



Global Innovation Index 2021



ALGERIA

120th Algeria ranks 120th among the 132 economies featured in the GII 2021.

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.

The following table shows the rankings of Algeria over the past three years, noting that 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 Algeria in the GII 2021 is between ranks 113 and 125.

Rankings for Algeria (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	120	109	128
2020	121	111	126
2019	113	100	118

- Algeria performs better in innovation inputs than innovation outputs in 2021.
- This year Algeria ranks 109th in innovation inputs, higher than last year but lower than 2019.
- As for innovation outputs, Algeria ranks 128th. This position is lower than both 2020 and 2019.

29th Algeria ranks 29th among the 34 lower middle-income group economies.

18th Algeria ranks 18th among the 19 economies in Northern Africa and Western Asia.

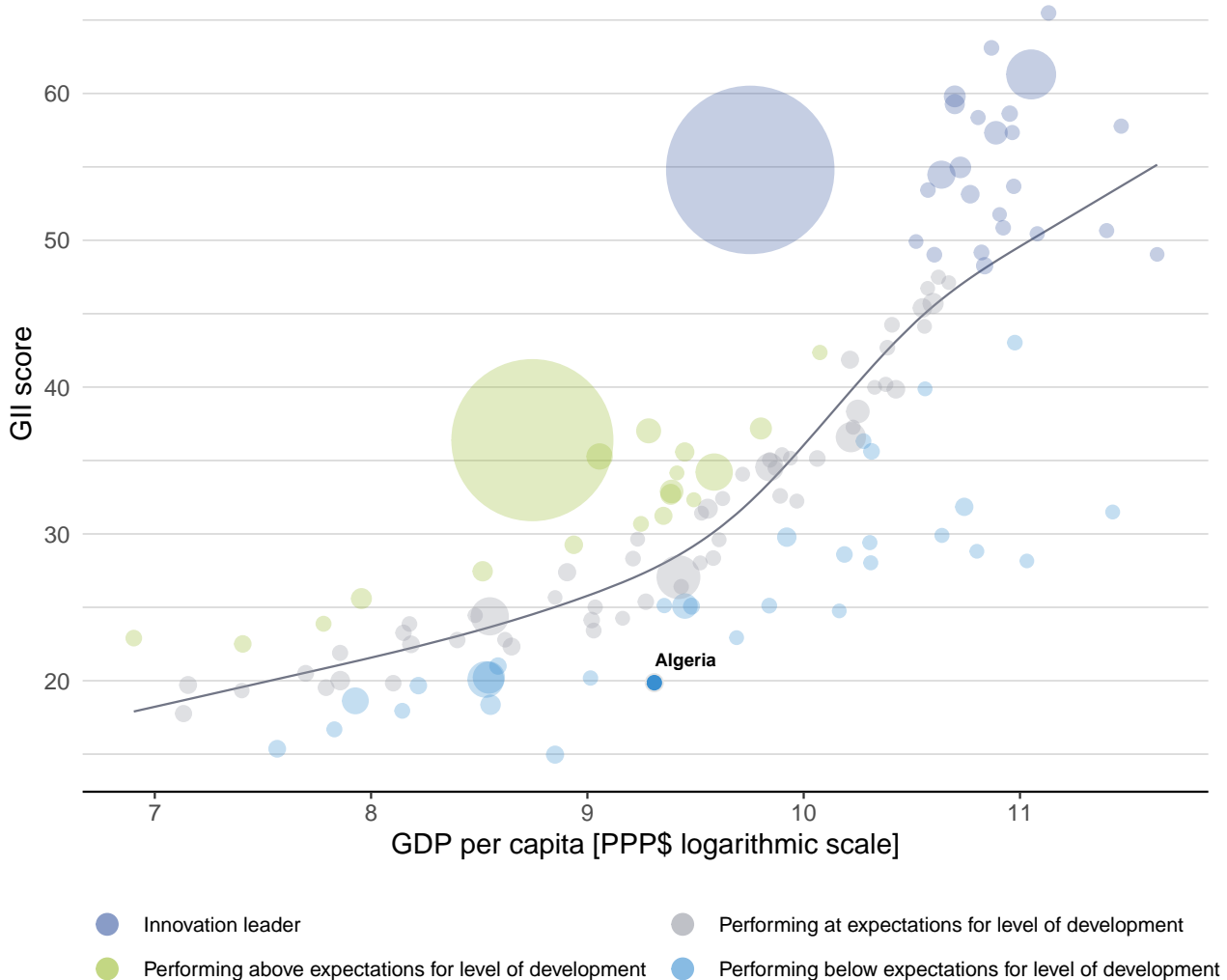


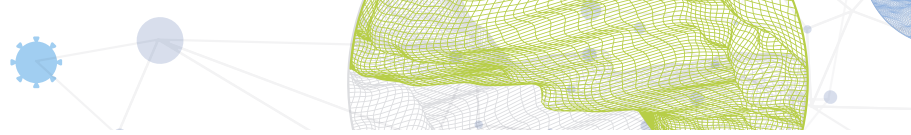
EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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, Algeria's performance is below expectations for its level of development.

