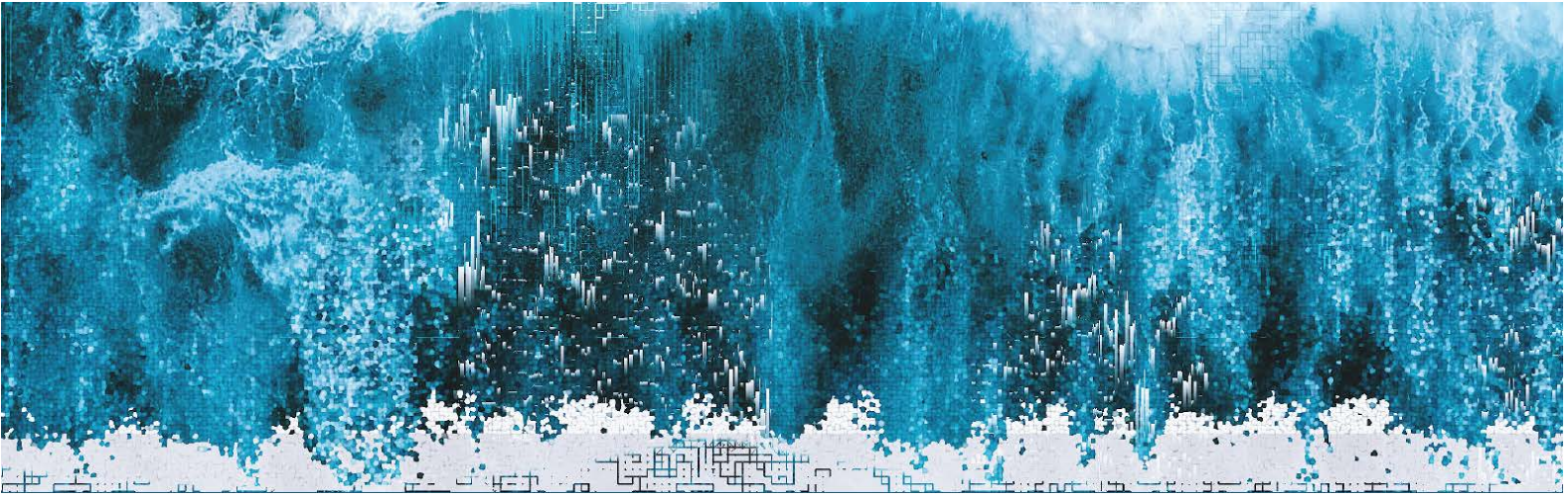


GLOBAL INNOVATION INDEX 2018

Egypt

95th Egypt is ranked 95th in the GII 2018, moving up 10 positions from the previous year.

The GII indicators are grouped into innovation inputs and outputs. The following table reflects Egypt's ranking over time[1].

Egypt's ranking over time

	GII	Input	Output	Efficiency
2018	95	105	79	45
2017	105	106	97	81
2016	107	107	98	74

- Egypt jumps 10 positions in the GII ranking, taking the 95th position this year.
- It ranks better in innovation outputs than inputs. In the former, Egypt substantially improves this year, gaining 18 positions and positioning 79th.
- Over the last three years, Egypt has gradually improved also in innovation inputs, moving to the 105th position this year.
- Egypt ranks 45th in the Innovation Efficiency Ratio, leaping from the 81st spot it held last year. The country proves to be highly efficient in translating its innovation inputs into outputs, as demonstrated by this ratio. This is partly due to a higher ranking in innovation outputs (79th) compared to inputs (105th).

