



ALGERIA

115th Algeria ranks 115th among the 132 economies featured in the GII 2022.

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 2022 is between ranks 109 and 117.

Rankings for Algeria (2020–2022)

GIIYR	GII	Innovation inputs	Innovation outputs
2020	121	111	126
2021	120	109	128
2022	115	110	118

- Algeria performs better in innovation inputs than innovation outputs in 2022.
- This year Algeria ranks 110th in innovation inputs, lower than last year but higher than 2020.
- As for innovation outputs, Algeria ranks 118th. This position is higher than both 2021 and 2020.

30th Algeria ranks 30th among the 36 lower-middle-income group economies.

17th Algeria ranks 17th among the 19 economies in Northern Africa and Western Asia.

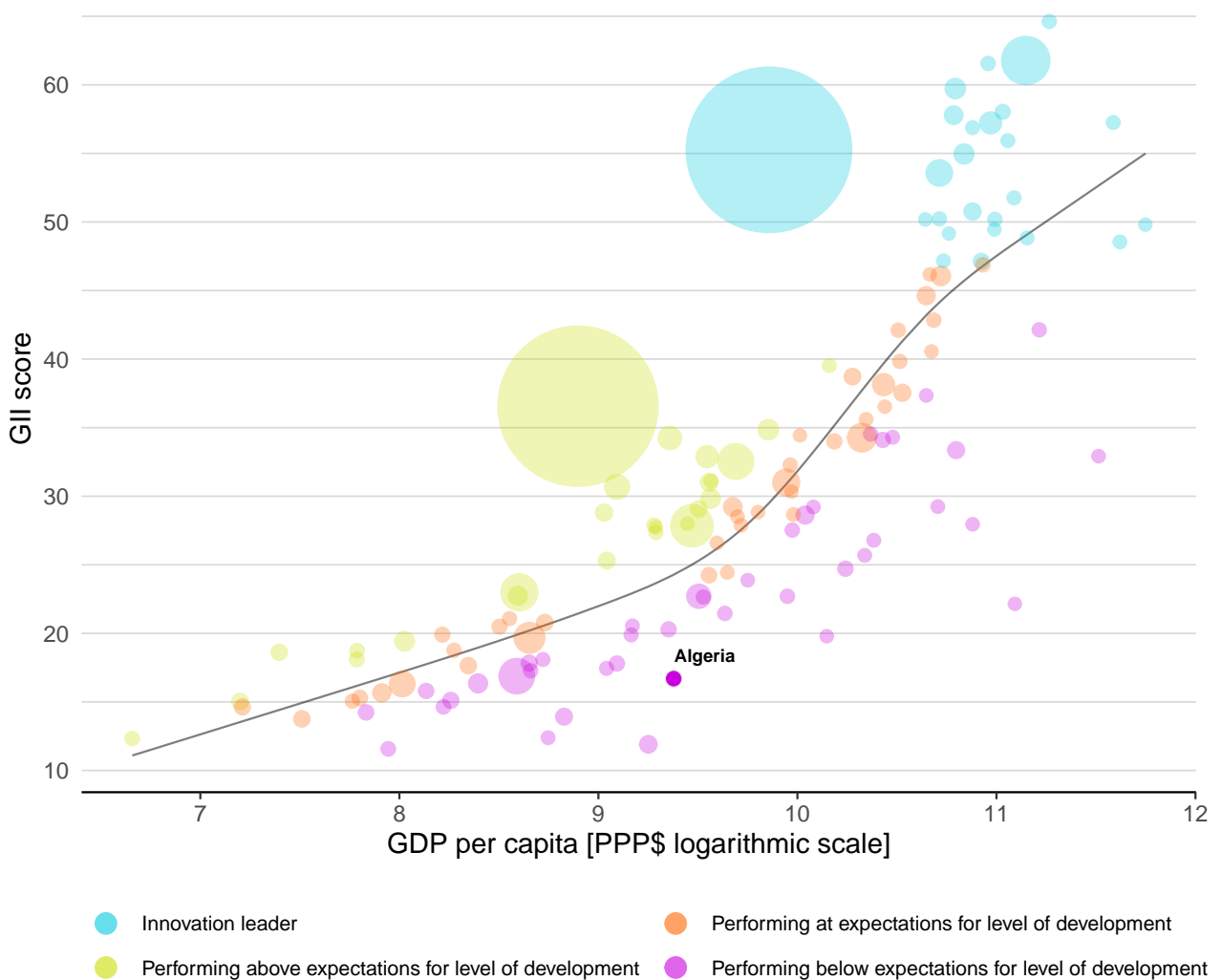


EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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