The positive relationship between innovation and development



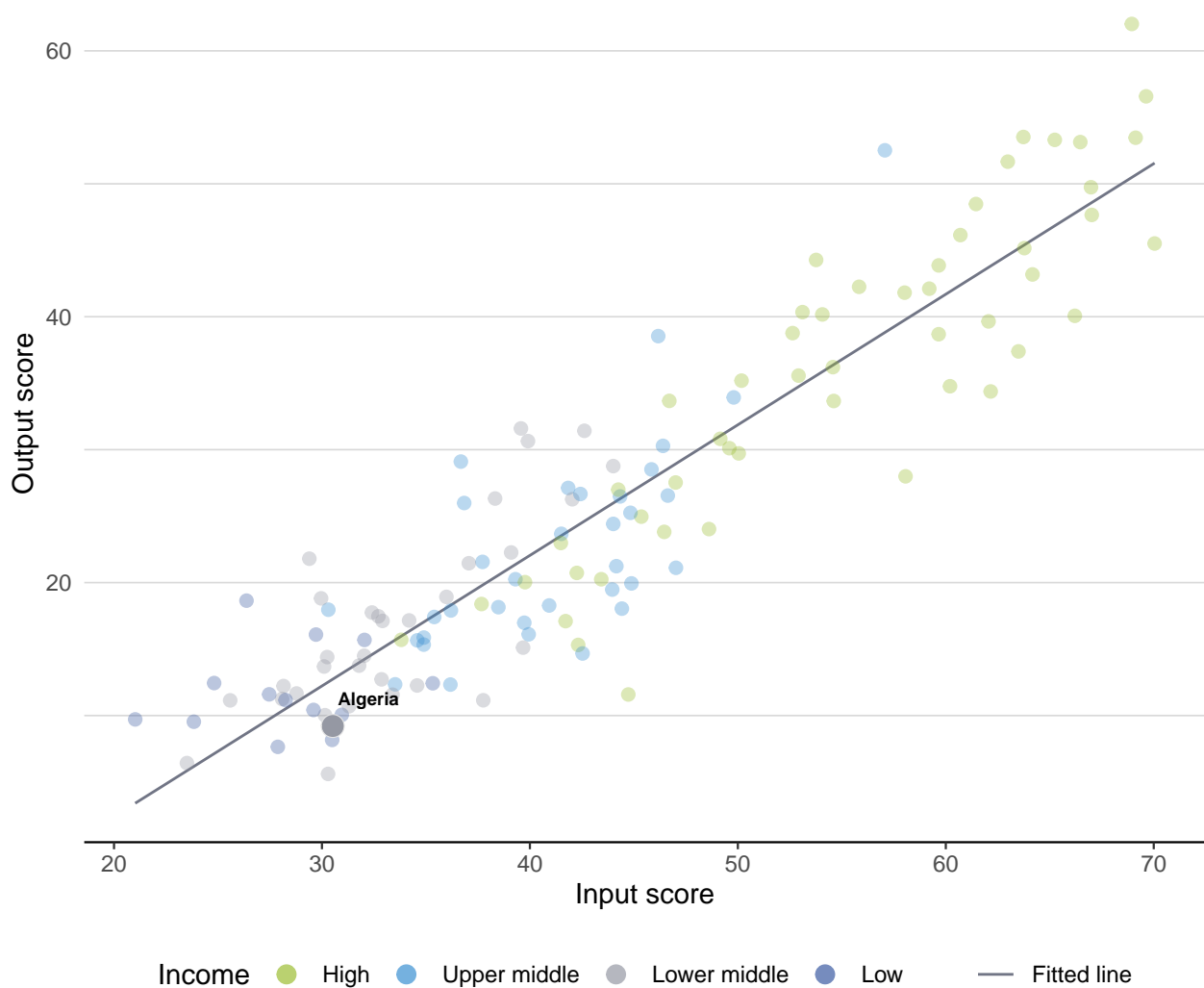


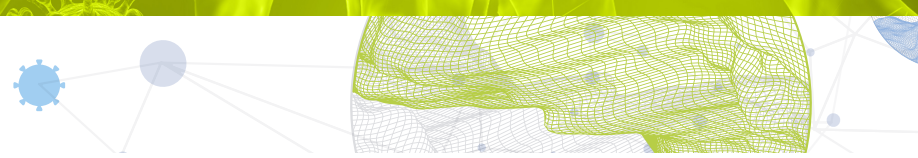
EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

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

Innovation input to output performance





BENCHMARKING AGAINST OTHER LOWER MIDDLE-INCOME GROUP ECONOMIES AND NORTHERN AFRICA AND WESTERN ASIA

The seven GII pillar scores for Algeria

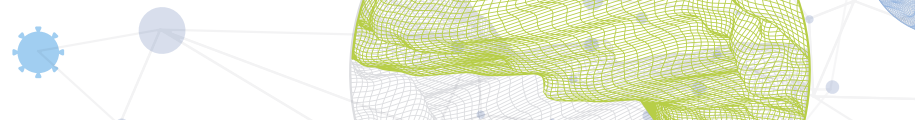


Lower middle-income group economies

