

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 time¹.

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.

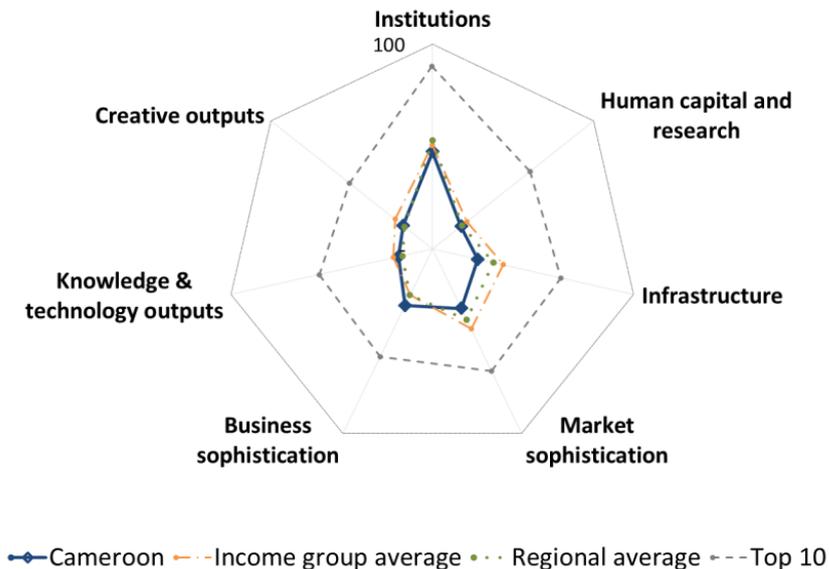
24th Cameroon is ranked 24th among the 30 lower-middle-income countries in the GII 2018.

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

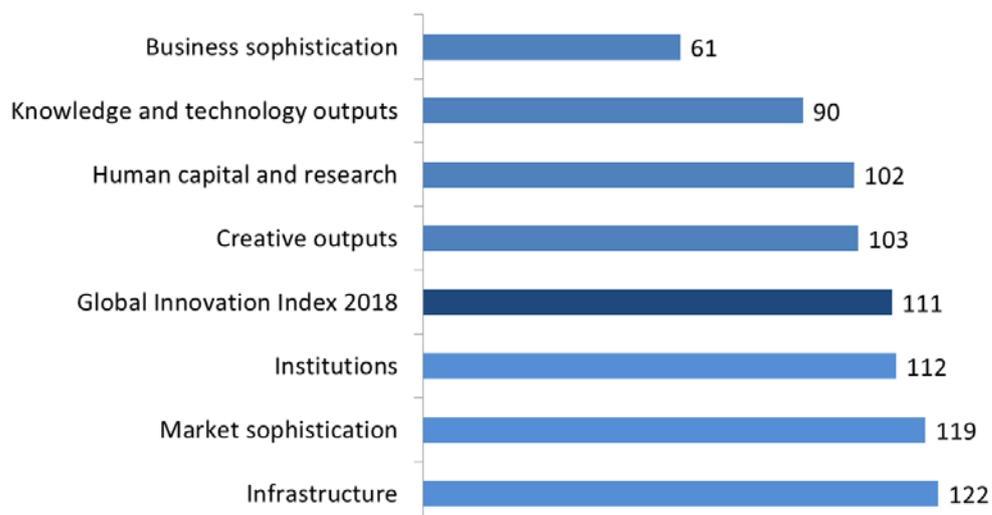
- Most of the relative weaknesses for Cameroon are found on the **innovation input** side, among three of the five GII input areas.
- **Infrastructure** (122nd), the lowest-ranked area for Cameroon, is signaled as a GII weakness. Here the country performs weakly in one of its components – *Information & 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.

