

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank	
75	72	High	LCN	44.7	918.6	20,537.1	80	
INSTITUTIONS 56.7 86 ◊				BUSINESS SOPHISTICATION 32.6 57 ◊				
1.1	Political environment	57.0	62	◊	5.1	Knowledge workers	41.2	53
1.1.1	Political and operational stability*.....	70.2	61	◊	5.1.1	Knowledge-intensive employment, %.....	17.6	84 ◊
1.1.2	Government effectiveness*.....	50.4	61	◊	5.1.2	Firms offering formal training, % firms.....	63.6	5 ● ◆
1.2	Regulatory environment	51.5	106	○ ◊	5.1.3	GERD performed by business, % GDP.....	0.1	58 ◊
1.2.1	Regulatory quality*.....	34.1	92	◊	5.1.4	GERD financed by business, %.....	18.2	69 ◊
1.2.2	Rule of law*.....	39.9	75	◊	5.1.5	Females employed w/advanced degrees, %.....	14.2	44 ◊
1.2.3	Cost of redundancy dismissal, salary weeks.....	30.3	116	○ ◊	5.2	Innovation linkages	18.0	106
1.3	Business environment	61.6	95	◊	5.2.1	University/industry research collaboration*.....	37.6	83 ◊
1.3.1	Ease of starting a business*.....	82.0	99	◊	5.2.2	State of cluster development*.....	39.1	95 ◊
1.3.2	Ease of resolving insolvency*.....	41.2	92	◊	5.2.3	GERD financed by abroad, %.....	6.3	57
HUMAN CAPITAL & RESEARCH 38.7 42				KNOWLEDGE & TECHNOLOGY OUTPUTS 19.2 78 ◊				
2.1	Education	57.9	31		5.3	Knowledge absorption	38.4	42
2.1.1	Expenditure on education, % GDP.....	5.6	25	●	5.3.1	Intellectual property payments, % total trade.....	2.9	7 ● ◆
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..	21.8	42		5.3.2	High-tech imports, % total trade.....	12.1	18 ●
2.1.3	School life expectancy, years.....	17.6	15	●	5.3.3	ICT services imports, % total trade.....	1.5	39
2.1.4	PISA scales in reading, maths, & science.....	468.9	39		5.3.4	FDI net inflows, % GDP.....	1.5	97
2.1.5	Pupil-teacher ratio, secondary.....	12.2	50		5.3.5	Research talent, % in business enterprise.....	8.1	65 ◊
2.2	Tertiary education	29.7	70	◊	6.1	Knowledge creation	13.2	60
2.2.1	Tertiary enrolment, % gross.....	89.1	7	●	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.4	78
2.2.2	Graduates in science & engineering, %.....	16.1	81	○ ◊	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	n/a	n/a
2.2.3	Tertiary inbound mobility, %.....	2.5	70		6.1.3	Utility models by origin/bn PPP\$ GDP.....	0.2	43
2.3	Research & development (R&D)	28.6	38		6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	6.8	65 ◊
2.3.1	Researchers, FTE/mn pop.....	1,232.6	47	◊	6.1.5	Citable documents H-index.....	26.2	36
2.3.2	Gross expenditure on R&D, % GDP.....	0.5	59		6.2	Knowledge impact	28.0	101
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....	46.3	34		6.2.1	Growth rate of PPP\$ GDP/worker, %.....	-1.2	102 ○ ◊
2.3.4	QS university ranking, average score top 3*.....	41.9	29	●	6.2.2	New businesses/th pop. 15-64.....	0.4	89 ○
INFRASTRUCTURE 45.8 69 ◊				CREATIVE OUTPUTS 24.0 77 ◊				
3.1	Information & communication technologies (ICTs)	68.1	62	◊	6.3	Knowledge diffusion	16.3	73
3.1.1	ICT access*.....	73.1	55	◊	6.3.1	Intellectual property receipts, % total trade.....	0.2	33
3.1.2	ICT use*.....	61.8	53	◊	6.3.2	High-tech net exports, % total trade.....	1.8	56
3.1.3	Government's online service*.....	75.0	56		6.3.3	ICT services exports, % total trade.....	2.5	41
3.1.4	E-participation*.....	62.4	84	◊	6.3.4	FDI net outflows, % GDP.....	0.2	87
3.2	General infrastructure	32.1	75	◊	7.1	Intangible assets	37.9	80
3.2.1	Electricity output, kWh/mn pop.....	3,346.1	59		7.1.1	Trademarks by origin/bn PPP\$ GDP.....	64.7	32
3.2.2	Logistics performance*.....	38.5	60	◊	7.1.2	Industrial designs by origin/bn PPP\$ GDP.....	1.1	65
3.2.3	Gross capital formation, % GDP.....	23.7	57		7.1.3	ICTs & business model creation*.....	53.0	93 ◊
3.3	Ecological sustainability	37.3	69	◊	7.1.4	ICTs & organizational model creation*.....	50.6	79 ◊
3.3.1	GDP/unit of energy use.....	9.2	62		7.2	Creative goods & services	14.6	69
3.3.2	Environmental performance*.....	59.3	65	◊	7.2.1	Cultural & creative services exports, % total trade.....	1.1	24 ●
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..	1.6	54		7.2.2	National feature films/mn pop. 15-69.....	7.4	24 ●
MARKET SOPHISTICATION 37.9 111 ○ ◊				ONLINE CREATIVITY 5.4 63 ◊				
4.1	Credit	20.1	117	○ ◊	7.2.3	Entertainment & Media market/th pop. 15-69.....	10.2	35 ◊
4.1.1	Ease of getting credit*.....	55.0	77		7.2.4	Printing & other media, % manufacturing.....	1.0	67
4.1.2	Domestic credit to private sector, % GDP.....	16.1	113	○ ◊	7.2.5	Creative goods exports, % total trade.....	0.1	98
4.1.3	Microfinance gross loans, % GDP.....	0.0	75	○	7.3	Online creativity	5.4	63
4.2	Investment	32.2	111	○ ◊	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	3.0	62 ◊
4.2.1	Ease of protecting minority investors*.....	61.7	54		7.3.2	Country-code TLDs/th pop. 15-69.....	4.5	55
4.2.2	Market capitalization, % GDP.....	12.7	68	○	7.3.3	Wikipedia edits/mn pop. 15-69.....	12.1	61 ◊
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	59		7.3.4	Mobile app creation/bn PPP\$ GDP.....	5.8	48
4.3	Trade, competition, & market scale	61.3	61					
4.3.1	Applied tariff rate, weighted avg., %.....	7.9	103	○ ◊				
4.3.2	Intensity of local competition*.....	55.4	120	○ ◊				
4.3.3	Domestic market scale, bn PPP\$.....	918.6	28	●				

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.