Algeria performs above the lower middle-income group average in two pillars, namely: Human capital and research; and, Infrastructure.

Northern Africa and Western Asia

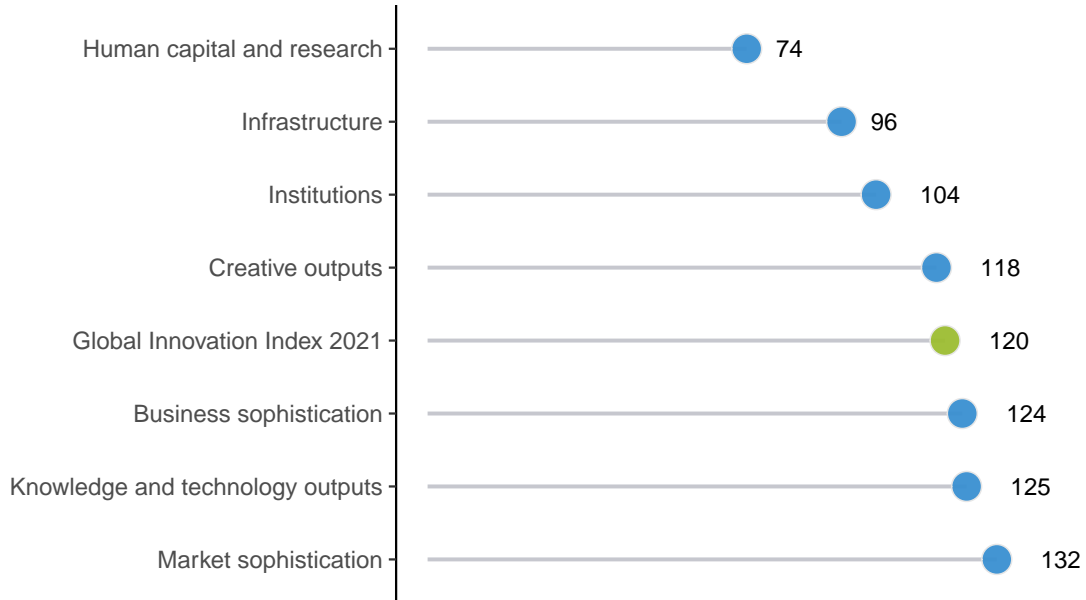
Algeria performs below the regional average in all GII pillars.



OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Algeria performs best in Human capital and research and its weakest performance is in Market sophistication.

The seven GII pillar ranks for Algeria



Note: The highest possible ranking in each pillar is one.










INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Algeria in the GII 2021.

