

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
111	78	Lower middle	CSA	6.1	24.4	3,843.6	94
				Score/Value	Rank		
INSTITUTIONS				54.6	92		
1.1	Political environment		37.0	117	◇		
1.1.1	Political and operational stability*		52.6	118			
1.1.2	Government effectiveness*		29.2	114			
1.2	Regulatory environment		56.5	96			
1.2.1	Regulatory quality*		32.6	95			
1.2.2	Rule of law*		21.9	118	◇		
1.2.3	Cost of redundancy dismissal, salary weeks		17.3	71			
1.3	Business environment		70.3	64			
1.3.1	Ease of starting a business*		93.0	32	●		
1.3.2	Ease of resolving insolvency*		47.6	74			
HUMAN CAPITAL & RESEARCH				31.7	60	◇	
2.1	Education		64.1	[11]			
2.1.1	Expenditure on education, % GDP		7.2	9	● ◆		
2.1.2	Government funding/pupil, secondary, % GDP/cap		n/a	n/a			
2.1.3	School life expectancy, years		13.4	77			
2.1.4	PISA scales in reading, maths, & science		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary		10.4	35	● ◆		
2.2	Tertiary education		30.4	65			
2.2.1	Tertiary enrolment, % gross		43.7	67			
2.2.2	Graduates in science & engineering, %		20.5	63			
2.2.3	Tertiary inbound mobility, %		6.4	36	◆		
2.3	Research & development (R&D)		0.7	111			
2.3.1	Researchers, FTE/mn pop		n/a	n/a			
2.3.2	Gross expenditure on R&D, % GDP		0.1	104			
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				38.8	89		
3.1	Information & communication technologies (ICTs)		55.0	85			
3.1.1	ICT access*		47.1	95			
3.1.2	ICT use*		39.7	91			
3.1.3	Government's online service*		64.6	83			
3.1.4	E-participation*		68.5	73			
3.2	General infrastructure		34.6	66			
3.2.1	Electricity output, kWh/mn pop		2,181.3	74	◆		
3.2.2	Logistics performance*		22.6	100			
3.2.3	Gross capital formation, % GDP		30.7	19	●		
3.3	Ecological sustainability		26.7	110			
3.3.1	GDP/unit of energy use		5.1	108	◇		
3.3.2	Environmental performance*		54.9	83			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP		0.1	124	○ ◇		
MARKET SOPHISTICATION				55.6	36	● ◆	
4.1	Credit		51.2	30	●		
4.1.1	Ease of getting credit*		75.0	29	●		
4.1.2	Domestic credit to private sector, % GDP		21.8	110			
4.1.3	Microfinance gross loans, % GDP		4.1	7	● ◆		
4.2	Investment		66.7	[12]			
4.2.1	Ease of protecting minority investors*		66.7	35			
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		49.0	110			
4.3.1	Applied tariff rate, weighted avg., %		2.9	63			
4.3.2	Intensity of local competition*		56.5	118	◇		
4.3.3	Domestic market scale, bn PPP\$		24.4	122	◇		
BUSINESS SOPHISTICATION				26.7	84		
5.1	Knowledge workers		37.3	62			
5.1.1	Knowledge-intensive employment, %		18.5	78			
5.1.2	Firms offering formal training, % firms		62.7	6	● ◆		
5.1.3	GERD performed by business, % GDP		0.0	77			
5.1.4	GERD financed by business, %		6.4	78			
5.1.5	Females employed w/advanced degrees, %		10.8	61			
5.2	Innovation linkages		13.9	121			
5.2.1	University/industry research collaboration†		27.6	112			
5.2.2	State of cluster development†		29.1	123	○ ◇		
5.2.3	GERD financed by abroad, %		3.1	70			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		n/a	n/a			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		0.0	93	○ ◇		
5.3	Knowledge absorption		28.9	88			
5.3.1	Intellectual property payments, % total trade		0.2	91			
5.3.2	High-tech imports, % total trade		7.1	70			
5.3.3	ICT services imports, % total trade		0.6	95			
5.3.4	FDI net inflows, % GDP		8.3	17	●		
5.3.5	Research talent, % in business enterprise		n/a	n/a			
KNOWLEDGE & TECHNOLOGY OUTPUTS				17.3	85		
6.1	Knowledge creation		10.3	70			
6.1.1	Patents by origin/bn PPP\$ GDP		6.0	18	● ◆		
6.1.2	PCT patents by origin/bn PPP\$ GDP		0.0	99	○ ◇		
6.1.3	Utility models by origin/bn PPP\$ GDP		0.9	26			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		3.2	99			
6.1.5	Citable documents H-index		1.4	125	○ ◇		
6.2	Knowledge impact		28.3	98			
6.2.1	Growth rate of PPP\$ GDP/worker, %		2.9	25	●		
6.2.2	New businesses/th pop. 15-64		1.3	65			
6.2.3	Computer software spending, % GDP		0.1	90			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		0.3	124	○ ◇		
6.2.5	High- & medium-high-tech manufactures, %		0.0	100	○ ◇		
6.3	Knowledge diffusion		13.2	83			
6.3.1	Intellectual property receipts, % total trade		0.0	66			
6.3.2	High-tech net exports, % total trade		2.3	51			
6.3.3	ICT services exports, % total trade		1.0	82			
6.3.4	FDI net outflows, % GDP		0.7	58			
CREATIVE OUTPUTS				13.3	122	◇	
7.1	Intangible assets		23.1	125	○ ◇		
7.1.1	Trademarks by origin/bn PPP\$ GDP		22.4	84			
7.1.2	Industrial designs by origin/bn PPP\$ GDP		0.5	85			
7.1.3	ICTs & business model creation†		36.5	124	○ ◇		
7.1.4	ICTs & organizational model creation†		34.8	120	◇		
7.2	Creative goods & services		5.5	99			
7.2.1	Cultural & creative services exports, % total trade		0.4	59			
7.2.2	National feature films/mn pop. 15-69		0.3	103	○		
7.2.3	Entertainment & Media market/th pop. 15-69		n/a	n/a			
7.2.4	Printing & other media, % manufacturing		0.7	81			
7.2.5	Creative goods exports, % total trade		0.1	99			
7.3	Online creativity		1.5	95			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		0.2	116	◇		
7.3.2	Country-code TLDs/th pop. 15-69		0.8	86			
7.3.3	Wikipedia edits/mn pop. 15-69		7.3	69			
7.3.4	Mobile app creation/bn PPP\$ GDP		0.1	85			

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.