

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
71	91	Upper middle	NAWA	9.9	93.2	9,433.5	79
INSTITUTIONS 62.1 67				BUSINESS SOPHISTICATION 16.9 128 ◊			
1.1	Political environment	54.5	67	5.1	Knowledge workers	0.0	[129]
1.1.1	Political and operational stability*	64.9	79	5.1.1	Knowledge-intensive employment, %	n/a	n/a
1.1.2	Government effectiveness*	49.4	64	5.1.2	Firms offering formal training, % firms	3.4	91 ◊
1.2	Regulatory environment	74.5	38 ● ◆	5.1.3	GERD performed by business, % GDP	n/a	n/a
1.2.1	Regulatory quality*	44.5	66	5.1.4	GERD financed by business, %	n/a	n/a
1.2.2	Rule of law*	53.3	51 ◆	5.1.5	Females employed w/advanced degrees, %	n/a	n/a
1.2.3	Cost of redundancy dismissal, salary weeks	8.0	1 ●	5.2	Innovation linkages	26.7	59
1.3	Business environment	57.4	109 ◊	5.2.1	University/industry research collaboration†	40.6	66
1.3.1	Ease of starting a business*	84.4	81	5.2.2	State of cluster development†	57.7	31 ● ◆
1.3.2	Ease of resolving insolvency*	30.3	120 ◊	5.2.3	GERD financed by abroad, %	n/a	n/a
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	0.0	90
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP	0.0	71
HUMAN CAPITAL & RESEARCH 29.4 68				KNOWLEDGE & TECHNOLOGY OUTPUTS 17.4 84			
2.1	Education	37.3	93	5.3	Knowledge absorption	23.9	106
2.1.1	Expenditure on education, % GDP	3.6	91	5.3.1	Intellectual property payments, % total trade	0.1	98
2.1.2	Government funding/pupil, secondary, % GDP/cap	17.0	71	5.3.2	High-tech imports, % total trade	6.6	79
2.1.3	School life expectancy, years	n/a	n/a	5.3.3	ICT services imports, % total trade	0.2	118 ◊
2.1.4	PISA scales in reading, maths, & science	399.0	62 ◊	5.3.4	FDI net inflows, % GDP	4.4	36 ●
2.1.5	Pupil-teacher ratio, secondary	11.4	42	5.3.5	Research talent, % in business enterprise	n/a	n/a
2.2	Tertiary education	43.2	27 ●	6.1	Knowledge creation	14.4	[57]
2.2.1	Tertiary enrolment, % gross	31.7	82	6.1.1	Patents by origin/bn PPP\$ GDP	0.3	88
2.2.2	Graduates in science & engineering, %	26.4	24 ●	6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	n/a
2.2.3	Tertiary inbound mobility, %	13.9	11 ● ◆	6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	n/a
2.3	Research & development (R&D)	7.8	66	6.1.4	Scientific & technical articles/bn PPP\$ GDP	14.1	36 ●
2.3.1	Researchers, FTE/mn pop	601.1	64	6.1.5	Citable documents H-index	8.4	77
2.3.2	Gross expenditure on R&D, % GDP	0.3	75	6.2	Knowledge impact	30.5	91
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, %	-0.2	94 ◊
2.3.4	QS university ranking, average score top 3*	17.1	55	6.2.2	New businesses/th pop. 15-64	0.6	80
				6.2.3	Computer software spending, % GDP	0.3	49
				6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	4.2	63
				6.2.5	High- & medium-high-tech manufactures, %	0.2	50
INFRASTRUCTURE 38.2 91				CREATIVE OUTPUTS 26.8 67			
3.1	Information & communication technologies (ICTs)	54.2	87	6.3	Knowledge diffusion	7.3	117 ◊
3.1.1	ICT access*	61.5	73	6.3.1	Intellectual property receipts, % total trade	0.1	48
3.1.2	ICT use*	57.5	60	6.3.2	High-tech net exports, % total trade	0.4	82
3.1.3	Government's online service*	49.3	105	6.3.3	ICT services exports, % total trade	0.1	123 ◊
3.1.4	E-participation*	48.3	105	6.3.4	FDI net outflows, % GDP	0.0	111 ◊
3.2	General infrastructure	23.9	104	7.1	Intangible assets	37.7	82
3.2.1	Electricity output, kWh/mn pop	2,085.7	75	7.1.1	Trademarks by origin/bn PPP\$ GDP	34.7	70
3.2.2	Logistics performance*	29.2	82	7.1.2	Industrial designs by origin/bn PPP\$ GDP	0.8	76
3.2.3	Gross capital formation, % GDP	19.4	96	7.1.3	ICTs & business model creation†	63.5	55
3.3	Ecological sustainability	36.6	73	7.1.4	ICTs & organizational model creation†	52.6	68
3.3.1	GDP/unit of energy use	8.7	66	7.2	Creative goods & services	23.1	46
3.3.2	Environmental performance*	62.2	55	7.2.1	Cultural & creative services exports, % total trade	0.3	64
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	0.9	69	7.2.2	National feature films/mn pop. 15-69	n/a	n/a
				7.2.3	Entertainment & Media market/th pop. 15-69	1.9	53 ◊
				7.2.4	Printing & other media, % manufacturing	2.4	13 ● ◆
				7.2.5	Creative goods exports, % total trade	1.5	36 ●
MARKET SOPHISTICATION 38.9 106 ◊				7.3	Online creativity	8.9	54
4.1	Credit	25.5	107	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	5.2	54
4.1.1	Ease of getting credit*	35.0	110 ◊	7.3.2	Country-code TLDs/th pop. 15-69	0.2	107
4.1.2	Domestic credit to private sector, % GDP	75.1	41 ●	7.3.3	Wikipedia edits/mn pop. 15-69	21.7	48
4.1.3	Microfinance gross loans, % GDP	0.4	36	7.3.4	Mobile app creation/bn PPP\$ GDP	15.6	32 ●
4.2	Investment	31.3	116 ◊				
4.2.1	Ease of protecting minority investors*	46.7	101				
4.2.2	Market capitalization, % GDP	63.7	25				
4.2.3	Venture capital deals/bn PPP\$ GDP	0.0	42				
4.3	Trade, competition, & market scale	59.8	69				
4.3.1	Applied tariff rate, weighted avg., %	4.4	79				
4.3.2	Intensity of local competition†	76.0	19 ● ◆				
4.3.3	Domestic market scale, bn PPP\$	93.2	81				

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.