

GLOBAL INNOVATION INDEX 2018

India

57th India is ranked 57th in the GII 2018, moving up 3 positions from the previous year.

India is rapidly climbing in the GII ranking and has constantly outperformed on innovation relative to its level of development for many years in a row (see bubble chart at page 5 of this brief). Positioning in the top half of the GII ranking, India ranks well in a number of important innovation inputs, including graduates in science and engineering, expenditures of major R&D-intensive global companies, and capital formation.

Among indicators of innovation outputs, India earns excellent positions in ICT services exports, where it ranks first in the world, and labour productivity growth, where it is 4th globally (for a complete list of relative strengths, see page 3).

India is 2nd among middle-income economies (after China) in the indicators that capture the quality of the innovation inputs and outputs. This year, its rankings are edging slightly closer to those of China, testifying the important efforts that the country is making in boosting innovation. In particular, the country ranks well in the quality of its scientific publication and local universities, because of higher scores for the Indian Institute of Science Bangalore and the Indian Institute of Technology.

The GII indicators are grouped into innovation inputs and outputs. Innovation inputs capture the efforts made by the country to boost innovation. Innovation outputs measure the results of these efforts in terms of scientific publications, patents, trademarks, production, exports and other outputs.

The table below presents India's ranking over time in the overall GII, the Innovation Input and Output Sub-Indices – which summarize India's performance in innovation input and output indicators–, and in the Efficiency Ratio – which captures how well the economy translates innovation inputs into more outputs.¹

¹ Note that year-on-year comparisons of the GII ranks are imperfect and influenced by changes in the GII model and data availability.

India's ranking over time

	GII	Input	Output	Efficiency
2018	57	63	57	49
2017	60	66	58	53
2016	66	72	59	63

- Over the last three years, India has improved its ranking in innovation outputs, reaching the 57th position this year, up from the 58th in 2017 and the 59th in 2016.
- Innovation inputs also improve, ranking 63rd up from 66th and 72nd positions in the past two years.
- India is also becoming increasingly efficient in translating its innovation efforts (inputs) into more and more varied outputs. This is evidenced in the trend of the Innovation Efficiency Ratio, in which it ranks 49th in 2018, improving from the 53rd and the 63rd positions in 2017 and 2016.

5th

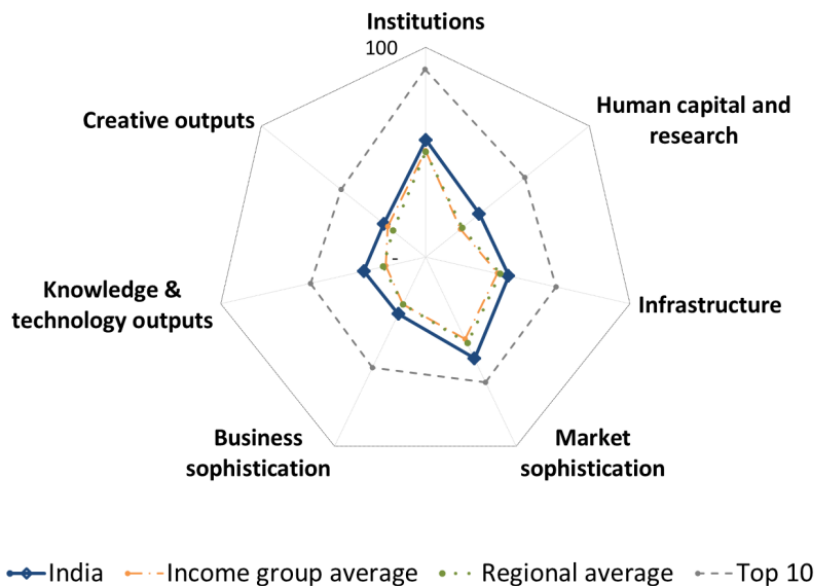
India is ranked 5th among the 30 lower-middle-income countries in the GII 2018.

1st

India is the most innovative country in Central and Southern Asia.

Benchmarking India to other lower-middle-income countries and the Central and Southern Asia region

India's scores by area



Lower-middle-income countries

India has high scores in all 7 GII areas – **Institutions, Human Capital and Research, Infrastructure, Market Sophistication, Business Sophistication, Knowledge and Technology Outputs, and Creative Outputs**, in which it scores above the average of the lower-middle-income group.

Top scores in *Regulatory environment, Tertiary education, Information and Communication Technologies (ICTs), Trade, competition and market scale, Innovation linkages, Knowledge impact, and Intangible assets* are behind these high rankings.

Central and Southern Asia region

Compared to other countries in the Central and Southern Asia region, India performs above average in all GII areas.

India's innovation profile

Strengths

- In **Market Sophistication** (36th), India exhibits particular strength in the area *Trade, competition & market scale* (16th) and indicators *Ease of protecting minority investors* and *Domestic market scale*, ranking 4th and 3rd respectively.
- In **Human Capital and Research** (56th), India has strengths in indicators *Graduates in science and engineering* (6th), *Global R&D companies' expenditures* (18th), and *Quality of universities* (21st).
- In **Infrastructure** (77th), India also has strength at the variable level in *Gross capital formation* (20th).
- In **Innovation Outputs**, India shows strengths in *Quality of scientific publications* (21st), *Productivity growth* (4th), *ICT services exports* (1st), and *Creative goods exports* (17th).

