



IRAN (ISLAMIC REPUBLIC OF)

67th

Iran (Islamic Republic of) ranks 67th among the 131 economies featured in the GI 2020.

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 GI aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of Iran (Islamic Republic of) over the past three years, noting that data availability and changes to the GI model framework influence year-on-year comparisons of the GI rankings. The statistical confidence interval for the ranking of Iran (Islamic Republic of) in the GI 2020 is between ranks 59 and 71.

Rankings of Iran (Islamic Republic of) (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	67	90	50
2019	61	86	47
2018	65	93	46

- Iran (Islamic Republic of) performs better in innovation outputs than innovation inputs in 2020.
- This year Iran (Islamic Republic of) ranks 90th in innovation inputs, lower than last year and higher compared to 2018.
- As for innovation outputs, Iran (Islamic Republic of) ranks 50th. This position is lower than last year and lower compared to 2018.

19th

Iran (Islamic Republic of) ranks 19th among the 37 upper middle-income group economies.

2nd

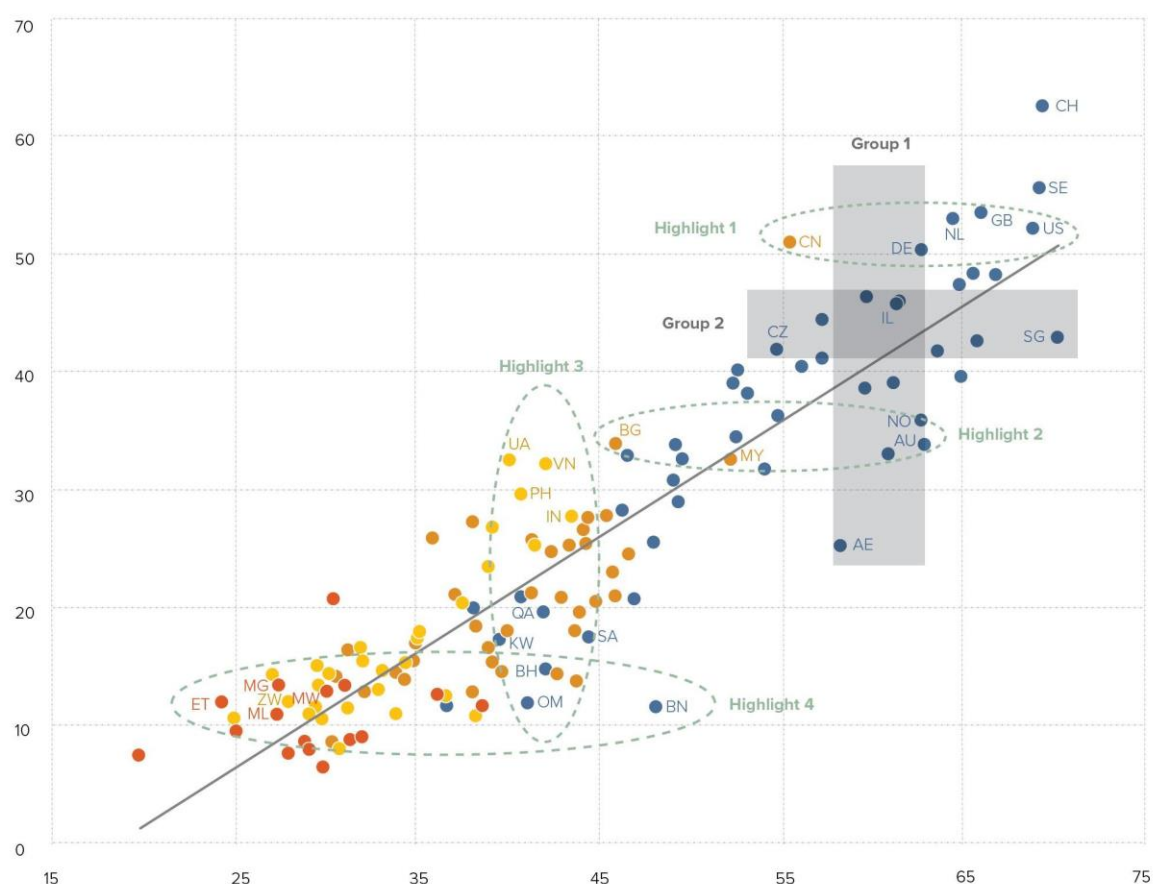
Iran (Islamic Republic of) ranks 2nd among the 10 economies in Central and Southern Asia.

