

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
108	123	Lower middle	SSF	14.6	40.3	2,358.9	122
			Score/Value Rank				Score/Value Rank
INSTITUTIONS 40.3 128 ○ ◇				BUSINESS SOPHISTICATION 18.2 108			
1.1	Political environment	32.2	130 ○ ◇	5.1	Knowledge workers	13.6	[114]
1.1.1	Political and operational stability*.....	50.0	126 ◇	5.1.1	Knowledge-intensive employment, %.....	6.1	112 ◇
1.1.2	Government effectiveness*.....	23.4	130 ○ ◇	5.1.2	Firms offering formal training, %.....	26.4	58
1.2	Regulatory environment	36.3	122	5.1.3	GERD performed by business, % GDP.....	n/a	n/a
1.2.1	Regulatory quality*.....	0.0	131 ○ ◇	5.1.4	GERD financed by business, %.....	n/a	n/a
1.2.2	Rule of law*.....	13.5	129 ○ ◇	5.1.5	Females employed w/advanced degrees, %.....	0.9	111
1.2.3	Cost of redundancy dismissal, salary weeks.....	25.3	104	5.2	Innovation linkages	21.3	63 ●
1.3	Business environment	52.4	122	5.2.1	University/industry research collaboration*.....	29.0	114
1.3.1	Ease of starting a business*.....	72.0	120 ◇	5.2.2	State of cluster development*.....	31.4	119 ◇
1.3.2	Ease of resolving insolvency*.....	32.9	115	5.2.3	GERD financed by abroad, % GDP.....	n/a	n/a
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.1	21 ● ◆
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.0	101 ○ ◇
HUMAN CAPITAL & RESEARCH 20.9 93				KNOWLEDGE & TECHNOLOGY OUTPUTS 12.9 101			
2.1	Education	36.8	88	6.1	Knowledge creation	8.0	82
2.1.1	Expenditure on education, % GDP.....	4.6	59	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.2	100
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	22.2	35 ●	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.0	80
2.1.3	School life expectancy, years.....	11.4	99	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.....	7.2	67
2.1.5	Pupil-teacher ratio, secondary.....	22.5	103	6.1.5	Citable documents H-index.....	7.6	87
2.2	Tertiary education	25.7	80	6.2	Knowledge impact	21.0	80
2.2.1	Tertiary enrolment, % gross.....	10.0	111	6.2.1	Growth rate of PPP\$ GDP/worker, %.....	-1.4	111 ◇
2.2.2	Graduates in science & engineering, %.....	30.2	14 ●	6.2.2	New businesses/th pop. 15-64.....	2.1	54 ●
2.2.3	Tertiary inbound mobility, %.....	0.5	99	6.2.3	Computer software spending, % GDP.....	0.0	22 ● ◆
2.3	Research & development (R&D)	0.3	115	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	3.0	73
2.3.1	Researchers, FTE/mn pop.....	99.5	88	6.2.5	High- and medium-high-tech manufacturing, %.....	21.7	51 ●
2.3.2	Gross expenditure on R&D, % GDP.....	n/a	n/a	6.3	Knowledge diffusion	9.7	123
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	70
2.3.4	QS university ranking, average score top 3*.....	0.0	77 ○ ◇	6.3.2	High-tech net exports, % total trade.....	0.1	103
				6.3.3	ICT services exports, % total trade.....	0.2	114
				6.3.4	FDI net outflows, % GDP.....	1.9	37 ● ◆
INFRASTRUCTURE 16.4 131 ○ ◇				CREATIVE OUTPUTS 11.0 112			
3.1	Information & communication technologies (ICTs)	31.0	120 ◇	7.1	Intangible assets	11.6	126 ○ ◇
3.1.1	ICT access*.....	36.8	112	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	4.1	123 ○
3.1.2	ICT use*.....	27.0	107	7.1.2	Global brand value, top 5,000, % GDP.....	12.2	56 ●
3.1.3	Government's online service*.....	32.6	117 ◇	7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	n/a	n/a
3.1.4	E-participation*.....	27.5	120 ◇	7.1.4	ICTs & organizational model creation*.....	29.7	123 ○ ◇
3.2	General infrastructure	2.0	131 ○ ◇	7.2	Creative goods and services	15.2	[63]
3.2.1	Electricity output, kWh/mn pop.....	456.4	107	7.2.1	Cultural & creative services exports, % total trade.....	n/a	n/a
3.2.2	Logistics performance*.....	2.4	123 ○ ◇	7.2.2	National feature films/mn pop. 15-69.....	n/a	n/a
3.2.3	Gross capital formation, % GDP.....	n/a	n/a	7.2.3	Entertainment & Media market/th pop. 15-69.....	n/a	n/a
3.3	Ecological sustainability	16.2	120 ◇	7.2.4	Printing and other media, % manufacturing.....	n/a	n/a
3.3.1	GDP/unit of energy use.....	3.2	119 ○ ◇	7.2.5	Creative goods exports, % total trade.....	1.2	40 ●
3.3.2	Environmental performance*.....	37.0	100	7.3	Online creativity	5.6	107
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	1.1	58 ● ◆	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	0.5	111
				7.3.2	Country-code TLDs/th pop. 15-69.....	0.9	89
				7.3.3	Wikipedia edits/mn pop. 15-69.....	19.7	108
				7.3.4	Mobile app creation/bn PPP\$ GDP.....	n/a	n/a
MARKET SOPHISTICATION 44.1 84							
4.1	Credit	27.4	114				
4.1.1	Ease of getting credit*.....	65.0	61				
4.1.2	Domestic credit to private sector, % GDP.....	13.1	121 ◇				
4.1.3	Microfinance gross loans, % GDP.....	0.0	71				
4.2	Investment	54.0	[22]				
4.2.1	Ease of protecting minority investors*.....	54.0	88				
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	50.9	111				
4.3.1	Applied tariff rate, weighted avg., %.....	5.0	93				
4.3.2	Intensity of local competition*.....	58.4	111 ◇				
4.3.3	Domestic market scale, bn PPP\$.....	40.3	111				

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.