Weaknesses

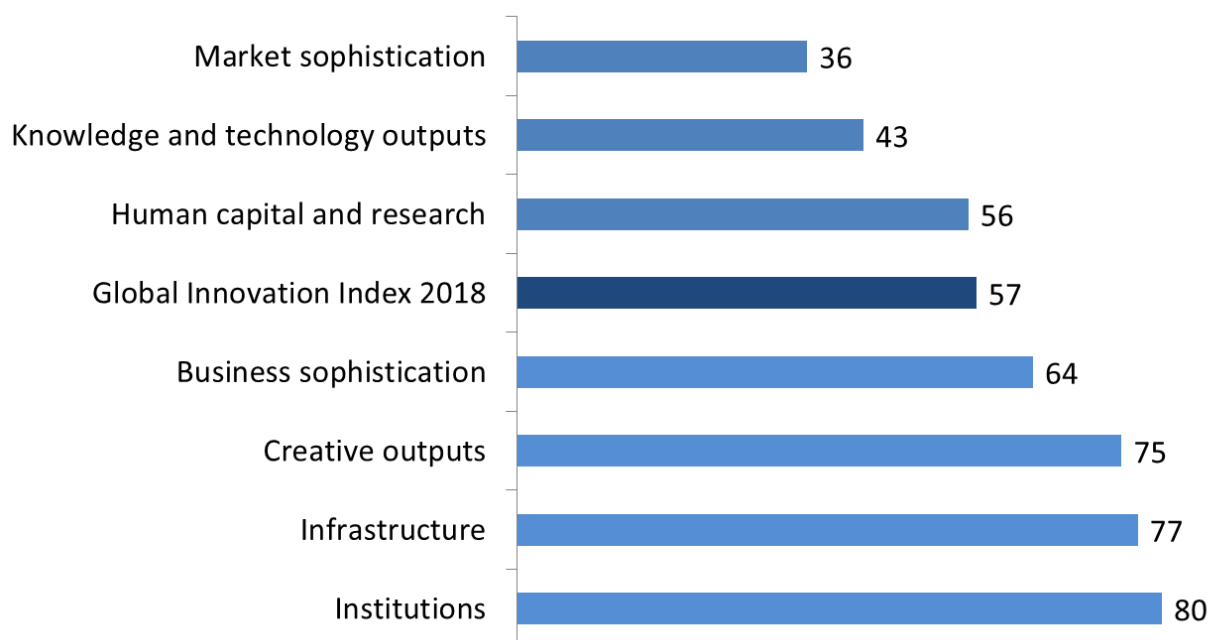
- In **Institutions** (80th), India has relative weaknesses in *Political stability & safety* (110th) and *Ease of starting a business* (114th).
- In **Human Capital and Research** (56th), India exhibits relative weakness in the area *Education* (112th) and in indicators *PISA results* (71st), *Pupil-teacher ratio* (101st), and *Tertiary inbound mobility* (102nd).
- In **Infrastructure** (77th), the area *Ecological sustainability* (119th) and indicators *ICT use* (110th) and *Environmental performance* (123rd) are identified as weaknesses.
- In **Business Sophistication** (64th), India ranks relatively weakly in *Females employed with advanced degrees* (93rd).
- In **Innovation Outputs**, India demonstrates relative weaknesses in *New businesses* (100th) and *Entertainment & Media market* (61st).

The following figure presents a summary of India's ranks in the 7 GII areas, as well as the overall rank in the GII 2018.

India's rank in the GII 2018 and the 7 GII areas

Rank 1 is the highest possible in each pillar

Total number of countries: 126



Missing and Outdated Data

More and better data improve the ability of a country to understand its strengths and weaknesses and give policymakers greater capacity to plan and adapt public policies accordingly. The GII 2018 covers 126 countries that complied with the minimum indicator coverage of 35 indicators in the Innovation Input Sub-Index (66%) and 18 indicators in the Innovation Output Sub-Index (66%).

The following tables show data for India that is not available or that is outdated.

Missing Data

Code	Indicator	Country Year	Model Year	Source
5.1.4	GERD financed by business, %	n/a	2015	UNESCO Institute for Statistics
5.2.3	GERD financed by abroad, %	n/a	2015	UNESCO Institute for Statistics
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2016	WIPO, Intellectual Property Statistics

Outdated Data

Code	Indicator	Country Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2013	2014	UNESCO Institute for Statistics
2.1.2	Government funding/pupil, secondary, % GDP/cap	2013	2014	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths & science	2010	2015	OECD, PISA
2.3.1	Researchers, FTE/mn pop.	2015	2016	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2015	2016	UNESCO Institute for Statistics
5.1.1	Knowledge-intensive employment, %	2012	2016	ILO, ILOSTAT
5.1.3	GERD performed by business, % GDP	2015	2016	UNESCO Institute for Statistics
5.1.5	Females employed w/advanced degrees, %	2012	2016	ILO, ILOSTAT
5.3.5	Research talent, % in business enterprise	2015	2016	UNESCO Institute for Statistics
6.2.5	High- & medium-high-tech manufactures, %	2014	2015	UNIDO, Industrial Statistics
7.2.4	Printing & other media, % manufacturing	2014	2015	UNIDO, Industrial Statistics



