

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank	
79	73	High	NAWA	4.2	312.1	57,957.5	60	
		Score/Value	Rank				Score/Value	Rank
INSTITUTIONS				56.7	88			
1.1	Political environment	53.0	82					
1.1.1	Political and operational stability*.....	62.5	92					
1.1.2	Government effectiveness*.....	48.2	77					
1.2	Regulatory environment	53.3	97					
1.2.1	Regulatory quality*.....	40.9	71					
1.2.2	Rule of law*.....	52.2	54					
1.2.3	Cost of redundancy dismissal, salary weeks.....	28.1	115					
1.3	Business environment	63.8	90					
1.3.1	Ease of starting a business*.....	88.4	67					
1.3.2	Ease of resolving insolvency*.....	39.2	101					
HUMAN CAPITAL & RESEARCH				31.0	[63]			
2.1	Education	51.0	[49]					
2.1.1	Expenditure on education, % GDP.....	n/a	n/a					
2.1.2	Government funding/pupil, secondary, % GDP/cap.Ⓞ.....	17.3	67					
2.1.3	School life expectancy, years.Ⓞ.....	14.7	59					
2.1.4	PISA scales in reading, maths, & science.....	n/a	n/a					
2.1.5	Pupil-teacher ratio, secondary.Ⓞ.....	7.6	5					
2.2	Tertiary education	39.4	[44]					
2.2.1	Tertiary enrolment, % gross.....	54.4	54					
2.2.2	Graduates in science & engineering, %.....	n/a	n/a					
2.2.3	Tertiary inbound mobility, %.....	n/a	n/a					
2.3	Research & development (R&D)	2.7	88					
2.3.1	Researchers, FTE/mn pop.....	513.9	67					
2.3.2	Gross expenditure on R&D, % GDP.....	0.1	111					
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US.....	0.0	42					
2.3.4	QS university ranking, average score top 3*.....	3.6	72					
INFRASTRUCTURE				44.7	55			
3.1	Information & communication technologies (ICTs)	73.4	51					
3.1.1	ICT access*.....	77.6	34					
3.1.2	ICT use*.....	67.9	46					
3.1.3	Government's online service*.....	79.2	48					
3.1.4	E-participation*.....	69.1	71					
3.2	General infrastructure	34.2	35					
3.2.1	Electricity output, kWh/mn pop.....	17,581.6	4					
3.2.2	Logistics performance*.....	37.1	62					
3.2.3	Gross capital formation, % GDP.....	20.4	95					
3.3	Ecological sustainability	26.5	75					
3.3.1	GDP/unit of energy use.....	7.8	83					
3.3.2	Environmental performance*.....	53.6	45					
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.6	74					
MARKET SOPHISTICATION				45.3	81			
4.1	Credit	41.9	65					
4.1.1	Ease of getting credit*.....	45.0	101					
4.1.2	Domestic credit to private sector, % GDP.....	88.7	30					
4.1.3	Microfinance gross loans, % GDP.....	n/a	n/a					
4.2	Investment	35.3	73					
4.2.1	Ease of protecting minority investors*.....	66.0	50					
4.2.2	Market capitalization, % GDP.....	n/a	n/a					
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	45					
4.3	Trade, competition, and market scale	58.6	83					
4.3.1	Applied tariff rate, weighted avg., %.....	4.8	86					
4.3.2	Intensity of local competition*.....	56.0	121					
4.3.3	Domestic market scale, bn PPP\$.....	312.1	57					
BUSINESS SOPHISTICATION				20.4	[98]			
5.1	Knowledge workers	18.3	[102]					
5.1.1	Knowledge-intensive employment, %.....	22.7	68					
5.1.2	Firms offering formal training, %.....	n/a	n/a					
5.1.3	GERD performed by business, % GDP.....	n/a	n/a					
5.1.4	GERD financed by business, %.....	1.0	96					
5.1.5	Females employed w/advanced degrees, %.....	n/a	n/a					
5.2	Innovation linkages	18.9	79					
5.2.1	University/industry research collaboration*.....	44.6	54					
5.2.2	State of cluster development*.....	51.3	46					
5.2.3	GERD financed by abroad, % GDP.....	0.0	99					
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	51					
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.0	79					
5.3	Knowledge absorption	24.0	[84]					
5.3.1	Intellectual property payments, % total trade.....	n/a	n/a					
5.3.2	High-tech imports, % total trade.....	5.2	108					
5.3.3	ICT services imports, % total trade.....	0.5	103					
5.3.4	FDI net inflows, % GDP.....	0.1	123					
5.3.5	Research talent, % in business enterprise.....	n/a	n/a					
KNOWLEDGE & TECHNOLOGY OUTPUTS				17.8	73			
6.1	Knowledge creation	4.6	109					
6.1.1	Patents by origin/bn PPP\$ GDP.....	0.0	127					
6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.0	93					
6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a					
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	2.9	106					
6.1.5	Citable documents H-index.....	8.9	82					
6.2	Knowledge impact	20.2	83					
6.2.1	Growth rate of PPP\$ GDP/worker, %.....	-2.0	114					
6.2.2	New businesses/th pop. 15-64.....	5.9	27					
6.2.3	Computer software spending, % GDP.....	0.0	25					
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	1.6	89					
6.2.5	High- and medium-high-tech manufacturing, %.....	22.8	48					
6.3	Knowledge diffusion	28.6	46					
6.3.1	Intellectual property receipts, % total trade.....	n/a	n/a					
6.3.2	High-tech net exports, % total trade.....	0.3	89					
6.3.3	ICT services exports, % total trade.....	3.8	22					
6.3.4	FDI net outflows, % GDP.....	4.6	13					
CREATIVE OUTPUTS				16.5	88			
7.1	Intangible assets	24.2	76					
7.1.1	Trademarks by origin/bn PPP\$ GDP.....	11.6	106					
7.1.2	Global brand value, top 5,000, % GDP.....	49.1	36					
7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	n/a	n/a					
7.1.4	ICTs & organizational model creation*.....	50.9	79					
7.2	Creative goods and services	5.7	101					
7.2.1	Cultural & creative services exports, % total trade.....	n/a	n/a					
7.2.2	National feature films/mn pop. 15-69.....	1.9	70					
7.2.3	Entertainment & Media market/th pop. 15-69.....	15.0	31					
7.2.4	Printing and other media, % manufacturing.....	0.4	94					
7.2.5	Creative goods exports, % total trade.....	0.1	97					
7.3	Online creativity	11.9	76					
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	7.6	44					
7.3.2	Country-code TLDs/th pop. 15-69.....	0.3	105					
7.3.3	Wikipedia edits/mn pop. 15-69.....	42.3	78					
7.3.4	Mobile app creation/bn PPP\$ GDP.....	0.6	71					

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.