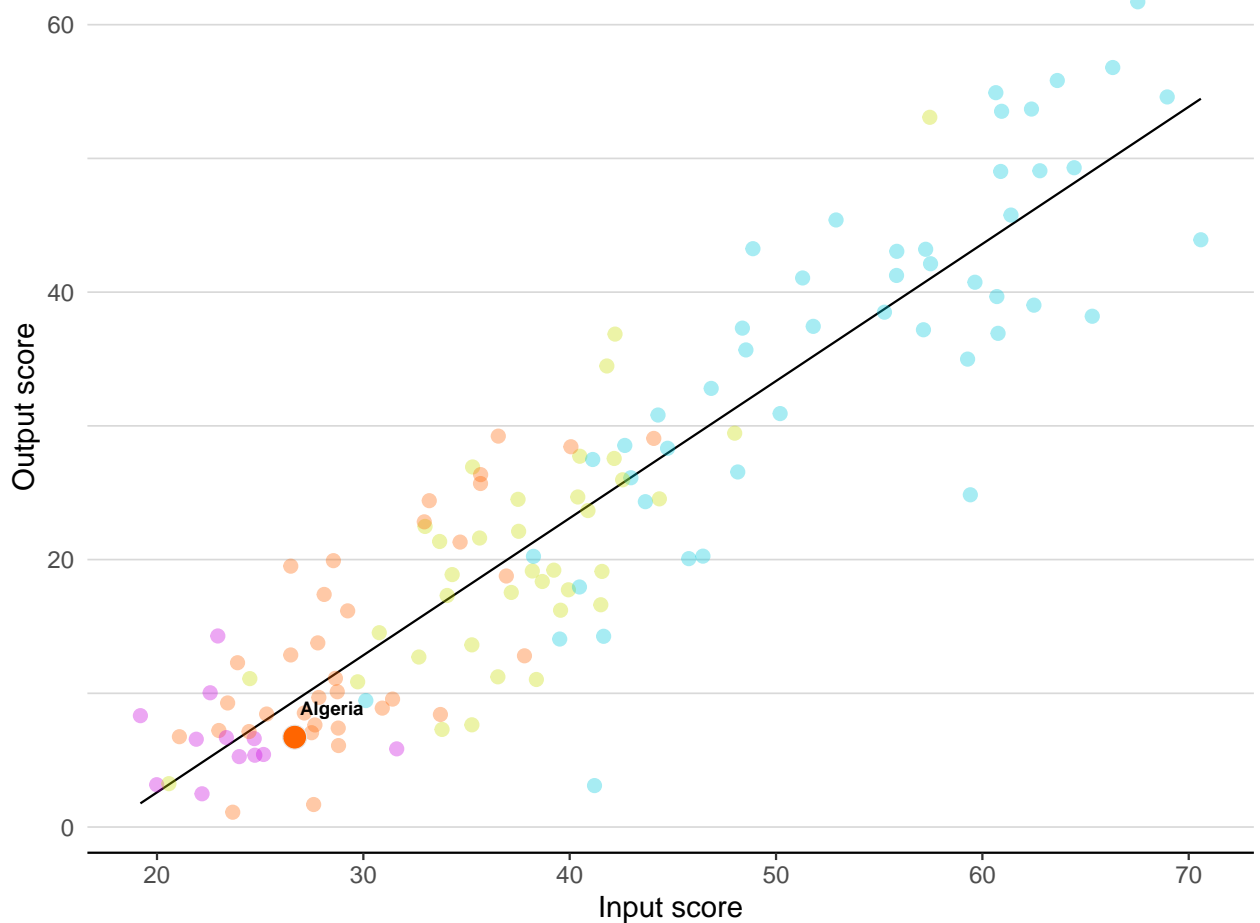


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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

