Global Innovation Index 2025

India ranking in the Global Innovation Index 2025

India ranks 38th 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.

India ranks 1st among the 37 Lower middle-income group economies.

India ranks 1st among the 10 economies in Central and Southern Asia.

India GII Ranking (2020-2025)

The table shows the rankings of India 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 India in the GII 2025 is between ranks 37 and 41.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	48th	57th	45th
2021	46th	57th	45th
2022	40th	42nd	39th
2023	40th	46th	35th
2024	39th	44th	33rd
2025	38th	52nd	32nd

India performs better in innovation outputs than innovation inputs in 2025.

This year India ranks 52nd in innovation inputs. This position is lower than last year.

India ranks 32nd in innovation outputs. This position is higher than last year.

India has 4 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 India, how rapidly is technology being embraced and what are the resulting societal impacts.

For India, 8 indicators have improved in the short-term and 2 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	▲ 7.7 % 2023 - 2024	▼ -7.8 % 2019 - 2020	0 % 2023 - 2024	▲ 22.2 % 2023 - 2024
Long term (annual growth)	▲ 7.3 % 2014 - 2024	▲ 3.1 % 2010 - 2020	▼ -1.5 % 2020 - 2024	▲ 12.3 % 2014 - 2024

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	▲ 3.3% 2023 - 2024	▲ 17.7% 2022 - 2023	n/a	▲ 18.3% 2022 - 2023	▲ 59.9% 2023 - 2024
Long term (annual growth)	▲ 4.6% 2014 - 2024	▲ 10.2% 2013 - 2023	n/a	▲ 16.6% 2013 - 2023	▲ 53.1% 2014 - 2024
Penetration	62.8 per 100 inhabitants in 2024	2.7 per 100 inhabitants in 2023	82 per 100 inhabitants in 2023	n/a	0.5 per 100 cars in 2024

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▲ 2.4 % 2023 - 2024	▲ 0.4 % 2022 - 2023	+ 1.1 °C 2024
Long term (annual growth)	▲ 4.4 % 2014 - 2024	▲ 0.5 % 2013 - 2023	+ 0.5 °C 2014
Level	24,818.8 USD in 2024	72 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.