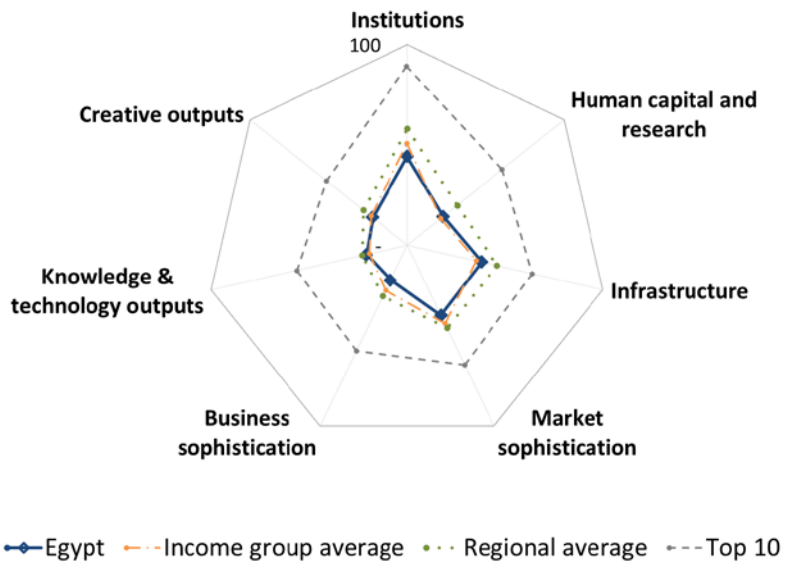
16th Egypt is ranked 16th among the 30 lower-middle-income economies in the GII 2018.

17th Egypt is ranked 17th among the 19 countries in Northern Africa and Western Asia.

[1] Note that year-on-year comparisons of the GII ranks are imperfect and influenced by changes in the GII model and data availability.

Benchmarking Egypt to other lower-middle-income countries and the Northern Africa and Western Asia region

Egypt's scores by GII area



Lower-middle-income countries

Egypt has high scores in 3 of the 7 GII areas - **Human Capital & Research, Infrastructure,** and **Knowledge & Technology Outputs**, in which it scores above the average of the lower-middle-income group.

Top scores in areas such as *Education, Information & Communication Technologies (ICTs),* and *Knowledge impact* are behind these high rankings.

Northern Africa and Western Asia region

Compared to other countries in the Northern Africa and Western Asia region, Egypt performs below-average in all GII areas.

Egypt's innovation profile

Strengths

- The most important strength for Egypt is in the **Innovation Efficiency Ratio**, where it ranks 45th.
- On the **innovation input** side, Egypt exhibits a number of strengths in four of the five GII input areas.
- In **Human Capital & Research** (89th), the indicator *Quality of universities* (46th) is highlighted as a strength.
- In **Infrastructure** (90th), Egypt is strong in two indicators – *Logistics performance* (48th) and *GDP per unit of energy use* (30th).
- In **Market Sophistication** (104th), the country exhibits GII strengths in the area *Trade, competition & market scale* (48th) and in the indicator *Domestic market scale* (21st).
- The indicator *Knowledge-intensive employment* (41st) is marked as a strength in **Business Sophistication** (117th).
- On the **innovation output** side, most of Egypt's strengths lie within **Knowledge & Technology Outputs** (66th), the top-ranked GII area for the country. Here Egypt performs strongly in one of its three components – *Knowledge impact* (45th). At the indicator level, GII

strengths are shown in *Quality of scientific publications* (48th), *Productivity growth* (29th), *Computer software spending* (49th), and *Intellectual property receipts* (36th).

- The indicator *Creative goods exports* (28th) is strong within **Creative Outputs** (89th).

Weaknesses

- Most of relative GII weaknesses for Egypt are accrued on the **innovation input** side of the GII.

- The GII area **Institutions** (120th), the lowest ranking GII area, is signaled as a weakness for the country. Here it ranks relatively weakly in three indicators: *Political stability & safety* (119th), *Regulatory quality* (118th), and *Cost of redundancy dismissal* (117th).

