

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
97	109	Lower middle	SSF	29.5	145.8	6,451.7	107
				Score/Value	Rank		
INSTITUTIONS				48.9	115		
1.1	Political environment		52.0	74			
1.1.1	Political and operational stability*.....		68.4	71			
1.1.2	Government effectiveness*.....		43.8	78			
1.2	Regulatory environment		40.2	121			
1.2.1	Regulatory quality*.....		38.3	79			
1.2.2	Rule of law*.....		49.8	53	◆		
1.2.3	Cost of redundancy dismissal, salary weeks.....		49.8	123	○ ◇		
1.3	Business environment		54.6	117	◇		
1.3.1	Ease of starting a business*.....		84.3	83			
1.3.2	Ease of resolving insolvency*.....		24.9	128	○ ◇		
HUMAN CAPITAL & RESEARCH				19.2	97		
2.1	Education		43.6	75			
2.1.1	Expenditure on education, % GDP.....		4.5	62			
2.1.2	Government funding/pupil, secondary, % GDP/cap.Ⓞ		26.2	21	●		
2.1.3	School life expectancy, years.....		11.5	94			
2.1.4	PISA scales in reading, maths, & science.....		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary.....		16.0	72			
2.2	Tertiary education		11.8	107			
2.2.1	Tertiary enrolment, % gross.....		16.2	99			
2.2.2	Graduates in science & engineering, %.....		13.4	93	◇		
2.2.3	Tertiary inbound mobility, %.....		2.9	64			
2.3	Research & development (R&D)		2.1	93			
2.3.1	Researchers, FTE/mn pop.Ⓞ		38.4	96			
2.3.2	Gross expenditure on R&D, % GDP.Ⓞ		0.4	70			
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				35.0	103		
3.1	Information & communication technologies (ICTs)		54.5	86			
3.1.1	ICT access*.....		45.6	97			
3.1.2	ICT use*.....		40.0	89			
3.1.3	Government's online service*.....		69.4	70			
3.1.4	E-participation*.....		62.9	82			
3.2	General infrastructure		14.9	125	○ ◇		
3.2.1	Electricity output, kWh/mn pop.....		461.6	106			
3.2.2	Logistics performance*.....		23.5	99			
3.2.3	Gross capital formation, % GDP.....		13.8	119	○ ◇		
3.3	Ecological sustainability		35.7	75			
3.3.1	GDP/unit of energy use.....		11.8	33	●		
3.3.2	Environmental performance*.....		49.7	99			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.3	102			
MARKET SOPHISTICATION				34.3	121		◇
4.1	Credit		25.8	104			
4.1.1	Ease of getting credit*.....		60.0	66			
4.1.2	Domestic credit to private sector, % GDP.....		13.9	120	○ ◇		
4.1.3	Microfinance gross loans, % GDP.....		0.8	24	●		
4.2	Investment		26.7	127	○ ◇		
4.2.1	Ease of protecting minority investors*.....		51.7	89			
4.2.2	Market capitalization, % GDP.Ⓞ		8.8	71	○		
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.0	64			
4.3	Trade, competition, & market scale		50.3	107			
4.3.1	Applied tariff rate, weighted avg., %.....		10.6	115	◇		
4.3.2	Intensity of local competition*.....		63.4	87			
4.3.3	Domestic market scale, bn PPP\$.....		145.8	70			
BUSINESS SOPHISTICATION				26.6	86		
5.1	Knowledge workers		20.7	108			
5.1.1	Knowledge-intensive employment, %.....		11.6	95			
5.1.2	Firms offering formal training, % firms.....		40.1	35			
5.1.3	GERD performed by business, % GDP.Ⓞ		0.0	91	○		
5.1.4	GERD financed by business, %.....		0.1	97	○ ◇		
5.1.5	Females employed w/advanced degrees, %.....		3.4	97			
5.2	Innovation linkages		36.1	38	● ◆		
5.2.1	University/industry research collaboration*.....		47.3	44	● ◆		
5.2.2	State of cluster development*.....		52.9	42	● ◆		
5.2.3	GERD financed by abroad, %.....		31.2	11	● ◆		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	42	●		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	82			
5.3	Knowledge absorption		23.0	[112]			
5.3.1	Intellectual property payments, % total trade.....		n/a	n/a			
5.3.2	High-tech imports, % total trade.....		3.7	119			
5.3.3	ICT services imports, % total trade.....		n/a	n/a			
5.3.4	FDI net inflows, % GDP.....		6.1	25	●		
5.3.5	Research talent, % in business enterprise.....		1.0	77			
KNOWLEDGE & TECHNOLOGY OUTPUTS				16.6	89		
6.1	Knowledge creation		4.4	103			
6.1.1	Patents by origin/bn PPP\$ GDP.....		0.1	110			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.0	99	○ ◇		
6.1.3	Utility models by origin/bn PPP\$ GDP.....		0.1	58			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		5.2	79			
6.1.5	Citable documents H-index.....		7.3	82			
6.2	Knowledge impact		33.2	81			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		3.6	17	●		
6.2.2	New businesses/th pop. 15-64.Ⓞ		0.9	73			
6.2.3	Computer software spending, % GDP.....		0.0	124	○ ◇		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		0.5	119	◇		
6.2.5	High- & medium-high-tech manufactures, %.....		n/a	n/a			
6.3	Knowledge diffusion		12.3	[92]			
6.3.1	Intellectual property receipts, % total trade.....		n/a	n/a			
6.3.2	High-tech net exports, % total trade.....		0.2	97			
6.3.3	ICT services exports, % total trade.....		n/a	n/a			
6.3.4	FDI net outflows, % GDP.....		0.2	91			
CREATIVE OUTPUTS				18.9	[100]		
7.1	Intangible assets		35.0	96			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		6.9	110			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		5.5	25	●		
7.1.3	ICTs & business model creation*.....		56.0	84			
7.1.4	ICTs & organizational model creation*.....		49.7	83			
7.2	Creative goods & services		5.1	[100]			
7.2.1	Cultural & creative services exports, % total trade.....		n/a	n/a			
7.2.2	National feature films/mn pop. 15-69.....		n/a	n/a			
7.2.3	Entertainment & Media market/th pop. 15-69.....		n/a	n/a			
7.2.4	Printing & other media, % manufacturing.Ⓞ		0.6	85			
7.2.5	Creative goods exports, % total trade.....		0.0	117			
7.3	Online creativity		0.3	[114]			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		0.6	102			
7.3.2	Country-code TLDs/th pop. 15-69.....		0.0	122			
7.3.3	Wikipedia edits/mn pop. 15-69.....		n/a	n/a			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		n/a	n/a			

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.