

EGYPT

96th

Egypt ranks 96th among the 131 economies featured in the GII 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 GII aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of Egypt 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 Egypt in the GII 2020 is between ranks 85 and 99.

Rankings of Egypt (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	96	104	82
2019	92	106	74
2018	95	105	79

- Egypt performs better in innovation outputs than innovation inputs in 2020.
- This year Egypt ranks 104th in innovation inputs, higher than last year and higher compared to 2018.
- As for innovation outputs, Egypt ranks 82nd. This position is lower than last year and lower compared to 2018.

14th

Egypt ranks 14th among the 29 lower middle-income group economies.

17th

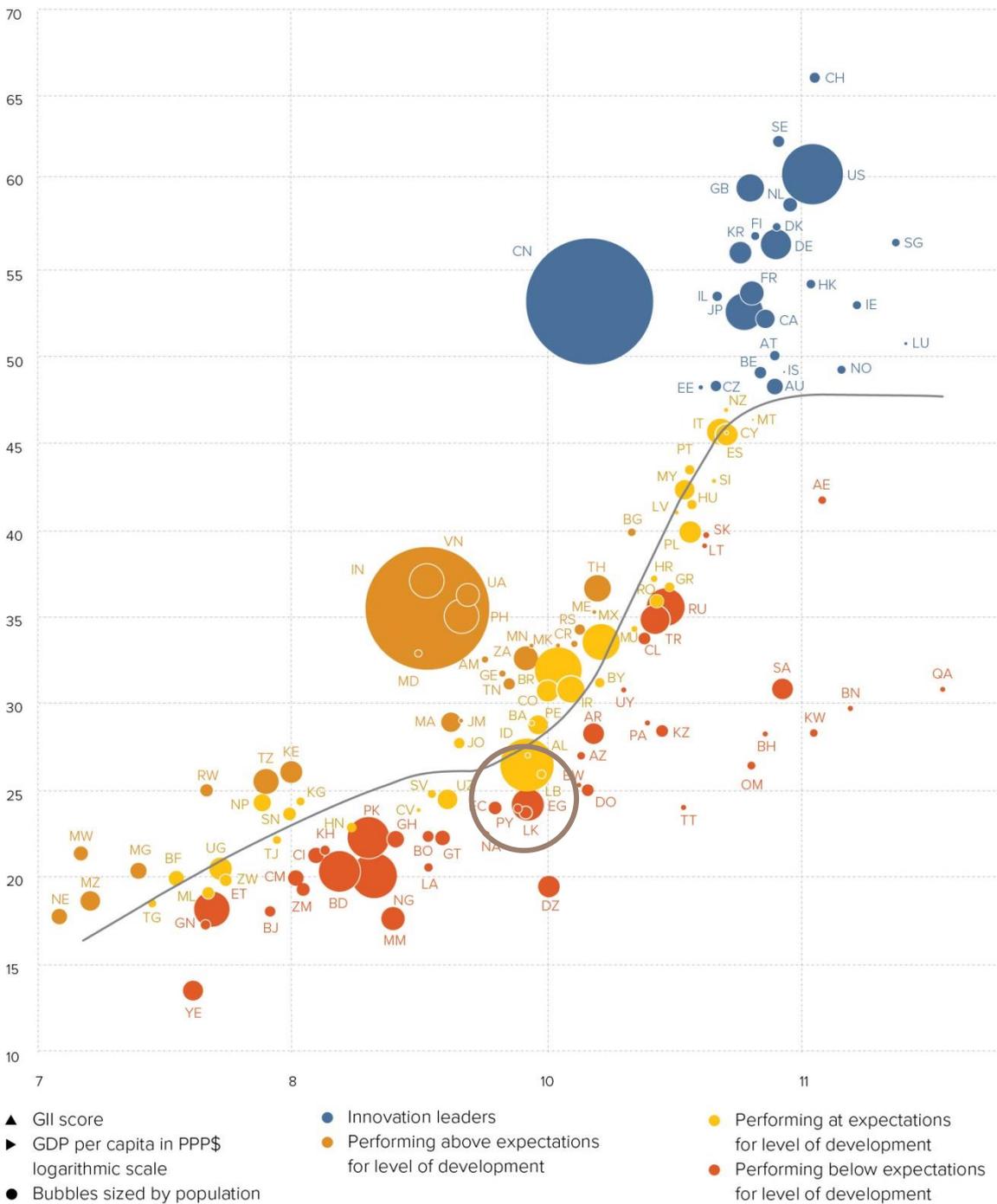
Egypt ranks 17th among the 19 economies in Northern Africa and Western Asia.