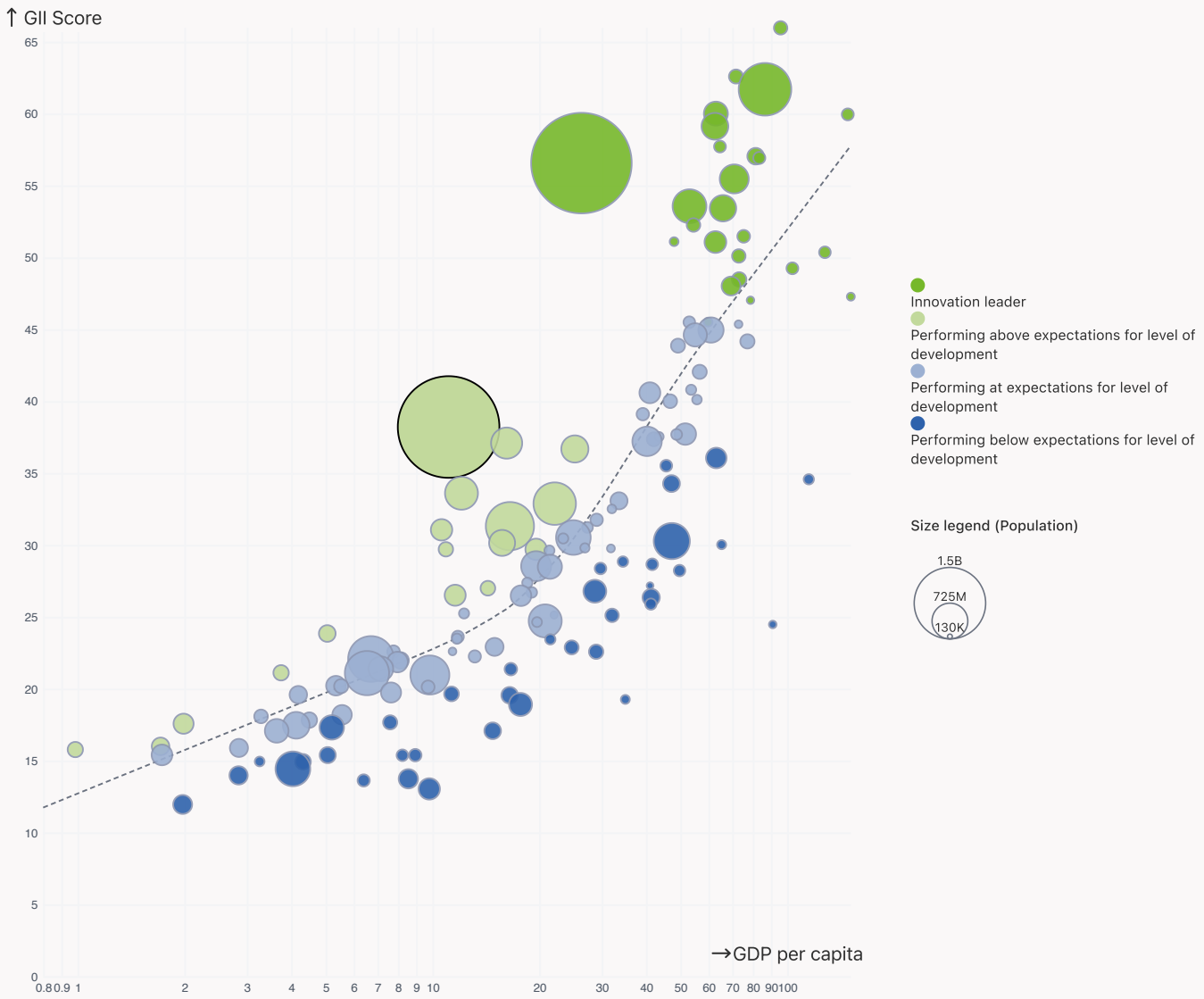
Global Innovation Index 2025

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.

Relative to GDP India performs above 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.

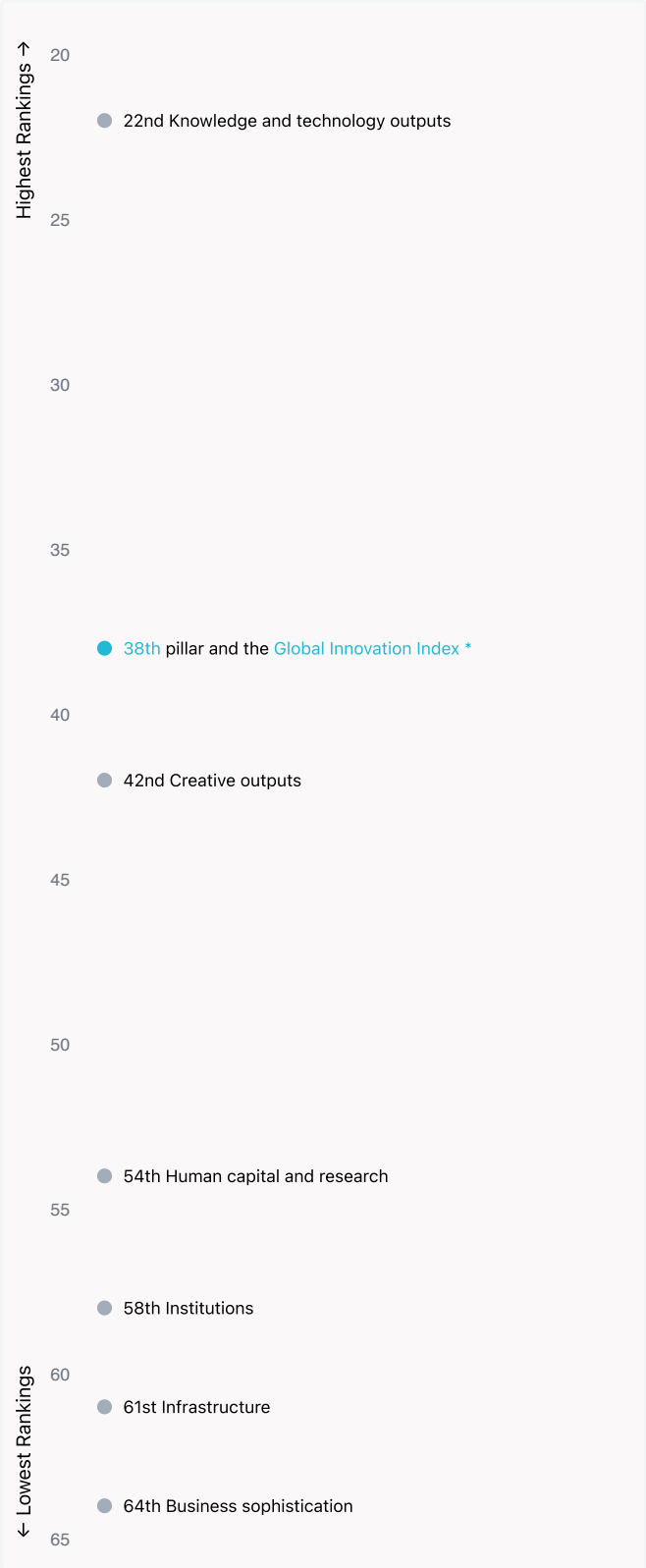
India produces more innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

Global Innovation Index 2025

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



Highest Rankings

India ranks highest in Knowledge and technology outputs (22nd) and Market sophistication (38th).