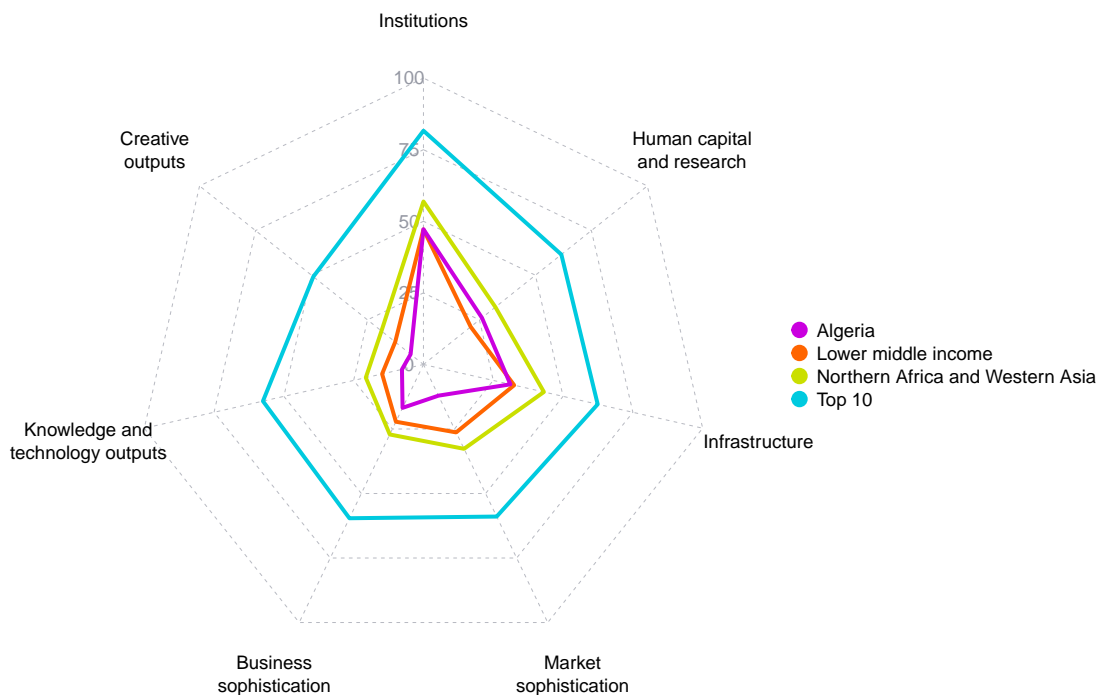


Income ● High income ● Upper middle ● Lower middle ● Low income — Fitted line



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: Institutions; and, Human capital and research.

Northern Africa and Western Asia

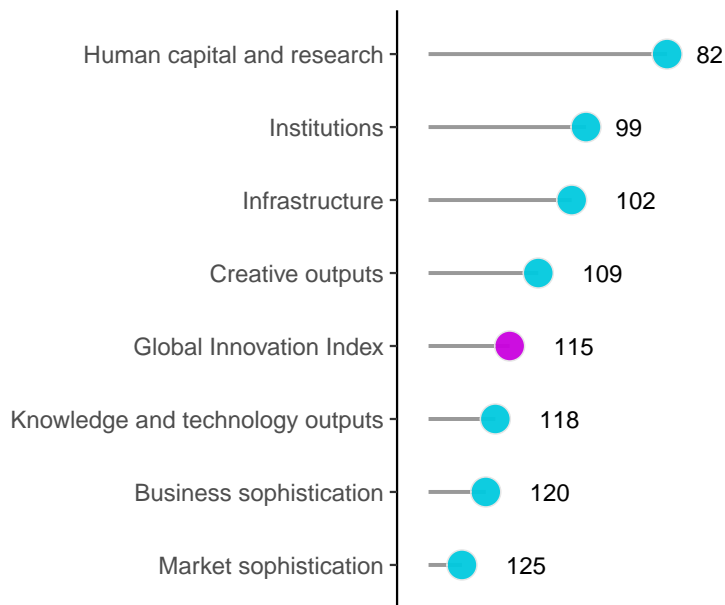
Algeria performs below the regional average in all GII pillars.



OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 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 1.

The full WIPO Intellectual Property Statistics profile for Algeria can be found at:

https://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=DZ.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the indicator strengths and weaknesses of Algeria in the GII 2022.








Strengths and weaknesses for Algeria

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.1.1	Expenditure on education, % GDP	19	1.2.1	Regulatory quality	128
2.2.1	Tertiary enrolment, % gross	61	2.1.4	PISA scales in reading, maths and science	76
2.2.2	Graduates in science and engineering, %	20	2.3.3	Global corporate R&D investors, top 3, mn USD	38
2.3.1	Researchers, FTE/mn pop.	56	2.3.4	QS university ranking, top 3	72
2.3.2	Gross expenditure on R&D, % GDP	58	3.1.4	E-participation	130
3.2.3	Gross capital formation, % GDP	5	4.2.1	Market capitalization, % GDP	81
4.3.3	Domestic market scale, bn PPP\$	42	4.2.3	Venture capital recipients, deals/bn PPP\$ GDP	103
5.2.2	State of cluster development and depth	66	6.2.3	Software spending, % GDP	122
5.3.2	High-tech imports, % total trade	55	6.3.3	High-tech exports, % total trade	130
7.1.4	Industrial designs by origin/bn PPP\$ GDP	43	7.1.3	Global brand value, top 5,000, % GDP	77

Algeria

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Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
118	110	Lower middle	NAWA	44.6	532.6	11,829