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, Egypt is performing below expectations for its level of development.

The positive relationship between innovation and development

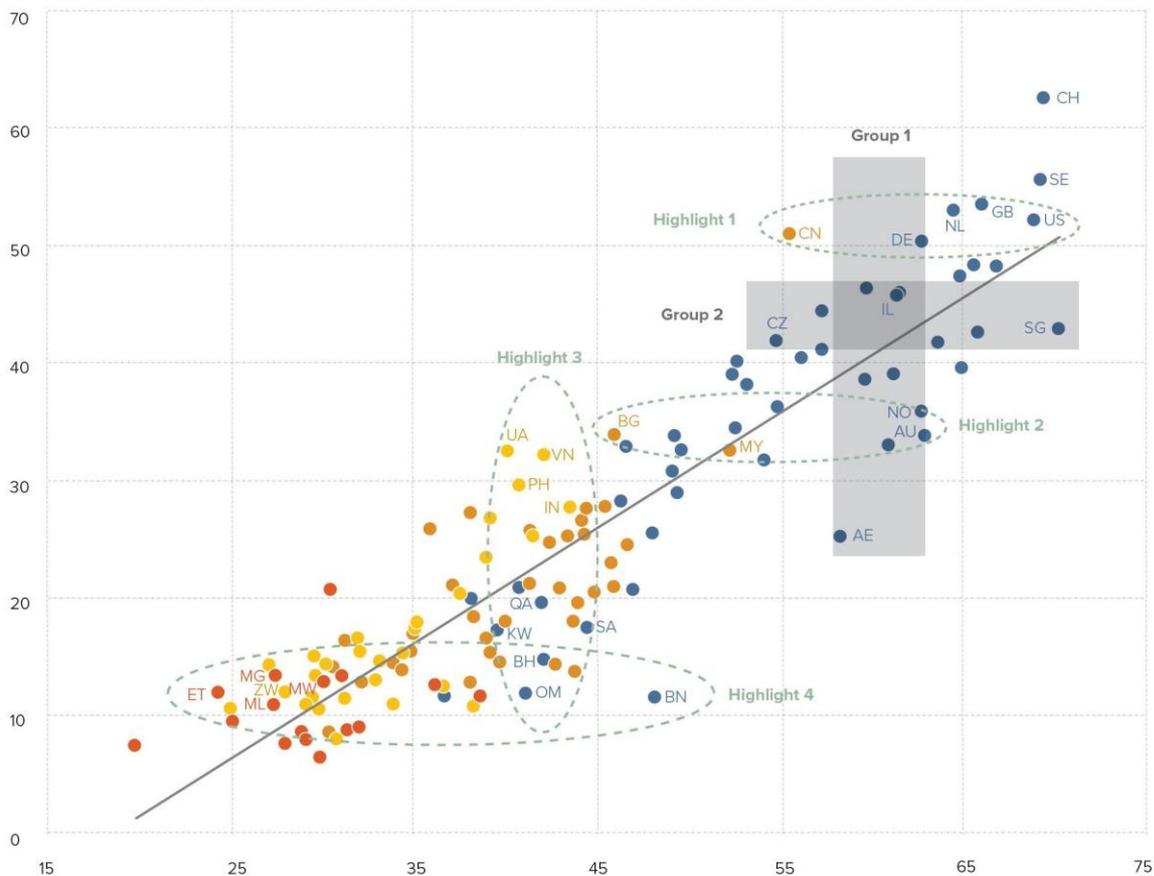


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

Egypt produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance, 2020

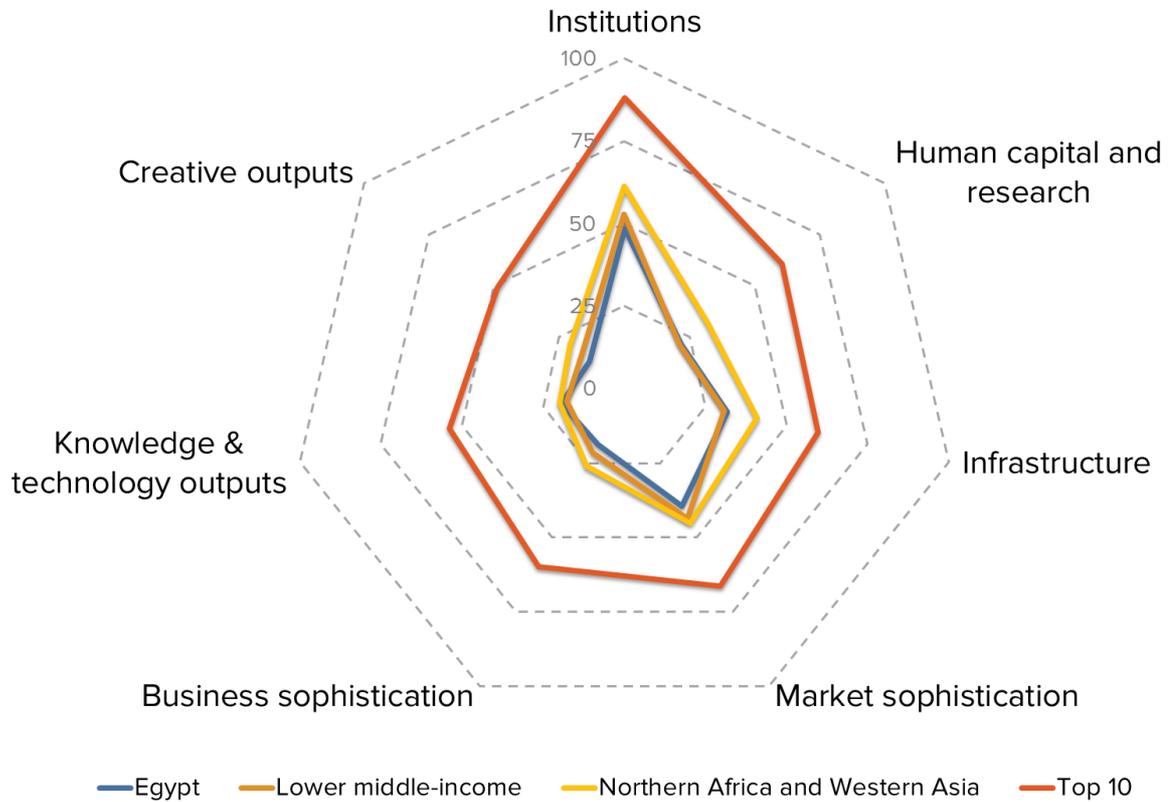


▲ Output score ● High income group ● Lower middle-income group — Fitted values
 ► Input score ● Upper middle-income group ● Low income group

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

Egypt's scores in the seven GII pillars



Lower middle-income group economies

Egypt has high scores in three out of the seven GII pillars: Human capital & research, Infrastructure and Knowledge & technology outputs, which are above average for the lower middle-income group.