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.

Iran (Islamic Republic of) produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance, 2020

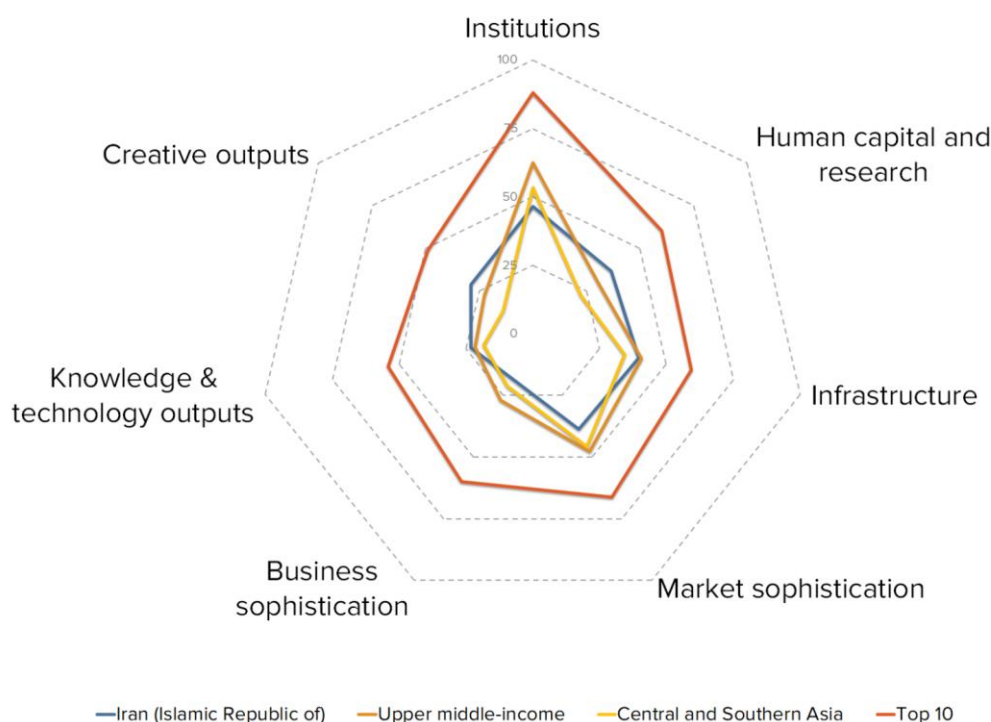


- ▲ Output score
- Input score
- High income group
- Lower middle-income group
- Upper middle-income group
- Low income group
- Fitted values

AU	Australia	IN	India	NL	Netherlands	CH	Switzerland
BH	Bahrain	IL	Israel	NO	Norway	UA	Ukraine
BN	Brunei Darussalam	KW	Kuwait	OM	Oman	AE	United Arab Emirates
BG	Bulgaria	MG	Madagascar	PH	Philippines	GB	United Kingdom
CN	China	MW	Malawi	QA	Qatar	US	United States of America
CZ	Czech Republic	ML	Mali	SA	Saudi Arabia	VN	Viet Nam
ET	Ethiopia	MY	Malaysia	SG	Singapore	ZW	Zimbabwe
DE	Germany			SE	Sweden		

BENCHMARKING IRAN (ISLAMIC REPUBLIC OF) AGAINST OTHER UPPER MIDDLE-INCOME ECONOMIES AND CENTRAL AND SOUTHERN ASIA

Iran (Islamic Republic of)'s scores in the seven GII pillars



Upper middle-income group

Iran (Islamic Republic of) has high scores in four out of the seven GII pillars: Human capital & research, Infrastructure, Knowledge & technology outputs and Creative outputs, which are above average for the upper middle-income group.

Conversely, Iran (Islamic Republic of) scores below average for its income group in three pillars: Institutions, Market sophistication and Business sophistication.