		Score/ Value	Rank			Score/ Value	Rank
	Institutions	47.2	99		Business sophistication	16.8	120
1.1	Political environment	47.4	103	5.1	Knowledge workers	15.2	111
1.1.1	Political and operational stability*	56.4	108	5.1.1	Knowledge-intensive employment, %	17.9	85
1.1.2	Government effectiveness*	38.4	99	5.1.2	Firms offering formal training, %	n/a	n/a
1.2	Regulatory environment	50.4	105	5.1.3	GERD performed by business, % GDP	0.0	76
1.2.1	Regulatory quality*	12.7	128	5.1.4	GERD financed by business, %	6.7	81
1.2.2	Rule of law*	25.8	110	5.1.5	Females employed w/advanced degrees, %	8.1	81
1.2.3	Cost of redundancy dismissal	17.3	71	5.2	Innovation linkages	17.4	111
1.3	Business environment	43.9	[77]	5.2.1	University-industry R&D collaboration [†]	37.1	96
1.3.1	Policies for doing business [†]	43.9	83	5.2.2	State of cluster development and depth [†]	48.3	66
1.3.2	Entrepreneurship policies and culture*	n/a	n/a	5.2.3	GERD financed by abroad, % GDP	0.0	95
				5.2.4	Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	124
				5.2.5	Patent families/bn PPP\$ GDP	0.0	97
	Human capital and research	26.1	82	5.3	Knowledge absorption	17.8	125
2.1	Education	40.9	[94]	5.3.1	Intellectual property payments, % total trade	0.4	77
2.1.1	Expenditure on education, % GDP	6.1	19	5.3.2	High-tech imports, % total trade	8.9	55
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	n/a	5.3.3	ICT services imports, % total trade	0.5	112
2.1.3	School life expectancy, years	14.3	67	5.3.4	FDI net inflows, % GDP	0.8	107
2.1.4	PISA scales in reading, maths and science	361.7	76	5.3.5	Research talent, % in businesses	0.5	81
2.1.5	Pupil-teacher ratio, secondary	n/a	n/a		Knowledge and technology outputs	7.7	118
2.2	Tertiary education	34.3	51	6.1	Knowledge creation	6.8	94
2.2.1	Tertiary enrolment, % gross	52.5	61	6.1.1	Patents by origin/bn PPP\$ GDP	0.3	86
2.2.2	Graduates in science and engineering, %	29.6	20	6.1.2	PCT patents by origin/bn PPP\$ GDP	0.0	93
2.2.3	Tertiary inbound mobility, %	0.6	98	6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	n/a
2.3	Research and development (R&D)	3.2	79	6.1.4	Scientific and technical articles/bn PPP\$ GDP	10.6	82
2.3.1	Researchers, FTE/mn pop.	819.3	56	6.1.5	Citable documents H-index	9.8	75
2.3.2	Gross expenditure on R&D, % GDP	0.5	58	6.2	Knowledge impact	11.5	116
2.3.3	Global corporate R&D investors, top 3, mn USD	0.0	38	6.2.1	Labor productivity growth, %	0.4	80
2.3.4	QS university ranking, top 3*	0.0	72	6.2.2	New businesses/th pop. 15-64	0.4	104
				6.2.3	Software spending, % GDP	0.0	122
				6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	1.0	107
				6.2.5	High-tech manufacturing, %	4.1	101
	Infrastructure	31.1	102	6.3	Knowledge diffusion	4.8	122
3.1	Information and communication technologies (ICTs)	45.1	115	6.3.1	Intellectual property receipts, % total trade	0.0	103
3.1.1	ICT access*	80.4	84	6.3.2	Production and export complexity	17.5	110
3.1.2	ICT use*	57.0	82	6.3.3	High-tech exports, % total trade	0.0	130
3.1.3	Government's online service*	27.7	126	6.3.4	ICT services exports, % total trade	0.2	124
3.1.4	E-participation*	15.5	130		Creative outputs	5.7	109
3.2	General infrastructure	31.1	61	7.1	Intangible assets	10.5	98
3.2.1	Electricity output, GWh/mn pop.	1,893.8	83	7.1.1	Intangible asset intensity, top 15, %	n/a	n/a
3.2.2	Logistics performance*	18.6	107	7.1.2	Trademarks by origin/bn PPP\$ GDP	24.8	86
3.2.3	Gross capital formation, % GDP	41.4	5	7.1.3	Global brand value, top 5,000, % GDP	0.0	77
3.3	Ecological sustainability	17.2	110	7.1.4	Industrial designs by origin/bn PPP\$ GDP	2.4	43
3.3.1	GDP/unit of energy use	8.1	90	7.2	Creative goods and services	1.3	120
3.3.2	Environmental performance*	29.6	110	7.2.1	Cultural and creative services exports, % total trade	0.0	101
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	0.4	91	7.2.2	National feature films/mn pop. 15-69	0.4	72
				7.2.3	Entertainment and media market/th pop. 15-69	0.8	58
				7.2.4	Printing and other media, % manufacturing	0.3	94
				7.2.5	Creative goods exports, % total trade	0.0	121
	Market sophistication	12.1	125	7.3	Online creativity	0.7	106
4.1	Credit	9.5	[113]	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	0.5	108
4.1.1	Finance for startups and scaleups*	n/a	n/a	7.3.2	Country-code TLDs/th pop. 15-69	0.1	114
4.1.2	Domestic credit to private sector, % GDP	29.7	94	7.3.3	GitHub commit pushes received/mn pop. 15-69	2.2	83
4.1.3	Loans from microfinance institutions, % GDP	n/a	n/a	7.3.4	Mobile app creation/bn PPP\$ GDP	0.0	103
4.2	Investment	0.7	110				
4.2.1	Market capitalization, % GDP	0.2	81				
4.2.2	Venture capital investors, deals/bn PPP\$ GDP	n/a	n/a				
4.2.3	Venture capital recipients, deals/bn PPP\$ GDP	0.0	103				
4.2.4	Venture capital received, value, % GDP	0.0	72				
4.3	Trade, diversification, and market scale	26.0	120				
4.3.1	Applied tariff rate, weighted avg., %	10.2	118				
4.3.2	Domestic industry diversification	31.9	107				
4.3.3	Domestic market scale, bn PPP\$	532.6	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 appendices for details, including the year of the data, at https://www.wipo.int/global_innovation_index/en/2022. 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 indicators that are either missing or outdated for Algeria.

