

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
48	68	Upper middle	LCN	5.0	88.7	17,559.1	54
				Score/Value	Rank		
INSTITUTIONS..... 61.9 68				BUSINESS SOPHISTICATION..... 33.2 52			
1.1	Political environment.....	58.4	58	5.1	Knowledge workers.....	37.0	65
1.1.1	Political and operational stability*.....	70.2	61	5.1.1	Knowledge-intensive employment, %.....	24.4	58
1.1.2	Government effectiveness*.....	52.5	56	5.1.2	Firms offering formal training, % firms.....	54.7	14 ●
1.2	Regulatory environment.....	69.9	54	5.1.3	GERD performed by business, % GDP.....	0.2	54
1.2.1	Regulatory quality*.....	54.0	48	5.1.4	GERD financed by business, %.....	2.8	87 ○ ◇
1.2.2	Rule of law*.....	58.4	43 ◆	5.1.5	Females employed w/advanced degrees, %.....	10.5	63
1.2.3	Cost of redundancy dismissal, salary weeks.....	18.7	76	5.2	Innovation linkages.....	18.8	95
1.3	Business environment.....	57.2	110 ○ ◇	5.2.1	University/industry research collaboration*.....	45.1	51
1.3.1	Ease of starting a business*.....	79.9	108	5.2.2	State of cluster development*.....	49.6	51
1.3.2	Ease of resolving insolvency*.....	34.5	111 ○ ◇	5.2.3	GERD financed by abroad, %.....	1.3	88 ○
HUMAN CAPITAL & RESEARCH..... 28.5 72				KNOWLEDGE & TECHNOLOGY OUTPUTS....24.3 56			
2.1	Education.....	57.5	36	5.3	Knowledge absorption.....	43.8	29 ◆
2.1.1	Expenditure on education, % GDP.....	7.4	7 ● ◆	5.3.1	Intellectual property payments, % total trade.....	2.8	8 ● ◆
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	23.9	28	5.3.2	High-tech imports, % total trade.....	9.1	43
2.1.3	School life expectancy, years.....	15.4	41	5.3.3	ICT services imports, % total trade.....	1.4	50
2.1.4	PISA scales in reading, maths, & science.....	415.8	54	5.3.4	FDI net inflows, % GDP.....	5.0	30
2.1.5	Pupil-teacher ratio, secondary.....	12.7	55	5.3.5	Research talent, % in business enterprise.....	n/a	n/a
2.2	Tertiary education.....	19.6	95	6.1	Knowledge creation.....	5.9	91
2.2.1	Tertiary enrolment, % gross.....	55.6	52	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.2	94
2.2.2	Graduates in science & engineering, %.....	14.4	90 ○ ◇	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.1	57
2.2.3	Tertiary inbound mobility, %.....	1.3	84	6.1.3	Utility models by origin/bn PPP\$ GDP.....	0.1	49
2.3	Research & development (R&D).....	8.3	64	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	5.0	81
2.3.1	Researchers, FTE/mn pop.....	529.9	66	6.1.5	Citable documents H-index.....	10.1	66
2.3.2	Gross expenditure on R&D, % GDP.....	0.5	66	6.2	Knowledge impact.....	36.9	62
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....	0.0	43 ○ ◇	6.2.1	Growth rate of PPP\$ GDP/worker, %.....	2.3	38
2.3.4	QS university ranking, average score top 3*.....	17.1	54	6.2.2	New businesses/th pop. 15-64.....	2.1	49
INFRASTRUCTURE..... 47.0 63				CREATIVE OUTPUTS.....34.3 39 ◆			
3.1	Information & communication technologies (ICTs).....	68.7	59	7.1	Intangible assets.....	48.6	41
3.1.1	ICT access*.....	65.6	67	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	94.1	19 ●
3.1.2	ICT use*.....	64.8	46 ◆	7.1.2	Industrial designs by origin/bn PPP\$ GDP.....	0.1	113 ○
3.1.3	Government's online service*.....	67.4	74	7.1.3	ICTs & business model creation*.....	68.3	34 ◆
3.1.4	E-participation*.....	77.0	57	7.1.4	ICTs & organizational model creation*.....	63.0	36 ◆
3.2	General infrastructure.....	23.4	108	7.2	Creative goods & services.....	34.8	16 ● ◆
3.2.1	Electricity output, kWh/mn pop.....	2,238.9	73	7.2.1	Cultural & creative services exports, % total trade.....	4.2	1 ● ◆
3.2.2	Logistics performance*.....	34.1	72	7.2.2	National feature films/mn pop. 15-69.....	3.7	50
3.2.3	Gross capital formation, % GDP.....	17.8	105 ○	7.2.3	Entertainment & Media market/th pop. 15-69.....	n/a	n/a
3.3	Ecological sustainability.....	49.0	34 ◆	7.2.4	Printing & other media, % manufacturing.....	2.2	15 ●
3.3.1	GDP/unit of energy use.....	14.5	15 ● ◆	7.2.5	Creative goods exports, % total trade.....	0.4	65
3.3.2	Environmental performance*.....	67.9	29 ◆	7.3	Online creativity.....	5.1	65
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	1.4	59	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	11.3	37 ◆
MARKET SOPHISTICATION..... 44.2 85				7.3.2	Country-code TLDs/th pop. 15-69.....	1.4	70
4.1	Credit.....	37.8	60	7.3.3	Wikipedia edits/mn pop. 15-69.....	11.0	62
4.1.1	Ease of getting credit*.....	85.0	11 ● ◆	7.3.4	Mobile app creation/bn PPP\$ GDP.....	0.4	73
4.1.2	Domestic credit to private sector, % GDP.....	62.0	53	4.2	Investment.....	32.2	112 ○
4.1.3	Microfinance gross loans, % GDP.....	0.0	71 ○	4.2.1	Ease of protecting minority investors*.....	48.3	99
4.2	Investment.....	32.2	112 ○	4.2.2	Market capitalization, % GDP.....	4.6	74 ○ ◇
4.2.1	Ease of protecting minority investors*.....	48.3	99	4.2.3	Venture capital deals/bn PPP\$ GDP.....	n/a	n/a
4.2.2	Market capitalization, % GDP.....	4.6	74 ○ ◇	4.3	Trade, competition, & market scale.....	62.4	58
4.2.3	Venture capital deals/bn PPP\$ GDP.....	n/a	n/a	4.3.1	Applied tariff rate, weighted avg., %.....	1.8	22 ●
4.3	Trade, competition, & market scale.....	62.4	58	4.3.2	Intensity of local competition*.....	72.9	39
4.3.1	Applied tariff rate, weighted avg., %.....	1.8	22 ●	4.3.3	Domestic market scale, bn PPP\$.....	88.7	84
4.3.2	Intensity of local competition*.....	72.9	39				
4.3.3	Domestic market scale, bn PPP\$.....	88.7	84				

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.