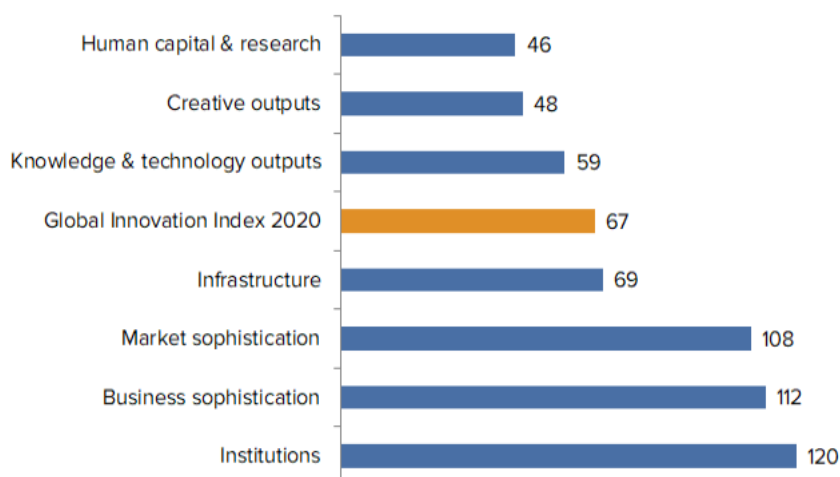
Central and Southern Asia

Compared to other economies in Central and Southern Asia, Iran (Islamic Republic of) performs:

- above average in four out of the seven GII pillars: Human capital & research, Infrastructure, Knowledge & technology outputs and Creative outputs; and
- below average in three out of the seven GII pillars: Institutions, Market sophistication and Business sophistication.

OVERVIEW OF IRAN (ISLAMIC REPUBLIC OF) RANKINGS IN THE SEVEN GII AREAS

Iran (Islamic Republic of) performs best in Human capital & research and its weakest performance is in Institutions.



*The highest possible ranking in each pillar is 1.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Iran (Islamic Republic of) in the GII 2020.

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.2	Tertiary education	7	1	Institutions	120
2.2.1	Tertiary enrolment, % gross	31	1.1.1	Political & operational stability*	123
2.2.2	Graduates in science & engineering, %	3	1.2.1	Regulatory quality*	129
3.1.1	ICT access*	39	1.3	Business environment	125
3.2	General infrastructure	31	1.3.1	Ease of starting a business*	128
3.2.3	Gross capital formation, % GDP	10	2.3.3	Global R&D companies, top 3, mn US\$	42
4.3.3	Domestic market scale, bn PPP\$	18	4.3.1	Applied tariff rate, weighted avg., %	129
6.1	Knowledge creation	25	5.2.1	University/industry research collaboration†	117
6.1.1	Patents by origin/bn PPP\$ GDP	14	5.2.4	JV–strategic alliance deals/bn PPP\$ GDP	122
6.1.4	Scientific & technical articles/bn PPP\$ GDP	21	6.2.1	Growth rate of PPP\$ GDP/worker, %	115
6.2.5	High- & medium-high-tech manufacturing, %	26	7.2.4	Printing & other media, % manufacturing	96
7.1	Intangible assets	13	7.2.5	Creative goods exports, % total trade	119
7.1.1	Trademarks by origin/bn PPP\$ GDP	1			
7.1.3	Industrial designs by origin/bn PPP\$ GDP	14			

STRENGTHS

GII strengths for Iran (Islamic Republic of) are found in five of the seven GII pillars.

- Human capital & research (46): shows strengths in the sub-pillar Tertiary education (7) and in the indicators Tertiary enrolment (31) and Graduates in science & engineering (3).
- Infrastructure (69): demonstrates strengths in the sub-pillar General infrastructure (31) and in the indicators ICT access (39) and Gross capital formation (10).
- Market sophistication (108): the indicator Domestic market scale (18) reveals a strength.
- Knowledge & technology outputs (59): exhibits strengths in the sub-pillar Knowledge creation (25) and in the indicators Patents by origin (14), Scientific & technical articles (21) and High- & medium-high-tech manufacturing (26).
- Creative outputs (48): displays strengths in the sub-pillar Intangible assets (13) and in the indicators Trademarks by origin (1) and Industrial designs by origin (14).