Missing data for Algeria

Code	Indicator name	Economy year	Model year	Source
1.3.2	Entrepreneurship policies and culture	n/a	2021	Global Entrepreneurship Monitor
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2018	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	n/a	2019	UNESCO Institute for Statistics
4.1.1	Finance for startups and scaleups	n/a	2021	Global Entrepreneurship Monitor
4.1.3	Loans from microfinance institutions, % GDP	n/a	2020	International Monetary Fund, Financial Access Survey (FAS)
4.2.2	Venture capital investors, deals/bn PPP\$ GDP	n/a	2021	Refinitiv
5.1.2	Firms offering formal training, %	n/a	2019	World Bank Enterprise Surveys
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2020	World Intellectual Property Organization
7.1.1	Intangible asset intensity, top 15, %	n/a	2021	Brand Finance

Outdated data for Algeria

Code	Indicator name	Economy year	Model year	Source
1.3.1	Policies for doing business	2019	2021	World Economic Forum, Executive Opinion Survey (EOS)
2.1.1	Expenditure on education, % GDP	2019	2020	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2011	2019	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	2015	2018	OECD, PISA
2.3.1	Researchers, FTE/mn pop.	2017	2020	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2017	2020	UNESCO Institute for Statistics
3.2.1	Electricity output, GWh/mn pop.	2019	2020	International Energy Agency
4.2.1	Market capitalization, % GDP	2018	2020	World Federation of Exchanges
4.3.2	Domestic industry diversification	2015	2019	United Nations Industrial Development Organization
5.1.1	Knowledge-intensive employment, %	2017	2021	International Labour Organization
5.1.3	GERD performed by business, % GDP	2017	2020	UNESCO Institute for Statistics
5.1.4	GERD financed by business, %	2017	2019	UNESCO Institute for Statistics
5.1.5	Females employed w/advanced degrees, %	2017	2021	International Labour Organization

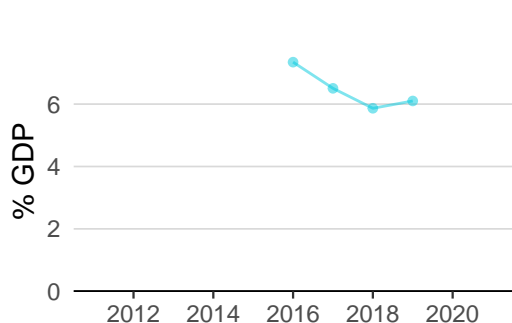


Code	Indicator name	Economy year	Model year	Source
5.2.1	University-industry R&D collaboration	2019	2021	World Economic Forum, Executive Opinion Survey (EOS)
5.2.2	State of cluster development and depth	2019	2021	World Economic Forum, Executive Opinion Survey (EOS)
5.2.3	GERD financed by abroad, % GDP	2017	2019	UNESCO Institute for Statistics
5.3.2	High-tech imports, % total trade	2017	2020	United Nations Comtrade Database
5.3.5	Research talent, % in businesses	2017	2020	UNESCO Institute for Statistics
6.2.2	New businesses/th pop. 15–64	2018	2020	World Bank, Entrepreneurship Database
6.2.5	High-tech manufacturing, %	2015	2019	United Nations Industrial Development Organization
6.3.3	High-tech exports, % total trade	2017	2020	United Nations Comtrade Database
7.2.4	Printing and other media, % manufacturing	2015	2019	United Nations Industrial Development Organization
7.2.5	Creative goods exports, % total trade	2017	2020	United Nations Comtrade Database

