

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
72	64	High	NAWA	2.8	365.8	116,013.7	65
		Score/Value	Rank			Score/Value	Rank
INSTITUTIONS 65.0 58 ◊				BUSINESS SOPHISTICATION 23.6 77 ◊			
1.1	Political environment	67.8	42	5.1	Knowledge workers	12.6	119 ○ ◊
1.1.1	Political and operational stability*.....	75.0	44	5.1.1	Knowledge-intensive employment, %.....	18.1	83 ◊
1.1.2	Government effectiveness*.....	64.2	40	5.1.2	Firms offering formal training, %.....	n/a	n/a
1.2	Regulatory environment	65.2	63 ◊	5.1.3	GERD performed by business, % GDP.....	0.1	63 ◊
1.2.1	Regulatory quality*.....	55.4	46 ◊	5.1.4	GERD financed by business, %.....	7.1	80 ◊
1.2.2	Rule of law*.....	65.8	36	5.1.5	Females employed w/advanced degrees, %.....	4.5	92 ◊
1.2.3	Cost of redundancy dismissal, salary weeks.....	23.2	99 ◊	5.2	Innovation linkages	25.7	46
1.3	Business environment	62.0	98 ◊	5.2.1	University/industry research collaboration*.....	66.1	16 ●
1.3.1	Ease of starting a business*.....	86.1	84 ◊	5.2.2	State of cluster development*.....	65.5	16 ●
1.3.2	Ease of resolving insolvency*.....	38.0	107 ○ ◊	5.2.3	GERD financed by abroad, % GDP.....	0.0	80 ◊
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	41
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.1	69
HUMAN CAPITAL & RESEARCH 25.4 83 ◊				KNOWLEDGE & TECHNOLOGY OUTPUTS 15.4 85 ◊			
2.1	Education	29.9	106 ◊	5.3	Knowledge absorption	32.6	51
2.1.1	Expenditure on education, % GDP.....	2.9	102 ○ ◊	5.3.1	Intellectual property payments, % total trade.....	n/a	n/a
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	10.9	91 ○ ◊	5.3.2	High-tech imports, % total trade.....	7.8	61
2.1.3	School life expectancy, years.....	12.0	93 ◊	5.3.3	ICT services imports, % total trade.....	2.9	10 ●
2.1.4	PISA scales in reading, maths, & science.....	413.5	60	5.3.4	FDI net inflows, % GDP.....	0.0	124 ○
2.1.5	Pupil-teacher ratio, secondary.....	11.0	43	5.3.5	Research talent, % in business enterprise.....	18.6	57 ◊
2.2	Tertiary education	39.2	46	6.1	Knowledge creation	6.5	93 ◊
2.2.1	Tertiary enrolment, % gross.....	17.9	97 ◊	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.1	119 ○ ◊
2.2.2	Graduates in science & engineering, %.....	22.5	54	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.1	71 ◊
2.2.3	Tertiary inbound mobility, %.....	34.2	1 ● ◆	6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a
2.3	Research & development (R&D)	7.3	66 ◊	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	4.9	88 ◊
2.3.1	Researchers, FTE/mn pop.....	584.0	64 ◊	6.1.5	Citable documents H-index.....	9.0	81 ◊
2.3.2	Gross expenditure on R&D, % GDP.....	0.5	65	6.2	Knowledge impact	26.4	59
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US.....	0.0	42 ○ ◊	6.2.1	Growth rate of PPP\$ GDP/worker, %.....	0.5	77
2.3.4	QS university ranking, average score top 3*.....	11.9	62	6.2.2	New businesses/th pop. 15-64.....	6.3	26 ●
				6.2.3	Computer software spending, % GDP.....	0.0	31
				6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	2.0	85 ◊
				6.2.5	High- and medium-high-tech manufacturing, %.....	31.8	36
INFRASTRUCTURE 53.6 28 ●				CREATIVE OUTPUTS 23.9 58 ◊			
3.1	Information & communication technologies (ICTs)	75.2	46	6.3	Knowledge diffusion	13.3	104 ◊
3.1.1	ICT access*.....	78.6	33	6.3.1	Intellectual property receipts, % total trade.....	n/a	n/a
3.1.2	ICT use*.....	71.9	37	6.3.2	High-tech net exports, % total trade.....	0.0	129 ○ ◊
3.1.3	Government's online service*.....	79.2	48	6.3.3	ICT services exports, % total trade.....	0.9	84
3.1.4	E-participation*.....	71.4	66 ◊	6.3.4	FDI net outflows, % GDP.....	2.7	24 ●
3.2	General infrastructure	64.1	2 ● ◆	7.1	Intangible assets	31.2	46
3.2.1	Electricity output, kWh/mn pop.....	17,255.6	6 ● ◆	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	3.3	125 ○ ◊
3.2.2	Logistics performance*.....	65.9	29	7.1.2	Global brand value, top 5,000, % GDP.....	82.1	24 ●
3.2.3	Gross capital formation, % GDP.....	n/a	n/a	7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	n/a	n/a
3.3	Ecological sustainability	21.3	91 ◊	7.1.4	ICTs & organizational model creation*.....	63.9	33
3.3.1	GDP/unit of energy use.....	7.0	89	7.2	Creative goods and services	23.1	44
3.3.2	Environmental performance*.....	37.1	99 ◊	7.2.1	Cultural & creative services exports, % total trade.....	0.4	54
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	1.2	56	7.2.2	National feature films/mn pop. 15-69.....	23.0	4 ● ◆
				7.2.3	Entertainment & Media market/th pop. 15-69.....	27.8	25
				7.2.4	Printing and other media, % manufacturing.....	0.9	62
				7.2.5	Creative goods exports, % total trade.....	0.2	83
MARKET SOPHISTICATION 42.3 94 ◊				7.3	Online creativity	9.8	84 ◊
4.1	Credit	39.2	75	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	3.5	60 ◊
4.1.1	Ease of getting credit*.....	45.0	101 ○ ◊	7.3.2	Country-code TLDs/th pop. 15-69.....	2.7	63 ◊
4.1.2	Domestic credit to private sector, % GDP.....	76.8	41	7.3.3	Wikipedia edits/mn pop. 15-69.....	36.3	86 ◊
4.1.3	Microfinance gross loans, % GDP.....	n/a	n/a	7.3.4	Mobile app creation/bn PPP\$ GDP.....	0.3	75
4.2	Investment	23.3	122 ○ ◊				
4.2.1	Ease of protecting minority investors*.....	28.0	123 ○ ◊				
4.2.2	Market capitalization, % GDP.....	88.5	16 ●				
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	60				
4.3	Trade, competition, and market scale	64.5	54				
4.3.1	Applied tariff rate, weighted avg., %.....	3.7	74				
4.3.2	Intensity of local competition*.....	65.6	79 ◊				
4.3.3	Domestic market scale, bn PPP\$.....	365.8	49				

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.