WEAKNESSES

GII weaknesses for Iran (Islamic Republic of) are found in six of the seven GII pillars.

- Institutions (120): exhibits weaknesses in the sub-pillar Business environment (125) and in the indicators Political & operational stability (123), Regulatory quality (129) and Ease of starting a business (128).
- Human capital & research (46): the indicator Global R&D companies (42) reveals a weakness.
- Market sophistication (108): demonstrates weakness in the indicator Applied tariff rate (129).
- Business sophistication (112): shows weaknesses in the indicators University/industry research collaboration (117) and JV–strategic alliance deals (122).
- Knowledge & technology outputs (59): the indicator Growth rate of PPP (115) displays a weakness.
- Creative outputs (48): shows weaknesses in the indicators Printing & other media (96) and Creative goods exports (119).

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
50	90	Upper middle	CSA	82.9	1,470.7	15,419.0	61
		Score/Value	Rank				
 INSTITUTIONS		46.6	120	 BUSINESS SOPHISTICATION			
1.1 Political environment		44.3	106	5.1 Knowledge workers			
1.1.1 Political and operational stability*.....		51.8	123	5.1.1 Knowledge-intensive employment, %.....			
1.1.2 Government effectiveness*.....		40.5	94	5.1.2 Firms offering formal training, %.....			
1.2 Regulatory environment		44.1	117	5.1.3 GERD performed by business, % GDP.....			
1.2.1 Regulatory quality*.....		7.6	129	5.1.4 GERD financed by business, %.....			
1.2.2 Rule of law*.....		28.6	108	5.1.5 Females employed w/advanced degrees, %.....			
1.2.3 Cost of redundancy dismissal, salary weeks.....		23.1	97	5.2 Innovation linkages			
1.3 Business environment		51.4	125	5.2.1 University/industry research collaboration*.....			
1.3.1 Ease of starting a business*.....		67.8	128	5.2.2 State of cluster development.....			
1.3.2 Ease of resolving insolvency*.....		35.1	111	5.2.3 GERD financed by abroad, % GDP.....			
HUMAN CAPITAL & RESEARCH		36.6	46	5.2.4 JV-strategic alliance deals/bn PPP\$ GDP.....			
2.1 Education		39.3	83	5.2.5 Patent families 2+ offices/bn PPP\$ GDP.....			
2.1.1 Expenditure on education, % GDP.....		4.0	74	5.3 Knowledge absorption			
2.1.2 Government funding/pupil, secondary, % GDP/cap.....		17.5	65	5.3.1 Intellectual property payments, % total trade.....			
2.1.3 School life expectancy, years.....		14.8	55	5.3.2 High-tech imports, % total trade.....			
2.1.4 PISA scales in reading, maths, & science.....		n/a	n/a	5.3.3 ICT services imports, % total trade.....			
2.1.5 Pupil-teacher ratio, secondary.....		19.0	94	5.3.4 FDI net inflows, % GDP.....			
2.2 Tertiary education		55.9	7	5.3.5 Research talent, % in business enterprise.....			
2.2.1 Tertiary enrolment, % gross.....		68.1	31	KNOWLEDGE & TECHNOLOGY OUTPUTS			
2.2.2 Graduates in science & engineering, %.....		42.1	3	6.1 Knowledge creation			
2.2.3 Tertiary inbound mobility, %.....		0.5	96	6.1.1 Patents by origin/bn PPP\$ GDP.....			