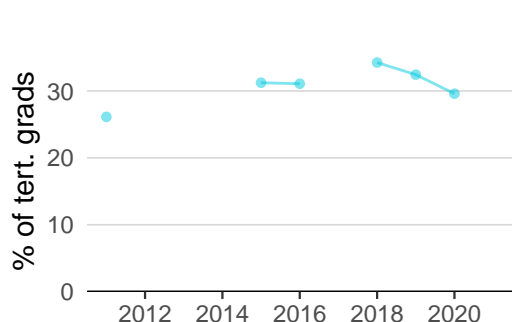
ALGERIA'S INNOVATION SYSTEM

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

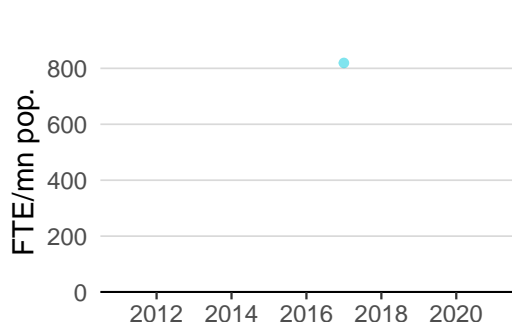
Innovation inputs



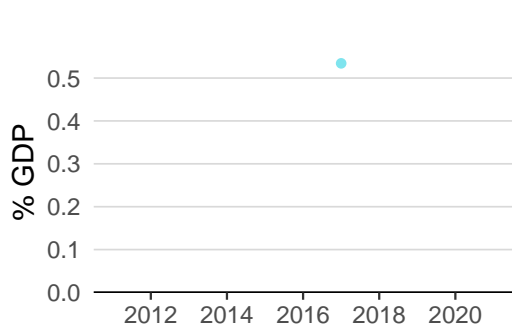
2.1.1 Expenditure on education was equal to 6.1% GDP in 2019—up by 4 percentage points from the year prior—and equivalent to an indicator rank of 19.



2.2.2 Graduates in science and engineering was equal to 29.6% of tert. grads in 2020—down by 9 percentage points from the year prior—and equivalent to an indicator rank of 20.



2.3.1 Researchers was equal to 819.3 FTE/mn pop. in 2017 and equivalent to an indicator rank of 56.



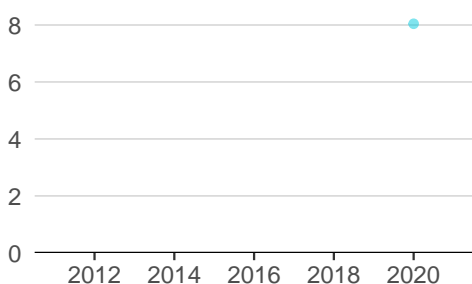
2.3.2 Gross expenditure on R&D was equal to 0.5% GDP in 2017 and equivalent to an indicator rank of 58.



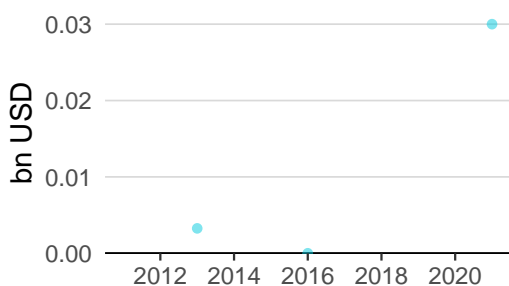
2.3.4 QS university ranking was equal to 0.0 in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 72.



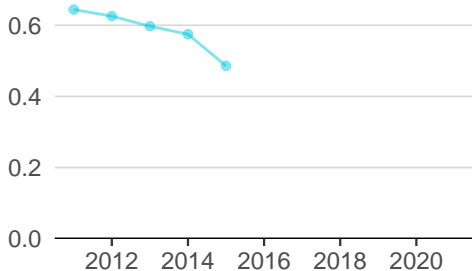
3.1.1 ICT access was equal to 8.0 in 2020 and equivalent to an indicator rank of 84.