Lowest Rankings

India ranks lowest in Business sophistication (64th), Infrastructure (61st) and Institutions (58th).

* Market sophistication

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

Global Innovation Index 2025

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

Lower middle-income economies

India performs above the Lower middle-income group average in all pillars.

Central and Southern Asia

India performs above the regional average in all pillars.

Institutions

- Top 10 | Score: 78.63
- India | Score: 53.49
- Lower middle-income | Score: 37.2
- Central and Southern Asia | Score:

Human capital and research

- Top 10 | Score: 59.30
- India | Score: 34.73
- Central and Southern Asia | Score:
- Lower middle-income | Score: 20.9

Infrastructure

- Top 10 | Score: 61.36
- India | Score: 45.21
- Central and Southern Asia | Score:
- Lower middle-income | Score: 32.1

Market sophistication

- Top 10 | Score: 61.82
- India | Score: 43.10
- Central and Southern Asia | Score:
- Lower middle-income | Score: 28.1

Business sophistication

- Top 10 | Score: 59.10
- India | Score: 29.20
- Lower middle-income | Score: 25.3
- Central and Southern Asia | Score:

Knowledge and technology outputs

- Top 10 | Score: 54.93
- India | Score: 37.81
- Central and Southern Asia | Score:
- Lower middle-income | Score: 15.4

Creative outputs

- Top 10 | Score: 55.98
- India | Score: 32.70
- Central and Southern Asia | Score:
- Lower middle-income | Score: 13.8

Global Innovation Index 2025

Innovation strengths and weaknesses in India

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

India's best-ranked innovation strengths are **ICT services exports, % total trade** (rank 1), **Domestic market scale, bn PPP$** (rank 3) and **Late-stage VC deal count, % global VC** (rank 4).

Strengths

Rank	Code	Indicator name
1	6.3.4	ICT services exports, % total trade
3	4.3.3	Domestic market scale, bn PPP$
4	4.2.3	Late-stage VC deal count, % global VC
8	7.1.1	Intangible asset intensity, top 15, %
9	4.1.1	Finance for startups and scaleups†
11	6.2.2	Unicorn valuation, % GDP
12	1.3.2	Entrepreneurship policies and culture†
13	7.2.1	Cultural and creative services exports, % total trade
14	3.2.3	Gross capital formation, % GDP
16	2.3.3	Global corporate R&D investors, top 3, mn USD

Weaknesses

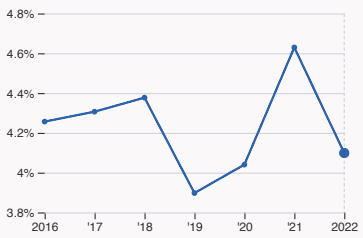
Rank	Code	Indicator name
116	4.3.1	Applied tariff rate, weighted avg., %
113	2.2.3	Tertiary inbound mobility, %
107	5.3.4	FDI net inflows, % GDP
101	5.1.2	Females employed w/advanced degrees, %
98	2.1.5	Pupil–teacher ratio, secondary
95	5.1.1	Knowledge-intensive employment, %
94	3.2.1	Electricity output, GWh/mn pop.
80	2.3.1	Researchers, FTE/mn pop.
61	7.2.3	Entertainment and media market/th pop. 15–69
48	4.1.3	Loans from microfinance institutions, % GDP

Global Innovation Index 2025

India's innovation system

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

Innovation inputs in India

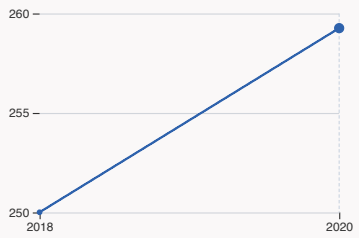


2.1.1 Expenditure on education

was equal to 4.1 % GDP in 2022, down by 0.53 percentage points from the year prior – and equivalent to an indicator rank of 70.

