

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
99	108	Low	CSA	9.3	33.4	3,133.4	100
			Score/Value Rank				Score/Value Rank
INSTITUTIONS 47.0 118				BUSINESS SOPHISTICATION 15.1 [128]			
1.1	Political environment	36.7	126	5.1	Knowledge workers	13.1	[117]
1.1.1	Political and operational stability*.....	58.9	104	5.1.1	Knowledge-intensive employment, %.....	n/a	n/a
1.1.2	Government effectiveness*.....	25.6	128	5.1.2	Firms offering formal training, %.....	24.3	63
1.2	Regulatory environment	43.3	118	5.1.3	GERD performed by business, % GDP.....	n/a	n/a
1.2.1	Regulatory quality*.....	14.1	126	5.1.4	GERD financed by business, %.....	1.6	93
1.2.2	Rule of law*.....	13.2	130	5.1.5	Females employed w/advanced degrees, %.....	4.0	93
1.2.3	Cost of redundancy dismissal, salary weeks.....	21.7	92	5.2	Innovation linkages	15.0	112
1.3	Business environment	60.8	105	5.2.1	University/industry research collaboration*.....	49.0	43
1.3.1	Ease of starting a business*.....	93.2	34	5.2.2	State of cluster development*.....	36.8	107
1.3.2	Ease of resolving insolvency*.....	28.4	122	5.2.3	GERD financed by abroad, % GDP.....	0.0	100
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	78
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.0	101
HUMAN CAPITAL & RESEARCH 22.8 87				KNOWLEDGE & TECHNOLOGY OUTPUTS 16.4 77			
2.1	Education	44.7	[70]	6.1	Knowledge creation	17.7	55
2.1.1	Expenditure on education, % GDP.....	5.2	35	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.1	118
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	n/a	n/a	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.0	100
2.1.3	School life expectancy, years.....	11.4	98	6.1.3	Utility models by origin/bn PPP\$ GDP.....	3.7	5
2.1.4	PISA scales in reading, maths, & science.....	n/a	n/a	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	2.4	112
2.1.5	Pupil-teacher ratio, secondary.....	15.4	78	6.1.5	Citable documents H-index.....	1.2	130
2.2	Tertiary education	23.3	86	6.2	Knowledge impact	15.8	95
2.2.1	Tertiary enrolment, % gross.....	31.3	81	6.2.1	Growth rate of PPP\$ GDP/worker, %.....	4.6	13
2.2.2	Graduates in science & engineering, %.....	22.0	57	6.2.2	New businesses/th pop. 15-64.....	0.2	114
2.2.3	Tertiary inbound mobility, %.....	0.8	91	6.2.3	Computer software spending, % GDP.....	0.0	93
2.3	Research & development (R&D)	0.6	112	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	0.1	131
2.3.1	Researchers, FTE/mn pop.....	n/a	n/a	6.2.5	High- and medium-high-tech manufacturing, %.....	2.8	104
2.3.2	Gross expenditure on R&D, % GDP.....	0.1	107	6.3	Knowledge diffusion	15.7	[90]
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US.....	0.0	42	6.3.1	Intellectual property receipts, % total trade.....	n/a	n/a
2.3.4	QS university ranking, average score top 3*.....	0.0	77	6.3.2	High-tech net exports, % total trade.....	n/a	n/a
				6.3.3	ICT services exports, % total trade.....	0.3	112
				6.3.4	FDI net outflows, % GDP.....	0.6	71
INFRASTRUCTURE 21.8 123				CREATIVE OUTPUTS 10.4 113			
3.1	Information & communication technologies (ICTs)	31.2	119	7.1	Intangible assets	13.2	120
3.1.1	ICT access*.....	37.0	111	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	6.1	114
3.1.2	ICT use*.....	15.0	120	7.1.2	Global brand value, top 5,000, % GDP.....	0.0	80
3.1.3	Government's online service*.....	34.0	116	7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	0.0	120
3.1.4	E-participation*.....	38.8	114	7.1.4	ICTs & organizational model creation*.....	44.4	99
3.2	General infrastructure	13.4	122	7.2	Creative goods and services	8.6	[85]
3.2.1	Electricity output, kWh/mn pop.....	2,030.7	77	7.2.1	Cultural & creative services exports, % total trade.....	0.0	95
3.2.2	Logistics performance*.....	12.6	118	7.2.2	National feature films/mn pop. 15-69.....	1.8	73
3.2.3	Gross capital formation, % GDP.....	19.6	99	7.2.3	Entertainment & Media market/th pop. 15-69.....	n/a	n/a
3.3	Ecological sustainability	20.8	95	7.2.4	Printing and other media, % manufacturing.....	1.1	52
3.3.1	GDP/unit of energy use.....	7.8	82	7.2.5	Creative goods exports, % total trade.....	n/a	n/a
3.3.2	Environmental performance*.....	38.2	95	7.3	Online creativity	6.9	99
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.4	85	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	0.0	128
				7.3.2	Country-code TLDs/th pop. 15-69.....	0.4	103
				7.3.3	Wikipedia edits/mn pop. 15-69.....	24.4	100
				7.3.4	Mobile app creation/bn PPP\$ GDP.....	n/a	n/a
MARKET SOPHISTICATION 48.4 60							
4.1	Credit	54.0	22				
4.1.1	Ease of getting credit*.....	90.0	10				
4.1.2	Domestic credit to private sector, % GDP.....	12.3	123				
4.1.3	Microfinance gross loans, % GDP.....	5.7	2				
4.2	Investment	40.0	[60]				
4.2.1	Ease of protecting minority investors*.....	40.0	110				
4.2.2	Market capitalization, % GDP.....	n/a	n/a				
4.2.3	Venture capital deals/bn PPP\$ GDP.....	n/a	n/a				
4.3	Trade, competition, and market scale	51.3	109				
4.3.1	Applied tariff rate, weighted avg., %.....	5.0	91				
4.3.2	Intensity of local competition*.....	61.2	104				
4.3.3	Domestic market scale, bn PPP\$.....	33.4	116				

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.