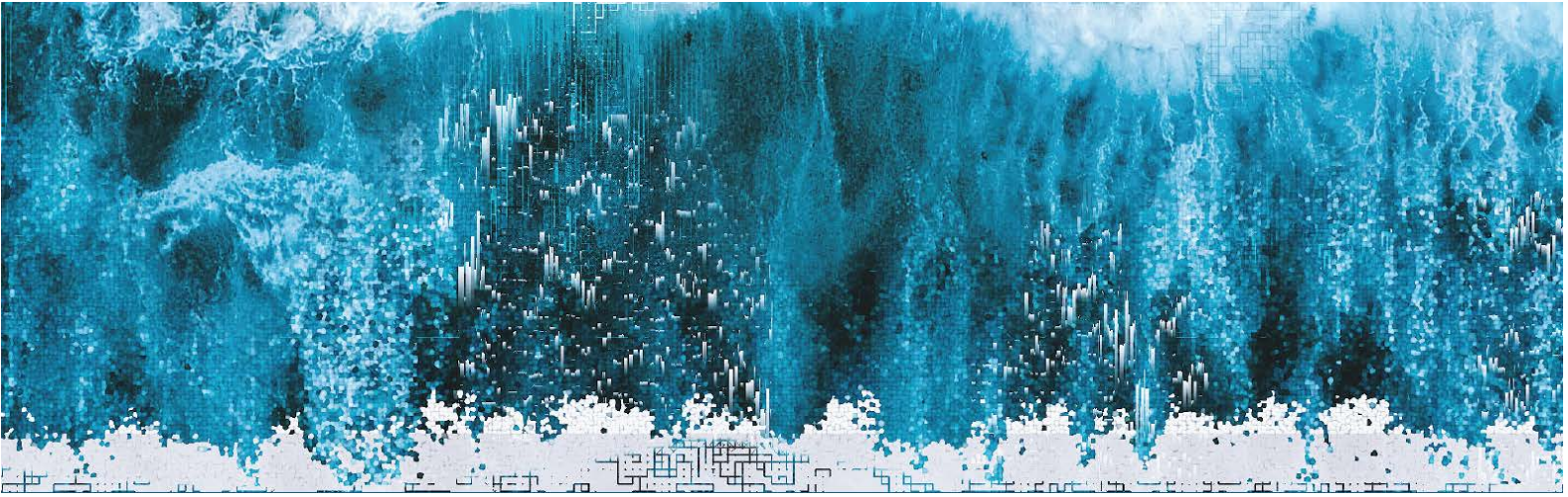


GLOBAL INNOVATION INDEX 2018

Cameroon

111th Cameroon is ranked 111th in the GII 2018, moving up 6 positions from last year.

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

Cameroon's ranking over time

	GII	Input	Output	Efficiency
2018	111	115	98	75
2017	117	117	113	92
2016	118	118	113	93

- Over the last three years, Cameroon has gradually increased in innovation inputs, placing 115th this year and moving up 2 positions from 2017 and 3 from 2016.
- This year Cameroon improves also in innovation outputs, reaching the 98th position, after ranking 113th for the past two years.
- Cameroon is quite efficient in translating its innovation inputs into outputs. This is shown in the Innovation Efficiency Ratio which positions 75th in the world this year, moving up from the 92nd-93rd spots it held over the last two years. This advancement is partly due to a higher (and improved) ranking in innovation outputs (98th) compared to inputs (115th). Relative to its GII position (111th), Cameroon's Innovation Efficiency Ratio (75th) seems rather strong.