Strengths and weaknesses for Algeria

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.2	Tertiary education	31	2.3.3	Global corporate R&D investors, top 3, mn US\$	41
2.2.1	Tertiary enrolment, % gross	59	2.3.4	QS university ranking, top 3	74
2.2.2	Graduates in science and engineering, %	8	3.1.4	E-participation	131
2.3.1	Researchers, FTE/mn pop.	54	4.1.1	Ease of getting credit	129
2.3.2	Gross expenditure on R&D, % GDP	62	4.2.1	Ease of protecting minority investors	130
3.2	General infrastructure	50	4.2.2	Market capitalization, % GDP	75
3.2.3	Gross capital formation, % GDP	10	5.2.3	GERD financed by abroad, % GDP	101
3.3.1	GDP/unit of energy use	64	5.2.5	Patent families/bn PPP\$ GDP	100
4.3.3	Domestic market scale, bn PPP\$	42	6.3.3	High-tech exports, % total trade	129
5.2.2	State of cluster development and depth	57	7.1.2	Global brand value, top 5,000, % GDP	80
5.3.2	High-tech imports, % total trade	49			
7.1.3	Industrial designs by origin/bn PPP\$ GDP	40			

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
128	109	Lower middle	NAWA	43.9	488.3	11,041	121

	Score/Value	Rank		Score/Value	Rank
 Institutions	52.5	104	 Business sophistication	14.7	124
1.1 Political environment	44.6	106	5.1 Knowledge workers	13.3	116
1.1.1 Political and operational stability*	55.4	112	5.1.1 Knowledge-intensive employment, %	17.9	88
1.1.2 Government effectiveness*	39.2	100	5.1.2 Firms offering formal training, %	n/a	n/a
1.2 Regulatory environment	49.4	108	5.1.3 GERD performed by business, % GDP	0.0	78
1.2.1 Regulatory quality*	9.4	129	5.1.4 GERD financed by business, %	6.7	82
1.2.2 Rule of law*	25.2	113	5.1.5 Females employed w/advanced degrees, %	8.1	78
1.2.3 Cost of redundancy dismissal	17.3	69	5.2 Innovation linkages	15.2	107
1.3 Business environment	63.6	92	5.2.1 University-industry R&D collaboration†	37.1	93
1.3.1 Ease of starting a business*	78.0	114	5.2.2 State of cluster development and depth†	48.3	57
1.3.2 Ease of resolving insolvency*	49.2	73	5.2.3 GERD financed by abroad, % GDP	0.0	101
			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	119
			5.2.5 Patent families/bn PPP\$ GDP	0.0	100
 Human capital and research	29.8	74	5.3 Knowledge absorption	15.6	115
2.1 Education	41.2	[91]	5.3.1 Intellectual property payments, % total trade	0.3	85
2.1.1 Expenditure on education, % GDP	n/a	n/a	5.3.2 High-tech imports, % total trade	8.9	49
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	5.3.3 ICT services imports, % total trade	0.6	97
2.1.3 School life expectancy, years	14.3	64	5.3.4 FDI net inflows, % GDP	0.8	112
2.1.4 PISA scales in reading, maths and science	361.7	77	5.3.5 Research talent, % in businesses	0.5	82
2.1.5 Pupil-teacher ratio, secondary	n/a	n/a	 Knowledge and technology outputs	8.1	125
2.2 Tertiary education	43.2	31	6.1 Knowledge creation	7.4	94
2.2.1 Tertiary enrolment, % gross	52.6	59	6.1.1 Patents by origin/bn PPP\$ GDP	0.2	96
2.2.2 Graduates in science and engineering, %	34.2	8	6.1.2 PCT patents by origin/bn PPP\$ GDP	0.0	83
