0.2	49	◇
6.2.3 Software spending, % GDP	0.3	36	
6.2.4 High-tech manufacturing, %	53.7	9	
6.3 Knowledge diffusion	**52.8**	**6**	
6.3.1 Intellectual property receipts, % total trade	5.1	2	● ◆
6.3.2 Production and export complexity	100	1	● ◆
6.3.3 High-tech exports, % total trade	11.1	16	
6.3.4 ICT services exports, % total trade	1.1	83	○
6.3.5 ISO 9001 quality/bn PPP$ GDP	6.2	41	
Creative outputs	**46.4**	**18**	
7.1 Intangible assets	**58**	**8**	
7.1.1 Intangible asset intensity, top 15, %	65.4	25	
7.1.2 Trademarks by origin/bn PPP$ GDP	40.1	44	
7.1.3 Global brand value, top 5,000, % GDP	17.8	5	◆
7.1.4 Industrial designs by origin/bn PPP$ GDP	3.3	26	
7.2 Creative goods and services	**32.9**	**21**	
7.2.1 Cultural and creative services exports, % total trade	0.4	64	○
7.2.2 National feature films/mn pop. 15–69	8.4	17	
7.2.3 Entertainment and media market/th pop. 15–69	59.9	8	
7.2.4 Creative goods exports, % total trade	1.7	29	
7.3 Online creativity	**36.5**	**40**	◇
7.3.1 Top-level domains (TLDs)/th pop. 15–69	12.7	42	◇
7.3.2 GitHub commits/mn pop. 15–69	25.7	39	◇
7.3.3 Mobile app creation/bn PPP$ GDP	71.1	38	

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 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.

Global Innovation Index 2025



Data Availability

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

Japan has missing data for two indicators and outdated data for six indicators.

Missing data for Japan

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)

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

Outdated data for Japan

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
2.2.1	Tertiary enrolment, % gross	2022	2023	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2022	2023	UNESCO Institute for Statistics
5.1.2	Females employed w/advanced degrees, %	2020	2024	International Labour Organization

*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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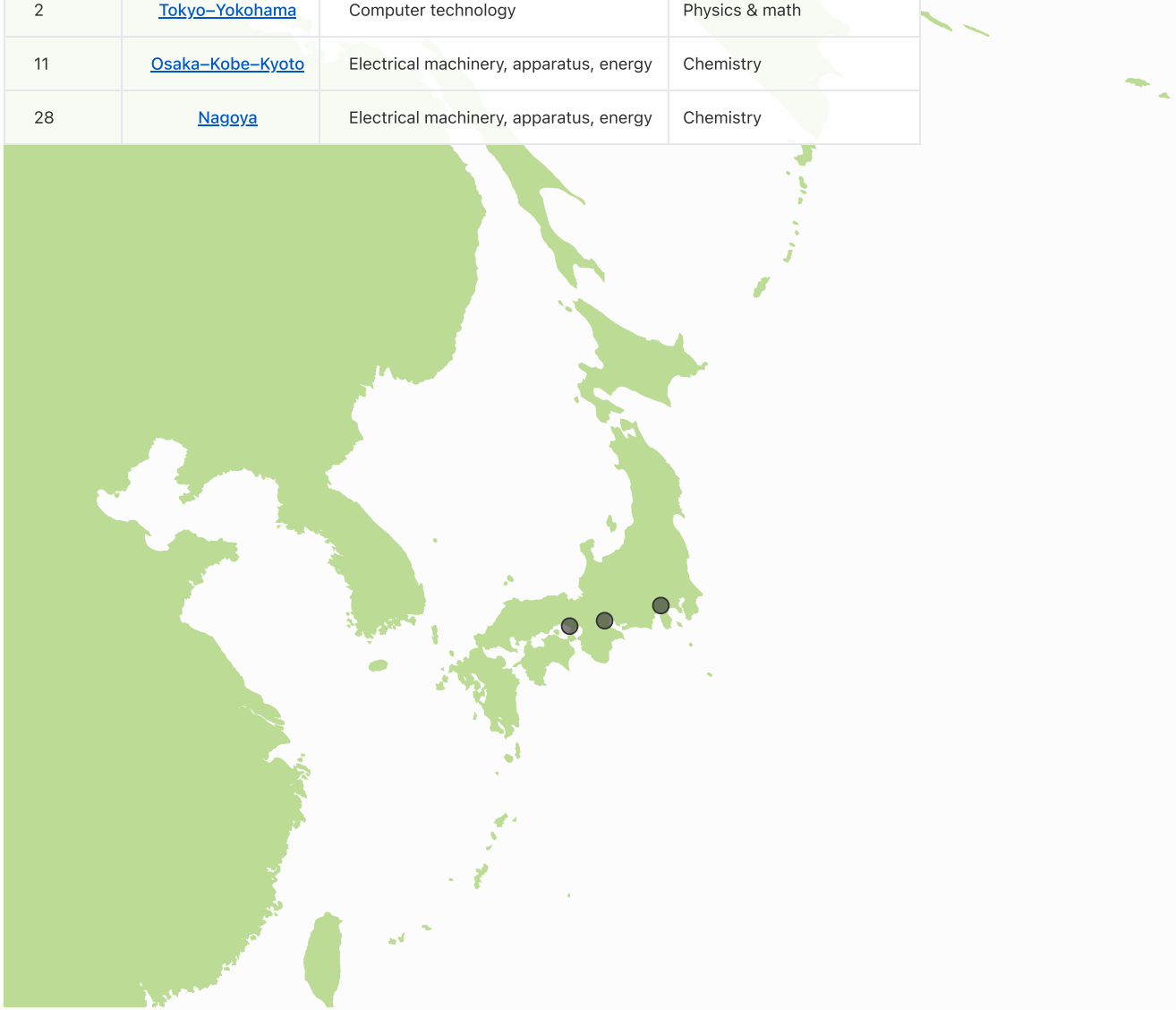
Top innovation clusters in Japan

Japan has 3 clusters in the world's top innovation clusters of the Global Innovation Index

The table and map below give an overview of the top innovation clusters in Japan.