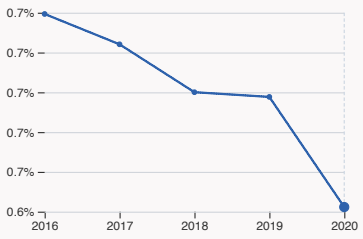
2.2.2 Graduates in science and engineering

was equal to 27.09 % of total graduates in 2023, down by 2.24 percentage points from the year prior – and equivalent to an indicator rank of 35.



2.3.1 Researchers

was equal to 259.26 FTE per million population in 2020, up by 3.7% from the year prior – and equivalent to an indicator rank of 80.

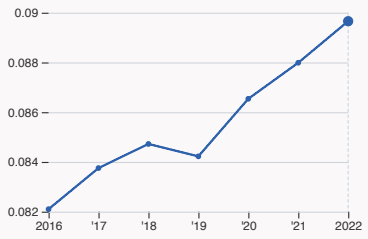


2.3.2 Gross expenditure on R&D

was equal to 0.65 % GDP in 2020, down by 0.01 percentage points from the year prior – and equivalent to an indicator rank of 56.

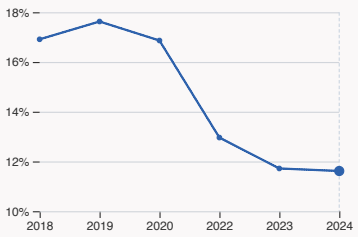
2.3.4 QS university ranking

was equal to an average score of 51.13 for the top three universities in 2024, up by 9.65% from the year prior – and equivalent to an indicator rank of 22.



4.3.2 Domestic industry diversification

was equal to an index score of 0.09 in 2022, up by 1.9% from the year prior – and equivalent to an indicator rank of 19.



5.1.1 Knowledge-intensive employment

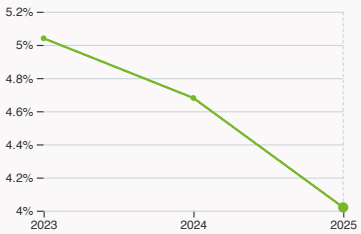
was equal to 11.62 % of total workforce in 2024, down by 0.1 percentage points from the year prior – and equivalent to an indicator rank of 95.

Global Innovation Index 2025

Innovation outputs in India

6.1.1 Patents by origin

was equal to 49.86 thousand patents in 2023, up by 29.34% from the year prior – and equivalent to an indicator rank of 19.

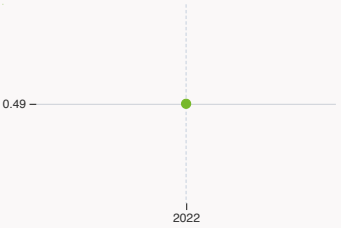


6.2.2 Unicorn valuation

was equal to 4.02 % GDP in 2025, down by 0.66 percentage points from the year prior – and equivalent to an indicator rank of 11.

6.2.4 High-tech manufacturing

was equal to 621.76 high-tech manufacturing output in billion USD in 2022, up by 15.9% from the year prior – and equivalent to an indicator rank of 31.

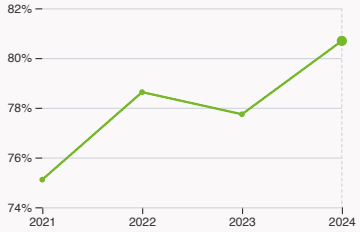


6.3.2 Production and export complexity

was equal to a score of 0.49 in 2022 – and equivalent to an indicator rank of 42.

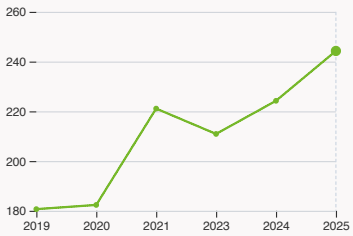
6.3.3 High-tech exports

was equal to 41.68 billion USD in 2023, up by 18.27% from the year prior – and equivalent to an indicator rank of 41.



7.1.1 Intangible asset intensity, top 15

was equal to 80.69 % for the top 15 companies in 2024, up by 2.95 percentage points from the year prior – and equivalent to an indicator rank of 8.



7.1.3 Global brand value, top 5,000

was equal to 244.28 billion USD in 2025, up by 8.94% from the year prior – and equivalent to an indicator rank of 31.

7.2.2 National feature films

was equal to 2.56 thousand films in 2023, up by 2.4% from the year prior – and equivalent to an indicator rank of 52.

