



GLOBAL INNOVATION INDEX 2019

ALGERIA

113th

Algeria ranks 113th among the 129 economies featured in the GII 2019.

The Global Innovation Index (GII) is a ranking of world economies based on 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 the GII model influence year-on-year comparisons of the GII ranks. The confidence interval for Algeria's ranking in the GII 2019 is between 109 and 118.

Algeria's Rankings, 2017 - 2019

	GII	Innovation Inputs	Innovation Outputs
2019	113	100	118
2018	110	100	116
2017	108	105	117

- Algeria performs better in Innovation Inputs than Outputs.
- This year Algeria ranks 100th in Innovation Inputs, the same as last year and better compared to 2017.
- As for Innovation Outputs, Algeria ranks 118th. This position is worse than last year and compared to 2017.

34th

Algeria ranks 34th among the 34 upper middle-income economies.

18th

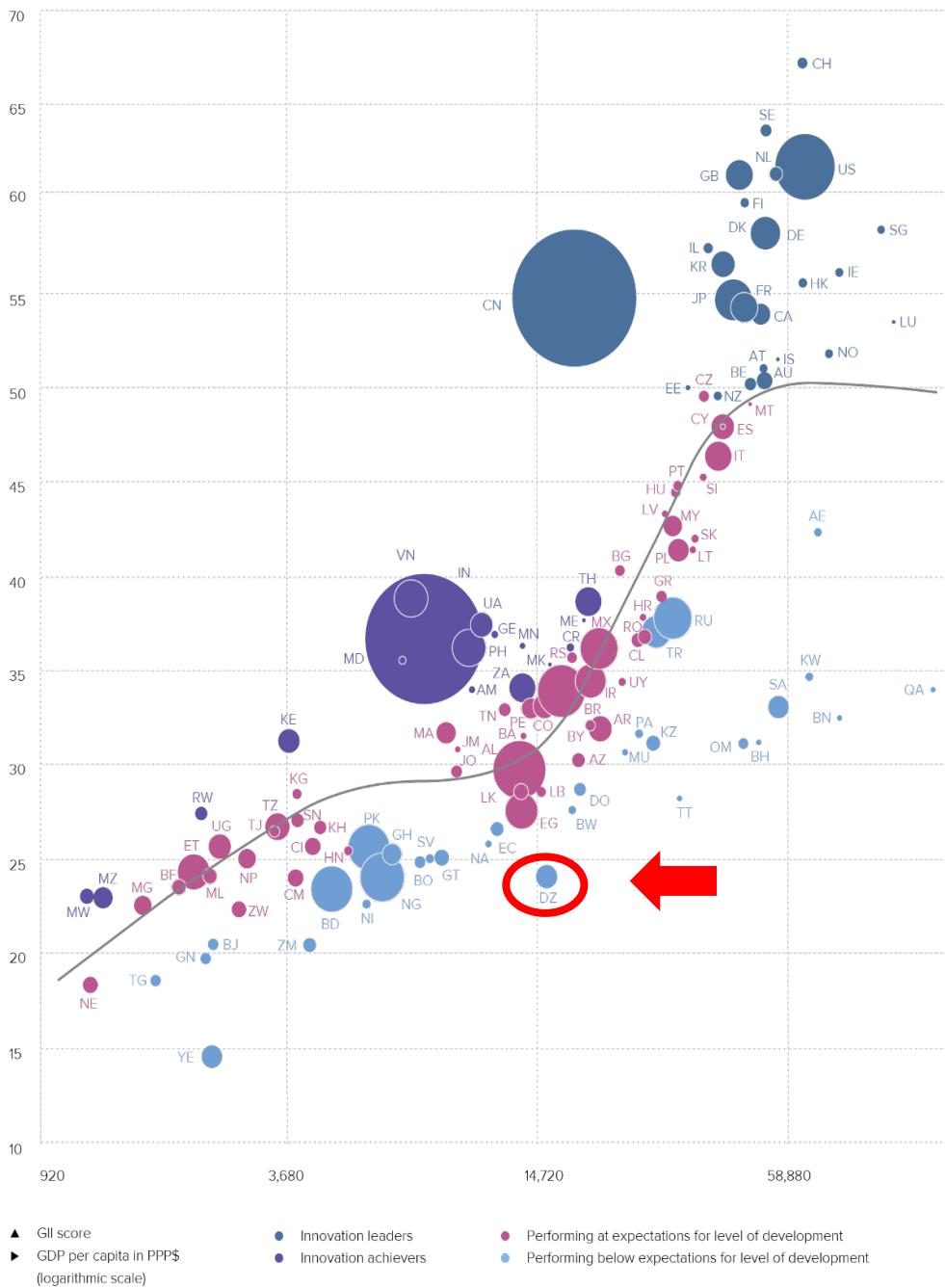
Algeria ranks 18th among the 19 economies in Northern Africa and Western Asia.