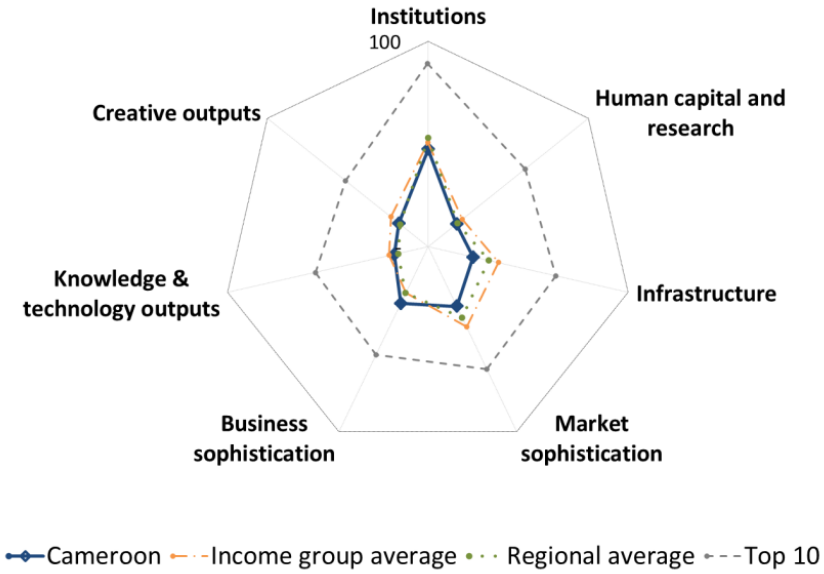
24th Cameroon is ranked 24th among the 30 lower-middle-income countries in the GII 2018.

12th Cameroon is ranked 12th among the 24 countries in Sub-Saharan Africa.

[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 Cameroon to other lower-middle-income countries and the Sub-Saharan Africa region

Cameroon's scores by area



Lower-middle-income countries

Cameroon has high scores in the GII area **Business Sophistication**, in which it scores above the average of the lower-middle-income group.

Top scores in areas such as *Innovation linkages* are behind this high ranking.

Sub-Saharan Africa region

Compared to other countries in the Sub-Saharan Africa region, Cameroon performs above average in 3 of the 7 GII areas: Business Sophistication, Knowledge & Technology Outputs, and Creative Outputs.

Cameroon's innovation profile

Strengths

- **Business Sophistication** (61st), the top-ranked GII area for Cameroon, is highlighted as a strength. In this area the country exhibits strong performance in one of its three components – *Innovation linkages* (66th) – and in the indicator *Firms offering formal training* (36th).

- In **Market Sophistication** (119th), GII strengths are demonstrated in the indicators *Ease of getting credit* (61st) and *Microfinance gross loans*, where Cameroon ranks 30th globally.

- On the innovation input side, comparative GII strengths are also found in two indicators: *Graduates in science & engineering* (50th) in **Human Capital & Research** (102nd) and *GDP per unit of energy use* (65th) in **Infrastructure** (122nd).

- On the **innovation output** side, Cameroon shows strengths in both the GII output areas.

- The indicators *Scientific & technical articles* (62nd), *Productivity growth* (40th), and *ICT services exports* (71st) are signaled as GII strengths in **Knowledge & Technology Outputs** (90th).

- Within **Creative Outputs** (103rd), strong performance is demonstrated in the indicators *Printing & other media* (38th) and *Country-code TLDs* (74th).

Weaknesses

- Most of the relative weaknesses for Cameroon are found on the **innovation input** side, among three of the five GII input areas.

- **Infrastructure** (122nd), the lowest-ranked area for Cameroon, is signaled as a GII weakness. Here the country performs weakly in one of its components – *Information & communication technologies (ICTs)* (119th) – as well as in the indicators *E-participation* (117th), *Logistics performance* (124th), and *Environmental performance* (117th).

- **Market Sophistication** (119th) is also identified as a GII weakness. Here two of its three components – *Investment* (121st) and *Trade, competition & market scale* (119th) – present weak performance. In addition, one indicator, *Applied tariff rate* (123rd), ranks weakly.