2.2.3 Tertiary inbound mobility, %	0.5	95	6.1.3 Utility models by origin/bn PPP\$ GDP	n/a	n/a
2.3 Research and development (R&D)	5.1	76	6.1.4 Scientific and technical articles/bn PPP\$ GDP	9.3	89
2.3.1 Researchers, FTE/mn pop.	819.3	54	6.1.5 Citable documents H-index	10.2	76
2.3.2 Gross expenditure on R&D, % GDP	0.5	62	6.2 Knowledge impact	13.7	119
2.3.3 Global corporate R&D investors, top 3, mn US\$	0.0	41	6.2.1 Labor productivity growth, %	-0.6	76
2.3.4 QS university ranking, top 3*	0.0	74	6.2.2 New businesses/th pop. 15-64	0.4	105
			6.2.3 Software spending, % GDP	0.0	123
 Infrastructure	31.8	96	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	1.2	103
3.1 Information and communication technologies (ICTs)	39.1	112	6.2.5 High-tech manufacturing, %	4.1	104
3.1.1 ICT access*	60.2	75	6.3 Knowledge diffusion	3.3	125
3.1.2 ICT use*	53.0	76	6.3.1 Intellectual property receipts, % total trade	0.0	112
3.1.3 Government's online service*	27.6	127	6.3.2 Production and export complexity	13.6	115
3.1.4 E-participation*	15.5	131	6.3.3 High-tech exports, % total trade	0.0	129
3.2 General infrastructure	32.4	50	6.3.4 ICT services exports, % total trade	0.4	106
3.2.1 Electricity output, GWh/mn pop.	1,815.5	86	 Creative outputs	10.3	118
3.2.2 Logistics performance*	18.6	109	7.1 Intangible assets	16.6	113
3.2.3 Gross capital formation, % GDP	37.5	10	7.1.1 Trademarks by origin/bn PPP\$ GDP	14.3	101
3.3 Ecological sustainability	24.1	83	7.1.2 Global brand value, top 5,000, % GDP	0.0	80
3.3.1 GDP/unit of energy use	10.2	64	7.1.3 Industrial designs by origin/bn PPP\$ GDP	2.7	40
3.3.2 Environmental performance*	44.8	74	7.1.4 ICTs and organizational model creation†	41.3	111
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	0.3	99	7.2 Creative goods and services	1.0	128
			7.2.1 Cultural and creative services exports, % total trade	0.0	104
 Market sophistication	23.7	132	7.2.2 National feature films/mn pop. 15-69	0.4	99
4.1 Credit	9.4	129	7.2.3 Entertainment and media market/th pop. 15-69	1.3	56
4.1.1 Ease of getting credit*	10.0	129	7.2.4 Printing and other media, % manufacturing	0.3	99
4.1.2 Domestic credit to private sector, % GDP	25.9	102	7.2.5 Creative goods exports, % total trade	0.0	124
4.1.3 Microfinance gross loans, % GDP	n/a	n/a	7.3 Online creativity	7.1	114
4.2 Investment	10.0	[131]	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	0.5	108
4.2.1 Ease of protecting minority investors*	20.0	130	7.3.2 Country-code TLDs/th pop. 15-69	0.1	116
4.2.2 Market capitalization, % GDP	0.2	75	7.3.3 Wikipedia edits/mn pop. 15-69	30.4	103
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	n/a	n/a	7.3.4 Mobile app creation/bn PPP\$ GDP	0.0	100
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	n/a	n/a			
4.3 Trade, diversification, and market scale	51.7	115			
4.3.1 Applied tariff rate, weighted avg., %	10.0	117			
4.3.2 Domestic industry diversification	45.8	108			
4.3.3 Domestic market scale, bn PPP\$	488.3	42			