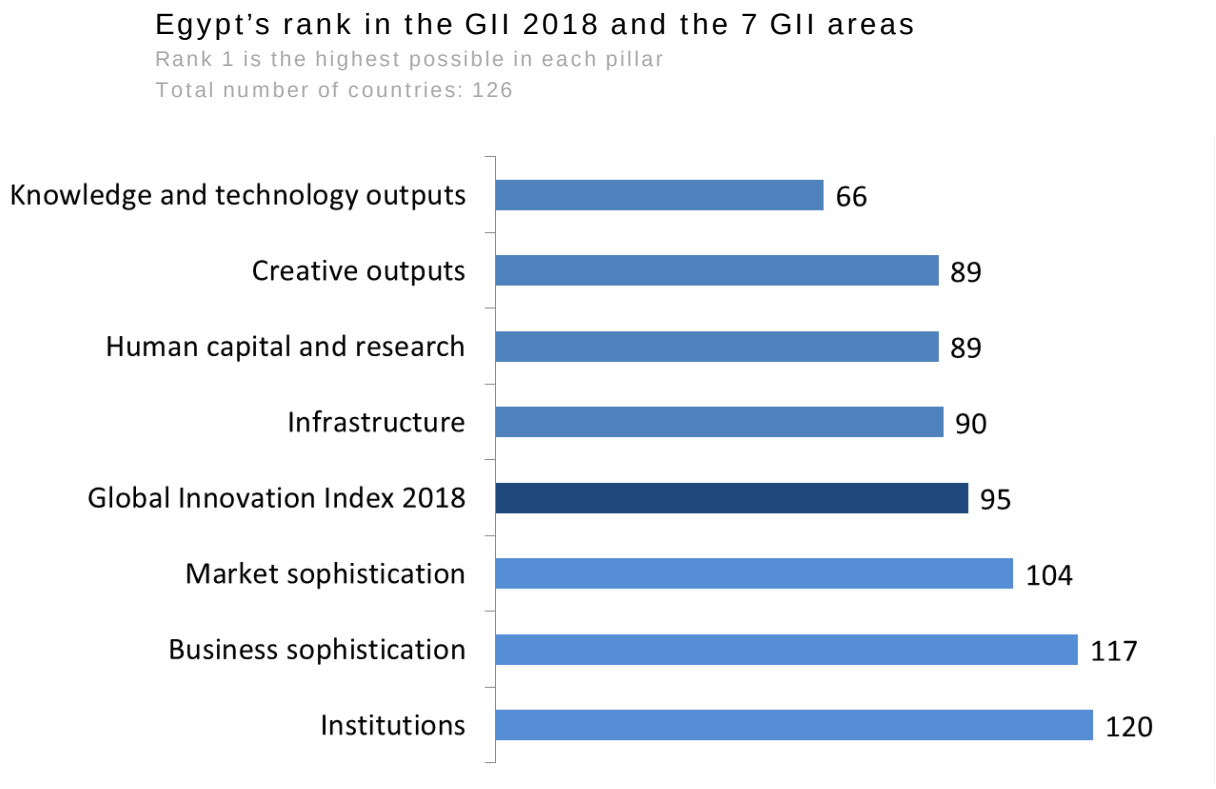
- In **Business Sophistication** (117th), relatively weak performance is shown in another three indicators: *Firms offering formal training* (89th), *R&D financed by abroad* (99th), and *Patent families in 2 or more offices* (107th).

- The indicators *Graduates in science & engineering* (91st) and *Global R&D companies expenditure* (40th) are signaled as GII weaknesses in **Human Capital & Research** (89th).

- One indicator – *Gross capital formation* (114th) – is relatively weak in **Infrastructure** (90th).

- In **innovation outputs**, only one GII weakness is found in the indicator *Country-code TLDs* (119th) within the area **Creative Outputs** (89th).