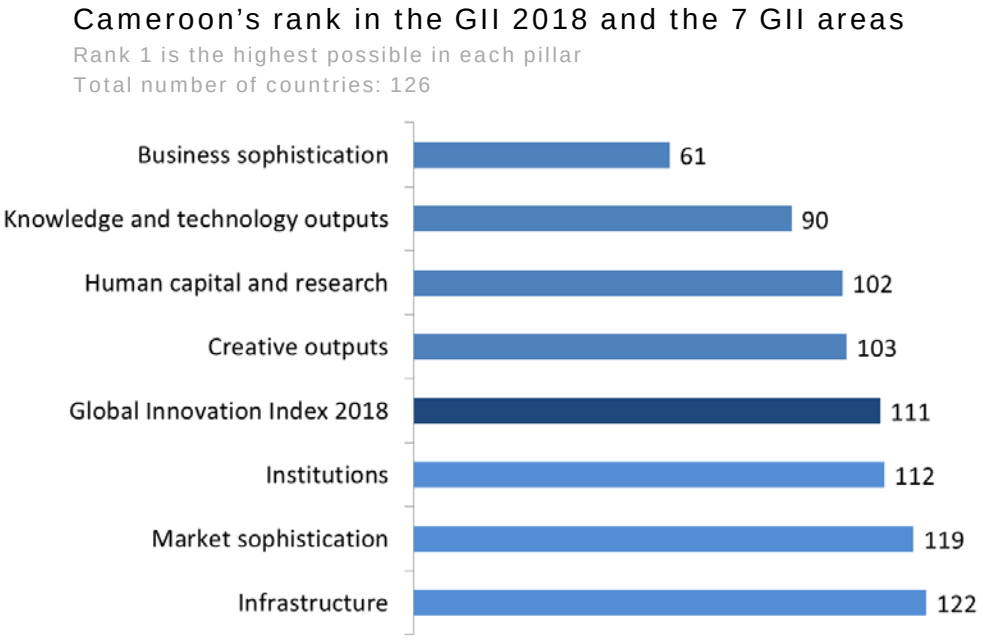
- On the innovation input side, comparative weaknesses also appear in **Human Capital & Research** (102nd) where the area *Research & development - R&D* (117th) as well as both its available indicators – *Global R&D companies expenditures* (40th) and *Quality of universities* (78th) – are signaled as weak.

- On the **innovation output** side, Cameroon demonstrates GII weaknesses in four indicators.

- In **Knowledge & Technology Outputs** (90th), the indicators *PCT patents by origin* (104th) and *High- & medium-high-tech manufactures* (99th) rank relatively weakly.

- The other two indicators – *Creative goods exports* (122nd) and *Wikipedia edits* (119th) – are relatively weak within **Creative Outputs** (103rd).