7.3.3 Mobile app creation

was equal to 6.79 billion global downloads of mobile apps in 2024, down by 8.74% from the year prior – and equivalent to an indicator rank of 40.

Global Innovation Index 2025

India'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 India

Rank	Firm	Industry	R&D [mn EUR]	R&D Growth [%]	R&D Intensity [%]
1	TATA MOTORS	Automobiles & Parts	2,951	45	6
2	SUN PHARMACEUTICAL INDUSTRIES	Pharmaceuticals & Biotechnology	343	34	6
3	DR REDDY'S LABORATORIES	Pharmaceuticals & Biotechnology	241	18	8
4	RELIANCE INDUSTRIES	Chemicals	219	-34	0.2

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 India's top universities

Rank	University	Score
118	INDIAN INSTITUTE OF TECHNOLOGY BOMBAY (IITB)	56.30
150	INDIAN INSTITUTE OF TECHNOLOGY DELHI (IITD)	52.10
211	INDIAN INSTITUTE OF SCIENCE	45.00

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	INDIAN INSTITUTE OF SCIENCE	64.45
2	MANIPAL ACADEMY OF HIGHER EDUCATION	50.55
3	INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY, HYDERABAD	49.40

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 India

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	BYJU'S	Consumer & Retail	Bengaluru	12
2	OYO ROOMS	Consumer & Retail	Gurugram	9
3	DREAM11	Media & Entertainment	Mumbai	8

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 India

Rank	Firm	Intensity, %
1	RELIANCE INDUSTRIES LIMITED	70.32
2	BHARTI AIRTEL LIMITED	88.26
3	HDFC BANK LIMITED	68.75

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 India with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	TATA GROUP	Diversified	31,564.5
2	INFOSYS	IT Services	16,337.8
3	HDFC GROUP	Banking	14,223

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

India

GII 2025 rank **38**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
32	52	Lower middle	Central and Southern Asia	1450.9	16,020	11,111.7

	Score / Value	Rank	
Institutions	**53.5**	**58**	◆
1.1 Institutional environment	**56**	**63**	◆
1.1.1 Operational stability for businesses*	57.3	79	
1.1.2 Government effectiveness*	54.7	47	◆
1.2 Regulatory environment	**50.2**	**65**	◆
1.2.1 Regulatory quality*	43.6	81	◆
1.2.2 Rule of law*	56.8	60	◆
1.3 Business environment	**54.2**	**53**	
1.3.1 Policy stability for doing business†	38.7	84	
1.3.2 Entrepreneurship policies and culture†	69.7	12	●◆
Human capital and research	**34.7**	**54**	◆
2.1 Education	**45.9**	**85**	
2.1.1 Expenditure on education, % GDP	4.1	70	
2.1.2 Government funding/pupil, secondary, % GDP/cap	17.9	53	
2.1.3 School life expectancy, years	13.4	79	
2.1.4 PISA scales in reading, maths and science	n/a	n/a	
2.1.5 Pupil–teacher ratio, secondary	18.8	98	○
2.2 Tertiary education	**25.1**	**82**	
2.2.1 Tertiary enrolment, % gross	34.4	89	
2.2.2 Graduates in science and engineering, %	27.1	35	
2.2.3 Tertiary inbound mobility, %	0.1	113	○
2.3 Research and development (R&D)	**33.3**	**34**	◆
2.3.1 Researchers, FTE/mn pop.	259.3	80	○
2.3.2 Gross expenditure on R&D, % GDP	0.6	56	◆
2.3.3 Global corporate R&D investors, top 3, mn USD	68.1	16	●◆
2.3.4 QS university ranking, top 3*	52.4	22	◆
Infrastructure	**45.2**	**61**	◆
3.1 Information and communication technologies (ICTs)	**78.8**	**60**	◆
3.1.1 ICT access*	84	72	◆
3.1.2 ICT use*	74.2	81	
3.1.3 Government's online service*	78.2	44	◆
3.2 General infrastructure	**43.5**	**37**	◆
3.2.1 Electricity output, GWh/mn pop.	1,365.4	94	○
3.2.2 Logistics performance*	59.1	37	◆
3.2.3 Gross capital formation, % GDP	33.3	14	●
3.3 Ecological sustainability	**13.3**	**103**	
3.3.1 GDP/unit of energy use	10	76	
3.3.2 Low-carbon energy use, %	10.4	92	
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.9	72	
Market sophistication	**43.1**	**38**	◆
4.1 Credit	**34.5**	**50**	
4.1.1 Finance for startups and scaleups†	81.5	9	●◆
4.1.2 Domestic credit to private sector, % GDP	50.1	64	
4.1.3 Loans from microfinance institutions, % GDP	0.4	48	○
4.2 Investment	**18.7**	**33**	◆
4.2.1 Market capitalization, % GDP	106	18	◆
4.2.2 Venture capital (VC) received, deal count/bn PPP$ GDP	0.1	45	◆
4.2.3 Late-stage VC deal count, % global VC	1.4	4	●◆
4.2.4 VC investors, deal count/bn PPP$ GDP	0.1	63	
4.2.5 VC investor co-participation/bn PPP$ GDP	0.08	52	◆
4.3 Trade, diversification and market scale	**76.1**	**46**	◆
4.3.1 Applied tariff rate, weighted avg., %	7.6	116	○
4.3.2 Domestic industry diversification	95.3	19	◆
4.3.3 Domestic market scale, bn PPP$	16,020	3	●◆

