

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
56	75	High	NAWA	4.2	303.3	67,000.2	60
Score/Value				Score/Value			
INSTITUTIONS.....				55.6	90		
1.1	Political environment.....		49.4	85			
1.1.1	Political and operational stability*.....		63.2	86			
1.1.2	Government effectiveness*.....		42.5	83			
1.2	Regulatory environment.....		57.0	92			
1.2.1	Regulatory quality*.....		40.3	73			
1.2.2	Rule of law*.....		49.1	55			
1.2.3	Cost of redundancy dismissal, salary weeks.....		28.1	113			
1.3	Business environment.....		60.3	105			
1.3.1	Ease of starting a business*.....		81.4	101			
1.3.2	Ease of resolving insolvency*.....		39.3	101			
HUMAN CAPITAL & RESEARCH.....				25.5	[81]		
2.1	Education.....		48.2	[67]			
2.1.1	Expenditure on education, % GDP.....		n/a	n/a			
2.1.2	Government funding/pupil, secondary, % GDP/cap.Ⓞ		17.6	64			
2.1.3	School life expectancy, years.Ⓞ		13.6	73			
2.1.4	PISA scales in reading, maths, & science.....		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary.Ⓞ		7.6	6			
2.2	Tertiary education.....		25.3	[79]			
2.2.1	Tertiary enrolment, % gross.Ⓞ		32.6	80			
2.2.2	Graduates in science & engineering, %.....		n/a	n/a			
2.2.3	Tertiary inbound mobility, %.....		n/a	n/a			
2.3	Research & development (R&D).....		2.9	87			
2.3.1	Researchers, FTE/mn pop.....		491.8	68			
2.3.2	Gross expenditure on R&D, % GDP.....		0.1	110			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		0.0	43			
2.3.4	QS university ranking, average score top 3*.....		4.5	71			
INFRASTRUCTURE.....				50.2	53		
3.1	Information & communication technologies (ICTs).....		73.7	48			
3.1.1	ICT access*.....		78.3	33			
3.1.2	ICT use*.....		68.2	38			
3.1.3	Government's online service*.....		79.2	48			
3.1.4	E-participation*.....		69.1	70			
3.2	General infrastructure.....		42.5	39			
3.2.1	Electricity output, kWh/mn pop.....		17,307.2	5			
3.2.2	Logistics performance*.....		37.3	62			
3.2.3	Gross capital formation, % GDP.....		22.2	75			
3.3	Ecological sustainability.....		34.4	80			
3.3.1	GDP/unit of energy use.....		7.6	82			
3.3.2	Environmental performance*.....		62.3	54			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.5	83			
MARKET SOPHISTICATION.....				53.5	41		
4.1	Credit.....		41.1	52			
4.1.1	Ease of getting credit*.....		35.0	110			
4.1.2	Domestic credit to private sector, % GDP.....		99.2	28			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	Investment.....		58.3	[22]			
4.2.1	Ease of protecting minority investors*.....		58.3	68			
4.2.2	Market capitalization, % GDP.....		n/a	n/a			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		n/a	n/a			
4.3	Trade, competition, & market scale.....		61.0	64			
4.3.1	Applied tariff rate, weighted avg., %.....		4.3	77			
4.3.2	Intensity of local competition*.....		56.0	119			
4.3.3	Domestic market scale, bn PPP\$.....		303.3	55			
BUSINESS SOPHISTICATION.....				24.7	[100]		
5.1	Knowledge workers.....		26.6	[91]			
5.1.1	Knowledge-intensive employment, %.....		22.7	66			
5.1.2	Firms offering formal training, % firms.....		n/a	n/a			
5.1.3	GERD performed by business, % GDP.....		n/a	n/a			
5.1.4	GERD financed by business, %.....		1.0	90			
5.1.5	Females employed w/advanced degrees, %.....		n/a	n/a			
5.2	Innovation linkages.....		19.6	89			
5.2.1	University/industry research collaboration*.....		40.2	68			
5.2.2	State of cluster development*.....		49.9	49			
5.2.3	GERD financed by abroad, %.....		1.2	90			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	56			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	81			
5.3	Knowledge absorption.....		28.1	[91]			
5.3.1	Intellectual property payments, % total trade.....		n/a	n/a			
5.3.2	High-tech imports, % total trade.....		6.8	76			
5.3.3	ICT services imports, % total trade.....		0.7	92			
5.3.4	FDI net inflows, % GDP.....		0.2	122			
5.3.5	Research talent, % in business enterprise.....		n/a	n/a			
KNOWLEDGE & TECHNOLOGY OUTPUTS....				25.2	52		
6.1	Knowledge creation.....		6.8	[85]			
6.1.1	Patents by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		2.1	112			
6.1.5	Citable documents H-index.....		7.6	81			
6.2	Knowledge impact.....		33.4	79			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		-1.5	103			
6.2.2	New businesses/th pop. 15-64.....		n/a	n/a			
6.2.3	Computer software spending, % GDP.....		0.4	26			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		1.5	101			
6.2.5	High- & medium-high-tech manufactures, %.....		0.2	54			
6.3	Knowledge diffusion.....		35.4	24			
6.3.1	Intellectual property receipts, % total trade.....		n/a	n/a			
6.3.2	High-tech net exports, % total trade.....		0.3	87			
6.3.3	ICT services exports, % total trade.....		3.9	20			
6.3.4	FDI net outflows, % GDP.....		5.5	11			
CREATIVE OUTPUTS.....				29.2	56		
7.1	Intangible assets.....		53.7	[25]			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		n/a	n/a			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		n/a	n/a			
7.1.3	ICTs & business model creation*.....		56.6	82			
7.1.4	ICTs & organizational model creation*.....		50.9	78			
7.2	Creative goods & services.....		4.6	103			
7.2.1	Cultural & creative services exports, % total trade.....		0.0	110			
7.2.2	National feature films/mn pop. 15-69.....		1.9	67			
7.2.3	Entertainment & Media market/th pop. 15-69.....		11.3	34			
7.2.4	Printing & other media, % manufacturing.....		0.4	97			
7.2.5	Creative goods exports, % total trade.....		0.2	78			
7.3	Online creativity.....		4.9	67			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		7.6	44			
7.3.2	Country-code TLDs/th pop. 15-69.....		0.3	100			
7.3.3	Wikipedia edits/mn pop. 15-69.....		16.3	54			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		0.7	67			

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.