

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
88	118	Lower middle	CSA	216.6	1,202.1	5,126.1	105
		Score/Value	Rank			Score/Value	Rank
INSTITUTIONS 54.1 99				BUSINESS SOPHISTICATION 22.0 87			
1.1	Political environment	43.6	109	5.1	Knowledge workers	21.1	[98]
1.1.1	Political and operational stability*.....	58.9	104	5.1.1	Knowledge-intensive employment, %.....	11.6	103
1.1.2	Government effectiveness*.....	36.0	112	5.1.2	Firms offering formal training, %.....	32.0	44
1.2	Regulatory environment	44.5	116	5.1.3	GERD performed by business, % GDP.....	n/a	n/a
1.2.1	Regulatory quality*.....	24.8	109	5.1.4	GERD financed by business, %.....	n/a	n/a
1.2.2	Rule of law*.....	29.1	105	5.1.5	Females employed w/advanced degrees, %.....	1.6	105
1.2.3	Cost of redundancy dismissal, salary weeks.....	27.2	107	5.2	Innovation linkages	18.5	83
1.3	Business environment	74.1	55 ◆	5.2.1	University/industry research collaboration*.....	47.7	46 ● ◆
1.3.1	Ease of starting a business*.....	89.3	59	5.2.2	State of cluster development*.....	48.8	54
1.3.2	Ease of resolving insolvency*.....	59.0	53 ◆	5.2.3	GERD financed by abroad, % GDP.....	0.0	90
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	55
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.0	88
HUMAN CAPITAL & RESEARCH 12.2 118 ◇				KNOWLEDGE & TECHNOLOGY OUTPUTS 18.6 69			
2.1	Education	21.9	124 ○ ◇	6.1	Knowledge creation	15.3	[63]
2.1.1	Expenditure on education, % GDP.....	2.9	101 ◇	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.3	90
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	16.0	72	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	n/a	n/a
2.1.3	School life expectancy, years.....	8.3	117 ○ ◇	6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a
2.1.4	PISA scales in reading, maths, & science.....	n/a	n/a	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	10.9	47 ● ◆
2.1.5	Pupil-teacher ratio, secondary.....	20.4	98	6.1.5	Citable documents H-index.....	16.4	51 ●
2.2	Tertiary education	6.0	[123]	6.2	Knowledge impact	20.8	81
2.2.1	Tertiary enrolment, % gross.....	9.0	113 ○	6.2.1	Growth rate of PPP\$ GDP/worker, %.....	2.0	46 ●
2.2.2	Graduates in science & engineering, %.....	n/a	n/a	6.2.2	New businesses/th pop. 15-64.....	0.1	117 ○
2.2.3	Tertiary inbound mobility, %.....	n/a	n/a	6.2.3	Computer software spending, % GDP.....	0.0	51
2.3	Research & development (R&D)	8.8	62	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	2.0	84
2.3.1	Researchers, FTE/mn pop.....	335.6	75	6.2.5	High- and medium-high-tech manufacturing, %.....	n/a	n/a
2.3.2	Gross expenditure on R&D, % GDP.....	0.2	88	6.3	Knowledge diffusion	19.5	81
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US.....	0.0	42 ○ ◇	6.3.1	Intellectual property receipts, % total trade.....	0.0	80
2.3.4	QS university ranking, average score top 3*.....	26.9	42 ● ◆	6.3.2	High-tech net exports, % total trade.....	0.8	72
				6.3.3	ICT services exports, % total trade.....	2.3	47 ●
				6.3.4	FDI net outflows, % GDP.....	0.0	115
INFRASTRUCTURE 23.3 119 ○ ◇				CREATIVE OUTPUTS 11.6 108			
3.1	Information & communication technologies (ICTs)	38.7	111	7.1	Intangible assets	18.6	98
3.1.1	ICT access*.....	34.7	115 ◇	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	26.7	83
3.1.2	ICT use*.....	15.4	117 ◇	7.1.2	Global brand value, top 5,000, % GDP.....	4.4	69
3.1.3	Government's online service*.....	54.9	101	7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	0.4	87
3.1.4	E-participation*.....	50.0	105	7.1.4	ICTs & organizational model creation*.....	51.6	76
3.2	General infrastructure	10.1	125 ○ ◇	7.2	Creative goods and services	0.8	128 ○ ◇
3.2.1	Electricity output, kWh/mn pop.....	666.3	103	7.2.1	Cultural & creative services exports, % total trade.....	0.1	83
3.2.2	Logistics performance*.....	16.4	112 ○	7.2.2	National feature films/mn pop. 15-69.....	0.1	108 ○
3.2.3	Gross capital formation, % GDP.....	15.4	119 ○ ◇	7.2.3	Entertainment & Media market/th pop. 15-69.....	0.0	62 ○ ◇
3.3	Ecological sustainability	21.0	94	7.2.4	Printing and other media, % manufacturing.....	n/a	n/a
3.3.1	GDP/unit of energy use.....	9.3	65	7.2.5	Creative goods exports, % total trade.....	0.1	106
3.3.2	Environmental performance*.....	33.1	111	7.3	Online creativity	8.4	93
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.4	88	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	0.5	106
				7.3.2	Country-code TLDs/th pop. 15-69.....	0.2	111
				7.3.3	Wikipedia edits/mn pop. 15-69.....	20.3	106
				7.3.4	Mobile app creation/bn PPP\$ GDP.....	16.9	29 ●
MARKET SOPHISTICATION 36.0 116 ◇							
4.1	Credit	21.1	124 ○ ◇				
4.1.1	Ease of getting credit*.....	45.0	101				
4.1.2	Domestic credit to private sector, % GDP.....	19.0	114				
4.1.3	Microfinance gross loans, % GDP.....	0.2	49				
4.2	Investment	28.5	100				
4.2.1	Ease of protecting minority investors*.....	72.0	27 ●				
4.2.2	Market capitalization, % GDP.....	29.2	50				
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	77 ○				
4.3	Trade, competition, and market scale	58.5	85				
4.3.1	Applied tariff rate, weighted avg., %.....	9.5	112				
4.3.2	Intensity of local competition*.....	57.7	115 ○ ◇				
4.3.3	Domestic market scale, bn PPP\$.....	1,202.1	24 ● ◆				

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.