

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
51	61	Lower middle	CSA	1,354.1	10,401.4	7,873.7	57
				Score/Value	Rank		
INSTITUTIONS				59.5	77		
1.1 Political environment				53.0	71		
1.1.1	Political and operational stability*			61.4	91		
1.1.2	Government effectiveness*			48.8	65	◆	
1.2 Regulatory environment				64.5	69		
1.2.1	Regulatory quality*			35.1	90		
1.2.2	Rule of law*			46.5	64	◆	
1.2.3	Cost of redundancy dismissal, salary weeks.....			15.8	63		
1.3 Business environment				60.9	101		
1.3.1	Ease of starting a business*			81.0	104		
1.3.2	Ease of resolving insolvency*			40.8	95		
HUMAN CAPITAL & RESEARCH				33.5	53	◆	
2.1 Education				28.0	110	○	
2.1.1	Expenditure on education, % GDP.Ⓞ			3.8	84		
2.1.2	Government funding/pupil, secondary, % GDP/cap.Ⓞ			16.8	72		
2.1.3	School life expectancy, years.....			12.3	87		
2.1.4	PISA scales in reading, maths, & science.Ⓞ			336.0	71	○	◇
2.1.5	Pupil-teacher ratio, secondary.Ⓞ			28.5	104	○	◇
2.2 Tertiary education				38.4	40	◆	
2.2.1	Tertiary enrolment, % gross.....			27.5	86		
2.2.2	Graduates in science & engineering, %.....			32.6	7	◆	
2.2.3	Tertiary inbound mobility, %.....			0.1	107	○	
2.3 Research & development (R&D)				34.2	35	◆	
2.3.1	Researchers, FTE/mn pop.Ⓞ			216.2	77		
2.3.2	Gross expenditure on R&D, % GDP.Ⓞ			0.6	50	◆	
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....			73.9	15	◆	
2.3.4	QS university ranking, average score top 3*.....			47.3	21	◆	
INFRASTRUCTURE				43.0	79		
3.1 Information & communication technologies (ICTs)				62.5	75		
3.1.1	ICT access*.....			38.5	105	○	
3.1.2	ICT use*.....			20.8	106	○	
3.1.3	Government's online service*.....			95.1	9	◆	
3.1.4	E-participation*.....			95.5	15	◆	
3.2 General infrastructure				41.9	42	◆	
3.2.1	Electricity output, kWh/mn pop.....			1,115.8	92		
3.2.2	Logistics performance*.....			52.1	43	◆	
3.2.3	Gross capital formation, % GDP.....			31.5	17	●	
3.3 Ecological sustainability				24.7	117	○	
3.3.1	GDP/unit of energy use.....			9.2	62		
3.3.2	Environmental performance*.....			30.6	125	○	◇
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..			0.8	70		
MARKET SOPHISTICATION				56.3	33	◆	
4.1 Credit				38.7	57		
4.1.1	Ease of getting credit*.....			80.0	20		
4.1.2	Domestic credit to private sector, % GDP.....			49.7	69		
4.1.3	Microfinance gross loans, % GDP.....			0.8	23		
4.2 Investment				50.8	37		
4.2.1	Ease of protecting minority investors*.....			80.0	6	◆	
4.2.2	Market capitalization, % GDP.....			76.9	20	◆	
4.2.3	Venture capital deals/bn PPP\$ GDP.....			0.0	30	◆	
4.3 Trade, competition, & market scale				79.4	9	◆	
4.3.1	Applied tariff rate, weighted avg., %.....			5.8	93		
4.3.2	Intensity of local competition*.....			67.6	70		
4.3.3	Domestic market scale, bn PPP\$.....			10,401.4	3	◆	
BUSINESS SOPHISTICATION				31.0	65		
5.1 Knowledge workers				24.1	99		
5.1.1	Knowledge-intensive employment, %.....			14.2	91		
5.1.2	Firms offering formal training, % firms.....			35.9	38		
5.1.3	GERD performed by business, % GDP.Ⓞ			0.3	49	◆	
5.1.4	GERD financed by business, %.....			n/a	n/a		
5.1.5	Females employed w/advanced degrees, %.....			1.6	103	○	
5.2 Innovation linkages				33.6	41	◆	
5.2.1	University/industry research collaboration*.....			60.1	23	◆	
5.2.2	State of cluster development*.....			60.4	25	◆	
5.2.3	GERD financed by abroad, %.....			n/a	n/a		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....			0.0	48		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....			0.2	46	◆	
5.3 Knowledge absorption				35.4	56		
5.3.1	Intellectual property payments, % total trade.....			1.2	29	◆	
5.3.2	High-tech imports, % total trade.....			10.3	27		
5.3.3	ICT services imports, % total trade.....			1.2	62		
5.3.4	FDI net inflows, % GDP.....			1.9	83		
5.3.5	Research talent, % in business enterprise.Ⓞ			26.4	46		
KNOWLEDGE & TECHNOLOGY OUTPUTS				33.5	32	◆	
6.1 Knowledge creation				20.9	42		
6.1.1	Patents by origin/bn PPP\$ GDP.....			1.6	52		
6.1.2	PCT patents by origin/bn PPP\$ GDP.....			0.2	51	◆	
6.1.3	Utility models by origin/bn PPP\$ GDP.....			n/a	n/a		
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....			5.3	77		
6.1.5	Citable documents H-index.....			38.9	21	◆	
6.2 Knowledge impact				43.4	35		
6.2.1	Growth rate of PPP\$ GDP/worker, %.....			5.9	4	◆	
6.2.2	New businesses/th pop. 15-64.....			0.1	100	○	
6.2.3	Computer software spending, % GDP.....			0.2	65		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....			3.8	65		
6.2.5	High- & medium-high-tech manufactures, %.....			0.3	33	◆	
6.3 Knowledge diffusion				36.1	23	◆	
6.3.1	Intellectual property receipts, % total trade.....			0.1	50		
6.3.2	High-tech net exports, % total trade.....			2.8	46		
6.3.3	ICT services exports, % total trade.....			10.4	1	◆	
6.3.4	FDI net outflows, % GDP.....			0.3	76		
CREATIVE OUTPUTS				23.5	78		
7.1 Intangible assets				37.8	81		
7.1.1	Trademarks by origin/bn PPP\$ GDP.....			25.6	79		
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....			0.8	77		
7.1.3	ICTs & business model creation*.....			61.1	58		
7.1.4	ICTs & organizational model creation*.....			59.6	47	◆	
7.2 Creative goods & services				15.2	66		
7.2.1	Cultural & creative services exports, % total trade.....			0.7	39	◆	
7.2.2	National feature films/mn pop. 15-69.Ⓞ			2.2	60		
7.2.3	Entertainment & Media market/th pop. 15-69.....			0.5	60	○	
7.2.4	Printing & other media, % manufacturing.Ⓞ			0.6	88	○	
7.2.5	Creative goods exports, % total trade.....			2.7	22		
7.3 Online creativity				3.2	76		
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....			0.9	98		
7.3.2	Country-code TLDs/th pop. 15-69.....			0.6	91		
7.3.3	Wikipedia edits/mn pop. 15-69.....			1.0	105		
7.3.4	Mobile app creation/bn PPP\$ GDP.....			10.7	42		

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.