2.3 Research & development (R&D)		14.5	48	6.1.2 PCT patents by origin/bn PPP\$ GDP.....			
2.3.1 Researchers, FTE/mn pop.....		1,474.9	44	6.1.3 Utility models by origin/bn PPP\$ GDP.....			
2.3.2 Gross expenditure on R&D, % GDP.....		0.8	44	6.1.4 Scientific & technical articles/bn PPP\$ GDP.....			
2.3.3 Global R&D companies, avg. exp. top 3, mn \$US.....		0.0	42	6.1.5 Citable documents H-index.....			
2.3.4 QS university ranking, average score top 3*.....		24.0	44	6.2 Knowledge impact			
INFRASTRUCTURE		39.7	69	6.2.1 Growth rate of PPP\$ GDP/worker, %.....			
3.1 Information & communication technologies (ICTs)		61.1	80	6.2.2 New businesses/th pop. 15-64.....			
3.1.1 ICT access*.....		75.9	39	6.2.3 Computer software spending, % GDP.....			
3.1.2 ICT use*.....		52.7	73	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP.....			
3.1.3 Government's online service*.....		63.2	88	6.2.5 High- and medium-high-tech manufacturing, %.....			
3.1.4 E-participation*.....		52.8	103	6.3 Knowledge diffusion			
3.2 General infrastructure		36.5	31	6.3.1 Intellectual property receipts, % total trade.....			
3.2.1 Electricity output, kWh/mn pop.....		3,794.6	53	6.3.2 High-tech net exports, % total trade.....			
3.2.2 Logistics performance*.....		36.7	63	6.3.3 ICT services exports, % total trade.....			
3.2.3 Gross capital formation, % GDP.....		40.8	10	6.3.4 FDI net outflows, % GDP.....			
3.3 Ecological sustainability		21.3	92	CREATIVE OUTPUTS			
3.3.1 GDP/unit of energy use.....		5.8	104	7.1 Intangible assets			
3.3.2 Environmental performance*.....		48.0	61	7.1.1 Trademarks by origin/bn PPP\$ GDP.....			
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP.....		0.4	92	7.1.2 Global brand value, top 5,000, % GDP.....			
MARKET SOPHISTICATION		38.8	108	7.1.3 Industrial designs by origin/bn PPP\$ GDP.....			
4.1 Credit		39.2	77	7.1.4 ICTs & organizational model creation*.....			
4.1.1 Ease of getting credit*.....		50.0	94	7.2 Creative goods and services			
4.1.2 Domestic credit to private sector, % GDP.....		66.1	50	7.2.1 Cultural & creative services exports, % total trade.....			
4.1.3 Microfinance gross loans, % GDP.....		n/a	n/a	7.2.2 National feature films/mn pop. 15-69.....			
4.2 Investment		25.5	115	7.2.3 Entertainment & Media market/th pop. 15-69.....			
4.2.1 Ease of protecting minority investors*.....		40.0	110	7.2.4 Printing and other media, % manufacturing.....			
4.2.2 Market capitalization, % GDP.....		24.6	52	7.2.5 Creative goods exports, % total trade.....			
4.2.3 Venture capital deals/bn PPP\$ GDP.....		n/a	n/a	7.3 Online creativity			
4.3 Trade, competition, and market scale		51.8	107	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69.....			
4.3.1 Applied tariff rate, weighted avg., %.....		15.2	129	7.3.2 Country-code TLDs/th pop. 15-69.....			
4.3.2 Intensity of local competition*.....		58.0	113	7.3.3 Wikipedia edits/mn pop. 15-69.....			
4.3.3 Domestic market scale, bn PPP\$.....		1,470.7	18	7.3.4 Mobile app creation/bn PPP\$ GDP.....			

