

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank			
111	87	High	LCN	1.4	45.2	28,561.4	91			
		Score/Value	Rank				Score/Value	Rank		
INSTITUTIONS				62.5	68		BUSINESS SOPHISTICATION		18.0	109
1.1	Political environment	60.1	58		5.1	Knowledge workers	23.8	87		
1.1.1	Political and operational stability*.....	71.4	59		5.1.1	Knowledge-intensive employment, %.....	29.8	47		
1.1.2	Government effectiveness*.....	54.4	58		5.1.2	Firms offering formal training, %.....	28.0	54		
1.2	Regulatory environment	58.8	82		5.1.3	GERD performed by business, % GDP.....	0.0	85		
1.2.1	Regulatory quality*.....	41.2	69		5.1.4	GERD financed by business, %.....	8.2	78		
1.2.2	Rule of law*.....	43.5	68		5.1.5	Females employed w/advanced degrees, %.....	12.8	55		
1.2.3	Cost of redundancy dismissal, salary weeks.....	20.5	86		5.2	Innovation linkages	14.4	114		
1.3	Business environment	68.5	74		5.2.1	University/industry research collaboration*.....	32.3	103		
1.3.1	Ease of starting a business*.....	88.6	64		5.2.2	State of cluster development*.....	42.3	86		
1.3.2	Ease of resolving insolvency*.....	48.4	75		5.2.3	GERD financed by abroad, % GDP.....	0.0	70		
					5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	107		
					5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.1	58		
HUMAN CAPITAL & RESEARCH				30.0	[65]		5.3	Knowledge absorption	15.9	126
2.1	Education	58.1	[20]		5.3.1	Intellectual property payments, % total trade.....	0.5	62		
2.1.1	Expenditure on education, % GDP.....	n/a	n/a		5.3.2	High-tech imports, % total trade.....	6.5	85		
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	n/a	n/a		5.3.3	ICT services imports, % total trade.....	0.4	112		
2.1.3	School life expectancy, years.....	n/a	n/a		5.3.4	FDI net inflows, % GDP.....	-1.6	127		
2.1.4	PISA scales in reading, maths, & science.....	423.0	54		5.3.5	Research talent, % in business enterprise.....	1.1	78		
2.1.5	Pupil-teacher ratio, secondary.....	13.5	64							
2.2	Tertiary education	n/a	[n/a]		KNOWLEDGE & TECHNOLOGY OUTPUTS				9.2	121
2.2.1	Tertiary enrolment, % gross.....	n/a	n/a		6.1	Knowledge creation	3.1	122		
2.2.2	Graduates in science & engineering, %.....	n/a	n/a		6.1.1	Patents by origin/bn PPP\$ GDP.....	0.1	116		
2.2.3	Tertiary inbound mobility, %.....	n/a	n/a		6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.1	72		
2.3	Research & development (R&D)	1.9	98		6.1.3	Utility models by origin/bn PPP\$ GDP.....	0.0	66		
2.3.1	Researchers, FTE/mn pop.....	517.3	66		6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	2.9	107		
2.3.2	Gross expenditure on R&D, % GDP.....	0.1	109		6.1.5	Citable documents H-index.....	5.0	105		
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US.....	0.0	42		6.2	Knowledge impact	17.2	[91]		
2.3.4	QS university ranking, average score top 3*.....	0.0	77		6.2.1	Growth rate of PPP\$ GDP/worker, %.....	0.1	89		
					6.2.2	New businesses/th pop. 15-64.....	n/a	n/a		
					6.2.3	Computer software spending, % GDP.....	n/a	n/a		
					6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	1.6	91		
					6.2.5	High- and medium-high-tech manufacturing, %.....	n/a	n/a		
INFRASTRUCTURE				34.1	91		6.3	Knowledge diffusion	7.4	130
3.1	Information & communication technologies (ICTs)	62.6	77		6.3.1	Intellectual property receipts, % total trade.....	0.0	83		
3.1.1	ICT access*.....	75.7	41		6.3.2	High-tech net exports, % total trade.....	0.0	121		
3.1.2	ICT use*.....	53.0	71		6.3.3	ICT services exports, % total trade.....	0.1	122		
3.1.3	Government's online service*.....	63.9	86		6.3.4	FDI net outflows, % GDP.....	0.0	113		
3.1.4	E-participation*.....	57.9	94							
3.2	General infrastructure	22.6	83		CREATIVE OUTPUTS				14.0	99
3.2.1	Electricity output, kWh/mn pop.....	8,053.5	22		7.1	Intangible assets	18.4	101		
3.2.2	Logistics performance*.....	16.2	113		7.1.1	Trademarks by origin/bn PPP\$ GDP.....	14.0	104		
3.2.3	Gross capital formation, % GDP.....	n/a	n/a		7.1.2	Global brand value, top 5,000, % GDP.....	0.0	80		
3.3	Ecological sustainability	17.1	114		7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	3.6	35		
3.3.1	GDP/unit of energy use.....	2.3	122		7.1.4	ICTs & organizational model creation*.....	49.8	83		
3.3.2	Environmental performance*.....	47.5	63		7.2	Creative goods and services	1.8	[120]		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.5	81		7.2.1	Cultural & creative services exports, % total trade.....	n/a	n/a		
					7.2.2	National feature films/mn pop. 15-69.....	n/a	n/a		
					7.2.3	Entertainment & Media market/th pop. 15-69.....	n/a	n/a		
					7.2.4	Printing and other media, % manufacturing.....	n/a	n/a		
					7.2.5	Creative goods exports, % total trade.....	0.1	89		
MARKET SOPHISTICATION				38.7	109		7.3	Online creativity	17.3	62
4.1	Credit	32.4	101		7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	4.1	59		
4.1.1	Ease of getting credit*.....	65.0	61		7.3.2	Country-code TLDs/th pop. 15-69.....	1.5	74		
4.1.2	Domestic credit to private sector, % GDP.....	39.7	81		7.3.3	Wikipedia edits/mn pop. 15-69.....	49.0	62		
4.1.3	Microfinance gross loans, % GDP.....	0.0	74		7.3.4	Mobile app creation/bn PPP\$ GDP.....	n/a	n/a		
4.2	Investment	33.7	81							
4.2.1	Ease of protecting minority investors*.....	64.0	56							
4.2.2	Market capitalization, % GDP.....	n/a	n/a							
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	54							
4.3	Trade, competition, and market scale	50.1	116							
4.3.1	Applied tariff rate, weighted avg., %.....	8.6	108							
4.3.2	Intensity of local competition*.....	66.9	74							
4.3.3	Domestic market scale, bn PPP\$.....	45.2	106							

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.