

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
65	74	Lower middle	NAWA	11.7	144.2	12,371.7	66
				Score/Value	Rank		
INSTITUTIONS				61.1	73	◆	
1.1	Political environment		51.6	76			
1.1.1	Political and operational stability*.....		64.9	79			
1.1.2	Government effectiveness*.....		44.9	75			
1.2	Regulatory environment		59.4	83			
1.2.1	Regulatory quality*.....		30.9	98			
1.2.2	Rule of law*.....		48.3	58	◆		
1.2.3	Cost of redundancy dismissal, salary weeks.....		21.6	90			
1.3	Business environment		72.2	56	◆		
1.3.1	Ease of starting a business*.....		90.2	53			
1.3.2	Ease of resolving insolvency*.....		54.2	62			
HUMAN CAPITAL & RESEARCH				44.4	32	◆◆	
2.1	Education		66.9	8	◆◆		
2.1.1	Expenditure on education, % GDP.....		6.6	13	◆◆		
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		52.8	1	◆◆		
2.1.3	School life expectancy, years.....		15.1	50	◆◆		
2.1.4	PISA scales in reading, maths, & science.....		371.4	67	○		
2.1.5	Pupil-teacher ratio, secondary.....		13.6	60			
2.2	Tertiary education		57.3	7	◆◆		
2.2.1	Tertiary enrolment, % gross.....		32.1	81			
2.2.2	Graduates in science & engineering, %.....		44.1	2	◆◆		
2.2.3	Tertiary inbound mobility, %.....		2.3	71			
2.3	Research & development (R&D)		9.1	60			
2.3.1	Researchers, FTE/mn pop.....		1,965.0	41	◆		
2.3.2	Gross expenditure on R&D, % GDP.....		0.6	53	◆		
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		0.0	43	○◆		
2.3.4	QS university ranking, average score top 3*.....		0.0	78	○◆		
INFRASTRUCTURE				44.2	74	◆	
3.1	Information & communication technologies (ICTs)		65.4	69	◆		
3.1.1	ICT access*.....		57.1	76			
3.1.2	ICT use*.....		44.0	80			
3.1.3	Government's online service*.....		80.6	44	◆◆		
3.1.4	E-participation*.....		79.8	53			
3.2	General infrastructure		26.2	96			
3.2.1	Electricity output, kWh/mn pop.....		1,737.5	83			
3.2.2	Logistics performance*.....		23.7	98			
3.2.3	Gross capital formation, % GDP.....		23.1	65			
3.3	Ecological sustainability		41.2	51	◆		
3.3.1	GDP/unit of energy use.....		10.9	43			
3.3.2	Environmental performance*.....		62.4	51	◆		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		1.6	55	◆		
MARKET SOPHISTICATION				39.6	104		
4.1	Credit		33.0	76			
4.1.1	Ease of getting credit*.....		50.0	87			
4.1.2	Domestic credit to private sector, % GDP.....		86.2	33	◆◆		
4.1.3	Microfinance gross loans, % GDP.....		0.5	30			
4.2	Investment		33.2	107	○		
4.2.1	Ease of protecting minority investors*.....		56.7	79			
4.2.2	Market capitalization, % GDP.....		21.0	60			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.0	28	◆		
4.3	Trade, competition, & market scale		52.4	99			
4.3.1	Applied tariff rate, weighted avg., %.....		9.4	109	○		
4.3.2	Intensity of local competition*.....		65.0	82			
4.3.3	Domestic market scale, bn PPP\$.....		144.2	72			
BUSINESS SOPHISTICATION				21.3	115	○◆	
5.1	Knowledge workers		26.7	90			
5.1.1	Knowledge-intensive employment, %.....		21.0	72			
5.1.2	Firms offering formal training, % firms.....		28.9	52			
5.1.3	GERD performed by business, % GDP.....		0.1	59			
5.1.4	GERD financed by business, %.....		18.9	68			
5.1.5	Females employed w/advanced degrees, %.....		6.7	82			
5.2	Innovation linkages		16.0	115	○		
5.2.1	University/industry research collaboration*.....		38.2	80			
5.2.2	State of cluster development*.....		37.0	100			
5.2.3	GERD financed by abroad, %.....		3.9	66			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	105	○		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	87			
5.3	Knowledge absorption		21.3	118	○		
5.3.1	Intellectual property payments, % total trade.....		0.1	100	○		
5.3.2	High-tech imports, % total trade.....		8.7	48			
5.3.3	ICT services imports, % total trade.....		0.4	110	○		
5.3.4	FDI net inflows, % GDP.....		1.9	82			
5.3.5	Research talent, % in business enterprise.....		4.0	73	○		
KNOWLEDGE & TECHNOLOGY OUTPUTS				23.0	60		
6.1	Knowledge creation		18.7	49			
6.1.1	Patents by origin/bn PPP\$ GDP.....		1.2	56			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.0	74			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		23.8	15	◆◆		
6.1.5	Citable documents H-index.....		9.6	71			
6.2	Knowledge impact		34.5	76			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		1.4	52			
6.2.2	New businesses/th pop. 15-64.....		1.7	57			
6.2.3	Computer software spending, % GDP.....		0.3	34	◆		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		7.6	40	◆◆		
6.2.5	High- & medium-high-tech manufactures, %.....		0.1	65			
6.3	Knowledge diffusion		15.8	75			
6.3.1	Intellectual property receipts, % total trade.....		0.1	51			
6.3.2	High-tech net exports, % total trade.....		3.7	39	◆		
6.3.3	ICT services exports, % total trade.....		1.5	69			
6.3.4	FDI net outflows, % GDP.....		0.3	85			
CREATIVE OUTPUTS				24.1	75		
7.1	Intangible assets		42.1	59			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		n/a	n/a			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		1.1	63			
7.1.3	ICTs & business model creation*.....		59.6	67			
7.1.4	ICTs & organizational model creation*.....		42.7	104			
7.2	Creative goods & services		10.5	82			
7.2.1	Cultural & creative services exports, % total trade.....		0.0	109	○		
7.2.2	National feature films/mn pop. 15-69.....		1.4	74			
7.2.3	Entertainment & Media market/th pop. 15-69.....		0.9	57	○		
7.2.4	Printing & other media, % manufacturing.....		n/a	n/a			
7.2.5	Creative goods exports, % total trade.....		2.0	28	◆		
7.3	Online creativity		1.6	93			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		2.7	70	◆		
7.3.2	Country-code TLDs/th pop. 15-69.....		1.4	72			
7.3.3	Wikipedia edits/mn pop. 15-69.....		2.9	94			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		0.2	79			

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.