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 considered Innovation under-performers relative to GDP.

Relative to GDP, Algeria performs below its expected level of development.

GII scores and GDP per capita in PPP US\$ (bubbles sized by population)

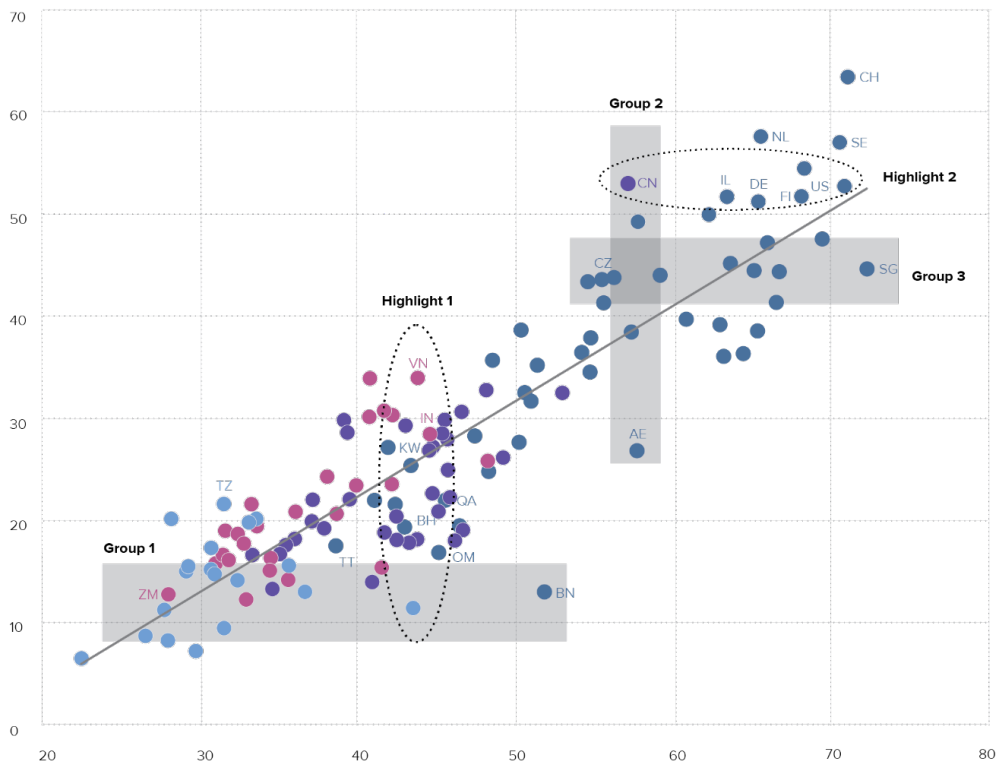


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and innovation outputs, indicating which economies best translate innovation inputs into innovation outputs. Economies appearing above the line are effectively translating their costly innovation investments into more and higher-quality outputs. In contrast, those below the line are not effectively translating innovation inputs into outputs.