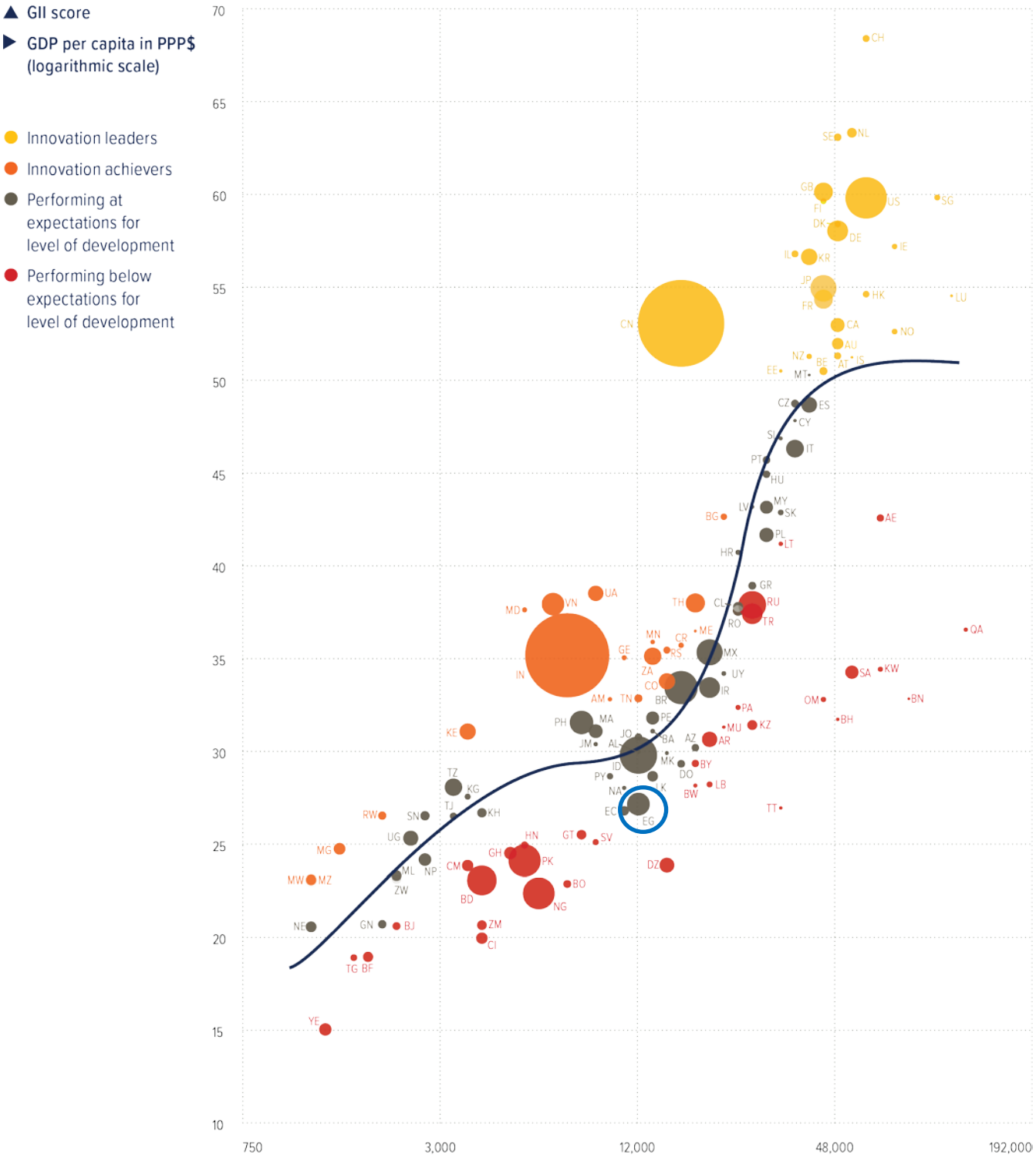
The following figure presents a summary of Egypt's ranks in the 7 GII areas, as well as the overall rank in the GII 2018.



Expected vs. Observed Innovation Performance

The GII bubble chart shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The depicted trendline gives an indication of the expected innovation performance at different levels of income. Countries located above the trendline are performing better that what would be expected based on their income level. Countries below the line are Innovation Under-performers relative to GDP.

Relative to GDP, Egypt performs at its expected level of development.



Missing and Outdated Data

More and better data improves the ability of a country to understand its strengths and weaknesses and give policymakers greater capacity to plan and adapt public policies accordingly. The GII 2018 covers 126 countries that complied with the minimum indicator coverage of 35 indicators in the Innovation Input Sub-Index (66%) and 18 indicators in the Innovation Output Sub-Index (66%).

The following tables show data for Egypt that is not available or that is outdated.