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; + a survey question. ⊕ indicates that the economy's data are older than the base year; see Appendix II for details, including the year of the data, at <http://globalinnovationindex.org>. Square brackets [] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

DATA AVAILABILITY

The following tables list data that are either missing or outdated for Iran (Islamic Republic of).

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.4	PISA scales in reading, maths & science	n/a	2018	OECD Programme for International Student Assessment (PISA)
4.1.3	Microfinance gross loans, % GDP	n/a	2018	Microfinance Information Exchange
4.2.3	Venture capital deals/bn PPP\$ GDP	n/a	2019	Thomson Reuters
5.1.2	Firms offering formal training, %	n/a	2018	World Bank
5.1.4	GERD financed by business, %	n/a	2017	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	n/a	2018	International Labour Organization
5.2.3	GERD financed by abroad, % GDP	n/a	2017	UNESCO Institute for Statistics
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2018	World Intellectual Property Organization

Outdated data

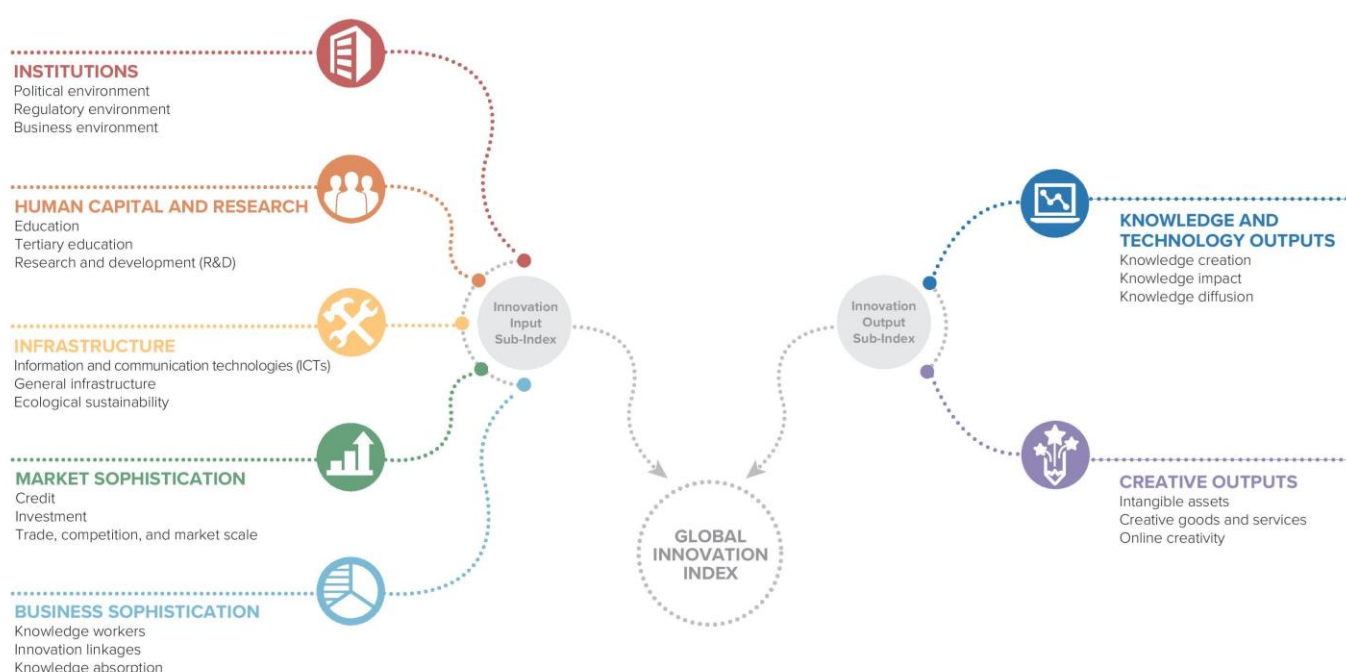
Code	Indicator name	Country year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2017	2018	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
4.1.2	Domestic credit to private sector, % GDP	2016	2018	International Monetary Fund
4.2.2	Market capitalization, % GDP	2017	2018	World Federation of Exchanges
4.3.1	Applied tariff rate, weighted avg., %	2011	2018	World Bank
5.1.3	GERD performed by business, % GDP	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.3.1	Intellectual property payments, % total trade	2016	2018	World Trade Organization
5.3.2	High-tech imports, % total trade	2016	2018	United Nations, COMTRADE
5.3.3	ICT services imports, % total trade	2015	2018	World Trade Organization
5.3.4	FDI net inflows, % GDP	2017	2018	International Monetary Fund
5.3.5	Research talent, % in business enterprise	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
6.2.5	High- & medium-high-tech manufacturing, %	2016	2017	United Nations Industrial Development Organization
6.3.1	Intellectual property receipts, % total trade	2016	2018	World Trade Organization
6.3.2	High-tech net exports, % total trade	2016	2018	United Nations, COMTRADE
6.3.3	ICT services exports, % total trade	2015	2018	World Trade Organization
6.3.4	FDI net outflows, % GDP	2017	2018	International Monetary Fund
7.2.1	Cultural & creative services exports, % total trade	2016	2018	World Trade Organization
7.2.4	Printing & other media, % manufacturing	2016	2017	United Nations Industrial Development Organization
7.2.5	Creative goods exports, % total trade	2016	2018	United Nations, COMTRADE

ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. In 2020, the GII presents its 13th edition devoted to the theme *Who Will Finance Innovation?*

Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 130 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.

Framework of the Global Innovation Index 2020



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.