	Score / Value	Rank	
Business sophistication	**29.2**	**64**	
5.1 Knowledge workers	**25.8**	**112**	
5.1.1 Knowledge-intensive employment, %	11.6	95	○
5.1.2 Females employed w/advanced degrees, %	3	101	○
5.1.3 Youth demographic dividend, %	41.7	55	◇
5.1.4 GERD performed by business, % GDP	0.2	53	◆
5.1.5 GERD financed by business, %	40.6	42	
5.2 Innovation linkages	**26.7**	**63**	
5.2.1 Public research–industry co-publications, %	2.3	35	◆
5.2.2 University–industry R&D collaboration†	28.2	91	
5.2.3 University industry & international engagement, top 5*	35.9	49	◆
5.2.4 State of cluster development†	41.9	81	
5.2.5 Patent families/bn PPP$ GDP	0.2	45	◆
5.3 Knowledge absorption	**35.1**	**38**	◆
5.3.1 Intellectual property payments, % total trade	1.4	24	◆
5.3.2 High-tech imports, % total trade	11.8	25	
5.3.3 ICT services imports, % total trade	2.7	25	◆
5.3.4 FDI net inflows, % GDP	1.2	107	○
5.3.5 Research talent, % in businesses	30.7	47	
Knowledge and technology outputs	**37.8**	**22**	◆
6.1 Knowledge creation	**25.5**	**38**	◆
6.1.1 Patents by origin/bn PPP$ GDP	3.4	19	◆
6.1.2 PCT patents by inventor origin/bn PPP$ GDP	0.2	43	◆
6.1.3 Utility models by origin/bn PPP$ GDP	-	-	
6.1.4 Scientific and technical articles/bn PPP$ GDP	7.1	90	
6.1.5 Citable documents H-index	43.7	19	◆
6.2 Knowledge impact	**48.5**	**11**	◆
6.2.1 Labor productivity growth, %	1.7	39	
6.2.2 Unicorn valuation, % GDP	4	11	●◆
6.2.3 Software spending, % GDP	0.3	44	◆
6.2.4 High-tech manufacturing, %	35.1	31	◆
6.3 Knowledge diffusion	**39.4**	**27**	◆
6.3.1 Intellectual property receipts, % total trade	0.2	50	◆
6.3.2 Production and export complexity	59.8	42	◆
6.3.3 High-tech exports, % total trade	5.1	41	
6.3.4 ICT services exports, % total trade	13.6	1	●◆
6.3.5 ISO 9001 quality/bn PPP$ GDP	4	63	
Creative outputs	**32.7**	**42**	◆
7.1 Intangible assets	**41.8**	**28**	◆
7.1.1 Intangible asset intensity, top 15, %	80.7	8	●◆
7.1.2 Trademarks by origin/bn PPP$ GDP	32.4	59	
7.1.3 Global brand value, top 5,000, % GDP	5.7	31	◆
7.1.4 Industrial designs by origin/bn PPP$ GDP	1.7	41	
7.2 Creative goods and services	**21.4**	**53**	◆
7.2.1 Cultural and creative services exports, % total trade	2.2	13	●◆
7.2.2 National feature films/mn pop. 15–69	2.5	52	
7.2.3 Entertainment and media market/th pop. 15–69	1.1	61	○
7.2.4 Creative goods exports, % total trade	1.8	26	
7.3 Online creativity	**25.9**	**64**	◆
7.3.1 Top-level domains (TLDs)/th pop. 15–69	1.1	99	
7.3.2 GitHub commits/mn pop. 15–69	5.6	74	
7.3.3 Mobile app creation/bn PPP$ GDP	70.9	40	◆

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.