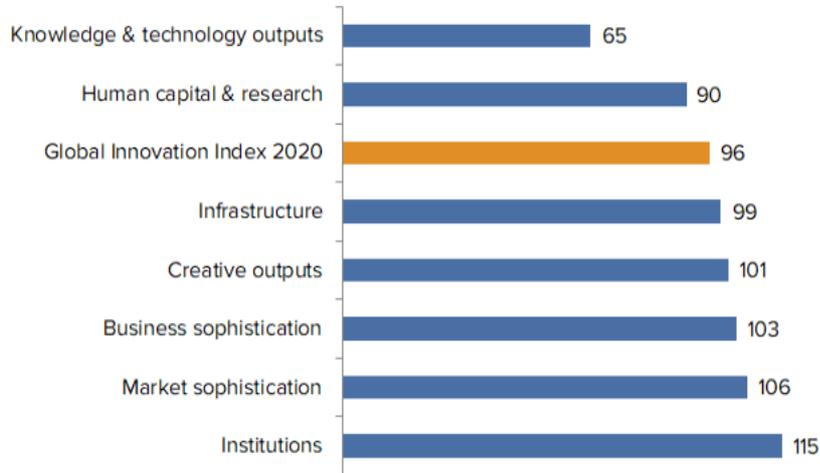
Conversely, Egypt scores below average for its income group in four pillars: Institutions, Market sophistication, Business sophistication and Creative outputs.

Northern Africa and Western Asia

Compared to other economies in Northern Africa and Western Asia, Egypt performs below average in all seven of the GII pillars.

OVERVIEW OF EGYPT RANKINGS IN THE SEVEN GII AREAS

Egypt performs best in Knowledge & technology outputs 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 Egypt in the GII 2020.

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.3.4	QS university ranking, average score top 3*	48	1	Institutions	115
3.3.1	GDP/unit of energy use	45	1.2	Regulatory environment	124
4.3.3	Domestic market scale, bn PPP\$	19	1.2.1	Regulatory quality*	121
5.1.1	Knowledge-intensive employment, %	45	1.2.3	Cost of redundancy dismissal, salary weeks	124
5.2.2	State of cluster development†	22	2.2.2	Graduates in science & engineering, %	102
5.3.2	High-tech imports, % total trade	45	2.3.3	Global R&D companies, top 3, mn US\$	42
6.1.5	Citable documents H-index	47	3.2	General infrastructure	116
6.2	Knowledge impact	36	3.2.3	Gross capital formation, % GDP	114
6.2.1	Growth rate of PPP\$ GDP/worker, %	20	4.2	Investment	119
6.2.3	Computer software spending, % GDP	21	4.2.3	Venture capital deals/bn PPP\$ GDP	70
7.2.5	Creative goods exports, % total trade	45	5.1.2	Firms offering formal training, %	93
			7.2.2	National feature films/mn pop. 15–69	96
			7.2.3	Entertainment & Media market/th pop. 15–69	61
			7.3.2	Country-code TLDs/th pop. 15–69	123

STRENGTHS

GII strengths for Egypt are found in six of the seven GII pillars.

- Human capital & research (90): the indicator QS university ranking (48) reveals a strength.
- Infrastructure (99): demonstrates strength in the indicator GDP/unit of energy use (45).
- Market sophistication (106): shows strength in the indicator Domestic market scale (19).
- Business sophistication (103): displays strengths in the indicators Knowledge-intensive employment (45), State of cluster development (22) and High-tech imports (45).
- Knowledge & technology outputs (65): reveals strengths in the sub-pillar Knowledge impact (36) and in the indicators Citable documents H-index (47), Growth rate of PPP (20) and Computer software spending (21).
- Creative outputs (101): the indicator Creative goods exports (45) demonstrates a strength.

WEAKNESSES

GII weaknesses for Egypt are found in six of the seven GII pillars.

