

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
81	77	Upper middle	NAWA	10.1	97.2	8,423.6	86
				Score/Value	Rank		
INSTITUTIONS.....				64.3	63		
1.1	Political environment.....		56.5	69			
1.1.1	Political and operational stability*.....		64.3	83			
1.1.2	Government effectiveness*.....		52.7	64			
1.2	Regulatory environment.....		74.2	39	◆		
1.2.1	Regulatory quality*.....		44.0	66			
1.2.2	Rule of law*.....		52.8	53	◆		
1.2.3	Cost of redundancy dismissal, salary weeks.....		8.0	1	● ◆		
1.3	Business environment.....		62.1	97			
1.3.1	Ease of starting a business*.....		84.5	92			
1.3.2	Ease of resolving insolvency*.....		39.7	98			
HUMAN CAPITAL & RESEARCH.....				27.2	78		
2.1	Education.....		31.8	99			
2.1.1	Expenditure on education, % GDP.....		3.6	88			
2.1.2	Government funding/pupil, secondary, % GDP/cap.....		15.6	74			
2.1.3	School life expectancy, years.....		10.4	105	○ ◇		
2.1.4	PISA scales in reading, maths, & science.....		416.0	58			
2.1.5	Pupil-teacher ratio, secondary.....		12.3	56			
2.2	Tertiary education.....		40.4	41			
2.2.1	Tertiary enrolment, % gross.....		34.7	78			
2.2.2	Graduates in science & engineering, %.....		26.4	30	●		
2.2.3	Tertiary inbound mobility, %.....		14.0	11	● ◆		
2.3	Research & development (R&D).....		9.5	60			
2.3.1	Researchers, FTE/mn pop.....		596.0	63			
2.3.2	Gross expenditure on R&D, % GDP.....		0.7	51			
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*.....		16.8	54			
INFRASTRUCTURE.....				32.8	95		
3.1	Information & communication technologies (ICTs).....		52.7	92			
3.1.1	ICT access*.....		59.3	75			
3.1.2	ICT use*.....		53.7	66			
3.1.3	Government's online service*.....		49.3	106	◇		
3.1.4	E-participation*.....		48.3	106			
3.2	General infrastructure.....		17.5	115	○		
3.2.1	Electricity output, kWh/mn pop.....		2,140.2	75			
3.2.2	Logistics performance*.....		29.0	83			
3.2.3	Gross capital formation, % GDP.....		19.5	100			
3.3	Ecological sustainability.....		28.3	68			
3.3.1	GDP/unit of energy use.....		8.5	73			
3.3.2	Environmental performance*.....		53.4	46			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....		1.0	62			
MARKET SOPHISTICATION.....				50.1	52		
4.1	Credit.....		53.2	24	● ◆		
4.1.1	Ease of getting credit*.....		95.0	4	● ◆		
4.1.2	Domestic credit to private sector, % GDP.....		80.4	35	●		
4.1.3	Microfinance gross loans, % GDP.....		0.4	40			
4.2	Investment.....		34.6	77			
4.2.1	Ease of protecting minority investors*.....		50.0	92			
4.2.2	Market capitalization, % GDP.....		58.5	29			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.2	17	●		
4.3	Trade, competition, and market scale.....		62.4	67			
4.3.1	Applied tariff rate, weighted avg., %.....		4.4	84			
4.3.2	Intensity of local competition*.....		76.0	19	● ◆		
4.3.3	Domestic market scale, bn PPP\$.....		97.2	83			
BUSINESS SOPHISTICATION.....				20.7	94		
5.1	Knowledge workers.....		15.0	[110]			
5.1.1	Knowledge-intensive employment, %.....		n/a	n/a			
5.1.2	Firms offering formal training, %.....		16.9	82	○ ◇		
5.1.3	GERD performed by business, % GDP.....		n/a	n/a			
5.1.4	GERD financed by business, %.....		n/a	n/a			
5.1.5	Females employed w/advanced degrees, %.....		n/a	n/a			
5.2	Innovation linkages.....		27.5	38	◆		
5.2.1	University/industry research collaboration*.....		44.5	55			
5.2.2	State of cluster development*.....		57.5	30	● ◆		
5.2.3	GERD financed by abroad, % GDP.....		n/a	n/a			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.1	38	◆		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	83			
5.3	Knowledge absorption.....		19.5	104			
5.3.1	Intellectual property payments, % total trade.....		0.1	100	○		
5.3.2	High-tech imports, % total trade.....		6.8	76			
5.3.3	ICT services imports, % total trade.....		0.3	113	○ ◇		
5.3.4	FDI net inflows, % GDP.....		3.7	41			
5.3.5	Research talent, % in business enterprise.....		n/a	n/a			
KNOWLEDGE & TECHNOLOGY OUTPUTS.....				15.6	82		
6.1	Knowledge creation.....		16.8	60			
6.1.1	Patents by origin/bn PPP\$ GDP.....		0.3	91			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.2	48			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		17.0	33	● ◆		
6.1.5	Citable documents H-index.....		9.7	78			
6.2	Knowledge impact.....		19.6	84			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		-1.0	106	○		
6.2.2	New businesses/th pop. 15-64.....		0.5	95			
6.2.3	Computer software spending, % GDP.....		0.0	50			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		5.5	50			
6.2.5	High- and medium-high-tech manufacturing, %.....		21.6	52			
6.3	Knowledge diffusion.....		10.5	120	○ ◇		
6.3.1	Intellectual property receipts, % total trade.....		0.1	45			
6.3.2	High-tech net exports, % total trade.....		0.4	83			
6.3.3	ICT services exports, % total trade.....		0.1	125	○		
6.3.4	FDI net outflows, % GDP.....		0.0	117	○		
CREATIVE OUTPUTS.....				17.5	84		
7.1	Intangible assets.....		19.9	90			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		31.9	76			
7.1.2	Global brand value, top 5,000, % GDP.....		7.8	63			
7.1.3	Industrial designs by origin/bn PPP\$ GDP.....		0.3	96			
7.1.4	ICTs & organizational model creation*.....		52.6	68			
7.2	Creative goods and services.....		14.3	68			
7.2.1	Cultural & creative services exports, % total trade.....		0.0	108	○		
7.2.2	National feature films/mn pop. 15-69.....		n/a	n/a			
7.2.3	Entertainment & Media market/th pop. 15-69.....		1.8	54	○ ◇		
7.2.4	Printing and other media, % manufacturing.....		2.4	9	● ◆		
7.2.5	Creative goods exports, % total trade.....		0.9	46			
7.3	Online creativity.....		16.0	66			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		4.9	54			
7.3.2	Country-code TLDs/th pop. 15-69.....		0.2	108			
7.3.3	Wikipedia edits/mn pop. 15-69.....		48.6	63			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		13.1	36			

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.