

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
68	51	Upper middle	SSF	57.4	790.9	13,675.3	58
				Score/Value	Rank		
INSTITUTIONS				65.9	55	BUSINESS SOPHISTICATION	
				Score/Value	Rank		
1.1	Political environment	57.2	61	5.1	Knowledge workers	33.9	74
1.1.1	Political and operational stability*	64.9	79	5.1.1	Knowledge-intensive employment, %	23.2	64
1.1.2	Government effectiveness*	53.3	51	5.1.2	Firms offering formal training, % firms	n/a	n/a
1.2	Regulatory environment	72.6	43 ◆	5.1.3	GERD performed by business, % GDP	0.3	46
1.2.1	Regulatory quality*	48.2	59	5.1.4	GERD financed by business, %	38.9	48
1.2.2	Rule of law*	46.1	65	5.1.5	Females employed w/advanced degrees, %	10.2	64
1.2.3	Cost of redundancy dismissal, salary weeks	9.3	25 ●	5.2	Innovation linkages	29.9	48 ◆
1.3	Business environment	67.9	70	5.2.1	University/industry research collaboration†	54.2	33 ◆
1.3.1	Ease of starting a business*	81.2	102 ○	5.2.2	State of cluster development†	56.4	32 ◆
1.3.2	Ease of resolving insolvency*	54.5	61	5.2.3	GERD financed by abroad, %	13.0	32
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	0.0	45
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP	0.3	40
HUMAN CAPITAL & RESEARCH				30.4	65	KNOWLEDGE & TECHNOLOGY OUTPUTS	
				Score/Value	Rank		
2.1	Education	44.4	71	6.1	Knowledge creation	19.3	48
2.1.1	Expenditure on education, % GDP	6.1	20 ● ◆	6.1.1	Patents by origin/bn PPP\$ GDP	0.9	63
2.1.2	Government funding/pupil, secondary, % GDP/cap	19.5	51	6.1.2	PCT patents by origin/bn PPP\$ GDP	0.3	44
2.1.3	School life expectancy, years	13.7	71	6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	n/a
2.1.4	PISA scales in reading, maths, & science	n/a	n/a	6.1.4	Scientific & technical articles/bn PPP\$ GDP	10.3	45
2.1.5	Pupil-teacher ratio, secondary	26.8	101 ○ ◇	6.1.5	Citable documents H-index	28.4	32 ● ◆
2.2	Tertiary education	21.0	92	6.2	Knowledge impact	37.9	58
2.2.1	Tertiary enrolment, % gross	20.5	93 ○	6.2.1	Growth rate of PPP\$ GDP/worker, %	-0.4	97 ○
2.2.2	Graduates in science & engineering, %	18.5	70	6.2.2	New businesses/th pop. 15-64	10.2	12 ● ◆
2.2.3	Tertiary inbound mobility, %	4.3	49	6.2.3	Computer software spending, % GDP	0.3	48
2.3	Research & development (R&D)	25.8	43	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	5.5	56
2.3.1	Researchers, FTE/mn pop.	473.1	69	6.2.5	High- & medium-high-tech manufactures, %	0.3	40
2.3.2	Gross expenditure on R&D, % GDP	0.8	44	6.3	Knowledge diffusion	14.4	80
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$	46.6	33 ◆	6.3.1	Intellectual property receipts, % total trade	0.1	49
2.3.4	QS university ranking, average score top 3*	33.6	33	6.3.2	High-tech net exports, % total trade	2.0	55
				6.3.3	ICT services exports, % total trade	0.7	91
				6.3.4	FDI net outflows, % GDP	1.8	32
INFRASTRUCTURE				41.1	83	CREATIVE OUTPUTS	
				Score/Value	Rank		
3.1	Information & communication technologies (ICTs)	66.3	67	7.1	Intangible assets	36.3	89
3.1.1	ICT access*	53.8	80	7.1.1	Trademarks by origin/bn PPP\$ GDP	20.9	86
3.1.2	ICT use*	43.1	81	7.1.2	Industrial designs by origin/bn PPP\$ GDP	1.3	60
3.1.3	Government's online service*	83.3	37	7.1.3	ICTs & business model creation†	57.2	80
3.1.4	E-participation*	84.8	39	7.1.4	ICTs & organizational model creation†	58.7	48
3.2	General infrastructure	32.6	71	7.2	Creative goods & services	6.9	95
3.2.1	Electricity output, kWh/mn pop.	4,461.7	49	7.2.1	Cultural & creative services exports, % total trade	0.2	70
3.2.2	Logistics performance*	61.4	32 ◆	7.2.2	National feature films/mn pop. 15-69	0.8	90 ○
3.2.3	Gross capital formation, % GDP	18.1	102 ○	7.2.3	Entertainment & Media market/th pop. 15-69	8.8	38 ◆
3.3	Ecological sustainability	24.4	119 ○ ◇	7.2.4	Printing & other media, % manufacturing	n/a	n/a
3.3.1	GDP/unit of energy use	4.8	111 ○ ◇	7.2.5	Creative goods exports, % total trade	0.8	48
3.3.2	Environmental performance*	44.7	110 ○ ◇	7.3	Online creativity	3.7	73
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	1.6	53	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	3.0	63
				7.3.2	Country-code TLDs/th pop. 15-69	8.6	42
				7.3.3	Wikipedia edits/mn pop. 15-69	4.2	87
				7.3.4	Mobile app creation/bn PPP\$ GDP	0.3	75 ○
MARKET SOPHISTICATION				58.6	19 ● ◆		
				Score/Value	Rank		
4.1	Credit	44.0	48	4.1	Trade, competition, & market scale	69.2	36
4.1.1	Ease of getting credit*	60.0	66	4.1.1	Applied tariff rate, weighted avg., %	4.6	80
4.1.2	Domestic credit to private sector, % GDP	147.7	9 ● ◆	4.1.2	Intensity of local competition†	71.2	48
4.1.3	Microfinance gross loans, % GDP	0.0	64 ○	4.1.3	Domestic market scale, bn PPP\$	790.9	29 ●
4.2	Investment	62.7	19 ● ◆				
4.2.1	Ease of protecting minority investors*	73.3	21 ● ◆				
4.2.2	Market capitalization, % GDP	302.1	1 ● ◆				
4.2.3	Venture capital deals/bn PPP\$ GDP	0.0	46				

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.