Rank	Cluster name	Top patent field	Top academic subject
2	Tokyo–Yokohama	Computer technology	Physics & math
11	Osaka–Kobe–Kyoto	Electrical machinery, apparatus, energy	Chemistry
28	Nagoya	Electrical machinery, apparatus, energy	Chemistry



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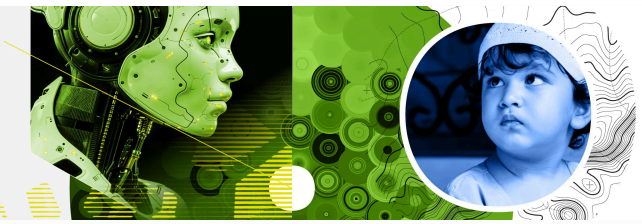
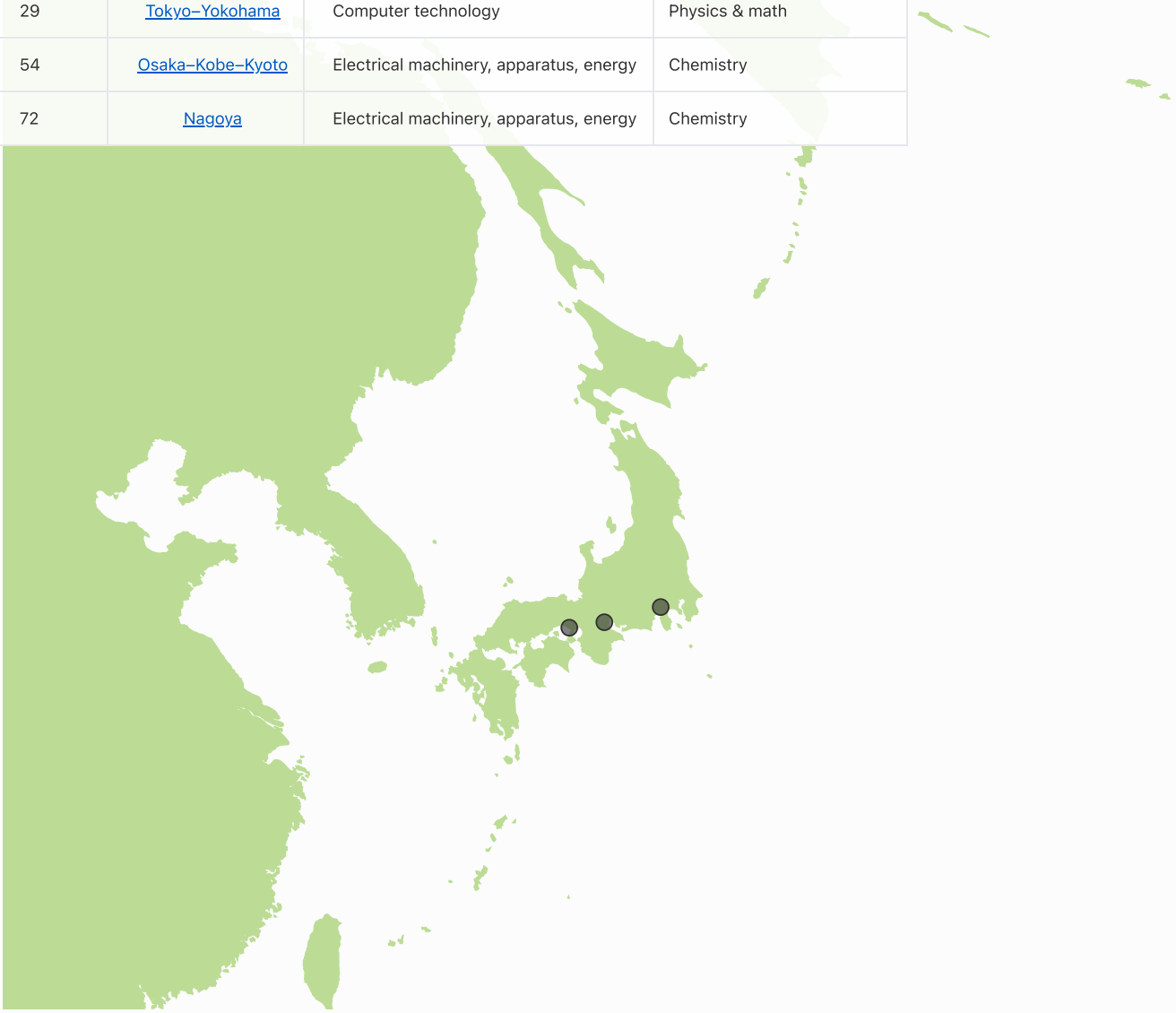


The table and map below give an overview by intensity of the top innovation clusters in Japan.

Rank	Cluster name	Top patent field	Top academic subject
29	Tokyo–Yokohama	Computer technology	Physics & math
54	Osaka–Kobe–Kyoto	Electrical machinery, apparatus, energy	Chemistry
72	Nagoya	Electrical machinery, apparatus, energy	Chemistry



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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.