- Institutions (115): exhibits weaknesses in the sub-pillar Regulatory environment (124) and in the indicators Regulatory quality (121) and Cost of redundancy dismissal (124).
- Human capital & research (90): has weaknesses in the indicators Graduates in science & engineering (102) and Global R&D companies (42).
- Infrastructure (99): displays weaknesses in the sub-pillar General infrastructure (116) and in the indicator Gross capital formation (114).
- Market sophistication (106): shows weaknesses in the sub-pillar Investment (119) and in the indicator Venture capital deals (70).
- Business sophistication (103): the indicator Firms offering formal training (93) reveals a weakness.
- Creative outputs (101): demonstrates weaknesses in the indicators National feature films (96), Entertainment & Media market (61) and Country-code TLDs (123).

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
82	104	Lower middle	NAWA	100.4	1,391.3	12,242.7	92
				Score/Value	Rank		
INSTITUTIONS				48.6	115		
1.1	Political environment	45.6	104				
1.1.1	Political and operational stability*	62.5	92				
1.1.2	Government effectiveness*	37.1	106				
1.2	Regulatory environment	35.2	124				
1.2.1	Regulatory quality*	18.9	121	◇			
1.2.2	Rule of law*	35.9	89				
1.2.3	Cost of redundancy dismissal, salary weeks	36.8	124	◇			
1.3	Business environment	65.0	84				
1.3.1	Ease of starting a business*	87.8	72				
1.3.2	Ease of resolving insolvency*	42.2	93				
HUMAN CAPITAL & RESEARCH				21.5	90		
2.1	Education	40.0	[80]				
2.1.1	Expenditure on education, % GDP	n/a	n/a				
2.1.2	Government funding/pupil, secondary, % GDP/cap	13.8	85				
2.1.3	School life expectancy, years	13.3	77				
2.1.4	PISA scales in reading, maths, & science	n/a	n/a				
2.1.5	Pupil-teacher ratio, secondary	15.2	74				
2.2	Tertiary education	13.5	109				
2.2.1	Tertiary enrolment, % gross	35.2	76				
2.2.2	Graduates in science & engineering, %	11.2	102	◇			
2.2.3	Tertiary inbound mobility, %	1.8	78				
2.3	Research & development (R&D)	11.0	55				
2.3.1	Researchers, FTE/mn pop	686.7	61				
2.3.2	Gross expenditure on R&D, % GDP	0.7	49	◆			
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US	0.0	42	◇			
2.3.4	QS university ranking, average score top 3*	21.5	48	◆◆			
INFRASTRUCTURE				31.5	99		
3.1	Information & communication technologies (ICTs)	50.3	96				
3.1.1	ICT access*	56.3	81	◆			
3.1.2	ICT use*	37.3	100				
3.1.3	Government's online service*	53.5	102				
3.1.4	E-participation*	53.9	101				
3.2	General infrastructure	17.4	116				
3.2.1	Electricity output, kWh/mn pop	1,928.8	79	◆			
3.2.2	Logistics performance*	35.4	66				
3.2.3	Gross capital formation, % GDP	17.3	114	◇			
3.3	Ecological sustainability	26.8	74				
3.3.1	GDP/unit of energy use	10.9	45	●			
3.3.2	Environmental performance*	43.3	81	◆			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	0.6	76				
MARKET SOPHISTICATION				39.3	106		
4.1	Credit	30.0	108				
4.1.1	Ease of getting credit*	65.0	61				
4.1.2	Domestic credit to private sector, % GDP	25.5	103				
4.1.3	Microfinance gross loans, % GDP	0.1	62				
4.2	Investment	24.0	119				
4.2.1	Ease of protecting minority investors*	64.0	56				