Missing Data

Code	Indicator	Country Year	Model Year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2014	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths & science	n/a	2015	OECD PISA
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	2016	WIPO, Intellectual Property Statistics
6.2.2	New businesses/th pop. 15–64	n/a	2016	World Bank, Doing Business
7.2.1	Cultural & creative services exports, % total trade	n/a	2016	WTO, Trade in Commercial Services

Outdated Data

Code	Indicator	Country Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2008	2014	UNESCO Institute for Statistics
5.3.1	Intellectual property payments, % total trade	2015	2016	WTO, Trade in Commercial Services
5.3.3	ICT services imports, % total trade	2015	2016	WTO, Trade in Commercial Services
6.2.5	High- & medium-high-tech manufactures, %	2014	2015	UNIDO, Industrial Statistics
6.3.1	Intellectual property receipts, % total trade	2007	2016	WTO, Trade in Commercial Services
6.3.3	ICT services exports, % total trade	2015	2016	WTO, Trade in Commercial Services
7.1.2	Industrial designs by origin/bn PPP$ GDP	2015	2016	WIPO, Intellectual Property Statistics
7.2.4	Printing & other media, % manufacturing	2014	2015	UNIDO, Industrial Statistics
7.2.5	Creative goods exports, % total trade	2015	2016	UN COMTRADE

EGYPT

GII 2018 rank **95**

Output rank	Input rank	Income	Region	Efficiency ratio	Population (mn)	GDP, PPP$	GDP per capita, PPP$	GII 2017 rank
79	105	Lower-middle	NAWA	45 ●	97.6	1,199.0	12,670.8	105

		Score/Value	Rank	
	Institutions	**44.3**	**120**	○
1.1	Political environment	29.8	117	
1.1.1	Political stability & safety*	31.8	119	○
1.1.2	Government effectiveness*	28.8	107	
1.2	Regulatory environment	41.3	116	
1.2.1	Regulatory quality*	20.4	118	○ ◇
1.2.2	Rule of law*	32.7	89	
1.2.3	Cost of redundancy dismissal, salary weeks	36.8	117	○
1.3	Business environment	61.7	93	
1.3.1	Ease of starting a business*	84.5	80	
1.3.2	Ease of resolving insolvency*	38.9	100	
	Human capital & research	**23.0**	**89**	
2.1	Education	45.3	74	
2.1.1	Expenditure on education, % GDP◴	3.8	87	
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3	School life expectancy, years	13.1	75	
2.1.4	PISA scales in reading, maths & science	n/a	n/a	
2.1.5	Pupil-teacher ratio, secondary	14.8	68	
2.2	Tertiary education	11.3	106	
2.2.1	Tertiary enrolment, % gross	34.4	74	
2.2.2	Graduates in science & engineering, %	11.2	91	○ ◇
2.2.3	Tertiary inbound mobility, %	1.8	73	
2.3	Research & development (R&D)	12.3	53	◆
2.3.1	Researchers, FTE/mn pop.	680.3	57	
2.3.2	Gross expenditure on R&D, % GDP	0.7	48	◆
2.3.3	Global R&D companies, top 3, mn US$	0.0	40	○ ◇
2.3.4	QS university ranking, average score top 3*	24.6	46	● ◆
	Infrastructure	**37.9**	**90**	
3.1	Information & communication technologies (ICTs)	43.8	91	
3.1.1	ICT access*	54.0	78	
3.1.2	ICT use*	33.5	91	
3.1.3	Government's online service*	47.1	89	
3.1.4	E-participation*	40.7	97	
3.2	General infrastructure	29.2	102	
3.2.1	Electricity output, kWh/cap	1,988.6	78	
3.2.2	Logistics performance*	51.9	48	● ◆
3.2.3	Gross capital formation, % GDP	15.6	114	○
3.3	Ecological sustainability	40.6	53	◆
3.3.1	GDP/unit of energy use	11.6	30	●
3.3.2	Environmental performance*	61.2	59	◆
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.9	71	
	Market sophistication	**38.8**	**104**	
4.1	Credit	21.1	112	
4.1.1	Ease of getting credit*	50.0	79	
4.1.2	Domestic credit to private sector, % GDP	34.1	92	
4.1.3	Microfinance gross loans, % GDP	0.0	65	
4.2	Investment	30.0	116	
4.2.1	Ease of protecting minority investors*	55.0	78	
4.2.2	Market capitalization, % GDP	16.5	68	
4.2.3	Venture capital deals/bn PPP$ GDP	0.0	57	
4.3	Trade, competition, & market scale	65.4	48	●
4.3.1	Applied tariff rate, weighted mean, %	6.6	97	
4.3.2	Intensity of local competition†	63.8	83	
4.3.3	Domestic market scale, bn PPP$	1,199.0	21	● ◆