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

Innovation input/output performance by income group, 2019

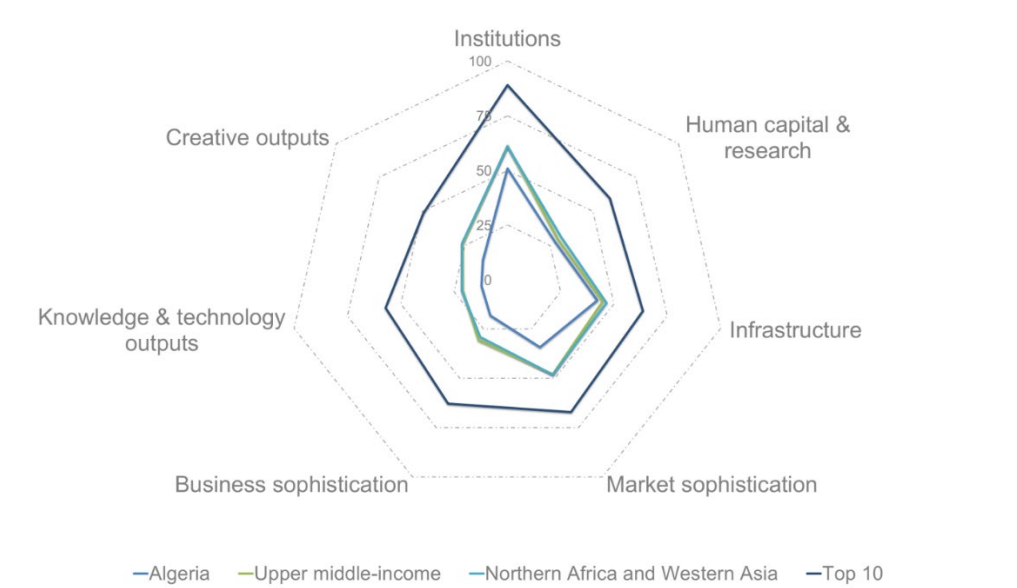


▲ Output score
 ► Input score
 ● High income
 ● Upper-middle income
 ● Lower-middle income
 ● Low income
 — Fitted values

- | | | | |
|-------------------------|-------------------|------------------------|--------------------------------|
| AE United Arab Emirates | CZ Czech Republic | NL Netherlands | TZ United Republic of Tanzania |
| BH Bahrain | DE Germany | OM Oman | US United States of America |
| BN Brunei Darussalam | FI Finland | QA Qatar | VN Viet Nam |
| CH Switzerland | IL Israel | SE Sweden | ZM Zambia |
| CN China | IN India | SG Singapore | |
| | KW Kuwait | TT Trinidad and Tobago | |

BENCHMARKING ALGERIA TO OTHER UPPER MIDDLE-INCOME ECONOMIES AND THE NORTHERN AFRICA AND WESTERN ASIA REGION

Algeria’s scores in the seven GII pillars



Upper middle-income economies

Algeria scores below the income group average in all the 7 GII pillars.