Cameroon's rank in the GII 2018 and the 7 GII areas

Rank 1 is the highest possible in each pillar

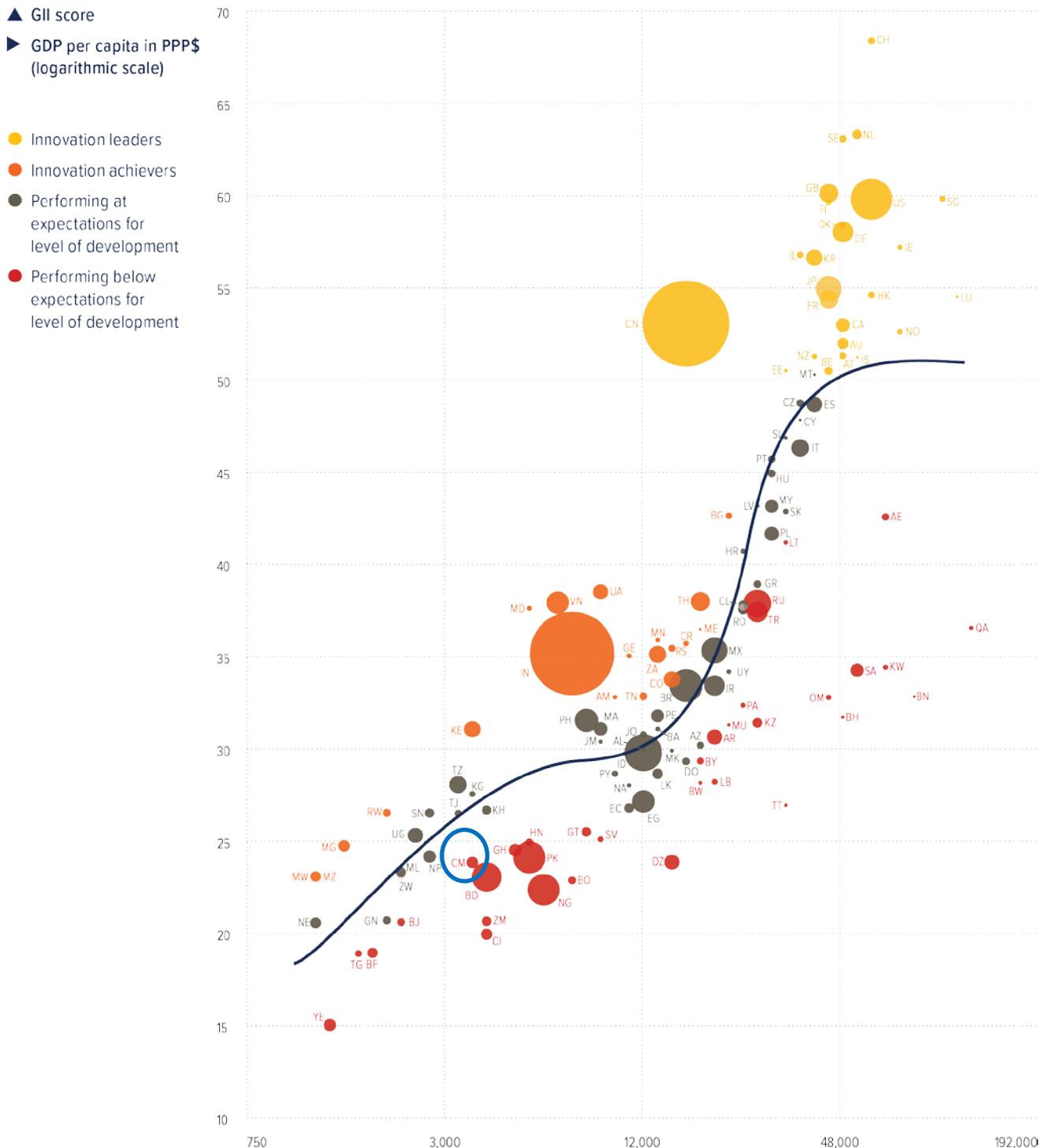
Total number of countries: 126



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 than 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



