

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
67	60	Upper middle	LCN	210.9	3,370.6	16,154.3	64
				Score/Value	Rank		
INSTITUTIONS				58.9	80		
1.1	Political environment		48.6	88			
1.1.1	Political and operational stability*.....		66.7	74			
1.1.2	Government effectiveness*.....		39.6	87			
1.2	Regulatory environment		63.8	72			
1.2.1	Regulatory quality*.....		38.9	76			
1.2.2	Rule of law*.....		38.9	78			
1.2.3	Cost of redundancy dismissal, salary weeks.....		15.4	62			
1.3	Business environment		64.4	83			
1.3.1	Ease of starting a business*.....		80.2	106 ○			
1.3.2	Ease of resolving insolvency*.....		48.5	69			
HUMAN CAPITAL & RESEARCH				36.0	48		
2.1	Education		50.1	59			
2.1.1	Expenditure on education, % GDP.....		6.2	18 ● ◆			
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		21.7	44			
2.1.3	School life expectancy, years.....		15.3	44			
2.1.4	PISA scales in reading, maths, & science.....		395.0	64 ○			
2.1.5	Pupil-teacher ratio, secondary.....		16.6	73			
2.2	Tertiary education		22.3	85			
2.2.1	Tertiary enrolment, % gross.....		50.5	56			
2.2.2	Graduates in science & engineering, %.....		17.7	75			
2.2.3	Tertiary inbound mobility, %.....		0.2	105 ○ ◆			
2.3	Research & development (R&D)		35.6	32 ◆			
2.3.1	Researchers, FTE/mn pop.....		881.4	53			
2.3.2	Gross expenditure on R&D, % GDP.....		1.3	28 ● ◆			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		61.5	22 ● ◆			
2.3.4	QS university ranking, average score top 3*.....		43.0	25 ● ◆			
INFRASTRUCTURE				46.8	64		
3.1	Information & communication technologies (ICTs)		77.9	36 ◆			
3.1.1	ICT access*.....		61.9	72			
3.1.2	ICT use*.....		60.2	57			
3.1.3	Government's online service*.....		92.4	22 ● ◆			
3.1.4	E-participation*.....		97.2	12 ● ◆			
3.2	General infrastructure		24.4	102 ○			
3.2.1	Electricity output, kWh/mn pop.....		2,787.8	64			
3.2.2	Logistics performance*.....		43.1	55			
3.2.3	Gross capital formation, % GDP.....		16.1	115 ○ ◆			
3.3	Ecological sustainability		38.2	65			
3.3.1	GDP/unit of energy use.....		10.0	52			
3.3.2	Environmental performance*.....		60.7	62			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.9	68			
MARKET SOPHISTICATION				44.2	84		
4.1	Credit		25.8	105 ○			
4.1.1	Ease of getting credit*.....		50.0	87			
4.1.2	Domestic credit to private sector, % GDP.....		59.7	56			
4.1.3	Microfinance gross loans, % GDP.....		0.0	74 ○			
4.2	Investment		36.8	91			
4.2.1	Ease of protecting minority investors*.....		65.0	45			
4.2.2	Market capitalization, % GDP.....		38.6	40			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.0	61 ○			
4.3	Trade, competition, & market scale		70.1	33			
4.3.1	Applied tariff rate, weighted avg., %.....		8.6	104 ○ ◆			
4.3.2	Intensity of local competition*.....		68.2	67			
4.3.3	Domestic market scale, bn PPP\$.....		3,370.6	8 ● ◆			
BUSINESS SOPHISTICATION				37.6	40 ◆		
5.1	Knowledge workers		46.3	42			
5.1.1	Knowledge-intensive employment, %.....		23.1	65			
5.1.2	Firms offering formal training, % firms.....		42.2	30			
5.1.3	GERD performed by business, % GDP.....		n/a	n/a			
5.1.4	GERD financed by business, %.....		45.0	35			
5.1.5	Females employed w/advanced degrees, %.....		12.5	55			
5.2	Innovation linkages		25.0	66			
5.2.1	University/industry research collaboration*.....		42.5	58			
5.2.2	State of cluster development*.....		49.7	50			
5.2.3	GERD financed by abroad, %.....		n/a	n/a			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	82			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.1	55			
5.3	Knowledge absorption		41.7	36 ◆			
5.3.1	Intellectual property payments, % total trade.....		2.3	10 ● ◆			
5.3.2	High-tech imports, % total trade.....		10.1	28 ●			
5.3.3	ICT services imports, % total trade.....		1.6	35			
5.3.4	FDI net inflows, % GDP.....		4.0	41			
5.3.5	Research talent, % in business enterprise.....		26.6	45			
KNOWLEDGE & TECHNOLOGY OUTPUTS				23.0	58		
6.1	Knowledge creation		19.8	47			
6.1.1	Patents by origin/bn PPP\$ GDP.....		1.7	50			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.2	53			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		0.9	25			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		9.7	50			
6.1.5	Citable documents H-index.....		36.3	24 ● ◆			
6.2	Knowledge impact		31.9	86			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		-0.3	96 ○			
6.2.2	New businesses/th pop. 15-64.....		0.1	98 ○			
6.2.3	Computer software spending, % GDP.....		0.2	74			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		5.4	58			
6.2.5	High- & medium-high-tech manufactures, %.....		0.3	32			
6.3	Knowledge diffusion		17.4	66			
6.3.1	Intellectual property receipts, % total trade.....		0.3	31 ◆			
6.3.2	High-tech net exports, % total trade.....		4.5	32			
6.3.3	ICT services exports, % total trade.....		0.9	84			
6.3.4	FDI net outflows, % GDP.....		0.6	63			
CREATIVE OUTPUTS				22.8	82		
7.1	Intangible assets		38.9	73			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		49.0	50			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		1.1	64			
7.1.3	ICTs & business model creation*.....		61.1	57			
7.1.4	ICTs & organizational model creation*.....		52.6	69			
7.2	Creative goods & services		7.0	94			
7.2.1	Cultural & creative services exports, % total trade.....		0.5	50			
7.2.2	National feature films/mn pop. 15-69.....		1.0	81			
7.2.3	Entertainment & Media market/th pop. 15-69.....		8.5	39 ◆			
7.2.4	Printing & other media, % manufacturing.....		0.6	86 ○			
7.2.5	Creative goods exports, % total trade.....		0.2	77			
7.3	Online creativity		6.4	61			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		1.5	87			
7.3.2	Country-code TLDs/th pop. 15-69.....		7.2	44			
7.3.3	Wikipedia edits/mn pop. 15-69.....		6.3	71			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		12.7	36			

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.