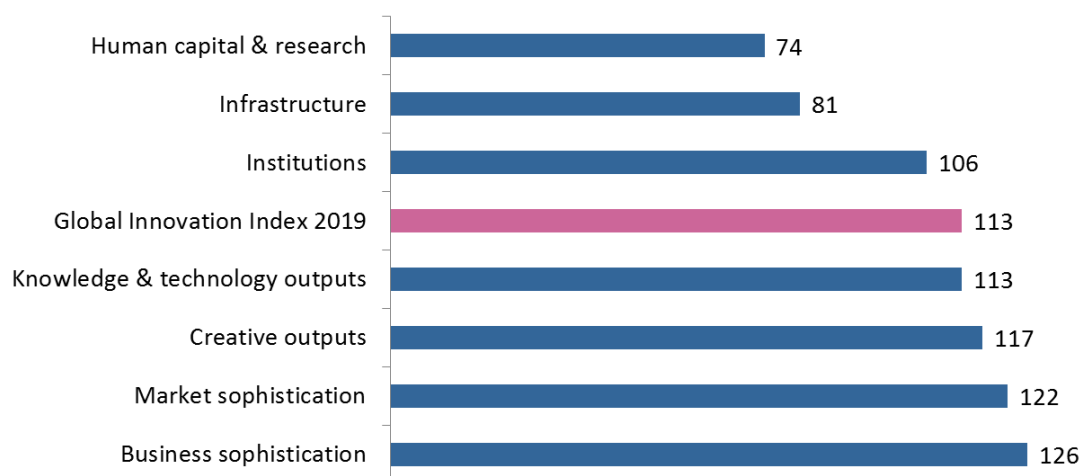
Northern Africa and Western Asia Region

Compared to other economies in Northern Africa and Western Asia, Algeria performs below average in all the 7 GII pillars.

Top ranks are found in areas such as Tertiary education, Research and development (R&D), General infrastructure, Ecological sustainability, and Trade, competition, & market scale where the country ranks in the top 80 worldwide.

OVERVIEW OF ALGERIA'S RANKINGS IN THE 7 GII AREAS

Algeria performs the best in Human capital & research and its weakest performance is in Business sophistication.



*The highest possible ranking in each pillar is 1.

ALGERIA'S INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of Algeria's strengths and weaknesses in the GII 2019.

Strengths		
Code	Indicator name	Rank
2.2	Tertiary education	36
2.2.1	Tertiary enrolment, % gross	62
2.2.2	Graduates in science & engineering, %	9
2.3.1	Researchers, FTE/mn pop.	54
2.3.2	Gross expenditure on R&D, % GDP	58
3.2	General infrastructure	10
3.2.3	Gross capital formation, % GDP	2
3.3.1	GDP/unit of energy use	47
4.3.3	Domestic market scale, bn PPP\$	34
5.3.2	High-tech imports, % total trade	53
6.2.1	Growth rate of PPP\$ GDP/worker, %, 3-year average	50
7.1.2	Industrial designs by origin/bn PPP\$ GDP	53

Weaknesses		
Code	Indicator name	Rank
1.2.1	Regulatory quality*	126
2.1.4	PISA scales in reading, maths & science	69
2.3.3	Global R&D companies, top 3, in mn US\$	43
2.3.4	QS university ranking, average score top 3*	78
3.1.3	Government's online service*	125
4.1.1	Ease of getting credit*	126
5	Business sophistication	126
5.2.3	GERD financed by abroad, %	102
6.2.3	Computer software spending, % GDP	125
6.3	Knowledge diffusion	126
6.3.2	High-tech net exports, % total trade	126
7.2.4	Printing & other media, % manufacturing	99

STRENGTHS

- GII strengths for Algeria are found in six of the seven GII pillars, and mostly on the innovation input side of the GII.
- Several of these strengths are in Human capital & research (74). Here Algeria's strengths are sub-pillar Tertiary education (36) and indicators Tertiary enrolment (62), Graduates in science & engineering (9), Researchers (54), and Gross expenditure on R&D (58).
- In Infrastructure (81), GII strengths for this country are sub-pillar General infrastructure (10) and indicators GDP per unit of energy use (47) and Gross capital formation, where Algeria positions 2nd globally.
- In Market sophistication (122), the only GII strength for Algeria is indicator Domestic market scale (34).
- In Business sophistication (126), indicator High-tech imports (53) is a relative strength for the country.
- In Knowledge & technology outputs (113), Algeria has strength in indicator Labor productivity growth (50).
- In Creative outputs (117), indicator Industrial designs by origin (53) is a strength for Algeria.