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Data Availability

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

India has missing data for one indicator and outdated data for seven indicators.

Missing data for India

Code	Indicator name	Economy year	Model year*	Source
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA

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

Outdated data for India

Code	Indicator name	Economy year	Model year*	Source
2.1.1	Expenditure on education, % GDP	2022	2023	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2020	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2020	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.1.2	Domestic credit to private sector, % GDP	2021	2023	International Monetary Fund; World Bank and OECD GDP estimates
5.1.4	GERD performed by business, % GDP	2020	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	GERD financed by business, %	2020	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.3.5	Research talent, % in businesses	2020	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

*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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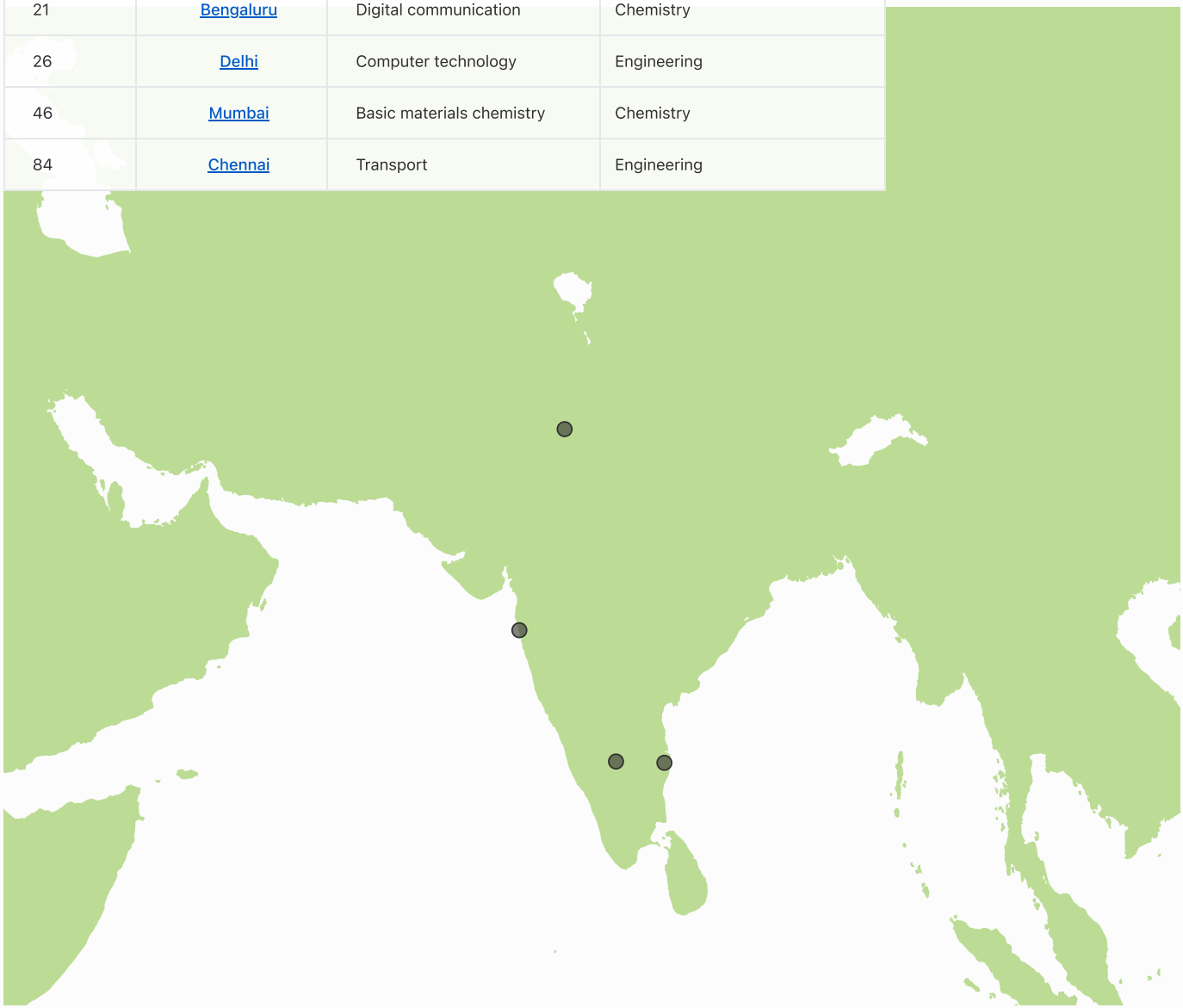
Top innovation clusters in India

India has 4 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 India.