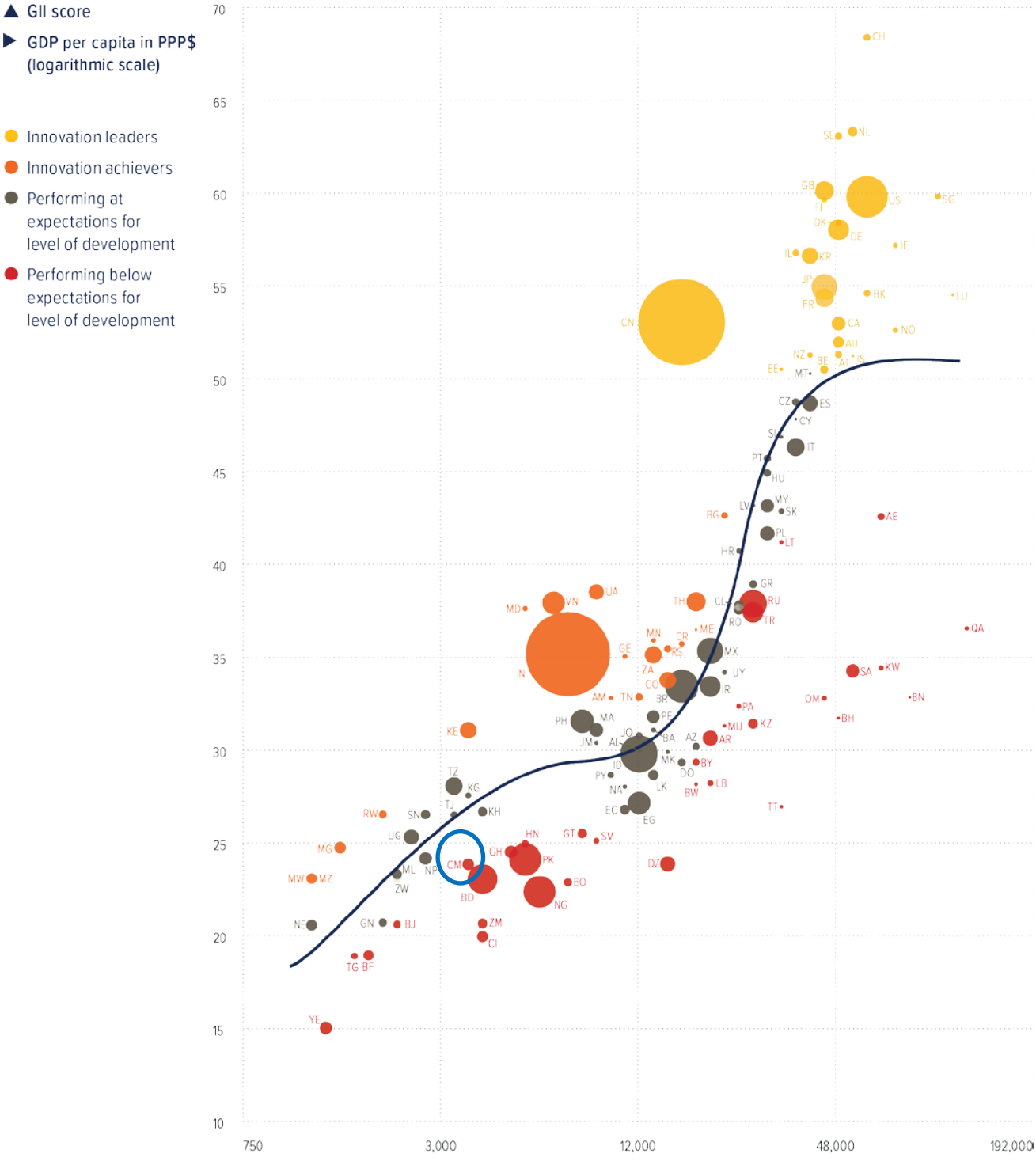
The following figure presents a summary of Cameroon's ranks in the 7 GII areas, as well as the overall rank in the GII 2018.



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, Cameroon performs below 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 Cameroon that is not available or that is outdated.

Missing Data

Code	Indicator	Country Year	Model Year	Source
2.1.4	PISA scales in reading, maths & science	n/a	2015	OECD PISA
2.3.1	Researchers, FTE/mn pop.	n/a	2016	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	n/a	2016	UNESCO Institute for Statistics
4.2.2	Market capitalization, % GDP	n/a	2016	World Bank, World Development Indicators
5.1.1	Knowledge-intensive employment, %	n/a	2016	ILO, ILOSTAT
5.1.3	GERD performed by business, % GDP	n/a	2016	UNESCO Institute for Statistics
5.1.4	GERD financed by business, %	n/a	2015	UNESCO Institute for Statistics
5.1.5	Females employed w/advanced degrees, %	n/a	2016	ILO, ILOSTAT
5.2.3	GERD financed by abroad, %	n/a	2015	UNESCO Institute for Statistics
5.2.5	Patent families 2+ offices/bn PPP$ GDP	n/a	2014	WIPO, Intellectual Property Statistics
5.3.5	Research talent, % in business enterprise	n/a	2016	UNESCO Institute for Statistics
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
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	2016	PwC's Global Entertainment and Media Outlook, 2017–2021
7.3.4	Mobile app creation/bn PPP$ GDP	n/a	2017	App Annie Intelligence

