

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
98	98	Upper middle	LCN	16.9	199.7	11,718.1	97
				Score/Value	Rank		
INSTITUTIONS				44.7	125		
1.1	Political environment		43.4	95			
1.1.1	Political and operational stability*		52.6	118			
1.1.2	Government effectiveness*		38.8	90			
1.2	Regulatory environment		42.6	119			
1.2.1	Regulatory quality*		15.1	123			
1.2.2	Rule of law*		27.8	106			
1.2.3	Cost of redundancy dismissal, salary weeks		31.8	119			
1.3	Business environment		48.0	126			
1.3.1	Ease of starting a business*		70.6	121			
1.3.2	Ease of resolving insolvency*		25.4	126			
HUMAN CAPITAL & RESEARCH				21.1	91		
2.1	Education		37.3	92			
2.1.1	Expenditure on education, % GDP		5.0	49			
2.1.2	Government funding/pupil, secondary, % GDP/cap		5.3	104			
2.1.3	School life expectancy, years		15.4	42			
2.1.4	PISA scales in reading, maths, & science		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary		21.9	92			
2.2	Tertiary education		19.1	97			
2.2.1	Tertiary enrolment, % gross		45.5	64			
2.2.2	Graduates in science & engineering, %		15.8	83			
2.2.3	Tertiary inbound mobility, %		0.8	92			
2.3	Research & development (R&D)		6.9	70			
2.3.1	Researchers, FTE/mn pop.		400.7	71			
2.3.2	Gross expenditure on R&D, % GDP		0.4	68			
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*		13.6	59			
INFRASTRUCTURE				43.4	78		
3.1	Information & communication technologies (ICTs)		58.4	80			
3.1.1	ICT access*		51.0	86			
3.1.2	ICT use*		42.4	83			
3.1.3	Government's online service*		72.9	63			
3.1.4	E-participation*		67.4	79			
3.2	General infrastructure		32.2	73			
3.2.1	Electricity output, kWh/mn pop.		1,666.5	84			
3.2.2	Logistics performance*		38.3	61			
3.2.3	Gross capital formation, % GDP		25.3	44			
3.3	Ecological sustainability		39.6	57			
3.3.1	GDP/unit of energy use		11.6	34			
3.3.2	Environmental performance*		57.4	76			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP		1.0	64			
MARKET SOPHISTICATION				43.3	89		
4.1	Credit		24.7	109			
4.1.1	Ease of getting credit*		45.0	94			
4.1.2	Domestic credit to private sector, % GDP		32.3	91			
4.1.3	Microfinance gross loans, % GDP		0.9	19			
4.2	Investment		46.7	[48]			
4.2.1	Ease of protecting minority investors*		46.7	101			
4.2.2	Market capitalization, % GDP		n/a	n/a			
4.2.3	Venture capital deals/bn PPP\$ GDP		n/a	n/a			
4.3	Trade, competition, & market scale		58.5	73			
4.3.1	Applied tariff rate, weighted avg., %		7.0	98			
4.3.2	Intensity of local competition*		69.8	62			
4.3.3	Domestic market scale, bn PPP\$		199.7	60			
BUSINESS SOPHISTICATION				24.6	102		
5.1	Knowledge workers		37.4	61			
5.1.1	Knowledge-intensive employment, %		13.4	93			
5.1.2	Firms offering formal training, % firms		73.7	2			
5.1.3	GERD performed by business, % GDP		0.2	53			
5.1.4	GERD financed by business, %		0.1	96			
5.1.5	Females employed w/advanced degrees, %		8.8	76			
5.2	Innovation linkages		14.9	119			
5.2.1	University/industry research collaboration*		34.5	95			
5.2.2	State of cluster development*		36.5	103			
5.2.3	GERD financed by abroad, %		2.5	74			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	97			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		0.0	83			
5.3	Knowledge absorption		21.6	115			
5.3.1	Intellectual property payments, % total trade		0.2	83			
5.3.2	High-tech imports, % total trade		8.1	55			
5.3.3	ICT services imports, % total trade		0.0	127			
5.3.4	FDI net inflows, % GDP		0.9	105			
5.3.5	Research talent, % in business enterprise		15.0	61			
KNOWLEDGE & TECHNOLOGY OUTPUTS				15.0	100		
6.1	Knowledge creation		5.8	93			
6.1.1	Patents by origin/bn PPP\$ GDP		0.1	114			
6.1.2	PCT patents by origin/bn PPP\$ GDP		0.2	56			
6.1.3	Utility models by origin/bn PPP\$ GDP		0.2	45			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		5.9	70			
6.1.5	Citable documents H-index		8.0	79			
6.2	Knowledge impact		29.7	95			
6.2.1	Growth rate of PPP\$ GDP/worker, %		-2.0	108			
6.2.2	New businesses/th pop. 15-64		n/a	n/a			
6.2.3	Computer software spending, % GDP		0.2	64			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		6.1	51			
6.2.5	High- & medium-high-tech manufactures, %		0.1	74			
6.3	Knowledge diffusion		9.5	104			
6.3.1	Intellectual property receipts, % total trade		n/a	n/a			
6.3.2	High-tech net exports, % total trade		0.4	84			
6.3.3	ICT services exports, % total trade		0.2	116			
6.3.4	FDI net outflows, % GDP		0.3	83			
CREATIVE OUTPUTS				20.4	93		
7.1	Intangible assets		35.9	94			
7.1.1	Trademarks by origin/bn PPP\$ GDP		42.8	61			
7.1.2	Industrial designs by origin/bn PPP\$ GDP		1.0	67			
7.1.3	ICTs & business model creation*		53.3	92			
7.1.4	ICTs & organizational model creation*		52.9	66			
7.2	Creative goods & services		8.1	93			
7.2.1	Cultural & creative services exports, % total trade		0.1	85			
7.2.2	National feature films/mn pop. 15-69		2.1	62			
7.2.3	Entertainment & Media market/th pop. 15-69		n/a	n/a			
7.2.4	Printing & other media, % manufacturing		1.1	60			
7.2.5	Creative goods exports, % total trade		0.1	110			
7.3	Online creativity		1.7	88			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		2.1	77			
7.3.2	Country-code TLDs/th pop. 15-69		1.1	79			
7.3.3	Wikipedia edits/mn pop. 15-69		5.0	82			
7.3.4	Mobile app creation/bn PPP\$ GDP		0.4	70			

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.