WEAKNESSES

- Algeria's weaknesses in the GII are found in all the 7 GII pillars.
- Pillar Business sophistication (126) is a notable weakness of Algeria.
- In Human capital & research (74), GII weaknesses are three important indicators: PISA results (69), Global R&D companies (43), and Quality of universities (78).
- In Knowledge & technology outputs (113), three other weaknesses are found in sub-pillar Knowledge diffusion (126) and indicators Computer software spending (125) and High-tech exports (126).
- In Institutions (106), Algeria exhibits only one weakness in indicator Regulatory quality (126).
- In Infrastructure (81), indicator Government's online service (125) is a relative weakness for the country.
- In Market sophistication (122), Algeria shows only one weakness in indicator Ease of getting credit (126).
- In Business sophistication (126), indicator R&D financed by abroad (102) is another GII weakness for Algeria.
- In Creative outputs (117), Algeria has only one weakness in indicator Printing & other media (99).

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
118	100	Upper middle	NAWA	42.0	660.8	15,439.9	110
				Score/Value	Rank		
INSTITUTIONS				51.1	106	◇	
1.1	Political environment		38.3	111	◇		
1.1.1	Political and operational stability*.....		50.9	121	◇		
1.1.2	Government effectiveness*.....		32.1	103	◇		
1.2	Regulatory environment		51.2	109	◇		
1.2.1	Regulatory quality*.....		9.8	126	◇		
1.2.2	Rule of law*.....		23.5	116	◇		
1.2.3	Cost of redundancy dismissal, salary weeks.....		17.3	71			
1.3	Business environment		63.7	88			
1.3.1	Ease of starting a business*.....		78.1	112			
1.3.2	Ease of resolving insolvency*.....		49.2	68			
HUMAN CAPITAL & RESEARCH				27.9	74		
2.1	Education		37.7	[90]			
2.1.1	Expenditure on education, % GDP.....		4.3	69			
2.1.2	Government funding/pupil, secondary, % GDP/cap... n/a		n/a	n/a			
2.1.3	School life expectancy, years.....		14.3	65			
2.1.4	PISA scales in reading, maths, & science.....		361.7	69	○		
2.1.5	Pupil-teacher ratio, secondary.....		n/a	n/a			
2.2	Tertiary education		40.6	36	●		
2.2.1	Tertiary enrolment, % gross.....		47.7	62	●		
2.2.2	Graduates in science & engineering, %.....		31.1	9	◆		
2.2.3	Tertiary inbound mobility, %.....		0.6	94			
2.3	Research & development (R&D)		5.3	78			
2.3.1	Researchers, FTE/mn pop.....		820.8	54	●		
2.3.2	Gross expenditure on R&D, % GDP.....		0.5	58	●		
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		0.0	43	○		
2.3.4	QS university ranking, average score top 3*.....		0.0	78	○		
INFRASTRUCTURE				42.1	81		
3.1	Information & communication technologies (ICTs)		35.3	115	◇		
3.1.1	ICT access*.....		53.1	83			
3.1.2	ICT use*.....		46.3	75			
3.1.3	Government's online service*.....		21.5	125	○		
3.1.4	E-participation*.....		20.2	123	◇		
3.2	General infrastructure		54.8	10	◆		
3.2.1	Electricity output, kWh/mn pop.....		1,748.3	82			
3.2.2	Logistics performance*.....		18.0	107	◇		
3.2.3	Gross capital formation, % GDP.....		50.6	2	◆		
3.3	Ecological sustainability		36.1	74			
3.3.1	GDP/unit of energy use.....		10.3	47	●		
3.3.2	Environmental performance*.....		57.2	77			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.1	123			
MARKET SOPHISTICATION				34.1	122	◇	
4.1	Credit		9.8	125	◇		
4.1.1	Ease of getting credit*.....		10.0	126	○		
4.1.2	Domestic credit to private sector, % GDP.....		24.8	107			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	Investment		35.0	[99]	◇		