4.2.2	Market capitalization, % GDP	15.5	61				
4.2.3	Venture capital deals/bn PPP\$ GDP	0.0	70	◇			
4.3	Trade, competition, and market scale	63.9	62				
4.3.1	Applied tariff rate, weighted avg., %	8.2	105				
4.3.2	Intensity of local competition†	65.7	77				
4.3.3	Domestic market scale, bn PPP\$	1,391.3	19	◆◆			
BUSINESS SOPHISTICATION				18.7	103		
5.1	Knowledge workers	15.2	108				
5.1.1	Knowledge-intensive employment, %	30.3	45	●◆			
5.1.2	Firms offering formal training, %	10.0	93	◇			
5.1.3	GERD performed by business, % GDP	0.0	79				
5.1.4	GERD financed by business, %	3.9	87				
5.1.5	Females employed w/advanced degrees, %	5.5	88				
5.2	Innovation linkages	19.3	74				
5.2.1	University/industry research collaboration†	38.5	79				
5.2.2	State of cluster development†	63.6	22	◆◆			
5.2.3	GERD financed by abroad, % GDP	0.0	86				
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	0.0	96				
5.2.5	Patent families 2+ offices/bn PPP\$ GDP	0.0	94				
5.3	Knowledge absorption	21.6	94				
5.3.1	Intellectual property payments, % total trade	0.4	71				
5.3.2	High-tech imports, % total trade	9.0	45	●			
5.3.3	ICT services imports, % total trade	1.0	70				
5.3.4	FDI net inflows, % GDP	2.8	61				
5.3.5	Research talent, % in business enterprise	6.3	69				
KNOWLEDGE & TECHNOLOGY OUTPUTS				19.7	65		
6.1	Knowledge creation	12.7	69				
6.1.1	Patents by origin/bn PPP\$ GDP	0.8	72				
6.1.2	PCT patents by origin/bn PPP\$ GDP	0.0	86				
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	n/a				
6.1.4	Scientific & technical articles/bn PPP\$ GDP	8.4	59				
6.1.5	Citable documents H-index	17.4	47	◆◆			
6.2	Knowledge impact	31.7	36				
6.2.1	Growth rate of PPP\$ GDP/worker, %	3.9	20	●			
6.2.2	New businesses/th pop. 15-64	n/a	n/a				
6.2.3	Computer software spending, % GDP	0.0	21	◆◆			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	1.5	92				
6.2.5	High- and medium-high-tech manufacturing, %	21.9	50				
6.3	Knowledge diffusion	14.6	99				
6.3.1	Intellectual property receipts, % total trade	n/a	n/a				
6.3.2	High-tech net exports, % total trade	0.2	99				
6.3.3	ICT services exports, % total trade	1.2	77				
6.3.4	FDI net outflows, % GDP	0.1	103				
CREATIVE OUTPUTS				13.4	101		
7.1	Intangible assets	19.2	95				
7.1.1	Trademarks by origin/bn PPP\$ GDP	16.3	98				
7.1.2	Global brand value, top 5,000, % GDP	4.2	71				
7.1.3	Industrial designs by origin/bn PPP\$ GDP	1.3	59				
7.1.4	ICTs & organizational model creation†	56.0	57				
7.2	Creative goods and services	6.9	94				
7.2.1	Cultural & creative services exports, % total trade	n/a	n/a				
7.2.2	National feature films/mn pop. 15-69	0.6	96	◇			
7.2.3	Entertainment & Media market/th pop. 15-69	0.4	61	◇			
7.2.4	Printing and other media, % manufacturing	0.5	85				
7.2.5	Creative goods exports, % total trade	0.9	45	●			
7.3	Online creativity	8.4	92				
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	1.2	92				
7.3.2	Country-code TLDs/th pop. 15-69	0.0	123	◇			
7.3.3	Wikipedia edits/mn pop. 15-69	35.8	87				
7.3.4	Mobile app creation/bn PPP\$ GDP	0.2	81				

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 Egypt.