Outdated Data

Code	Indicator	Country Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2013	2014	UNESCO Institute for Statistics
2.1.2	Government funding/pupil, secondary, % GDP/cap	2012	2014	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2015	2016	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2015	2016	UNESCO Institute for Statistics
2.2.2	Graduates in science & engineering, %	2010	2016	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2012	2016	UNESCO Institute for Statistics
4.3.1	Applied tariff rate, weighted mean, %	2014	2016	World Bank, World Development Indicators
5.3.1	Intellectual property payments, % total trade	2015	2016	WTO, Trade in Commercial Services
5.3.2	High-tech net imports, % total trade	2015	2016	UN COMTRADE
5.3.3	ICT services imports, % total trade	2015	2016	WTO, Trade in Commercial Services
6.2.5	High- & medium-high-tech manufactures, %	2008	2015	UNIDO, Industrial Statistics
6.3.1	Intellectual property receipts, % total trade	2015	2016	WTO, Trade in Commercial Services
6.3.2	High-tech net exports, % total trade	2015	2016	UN COMTRADE
6.3.3	ICT services exports, % total trade	2015	2016	WTO, Trade in Commercial Services
7.2.2	National feature films/mn pop. 15–69	2009	2015	UNESCO Institute for Statistics
7.2.4	Printing & other media, % manufacturing	2008	2015	UNIDO, Industrial Statistics
7.2.5	Creative goods exports, % total trade	2015	2016	UN COMTRADE
7.3.3	Wikipedia edits/mn pop. 15–69	2014	2017	Wikimedia Foundation

CAMEROON

GII 2018 rank **111**

Output rank	Input rank	Income	Region	Efficiency ratio	Population (mn)	GDP, PPP$	GDP per capita, PPP$	GII 2017 rank
98	115	Lower-middle	SSF	75	24.1	81.6	3,660.3	117

		Score/Value	Rank	
	Institutions	**47.4**	**112**	
1.1	Political environment	31.8	113	
1.1.1	Political stability & safety*	42.7	109	
1.1.2	Government effectiveness*	26.3	114	
1.2	Regulatory environment	50.9	104	
1.2.1	Regulatory quality*	23.8	112	
1.2.2	Rule of law*	16.0	116	
1.2.3	Cost of redundancy dismissal, salary weeks	19.9	76	
1.3	Business environment	59.6	101	
1.3.1	Ease of starting a business*	82.4	94	
1.3.2	Ease of resolving insolvency*	36.7	106	
	Human capital & research	**17.8**	**102**	
2.1	Education	32.1	104	
2.1.1	Expenditure on education, % GDP[4]	2.8	105	◇
2.1.2	Government funding/pupil, secondary, % GDP/cap[4]	17.4	63	
2.1.3	School life expectancy, years[4]	12.5	81	
2.1.4	PISA scales in reading, maths & science	n/a	n/a	
2.1.5	Pupil-teacher ratio, secondary	19.3	81	
2.2	Tertiary education	21.3	90	
2.2.1	Tertiary enrolment, % gross[4]	17.4	92	
2.2.2	Graduates in science & engineering, %[4]	21.3	50	●
2.2.3	Tertiary inbound mobility, %[4]	1.1	80	
2.3	Research & development (R&D)	0.0	117	○ ◇
2.3.1	Researchers, FTE/mn pop.	n/a	n/a	
2.3.2	Gross expenditure on R&D, % GDP	n/a	n/a	
2.3.3	Global R&D companies, top 3, mn US$	0.0	40	○ ◇
2.3.4	QS university ranking, average score top 3*	0.0	78	○ ◇
	Infrastructure	**22.4**	**122**	○ ◇
3.1	Information & communication technologies (ICTs)	19.7	119	○ ◇
3.1.1	ICT access*	28.4	113	◇
3.1.2	ICT use*	11.6	116	◇
3.1.3	Government's online service*	21.7	113	◇
3.1.4	E-participation*	16.9	117	○ ◇
3.2	General infrastructure	20.7	118	
3.2.1	Electricity output, kWh/cap	289.5	109	◇
3.2.2	Logistics performance*	4.1	124	○ ◇
3.2.3	Gross capital formation, % GDP	20.1	85	
3.3	Ecological sustainability	26.8	108	
3.3.1	GDP/unit of energy use	8.6	65	●
3.3.2	Environmental performance*	40.8	117	○ ◇
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.2	111	
	Market sophistication	**32.2**	**119**	○ ◇
4.1	Credit	26.0	102	
4.1.1	Ease of getting credit*	60.0	61	●
4.1.2	Domestic credit to private sector, % GDP	15.6	116	◇
4.1.3	Microfinance gross loans, % GDP	0.8	30	●
4.2	Investment	29.0	121	○
4.2.1	Ease of protecting minority investors*	41.7	107	◇
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital deals/bn PPP$ GDP	0.0	52	
4.3	Trade, competition, & market scale	41.5	119	○ ◇
4.3.1	Applied tariff rate, weighted mean, %[4]	12.7	123	○ ◇
4.3.2	Intensity of local competition†	64.4	80	
4.3.3	Domestic market scale, bn PPP$	81.6	82	