4.2.1	Ease of protecting minority investors*.....		35.0	123	◇		
4.2.2	Market capitalization, % GDP.....		n/a	n/a			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		n/a	n/a			
4.3	Trade, competition, & market scale		57.6	78			
4.3.1	Applied tariff rate, weighted avg., %.....		9.4	110	◇		
4.3.2	Intensity of local competition*.....		55.0	121	◇		
4.3.3	Domestic market scale, bn PPP\$.....		660.8	34	●		
BUSINESS SOPHISTICATION				18.1	126	○	
5.1	Knowledge workers		19.0	110	◇		
5.1.1	Knowledge-intensive employment, %.....		17.9	81			
5.1.2	Firms offering formal training, % firms.....		n/a	n/a			
5.1.3	GERD performed by business, % GDP.....		0.0	75			
5.1.4	GERD financed by business, %.....		6.7	77	◇		
5.1.5	Females employed w/advanced degrees, %.....		8.1	79			
5.2	Innovation linkages		13.8	122	◇		
5.2.1	University/industry research collaboration*.....		26.9	117	◇		
5.2.2	State of cluster development*.....		40.6	91			
5.2.3	GERD financed by abroad, %.....		0.0	102	○		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	94			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	89			
5.3	Knowledge absorption		21.4	117	◇		
5.3.1	Intellectual property payments, % total trade.....		0.4	73			
5.3.2	High-tech imports, % total trade.....		8.3	53	●		
5.3.3	ICT services imports, % total trade.....		0.0	91			
5.3.4	FDI net inflows, % GDP.....		0.5	120	◇		
5.3.5	Research talent, % in business enterprise.....		0.5	82	◇		
KNOWLEDGE & TECHNOLOGY OUTPUTS				12.3	113		
6.1	Knowledge creation		6.0	90			
6.1.1	Patents by origin/bn PPP\$ GDP.....		0.2	91			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.0	87			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		4.6	83			
6.1.5	Citable documents H-index.....		8.0	79			
6.2	Knowledge impact		24.5	107			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		1.5	50	●		
6.2.2	New businesses/th pop. 15-64.....		0.6	82			
6.2.3	Computer software spending, % GDP.....		0.0	125	○		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		0.7	115			
6.2.5	High- & medium-high-tech manufactures, %.....		0.0	94	◇		
6.3	Knowledge diffusion		6.4	126	○		
6.3.1	Intellectual property receipts, % total trade.....		0.0	100	◇		
6.3.2	High-tech net exports, % total trade.....		0.0	126	○		
6.3.3	ICT services exports, % total trade.....		0.3	109			
6.3.4	FDI net outflows, % GDP.....		0.0	107			
CREATIVE OUTPUTS				14.3	117	◇	
7.1	Intangible assets		27.8	111	◇		
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		12.9	99			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		1.9	53	●		
7.1.3	ICTs & business model creation*.....		46.7	114	◇		
7.1.4	ICTs & organizational model creation*.....		41.3	110	◇		
7.2	Creative goods & services		1.0	125	◇		
7.2.1	Cultural & creative services exports, % total trade.....		0.0	108			
7.2.2	National feature films/mn pop. 15-69.....		0.4	97			
7.2.3	Entertainment & Media market/th pop. 15-69.....		1.3	55	◇		
7.2.4	Printing & other media, % manufacturing.....		0.3	99	○		
7.2.5	Creative goods exports, % total trade.....		0.0	124			
7.3	Online creativity		0.8	102			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		0.5	108			
7.3.2	Country-code TLDs/th pop. 15-69.....		0.1	116			
7.3.3	Wikipedia edits/mn pop. 15-69.....		3.7	90			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		0.0	94			

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 missing or are outdated for Algeria.

