

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
23	28	High	NAWA	1.2	33.8	39,973.2	29
INSTITUTIONS 80.3 25				BUSINESS SOPHISTICATION 47.6 24			
1.1	Political environment	72.8	34	5.1	Knowledge workers	49.9	38
1.1.1	Political and operational stability*	80.7	35	5.1.1	Knowledge-intensive employment, %	35.3	37
1.1.2	Government effectiveness*	68.8	33	5.1.2	Firms offering formal training, % firms	n/a	n/a
1.2	Regulatory environment	84.8	21	5.1.3	GERD performed by business, % GDP	0.2	52
1.2.1	Regulatory quality*	69.6	31	5.1.4	GERD financed by business, %	34.9	53
1.2.2	Rule of law*	69.8	33	5.1.5	Females employed w/advanced degrees, %	24.6	14 ◆
1.2.3	Cost of redundancy dismissal, salary weeks	8.0	1 ● ◆	5.2	Innovation linkages	36.4	36
1.3	Business environment	83.3	24	5.2.1	University/industry research collaboration†	39.2	72 ◇
1.3.1	Ease of starting a business*	91.2	46	5.2.2	State of cluster development†	46.3	67
1.3.2	Ease of resolving insolvency*	75.5	24	5.2.3	GERD financed by abroad, %	18.6	20
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	0.1	17
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP	1.7	23
HUMAN CAPITAL & RESEARCH 35.8 49				KNOWLEDGE & TECHNOLOGY OUTPUTS 41.2 20			
2.1	Education	63.4	12	5.3	Knowledge absorption	56.3	9 ◆
2.1.1	Expenditure on education, % GDP	6.4	16	5.3.1	Intellectual property payments, % total trade	1.0	36
2.1.2	Government funding/pupil, secondary, % GDP/cap	39.4	3 ● ◆	5.3.2	High-tech imports, % total trade	4.6	111 ○ ◇
2.1.3	School life expectancy, years	14.6	62 ◇	5.3.3	ICT services imports, % total trade	8.1	1 ● ◆
2.1.4	PISA scales in reading, maths, & science	437.5	46	5.3.4	FDI net inflows, % GDP	43.8	2 ● ◆
2.1.5	Pupil-teacher ratio, secondary	10.4	33	5.3.5	Research talent, % in business enterprise	25.6	47
2.2	Tertiary education	37.5	42	6.1	Knowledge creation	24.6	35
2.2.1	Tertiary enrolment, % gross	60.1	45	6.1.1	Patents by origin/bn PPP\$ GDP	1.9	47
2.2.2	Graduates in science & engineering, %	15.9	82 ○ ◇	6.1.2	PCT patents by origin/bn PPP\$ GDP	1.2	28
2.2.3	Tertiary inbound mobility, %	17.5	8 ◆	6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	n/a
2.3	Research & development (R&D)	6.5	71 ◇	6.1.4	Scientific & technical articles/bn PPP\$ GDP	25.6	12
2.3.1	Researchers, FTE/mn pop	1,174.4	49 ◇	6.1.5	Citable documents H-index	10.4	63
2.3.2	Gross expenditure on R&D, % GDP	0.6	55	6.2	Knowledge impact	48.2	19
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, %	0.1	84 ○
2.3.4	QS university ranking, average score top 3*	0.0	78 ○ ◇	6.2.2	New businesses/th pop. 15-64	16.6	5 ● ◆
				6.2.3	Computer software spending, % GDP	0.2	71
				6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	29.6	4 ● ◆
				6.2.5	High- & medium-high-tech manufactures, %	0.2	60
INFRASTRUCTURE 55.9 34				CREATIVE OUTPUTS 41.1 28			
3.1	Information & communication technologies (ICTs)	79.9	32	7.1	Intangible assets	44.2	52
3.1.1	ICT access*	79.7	31	7.1.1	Trademarks by origin/bn PPP\$ GDP	97.0	17 ◆
3.1.2	ICT use*	79.6	18	7.1.2	Industrial designs by origin/bn PPP\$ GDP	3.4	37
3.1.3	Government's online service*	78.5	51	7.1.3	ICTs & business model creation†	58.1	73 ◇
3.1.4	E-participation*	82.0	46	7.1.4	ICTs & organizational model creation†	47.3	92 ◇
3.2	General infrastructure	29.9	86 ◇	7.2	Creative goods & services	22.4	50
3.2.1	Electricity output, kWh/mn pop	5,749.4	36	7.2.1	Cultural & creative services exports, % total trade	0.1	88 ○ ◇
3.2.2	Logistics performance*	50.9	44	7.2.2	National feature films/mn pop. 15-69	6.8	32
3.2.3	Gross capital formation, % GDP	17.0	111 ○ ◇	7.2.3	Entertainment & Media market/th pop. 15-69	n/a	n/a
3.3	Ecological sustainability	57.8	11	7.2.4	Printing & other media, % manufacturing	2.4	12 ◆
3.3.1	GDP/unit of energy use	12.2	28	7.2.5	Creative goods exports, % total trade	0.5	59
3.3.2	Environmental performance*	72.6	23	7.3	Online creativity	53.6	9 ◆
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	8.5	9 ◆	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	75.2	7 ● ◆
				7.3.2	Country-code TLDs/th pop. 15-69	4.7	52
				7.3.3	Wikipedia edits/mn pop. 15-69	51.2	23
				7.3.4	Mobile app creation/bn PPP\$ GDP	100.0	1 ● ◆
MARKET SOPHISTICATION 58.2 24							
4.1	Credit	78.8	6 ● ◆				
4.1.1	Ease of getting credit*	60.0	66				
4.1.2	Domestic credit to private sector, % GDP	199.1	2 ● ◆				
4.1.3	Microfinance gross loans, % GDP	n/a	n/a				
4.2	Investment	38.0	86				
4.2.1	Ease of protecting minority investors*	66.7	35				
4.2.2	Market capitalization, % GDP	12.9	66 ○				
4.2.3	Venture capital deals/bn PPP\$ GDP	0.1	25				
4.3	Trade, competition, & market scale	57.7	76 ◇				
4.3.1	Applied tariff rate, weighted avg., %	1.8	23				
4.3.2	Intensity of local competition†	76.0	20				
4.3.3	Domestic market scale, bn PPP\$	33.8	111 ○ ◇				

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.