

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
123	65	Low	SSF	12.5	27.1	2,280.1	99
				Score/Value	Rank		
INSTITUTIONS				68.1	50	◆	
1.1	Political environment	59.8	51	◆	5.1	Knowledge workers	34.8 [69]
1.1.1	Political and operational stability*.....	73.7	50	◆	5.1.1	Knowledge-intensive employment, %.....	8.2 103
1.1.2	Government effectiveness*.....	52.9	53	◆	5.1.2	Firms offering formal training, % firms.....	55.4 12 ◆
1.2	Regulatory environment	70.1	51	◆	5.1.3	GERD performed by business, % GDP.....	n/a n/a
1.2.1	Regulatory quality*.....	45.9	63	◆	5.1.4	GERD financed by business, %.....	n/a n/a
1.2.2	Rule of law*.....	49.8	54	◆	5.1.5	Females employed w/advanced degrees, %.....	3.7 94 ◆
1.2.3	Cost of redundancy dismissal, salary weeks.....	13.0	40	●	5.2	Innovation linkages	44.4 [23]
1.3	Business environment	74.3	52	◆	5.2.1	University/industry research collaboration*.....	41.5 63
1.3.1	Ease of starting a business*.....	91.4	45	●	5.2.2	State of cluster development*.....	45.8 72 ◆
1.3.2	Ease of resolving insolvency*.....	57.2	53	◆	5.2.3	GERD financed by abroad, %.....	n/a n/a
				Score/Value	Rank		
HUMAN CAPITAL & RESEARCH				17.8	102		
2.1	Education	43.9	74	◆	5.3	Knowledge absorption	29.4 87
2.1.1	Expenditure on education, % GDP.....	3.2	97		5.3.1	Intellectual property payments, % total trade.....	0.1 99
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	38.0	4	◆	5.3.2	High-tech imports, % total trade.....	9.8 35 ●
2.1.3	School life expectancy, years.....	11.2	99		5.3.3	ICT services imports, % total trade.....	0.6 96
2.1.4	PISA scales in reading, maths, & science.....	n/a	n/a		5.3.4	FDI net inflows, % GDP.....	3.0 57
2.1.5	Pupil-teacher ratio, secondary.....	20.1	89		5.3.5	Research talent, % in business enterprise.....	n/a n/a
2.2	Tertiary education	9.5	112		KNOWLEDGE & TECHNOLOGY OUTPUTS 5.7 125 ○ ◆		
2.2.1	Tertiary enrolment, % gross.....	7.6	113	○	6.1	Knowledge creation	4.6 102
2.2.2	Graduates in science & engineering, %.....	13.8	92		6.1.1	Patents by origin/bn PPP\$ GDP.....	0.1 107
2.2.3	Tertiary inbound mobility, %.....	1.7	78		6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.0 79
2.3	Research & development (R&D)	0.0	120	○ ◆	6.1.3	Utility models by origin/bn PPP\$ GDP.....	0.4 36
2.3.1	Researchers, FTE/mn pop.....	12.3	105	○ ◆	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	5.5 76
2.3.2	Gross expenditure on R&D, % GDP.....	n/a	n/a		6.1.5	Citable documents H-index.....	2.6 114
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....	0.0	43	○ ◆	6.2	Knowledge impact	3.9 [123]
2.3.4	QS university ranking, average score top 3*.....	0.0	78	○ ◆	6.2.1	Growth rate of PPP\$ GDP/worker, %.....	n/a n/a
				Score/Value	Rank		
INFRASTRUCTURE				40.0	87	◆	
3.1	Information & communication technologies (ICTs)	48.7	99	◆	6.2.2	New businesses/th pop. 15-64.....	2.0 51 ◆
3.1.1	ICT access*.....	27.8	119	○	6.2.3	Computer software spending, % GDP.....	0.0 103
3.1.2	ICT use*.....	19.0	110		6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	0.4 122 ○
3.1.3	Government's online service*.....	72.2	67	◆	6.2.5	High- & medium-high-tech manufactures, %.....	n/a n/a
3.1.4	E-participation*.....	75.8	59	◆	6.3	Knowledge diffusion	8.6 113
3.2	General infrastructure	42.0	40	●	6.3.1	Intellectual property receipts, % total trade.....	0.0 85
3.2.1	Electricity output, kWh/mn pop.....	n/a	n/a		6.3.2	High-tech net exports, % total trade.....	0.2 94
3.2.2	Logistics performance*.....	42.6	56	◆	6.3.3	ICT services exports, % total trade.....	0.8 86
3.2.3	Gross capital formation, % GDP.....	25.0	46	●	6.3.4	FDI net outflows, % GDP.....	0.4 74
3.3	Ecological sustainability	29.1	102		CREATIVE OUTPUTS 16.9 108		
3.3.1	GDP/unit of energy use.....	n/a	n/a		7.1	Intangible assets	33.0 100
3.3.2	Environmental performance*.....	43.7	113		7.1.1	Trademarks by origin/bn PPP\$ GDP.....	10.3 105
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.0	128	○ ◆	7.1.2	Industrial designs by origin/bn PPP\$ GDP.....	0.2 97
				Score/Value	Rank		
MARKET SOPHISTICATION				55.2	38	◆	
4.1	Credit	67.6	16	◆	7.1.3	ICTs & business model creation*.....	60.8 62 ◆
4.1.1	Ease of getting credit*.....	95.0	3	◆	7.1.4	ICTs & organizational model creation*.....	51.0 77 ◆
4.1.2	Domestic credit to private sector, % GDP.....	20.9	111		7.2	Creative goods & services	1.5 [119]
4.1.3	Microfinance gross loans, % GDP.....	6.7	1	◆	7.2.1	Cultural & creative services exports, % total trade.....	0.0 105
4.2	Investment	54.2	31	◆	7.2.2	National feature films/mn pop. 15-69.....	n/a n/a
4.2.1	Ease of protecting minority investors*.....	76.7	13	◆	7.2.3	Entertainment & Media market/th pop. 15-69.....	n/a n/a
4.2.2	Market capitalization, % GDP.....	n/a	n/a		7.2.4	Printing & other media, % manufacturing.....	n/a n/a
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	35		7.2.5	Creative goods exports, % total trade.....	0.2 87
4.3	Trade, competition, & market scale	44.0	120	○	7.3	Online creativity	0.1 123 ○
4.3.1	Applied tariff rate, weighted avg., %.....	7.3	99	○	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	0.1 120 ○
4.3.2	Intensity of local competition*.....	57.9	114		7.3.2	Country-code TLDs/th pop. 15-69.....	0.1 113
4.3.3	Domestic market scale, bn PPP\$.....	27.1	119	○	7.3.3	Wikipedia edits/mn pop. 15-69.....	0.2 117 ○
					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.