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2015	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	n/a	2017	UNESCO Institute for Statistics
4.1.3	Microfinance gross loans, % GDP	n/a	2017	Microfinance Information Exchange
4.2.2	Market capitalization, % GDP	n/a	2017	World Federation of Exchanges
4.2.3	Venture capital deals/bn PPP\$ GDP	n/a	2018	Thomson Reuters
5.1.2	Firms offering formal training, % firms	n/a	2013	World Bank
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2017	World Intellectual Property Organization

Outdated data

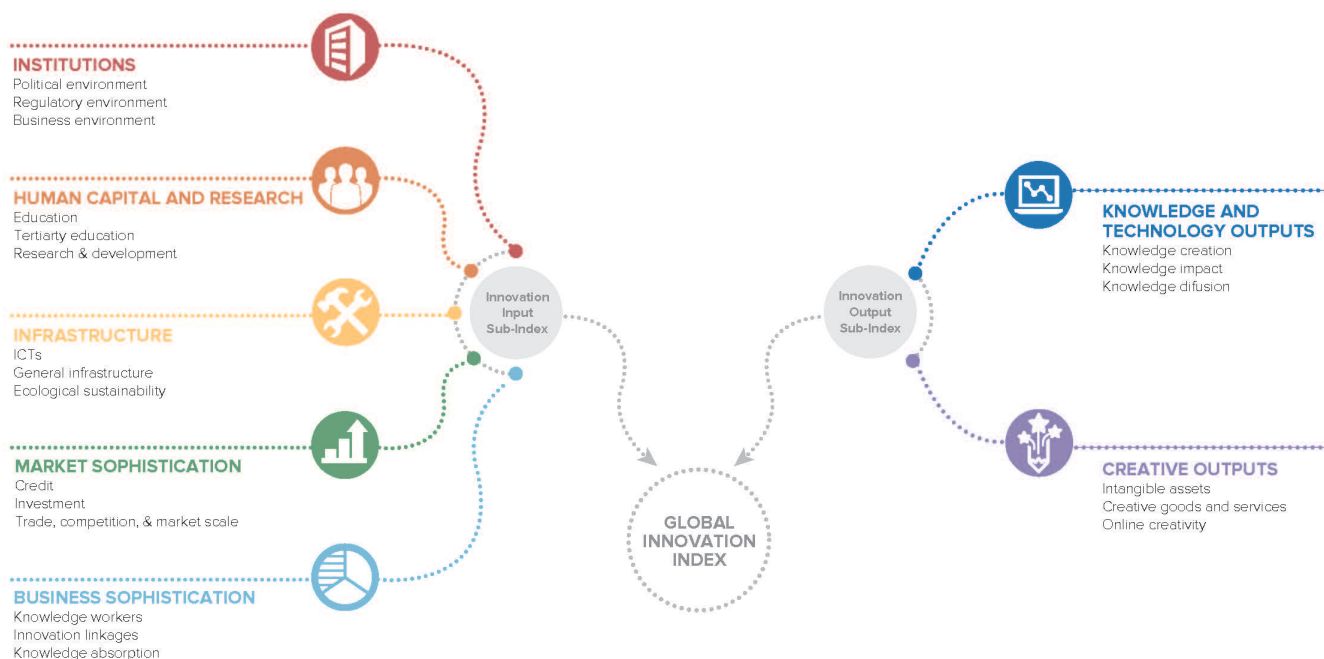
Code	Indicator name	Country year	Model year	Source
2.1.1	Expenditure on education, % GDP	2008	2015	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2011	2016	UNESCO Institute for Statistics
6.2.2	New businesses/th pop. 15–64	2014	2016	World Bank
6.2.5	High- & medium-high-tech manufactures, %	2015	2016	United Nations Industrial Development Organization
7.2.4	Printing & other media, % manufacturing	2015	2016	United Nations Industrial Development Organization

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 2019, the GII presents its 12th edition devoted to the theme **Creating Healthy Lives—The Future of Medical Innovation**.

Recognizing that innovation is a key driver of economic development, the GII aims to provide a rich innovation ranking and 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 countries that incorporate the GII into their innovation agendas.

Framework of the Global Innovation Index 2019



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that includes 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 containing three sub-pillars.



www.globalinnovationindex.org



GII app for iOS



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