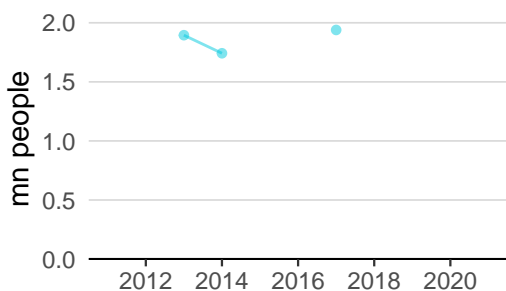
4.2.4 Venture capital received was equal to 0.0 bn USD in 2021 and equivalent to an indicator rank of 72.



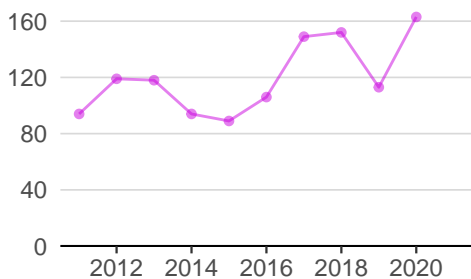
4.3.2 Domestic industry diversification was equal to 0.5 in 2015—down by 15 percentage points from the year prior—and equivalent to an indicator rank of 107.



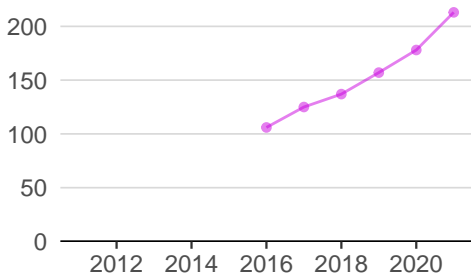
5.1.1 Knowledge-intensive employment was equal to 1.9 mn people in 2017 and equivalent to an indicator rank of 85.



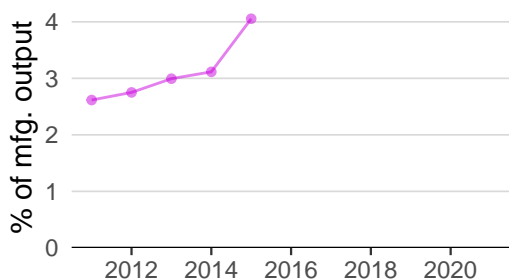
Innovation outputs



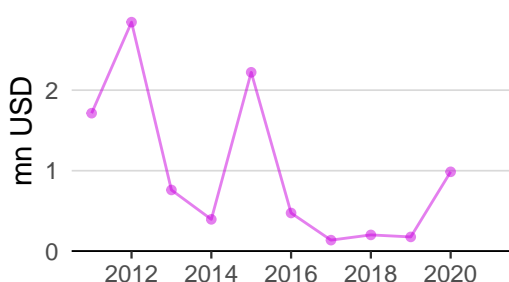
6.1.1 Patents by origin was equal to 163.0 in 2020—up by 44 percentage points from the year prior—and equivalent to an indicator rank of 86.



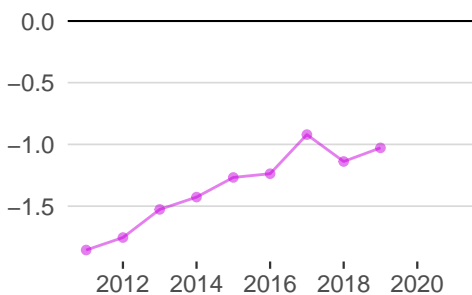
6.1.5 Citable documents H-index was equal to 213.0 in 2021—up by 20 percentage points from the year prior—and equivalent to an indicator rank of 75.



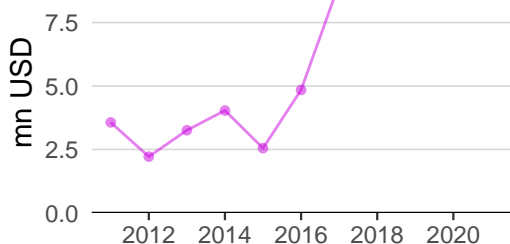
6.2.5 High-tech manufacturing was equal to 4.1% of mfg. output in 2015—up by 30 percentage points from the year prior—and equivalent to an indicator rank of 101.



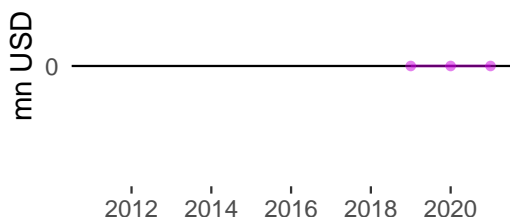
6.3.1 Intellectual property receipts was equal to 1.0 mn USD in 2020—up by 454 percentage points from the year prior—and equivalent to an indicator rank of 103.



