

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
108	117	Lower middle	CSA	166.4	758.2	4,619.8	116
				Score/Value	Rank		
INSTITUTIONS				45.5	124		
1.1	Political environment		37.2	116			
1.1.1	Political and operational stability*		54.4	111			
1.1.2	Government effectiveness*		28.7	115			
1.2	Regulatory environment		44.7	118			
1.2.1	Regulatory quality*		20.3	116			
1.2.2	Rule of law*		28.6	102			
1.2.3	Cost of redundancy dismissal, salary weeks		31.0	118			
1.3	Business environment		54.5	119			
1.3.1	Ease of starting a business*		80.8	105			
1.3.2	Ease of resolving insolvency*		28.2	123			
HUMAN CAPITAL & RESEARCH				8.8	127		
2.1	Education		15.9	127			
2.1.1	Expenditure on education, % GDP		1.5	118			
2.1.2	Government funding/pupil, secondary, % GDP/cap		10.2	97			
2.1.3	School life expectancy, years		11.2	98			
2.1.4	PISA scales in reading, maths, & science		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary		34.0	110			
2.2	Tertiary education		6.6	118			
2.2.1	Tertiary enrolment, % gross		17.6	97			
2.2.2	Graduates in science & engineering, %		11.3	98			
2.2.3	Tertiary inbound mobility, %		0.1	109			
2.3	Research & development (R&D)		4.0	[81]			
2.3.1	Researchers, FTE/mn pop		n/a	n/a			
2.3.2	Gross expenditure on R&D, % GDP		n/a	n/a			
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*		8.0	66			
INFRASTRUCTURE				40.0	86		
3.1	Information & communication technologies (ICTs)		53.3	90			
3.1.1	ICT access*		35.7	109			
3.1.2	ICT use*		18.7	111			
3.1.3	Government's online service*		78.5	51			
3.1.4	E-participation*		80.3	51			
3.2	General infrastructure		36.6	58			
3.2.1	Electricity output, kWh/mn pop		394.8	109			
3.2.2	Logistics performance*		24.0	94			
3.2.3	Gross capital formation, % GDP		33.7	14			
3.3	Ecological sustainability		30.0	96			
3.3.1	GDP/unit of energy use		13.3	19			
3.3.2	Environmental performance*		29.6	126			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP		0.2	113			
MARKET SOPHISTICATION				41.1	96		
4.1	Credit		32.7	78			
4.1.1	Ease of getting credit*		25.0	122			
4.1.2	Domestic credit to private sector, % GDP		47.6	73			
4.1.3	Microfinance gross loans, % GDP		3.0	9			
4.2	Investment		31.0	117			
4.2.1	Ease of protecting minority investors*		55.0	84			
4.2.2	Market capitalization, % GDP		34.5	43			
4.2.3	Venture capital deals/bn PPP\$ GDP		0.0	73			
4.3	Trade, competition, & market scale		59.5	70			
4.3.1	Applied tariff rate, weighted avg., %		10.7	116			
4.3.2	Intensity of local competition*		67.5	71			
4.3.3	Domestic market scale, bn PPP\$		758.2	30			
BUSINESS SOPHISTICATION				20.0	120		
5.1	Knowledge workers		15.7	[116]			
5.1.1	Knowledge-intensive employment, %		8.3	102			
5.1.2	Firms offering formal training, % firms		21.9	72			
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, %		1.3	105			
5.2	Innovation linkages		21.0	82			
5.2.1	University/industry research collaboration†		26.5	120			
5.2.2	State of cluster development†		46.8	60			
5.2.3	GERD financed by abroad, %		n/a	n/a			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	78			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		0.0	93			
5.3	Knowledge absorption		23.3	111			
5.3.1	Intellectual property payments, % total trade		0.1	103			
5.3.2	High-tech imports, % total trade		8.0	58			
5.3.3	ICT services imports, % total trade		0.2	120			
5.3.4	FDI net inflows, % GDP		1.1	104			
5.3.5	Research talent, % in business enterprise		n/a	n/a			
KNOWLEDGE & TECHNOLOGY OUTPUTS				16.1	91		
6.1	Knowledge creation		6.7	[86]			
6.1.1	Patents by origin/bn PPP\$ GDP		0.1	111			
6.1.2	PCT patents by origin/bn PPP\$ GDP		n/a	n/a			
6.1.3	Utility models by origin/bn PPP\$ GDP		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		2.2	110			
6.1.5	Citable documents H-index		10.4	63			
6.2	Knowledge impact		32.9	83			
6.2.1	Growth rate of PPP\$ GDP/worker, %		4.5	12			
6.2.2	New businesses/th pop. 15-64		0.1	101			
6.2.3	Computer software spending, % GDP		0.2	75			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		0.6	117			
6.2.5	High- & medium-high-tech manufactures, %		0.1	81			
6.3	Knowledge diffusion		8.6	114			
6.3.1	Intellectual property receipts, % total trade		0.0	103			
6.3.2	High-tech net exports, % total trade		0.2	93			
6.3.3	ICT services exports, % total trade		1.1	78			
6.3.4	FDI net outflows, % GDP		0.0	106			
CREATIVE OUTPUTS				15.0	115		
7.1	Intangible assets		29.4	108			
7.1.1	Trademarks by origin/bn PPP\$ GDP		13.4	98			
7.1.2	Industrial designs by origin/bn PPP\$ GDP		2.3	49			
7.1.3	ICTs & business model creation†		50.2	103			
7.1.4	ICTs & organizational model creation†		42.1	107			
7.2	Creative goods & services		0.8	126			
7.2.1	Cultural & creative services exports, % total trade		0.1	86			
7.2.2	National feature films/mn pop. 15-69		0.3	101			
7.2.3	Entertainment & Media market/th pop. 15-69		n/a	n/a			
7.2.4	Printing & other media, % manufacturing		0.2	101			
7.2.5	Creative goods exports, % total trade		0.1	107			
7.3	Online creativity		0.4	110			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		0.4	112			
7.3.2	Country-code TLDs/th pop. 15-69		0.1	117			
7.3.3	Wikipedia edits/mn pop. 15-69		1.0	104			
7.3.4	Mobile app creation/bn PPP\$ GDP		0.5	68			

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.