		Score/Value	Rank	
	Business sophistication	**19.5**	**117**	◇
5.1	Knowledge workers	21.7	101	
5.1.1	Knowledge-intensive employment, %	32.8	41	● ◆
5.1.2	Firms offering formal training, % firms	10.0	89	○ ◇
5.1.3	GERD performed by business, % GDP	0.0	73	
5.1.4	GERD financed by business, %	5.9	76	
5.1.5	Females employed w/advanced degrees, %	5.4	81	
5.2	Innovation linkages	18.2	113	
5.2.1	University/industry research collaboration†	29.2	106	
5.2.2	State of cluster development†	47.7	53	
5.2.3	GERD financed by abroad, %	0.0	99	○
5.2.4	JV–strategic alliance deals/bn PPP$ GDP	0.0	98	
5.2.5	Patent families 2+ offices/bn PPP$ GDP	0.0	107	○
5.3	Knowledge absorption	18.6	111	
5.3.1	Intellectual property payments, % total trade◴	0.4	69	
5.3.2	High-tech net imports, % total trade	7.0	79	
5.3.3	ICT services imports, % total trade◴	0.7	85	
5.3.4	FDI net inflows, % GDP	2.0	78	
5.3.5	Research talent, % in business enterprise	6.0	71	
	Knowledge & technology outputs	**21.1**	**66**	
6.1	Knowledge creation	9.2	73	
6.1.1	Patents by origin/bn PPP$ GDP	0.8	71	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.0	89	
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	n/a	
6.1.4	Scientific & technical articles/bn PPP$ GDP	6.7	66	
6.1.5	Citable documents H index	15.2	48	●
6.2	Knowledge impact	40.5	45	●
6.2.1	Growth rate of PPP$ GDP/worker, %	2.3	29	●
6.2.2	New businesses/th pop. 15–64	n/a	n/a	
6.2.3	Computer software spending, % GDP	0.3	49	●
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	2.4	85	
6.2.5	High- & medium-high-tech manufactures, %◴	0.2	52	
6.3	Knowledge diffusion	13.7	103	
6.3.1	Intellectual property receipts, % total trade◴	0.3	36	●
6.3.2	High-tech net exports, % total trade	0.1	112	
6.3.3	ICT services exports, % total trade◴	1.6	65	
6.3.4	FDI net outflows, % GDP	0.1	103	
	Creative outputs	**22.1**	**89**	
7.1	Intangible assets	35.0	93	
7.1.1	Trademarks by origin/bn PPP$ GDP	11.3	101	
7.1.2	Industrial designs by origin/bn PPP$ GDP◴	1.5	57	
7.1.3	ICTs & business model creation†	60.2	63	
7.1.4	ICTs & organizational model creation†	54.2	59	
7.2	Creative goods & services	17.6	74	
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	90	
7.2.3	Entertainment & Media market/th pop. 15–69	1.0	58	
7.2.4	Printing & other media, % manufacturing◴	0.4	87	
7.2.5	Creative goods exports, % total trade◴	2.0	28	● ◆
7.3	Online creativity	0.9	102	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	1.2	90	
7.3.2	Country-code TLDs/th pop. 15–69	0.0	119	○
7.3.3	Wikipedia edits/mn pop. 15–69	2.5	97	
7.3.4	Mobile app creation/bn PPP$ GDP	0.8	79	

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question.
◴ indicates that the country'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; see page 75 of this appendix for details.