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.1	Expenditure on education, % GDP	n/a	2018	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths & science	n/a	2018	OECD Programme for International Student Assessment (PISA)
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2018	World Intellectual Property Organization
6.2.2	New businesses/th pop. 15–64	n/a	2018	World Bank
6.3.1	Intellectual property receipts, % total trade	n/a	2018	World Trade Organization
7.2.1	Cultural & creative services exports, % total trade	n/a	2018	World Trade Organization

Outdated data

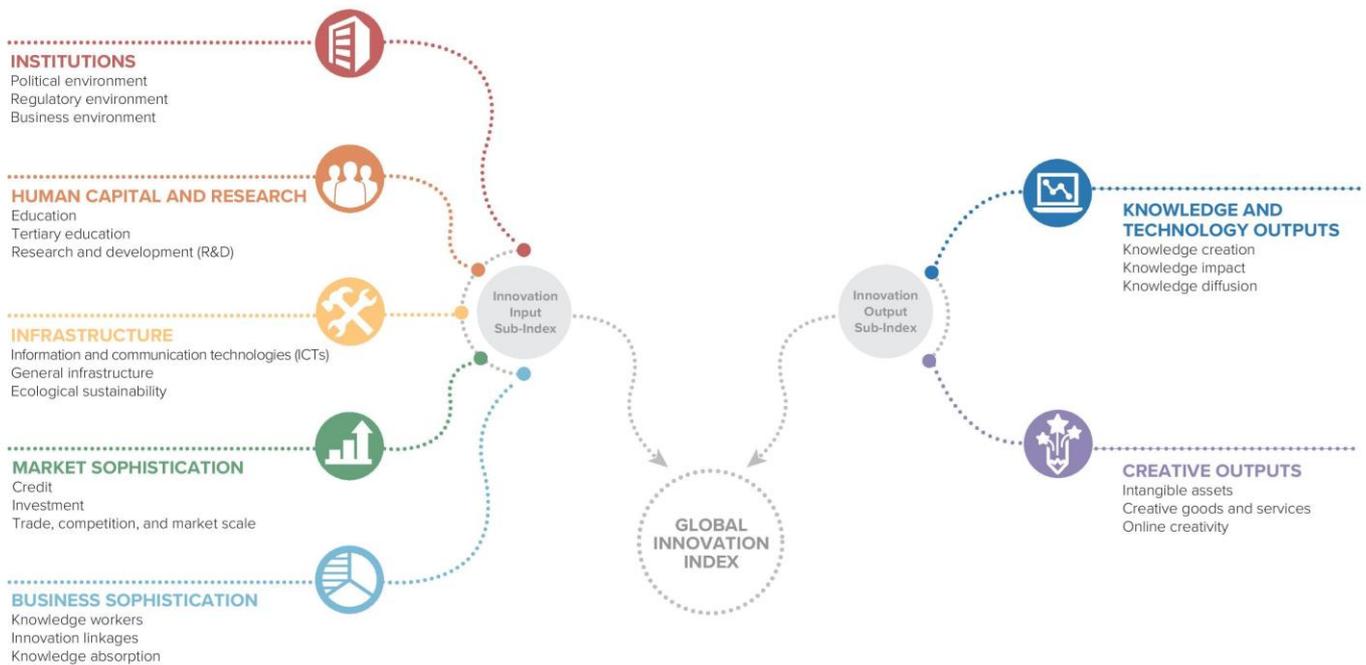
Code	Indicator name	Country year	Model year	Source
2.2.2	Graduates in science & engineering, %	2016	2017	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2016	2017	UNESCO Institute for Statistics
5.1.1	Knowledge-intensive employment, %	2017	2018	International Labour Organization
5.1.2	Firms offering formal training, %	2015	2018	World Bank
5.1.5	Females employed w/advanced degrees, %	2017	2018	International Labour Organization
6.2.5	High- & medium-high-tech manufacturing, %	2016	2017	United Nations Industrial Development Organization
7.2.2	National feature films/mn pop. 15–69	2016	2017	UNESCO Institute for Statistics
7.2.4	Printing & other media, % manufacturing	2016	2017	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 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.