Rank	Cluster name	Top patent field	Top academic subject
21	Bengaluru	Digital communication	Chemistry
26	Delhi	Computer technology	Engineering
46	Mumbai	Basic materials chemistry	Chemistry
84	Chennai	Transport	Engineering



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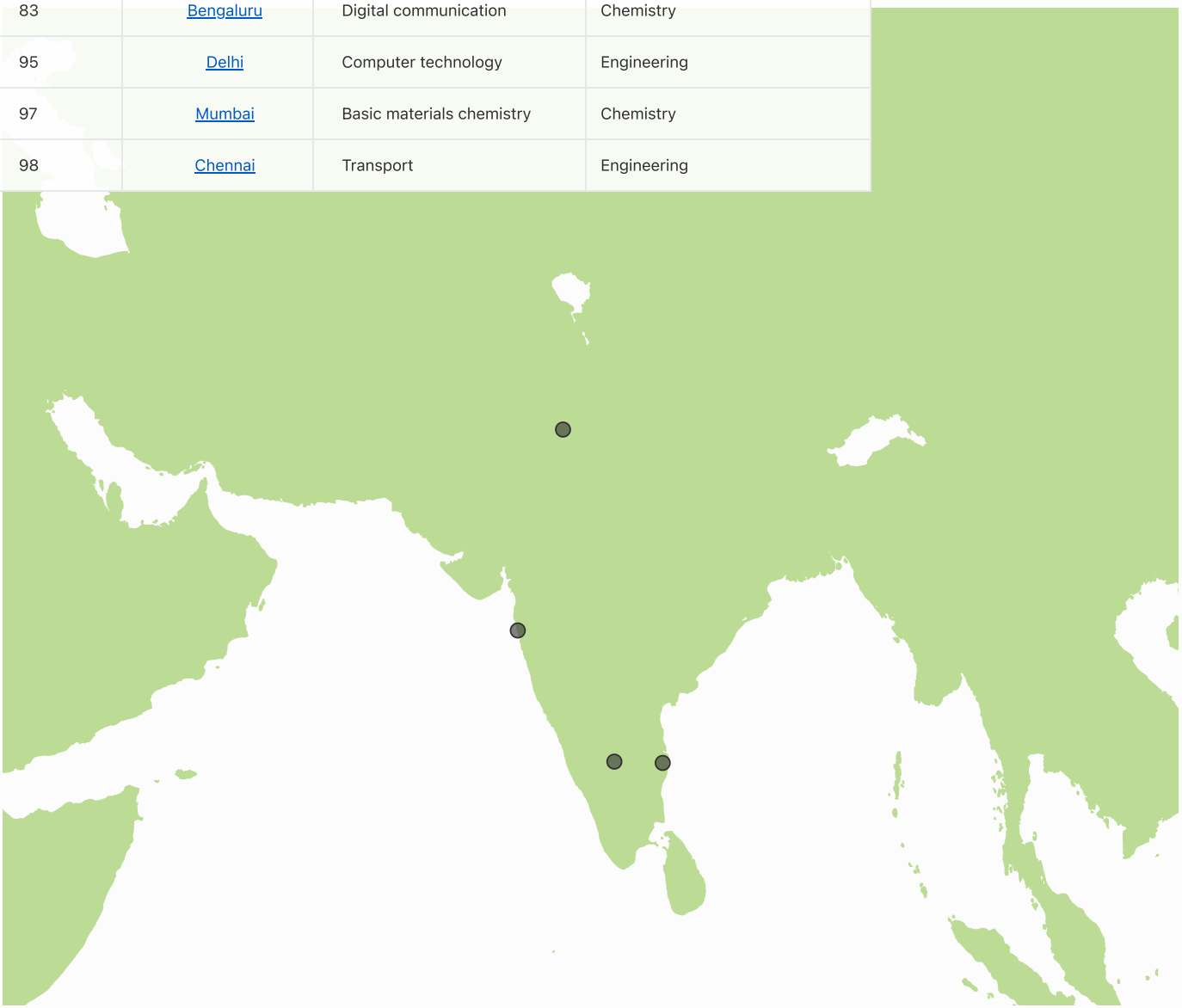
The table and map below give an overview by intensity of the top innovation clusters in India.

Rank	Cluster name	Top patent field	Top academic subject
83	Bengaluru	Digital communication	Chemistry
95	Delhi	Computer technology	Engineering
97	Mumbai	Basic materials chemistry	Chemistry
98	Chennai	Transport	Engineering



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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.