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 IV 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

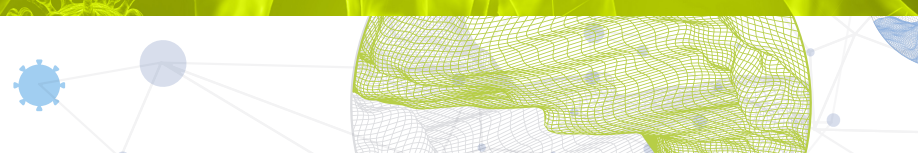
The following tables list data that are either missing or outdated for Algeria.

Missing data for Algeria

Code	Indicator name	Economy year	Model year	Source
2.1.1	Expenditure on education, % GDP	n/a	2017	UNESCO Institute for Statistics
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2017	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	n/a	2019	UNESCO Institute for Statistics
4.1.3	Microfinance gross loans, % GDP	n/a	2018	Microfinance Information Exchange
4.2.3	Venture capital investors, deals/bn PPP\$ GDP	n/a	2020	Refinitiv Eikon
4.2.4	Venture capital recipients, deals/bn PPP\$ GDP	n/a	2020	Refinitiv Eikon
5.1.2	Firms offering formal training, %	n/a	2019	World Bank
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization

Outdated data for Algeria

Code	Indicator name	Economy year	Model year	Source
2.1.3	School life expectancy, years	2011	2018	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	2015	2018	OECD Programme for International Student Assessment (PISA)
2.3.1	Researchers, FTE/mn pop.	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.2.2	Market capitalization, % GDP	2018	2019	World Federation of Exchanges
4.3.2	Domestic industry diversification	2017	2018	United Nations Industrial Development Organization



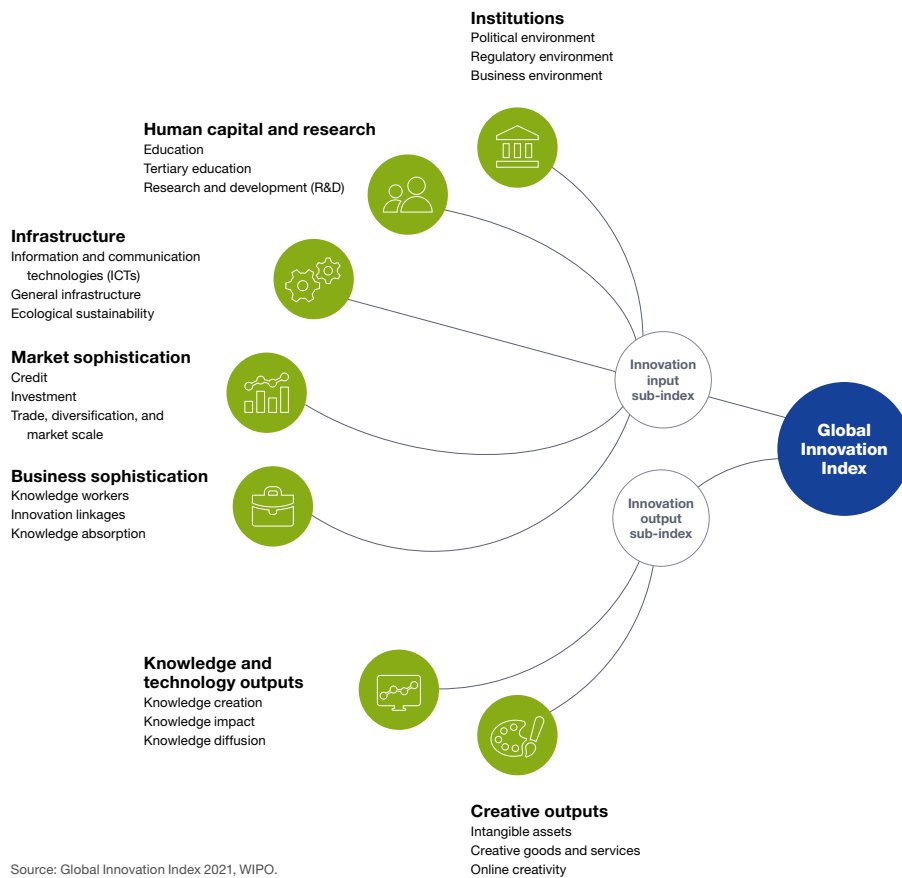
Code	Indicator name	Economy year	Model year	Source
5.1.1	Knowledge-intensive employment, %	2017	2019	International Labour Organization
5.1.3	GERD performed by business, % GDP	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.4	GERD financed by business, %	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	2017	2019	International Labour Organization
5.2.1	University-industry R&D collaboration	2019	2020	World Economic Forum
5.2.2	State of cluster development and depth	2019	2020	World Economic Forum
5.2.3	GERD financed by abroad, % GDP	2017	2018	UNESCO Institute for Statistics
5.3.2	High-tech imports, % total trade	2017	2019	United Nations, COMTRADE
5.3.5	Research talent, % in businesses	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
6.2.5	High-tech manufacturing, %	2017	2018	United Nations Industrial Development Organization
6.3.3	High-tech exports, % total trade	2017	2019	United Nations, COMTRADE
7.1.1	Trademarks by origin/bn PPP\$ GDP	2018	2019	World Intellectual Property Organization
7.2.4	Printing and other media, % manufacturing	2015	2018	United Nations Industrial Development Organization
7.2.5	Creative goods exports, % total trade	2017	2019	United Nations, COMTRADE
7.3.4	Mobile app creation/bn PPP\$ GDP	2019	2020	App Annie



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 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.



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.