		Score/Value	Rank	
	Business sophistication	**30.7**	**61**	● ◆
5.1	Knowledge workers	45.1	[45]	
5.1.1	Knowledge-intensive employment, %	n/a	n/a	
5.1.2	Firms offering formal training, % firms	37.6	36	●
5.1.3	GERD performed by business, % GDP	n/a	n/a	
5.1.4	GERD financed by business, %	n/a	n/a	
5.1.5	Females employed w/advanced degrees, %	n/a	n/a	
5.2	Innovation linkages	28.8	66	●
5.2.1	University/industry research collaboration†	37.6	82	
5.2.2	State of cluster development†	36.0	96	
5.2.3	GERD financed by abroad, %	n/a	n/a	
5.2.4	JV–strategic alliance deals/bn PPP$ GDP	0.0	84	
5.2.5	Patent families 2+ offices/bn PPP$ GDP	n/a	n/a	
5.3	Knowledge absorption	18.1	117	
5.3.1	Intellectual property payments, % total trade[4]	0.1	104	
5.3.2	High-tech net imports, % total trade[4]	5.8	99	
5.3.3	ICT services imports, % total trade[4]	0.5	99	
5.3.4	FDI net inflows, % GDP	1.6	89	
5.3.5	Research talent, % in business enterprise	n/a	n/a	
	Knowledge & technology outputs	**16.9**	**90**	
6.1	Knowledge creation	7.2	80	
6.1.1	Patents by origin/bn PPP$ GDP	0.6	78	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.0	104	○
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	n/a	
6.1.4	Scientific & technical articles/bn PPP$ GDP	7.5	62	●
6.1.5	Citable documents H index	6.1	85	
6.2	Knowledge impact	31.8	82	
6.2.1	Growth rate of PPP$ GDP/worker, %	1.9	40	●
6.2.2	New businesses/th pop. 15–64	n/a	n/a	
6.2.3	Computer software spending, % GDP	0.2	74	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	0.8	113	
6.2.5	High- & medium-high-tech manufactures, %[4]	0.0	99	○ ◇
6.3	Knowledge diffusion	11.8	111	
6.3.1	Intellectual property receipts, % total trade[4]	0.0	91	
6.3.2	High-tech net exports, % total trade[4]	0.2	99	
6.3.3	ICT services exports, % total trade[4]	1.3	71	●
6.3.4	FDI net outflows, % GDP	0.1	105	
	Creative outputs	**18.3**	**103**	
7.1	Intangible assets	29.4	105	
7.1.1	Trademarks by origin/bn PPP$ GDP	8.7	106	
7.1.2	Industrial designs by origin/bn PPP$ GDP	0.5	83	
7.1.3	ICTs & business model creation†	54.5	89	
7.1.4	ICTs & organizational model creation†	44.3	96	
7.2	Creative goods & services	13.7	79	
7.2.1	Cultural & creative services exports, % total trade	n/a	n/a	
7.2.2	National feature films/mn pop. 15–69[4]	1.8	63	
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	n/a	
7.2.4	Printing & other media, % manufacturing[4]	1.3	38	●
7.2.5	Creative goods exports, % total trade[4]	0.0	122	○
7.3	Online creativity	0.5	109	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	0.1	117	
7.3.2	Country-code TLDs/th pop. 15–69	1.3	74	●
7.3.3	Wikipedia edits/mn pop. 15–69[4]	0.1	119	○
7.3.4	Mobile app creation/bn PPP$ GDP	n/a	n/a	

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question.
[4] 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.