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		Score/Value	Rank		
	Institutions	47.4	112		Business sophistication	30.7	61 ●◆
1.1	Political environment.....	31.8	113	5.1	Knowledge workers.....	45.1	[45]
1.1.1	Political stability & safety*.....	42.7	109	5.1.1	Knowledge-intensive employment, %.....	n/a	n/a
1.1.2	Government effectiveness*.....	26.3	114	5.1.2	Firms offering formal training, % firms.....	37.6	36 ●
1.2	Regulatory environment.....	50.9	104	5.1.3	GERD performed by business, % GDP.....	n/a	n/a
1.2.1	Regulatory quality*.....	23.8	112	5.1.4	GERD financed by business, %.....	n/a	n/a
1.2.2	Rule of law*.....	16.0	116	5.1.5	Females employed w/advanced degrees, %.....	n/a	n/a
1.2.3	Cost of redundancy dismissal, salary weeks.....	19.9	76	5.2	Innovation linkages.....	28.8	66 ●
1.3	Business environment.....	59.6	101	5.2.1	University/industry research collaboration†.....	37.6	82
1.3.1	Ease of starting a business*.....	82.4	94	5.2.2	State of cluster development†.....	36.0	96
1.3.2	Ease of resolving insolvency*.....	36.7	106	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
	Human capital & research	17.8	102	5.3	Knowledge absorption.....	18.1	117
2.1	Education.....	32.1	104	5.3.1	Intellectual property payments, % total trade [Ⓔ]	0.1	104
2.1.1	Expenditure on education, % GDP [Ⓔ]	2.8	105 ◇	5.3.2	High-tech net imports, % total trade [Ⓔ]	5.8	99
2.1.2	Government funding/pupil, secondary, % GDP/cap [Ⓔ]	17.4	63	5.3.3	ICT services imports, % total trade [Ⓔ]	0.5	99
2.1.3	School life expectancy, years [Ⓔ]	12.5	81	5.3.4	FDI net inflows, % GDP.....	1.6	89
2.1.4	PISA scales in reading, maths & science.....	n/a	n/a	5.3.5	Research talent, % in business enterprise.....	n/a	n/a
2.1.5	Pupil-teacher ratio, secondary.....	19.3	81				
2.2	Tertiary education.....	21.3	90		Knowledge & technology outputs	16.9	90
2.2.1	Tertiary enrolment, % gross [Ⓔ]	17.4	92	6.1	Knowledge creation.....	7.2	80
2.2.2	Graduates in science & engineering, % [Ⓔ]	21.3	50 ●	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.6	78
2.2.3	Tertiary inbound mobility, % [Ⓔ]	1.1	80	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.0	104 ○
2.3	Research & development (R&D).....	0.0	117 ○◇	6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a
2.3.1	Researchers, FTE/mn pop.....	n/a	n/a	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	7.5	62 ●
2.3.2	Gross expenditure on R&D, % GDP.....	n/a	n/a	6.1.5	Citable documents H index.....	6.1	85
2.3.3	Global R&D companies, top 3, mn US\$.....	0.0	40 ○◇	6.2	Knowledge impact.....	31.8	82
2.3.4	QS university ranking, average score top 3*.....	0.0	78 ○◇	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
	Infrastructure	22.4	122 ○◇	6.2.3	Computer software spending, % GDP.....	0.2	74
3.1	Information & communication technologies (ICTs).....	19.7	119 ○◇	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	0.8	113
3.1.1	ICT access*.....	28.4	113 ◇	6.2.5	High- & medium-high-tech manufactures, % [Ⓔ]	0.0	99 ○◇
3.1.2	ICT use*.....	11.6	116 ◇	6.3	Knowledge diffusion.....	11.8	111
3.1.3	Government's online service*.....	21.7	113 ◇	6.3.1	Intellectual property receipts, % total trade [Ⓔ]	0.0	91
3.1.4	E-participation*.....	16.9	117 ○◇	6.3.2	High-tech net exports, % total trade [Ⓔ]	0.2	99
3.2	General infrastructure.....	20.7	118	6.3.3	ICT services exports, % total trade [Ⓔ]	1.3	71 ●
3.2.1	Electricity output, kWh/cap.....	289.5	109 ◇	6.3.4	FDI net outflows, % GDP.....	0.1	105
3.2.2	Logistics performance*.....	4.1	124 ○◇		Creative outputs	18.3	103
3.2.3	Gross capital formation, % GDP.....	20.1	85	7.1	Intangible assets.....	29.4	105
3.3	Ecological sustainability.....	26.8	108	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	8.7	106
3.3.1	GDP/unit of energy use.....	8.6	65 ●	7.1.2	Industrial designs by origin/bn PPP\$ GDP.....	0.5	83
3.3.2	Environmental performance*.....	40.8	117 ○◇	7.1.3	ICTs & business model creation†.....	54.5	89
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.2	111	7.1.4	ICTs & organizational model creation†.....	44.3	96
	Market sophistication	32.2	119 ○◇	7.2	Creative goods & services.....	13.7	79
4.1	Credit.....	26.0	102	7.2.1	Cultural & creative services exports, % total trade.....	n/a	n/a
4.1.1	Ease of getting credit*.....	60.0	61 ●	7.2.2	National feature films/mn pop. 15-69 [Ⓔ]	1.8	63
4.1.2	Domestic credit to private sector, % GDP.....	15.6	116 ◇	7.2.3	Entertainment & Media market/th pop. 15-69.....	n/a	n/a
4.1.3	Microfinance gross loans, % GDP.....	0.8	30 ●	7.2.4	Printing & other media, % manufacturing [Ⓔ]	1.3	38 ●
4.2	Investment.....	29.0	121 ○	7.2.5	Creative goods exports, % total trade [Ⓔ]	0.0	122 ○
4.2.1	Ease of protecting minority investors*.....	41.7	107 ◇	7.3	Online creativity.....	0.5	109
4.2.2	Market capitalization, % GDP.....	n/a	n/a	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	0.1	117
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	52	7.3.2	Country-code TLDs/th pop. 15-69.....	1.3	74 ●
4.3	Trade, competition, & market scale.....	41.5	119 ○◇	7.3.3	Wikipedia edits/mn pop. 15-69 [Ⓔ]	0.1	119 ○
4.3.1	Applied tariff rate, weighted mean, % [Ⓔ]	12.7	123 ○◇	7.3.4	Mobile app creation/bn PPP\$ GDP.....	n/a	n/a
4.3.2	Intensity of local competition†.....	64.4	80				
4.3.3	Domestic market scale, bn PPP\$.....	81.6	82				

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.