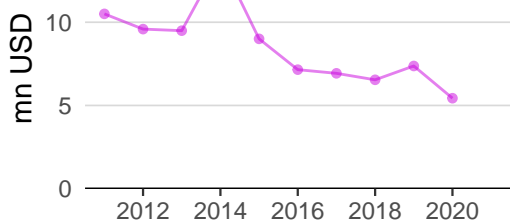
6.3.2 Production and export complexity was equal to -1.0 in 2019—up by 10 percentage points from the year prior—and equivalent to an indicator rank of 110.



6.3.3 High-tech exports was equal to 9.0 mn USD in 2017—up by 86 percentage points from the year prior—and equivalent to an indicator rank of 130.



7.1.3 Global brand value was equal to 0.0 mn USD in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 77.



7.2.1 Cultural and creative services exports was equal to 5.4 mn USD in 2020—down by 26 percentage points from the year prior—and equivalent to an indicator rank of 101.



ALGERIA'S INNOVATION TOP PERFORMERS

2.3.3 Global corporate R&D investors

Firm	Industry	R&D	R&D Growth	R&D Intensity	Rank
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No observations

Source: European Commission's Joint Research Centre (<https://iri.jrc.ec.europa.eu/scoreboard/2021-eu-industrial-rd-investment-scoreboard>).

2.3.4 QS university ranking

University	Score	Rank
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No observations

Source: QS Quacquarelli Symonds Ltd (<https://www.topuniversities.com/university-rankings/world-university-rankings/2022>).

7.1.1 Intangible asset intensity, top 15

Firm	Rank
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No observations

Source: Brand Finance (<https://brandirectory.com/reports/gift-2021>).

7.1.3 Global brand value, top 5,000

Brand	Industry	Rank
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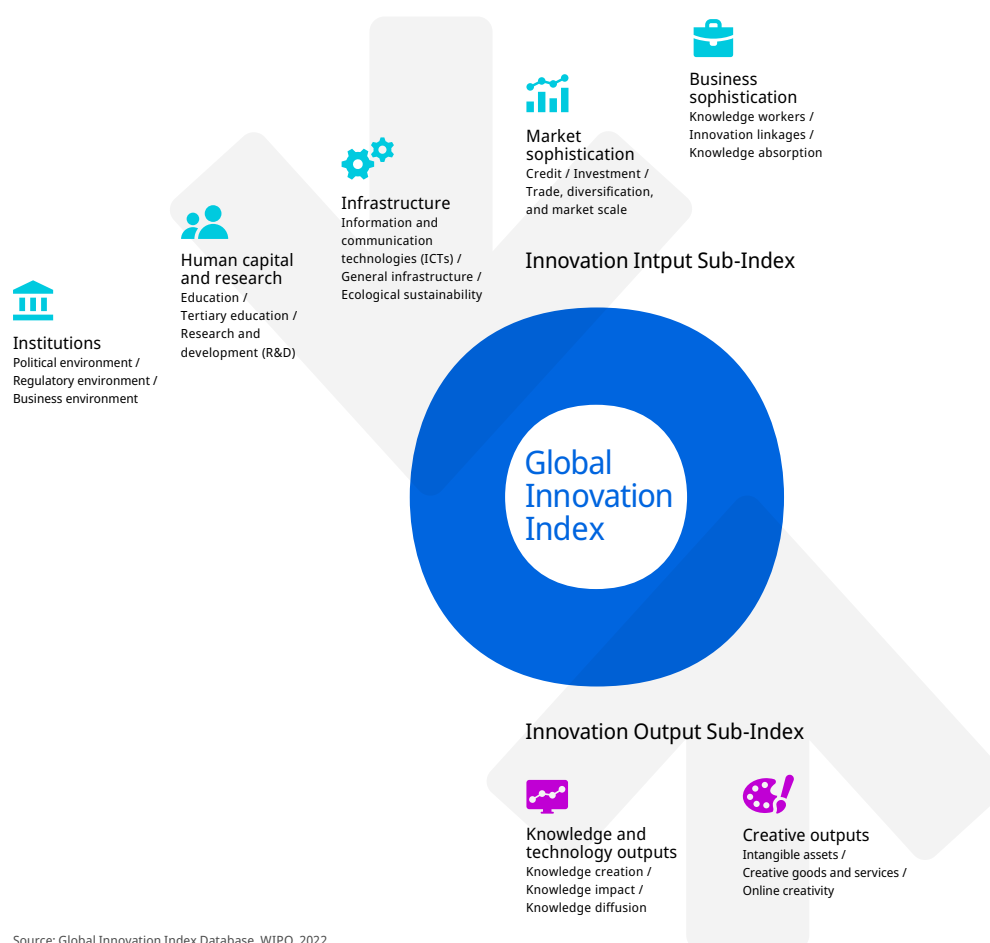
No observations

Source: Brand Finance (<https://brandirectory.com>).

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.