

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
103	99	Upper middle	SSF	2.6	27.5	11,228.8	93
				Score/Value	Rank		
INSTITUTIONS				61.2	71		
1.1	Political environment		59.4	54			
1.1.1	Political and operational stability*		75.4	46	●		
1.1.2	Government effectiveness*		51.4	58			
1.2	Regulatory environment		71.1	48	●		
1.2.1	Regulatory quality*		36.9	84			
1.2.2	Rule of law*		52.7	52	◆		
1.2.3	Cost of redundancy dismissal, salary weeks		9.7	28	●		
1.3	Business environment		53.0	122	○ ◆		
1.3.1	Ease of starting a business*		69.1	122	○ ◆		
1.3.2	Ease of resolving insolvency*		37.0	107	◆		
HUMAN CAPITAL & RESEARCH				13.9	112	○ ◆	
2.1	Education		23.5	[119]			
2.1.1	Expenditure on education, % GDP		3.1	100			
2.1.2	Government funding/pupil, secondary, % GDP/cap		n/a	n/a			
2.1.3	School life expectancy, years		n/a	n/a			
2.1.4	PISA scales in reading, maths, & science		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary		n/a	n/a			
2.2	Tertiary education		15.9	99	◆		
2.2.1	Tertiary enrolment, % gross		20.6	92	◆		
2.2.2	Graduates in science & engineering, %		13.0	96	○ ◆		
2.2.3	Tertiary inbound mobility, %		7.1	32	● ◆		
2.3	Research & development (R&D)		2.2	91			
2.3.1	Researchers, FTE/mn pop.		143.3	83			
2.3.2	Gross expenditure on R&D, % GDP		0.3	73			
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				34.9	104	◆	
3.1	Information & communication technologies (ICTs)		40.5	104	◆		
3.1.1	ICT access*		45.4	98	◆		
3.1.2	ICT use*		32.3	99	◆		
3.1.3	Government's online service*		45.1	111	○ ◆		
3.1.4	E-participation*		39.3	111	○ ◆		
3.2	General infrastructure		24.5	101			
3.2.1	Electricity output, kWh/mn pop.		573.0	105	○ ◆		
3.2.2	Logistics performance*		n/a	n/a			
3.2.3	Gross capital formation, % GDP		22.3	73			
3.3	Ecological sustainability		39.6	56			
3.3.1	GDP/unit of energy use		11.9	30	●		
3.3.2	Environmental performance*		58.5	69			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP		0.4	89			
MARKET SOPHISTICATION				40.2	99	◆	
4.1	Credit		29.9	93			
4.1.1	Ease of getting credit*		60.0	66			
4.1.2	Domestic credit to private sector, % GDP		63.8	50			
4.1.3	Microfinance gross loans, % GDP		0.0	59			
4.2	Investment		36.7	93			
4.2.1	Ease of protecting minority investors*		51.7	89			
4.2.2	Market capitalization, % GDP		19.7	61			
4.2.3	Venture capital deals/bn PPP\$ GDP		n/a	n/a			
4.3	Trade, competition, & market scale		54.1	92			
4.3.1	Applied tariff rate, weighted avg., %		0.9	10	●		
4.3.2	Intensity of local competition*		62.0	96	◆		
4.3.3	Domestic market scale, bn PPP\$		27.5	118	○ ◆		
BUSINESS SOPHISTICATION				24.7	101		
5.1	Knowledge workers		22.9	101			
5.1.1	Knowledge-intensive employment, %		18.7	75			
5.1.2	Firms offering formal training, % firms		25.4	63			
5.1.3	GERD performed by business, % GDP		0.0	73			
5.1.4	GERD financed by business, %		11.1	73			
5.1.5	Females employed w/advanced degrees, %		7.7	80			
5.2	Innovation linkages		26.1	62			
5.2.1	University/industry research collaboration*		37.5	84			
5.2.2	State of cluster development*		42.2	84			
5.2.3	GERD financed by abroad, %		15.8	25	●		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	28	● ◆		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		0.0	93	○ ◆		
5.3	Knowledge absorption		25.1	102			
5.3.1	Intellectual property payments, % total trade		0.1	101			
5.3.2	High-tech imports, % total trade		7.4	65			
5.3.3	ICT services imports, % total trade		0.9	76			
5.3.4	FDI net inflows, % GDP		5.9	26	●		
5.3.5	Research talent, % in business enterprise		6.9	68			
KNOWLEDGE & TECHNOLOGY OUTPUTS				6.0	124	○ ◆	
6.1	Knowledge creation		5.4	95			
6.1.1	Patents by origin/bn PPP\$ GDP		0.4	81			
6.1.2	PCT patents by origin/bn PPP\$ GDP		0.1	63			
6.1.3	Utility models by origin/bn PPP\$ GDP		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		5.9	69			
6.1.5	Citable documents H-index		3.7	106			
6.2	Knowledge impact		5.3	120	○ ◆		
6.2.1	Growth rate of PPP\$ GDP/worker, %		n/a	n/a			
6.2.2	New businesses/th pop. 15-64		0.9	74			
6.2.3	Computer software spending, % GDP		0.1	82			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		1.5	97			
6.2.5	High- & medium-high-tech manufactures, %		0.0	95	○ ◆		
6.3	Knowledge diffusion		7.1	121	○ ◆		
6.3.1	Intellectual property receipts, % total trade		0.0	94			
6.3.2	High-tech net exports, % total trade		0.0	121	○		
6.3.3	ICT services exports, % total trade		0.7	88			
6.3.4	FDI net outflows, % GDP		-0.1	118	○		
CREATIVE OUTPUTS				27.5	64		
7.1	Intangible assets		51.7	29	●		
7.1.1	Trademarks by origin/bn PPP\$ GDP		128.7	5	● ◆		
7.1.2	Industrial designs by origin/bn PPP\$ GDP		n/a	n/a			
7.1.3	ICTs & business model creation*		55.0	86			
7.1.4	ICTs & organizational model creation*		46.7	94			
7.2	Creative goods & services		2.8	[111]			
7.2.1	Cultural & creative services exports, % total trade		0.0	95			
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		n/a	n/a			
7.2.5	Creative goods exports, % total trade		0.3	69			
7.3	Online creativity		3.9	70			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		8.5	42	●		
7.3.2	Country-code TLDs/th pop. 15-69		0.7	87			
7.3.3	Wikipedia edits/mn pop. 15-69		3.6	91			
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.