

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
87	69	High	NAWA	1.6	75.2	50,056.5	72
				Score/Value	Rank		
<b>INSTITUTIONS</b> .....				66.0	54	◇	
<b>1.1</b>	<b>Political environment</b> .....		57.4	60	◇		
1.1.1	Political and operational stability*.....		70.2	61	◇		
1.1.2	Government effectiveness*.....		51.0	60	◇		
<b>1.2</b>	<b>Regulatory environment</b> .....		73.5	39	●		
1.2.1	Regulatory quality*.....		53.1	53	◇		
1.2.2	Rule of law*.....		58.2	44	◇		
1.2.3	Cost of redundancy dismissal, salary weeks.....		13.6	51			
<b>1.3</b>	<b>Business environment</b> .....		67.1	75	◇		
1.3.1	Ease of starting a business*.....		89.6	56			
1.3.2	Ease of resolving insolvency*.....		44.6	83	◇		
<b>HUMAN CAPITAL &amp; RESEARCH</b> .....				24.4	85	◇	
<b>2.1</b>	<b>Education</b> .....		40.5	83	◇		
2.1.1	Expenditure on education, % GDP.....		2.3	115	○ ◇		
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		17.5	66			
2.1.3	School life expectancy, years.....		15.3	46			
2.1.4	PISA scales in reading, maths, & science.....		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary.....		10.1	32	●		
<b>2.2</b>	<b>Tertiary education</b> .....		30.1	67	◇		
2.2.1	Tertiary enrolment, % gross.....		45.5	65	◇		
2.2.2	Graduates in science & engineering, %.....		15.6	85	◇		
2.2.3	Tertiary inbound mobility, %.....		13.1	12	●		
<b>2.3</b>	<b>Research &amp; development (R&amp;D)</b> .....		2.7	89	◇		
2.3.1	Researchers, FTE/mn pop.⊕.....		368.9	72	◇		
2.3.2	Gross expenditure on R&D, % GDP.⊕.....		0.1	107	○ ◇		
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	70	◇		
<b>INFRASTRUCTURE</b> .....				51.6	45		
<b>3.1</b>	<b>Information &amp; communication technologies (ICTs)</b> .....		78.8	34	●		
3.1.1	ICT access*.....		82.5	19	●		
3.1.2	ICT use*.....		73.2	30	●		
3.1.3	Government's online service*.....		79.9	45			
3.1.4	E-participation*.....		79.8	53			
<b>3.2</b>	<b>General infrastructure</b> .....		47.7	27	●		
3.2.1	Electricity output, kWh/mn pop.....		19,937.1	3	● ◆		
3.2.2	Logistics performance*.....		40.8	58	◇		
3.2.3	Gross capital formation, % GDP.....		24.0	54			
<b>3.3</b>	<b>Ecological sustainability</b> .....		28.2	106	◇		
3.3.1	GDP/unit of energy use.....		4.3	114	○ ◇		
3.3.2	Environmental performance*.....		55.2	81	◇		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		1.9	50			
<b>MARKET SOPHISTICATION</b> .....				45.3	79	◇	
<b>4.1</b>	<b>Credit</b> .....		39.7	56			
4.1.1	Ease of getting credit*.....		45.0	94			
4.1.2	Domestic credit to private sector, % GDP.⊕.....		73.7	43			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
<b>4.2</b>	<b>Investment</b> .....		43.9	60			
4.2.1	Ease of protecting minority investors*.....		66.7	35			
4.2.2	Market capitalization, % GDP.....		61.2	28			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.1	24	●		
<b>4.3</b>	<b>Trade, competition, &amp; market scale</b> .....		52.4	100	◇		
4.3.1	Applied tariff rate, weighted avg., %.....		7.8	102	◇		
4.3.2	Intensity of local competition*.....		70.1	60			
4.3.3	Domestic market scale, bn PPP\$.....		75.2	88	◇		
<b>BUSINESS SOPHISTICATION</b> .....				27.1	83	◇	
<b>5.1</b>	<b>Knowledge workers</b> .....		26.0	[96]			
5.1.1	Knowledge-intensive employment, %.....		21.9	69	◇		
5.1.2	Firms offering formal training, % firms.....		n/a	n/a			
5.1.3	GERD performed by business, % GDP.⊕.....		0.0	79	◇		
5.1.4	GERD financed by business, %.....		21.8	64	◇		
5.1.5	Females employed w/advanced degrees, %.....		n/a	n/a			
<b>5.2</b>	<b>Innovation linkages</b> .....		37.7	33	●		
5.2.1	University/industry research collaboration*.....		45.4	50			
5.2.2	State of cluster development*.....		60.3	26	●		
5.2.3	GERD financed by abroad, %.....		12.4	34			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.2	6	● ◆		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	75			
<b>5.3</b>	<b>Knowledge absorption</b> .....		17.7	127	○ ◇		
5.3.1	Intellectual property payments, % total trade.....		n/a	n/a			
5.3.2	High-tech imports, % total trade.⊕.....		4.7	110			
5.3.3	ICT services imports, % total trade.....		0.4	111	◇		
5.3.4	FDI net inflows, % GDP.....		0.8	109			
5.3.5	Research talent, % in business enterprise.....		0.4	83	○ ◇		
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b> .....				15.9	92	◇	
<b>6.1</b>	<b>Knowledge creation</b> .....		2.1	123	○ ◇		
6.1.1	Patents by origin/bn PPP\$ GDP.....		0.2	100			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.0	92	◇		
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		1.8	114	○ ◇		
6.1.5	Citable documents H-index.....		2.4	116	○ ◇		
<b>6.2</b>	<b>Knowledge impact</b> .....		35.7	69			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		0.6	72			
6.2.2	New businesses/th pop. 15-64.....		n/a	n/a			
6.2.3	Computer software spending, % GDP.....		0.3	39			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		5.7	54			
6.2.5	High- & medium-high-tech manufactures, %.....		0.1	85	◇		
<b>6.3</b>	<b>Knowledge diffusion</b> .....		9.8	103	◇		
6.3.1	Intellectual property receipts, % total trade.....		n/a	n/a			
6.3.2	High-tech net exports, % total trade.⊕.....		0.1	110	◇		
6.3.3	ICT services exports, % total trade.....		3.0	32	●		
6.3.4	FDI net outflows, % GDP.....		-2.7	125	○ ◇		
<b>CREATIVE OUTPUTS</b> .....				22.8	83	◇	
<b>7.1</b>	<b>Intangible assets</b> .....		36.1	90	◇		
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		3.6	119	○ ◇		
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		0.4	90			
7.1.3	ICTs & business model creation*.....		66.8	42			
7.1.4	ICTs & organizational model creation*.....		58.2	51			
<b>7.2</b>	<b>Creative goods &amp; services</b> .....		14.8	[67]			
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.....		9.3	37	◇		
7.2.4	Printing & other media, % manufacturing.....		n/a	n/a			
7.2.5	Creative goods exports, % total trade.....		1.5	35	●		
<b>7.3</b>	<b>Online creativity</b> .....		4.0	69	◇		
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		4.7	55			
7.3.2	Country-code TLDs/th pop. 15-69.....		0.4	96	◇		
7.3.3	Wikipedia edits/mn pop. 15-69.....		16.2	55			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		0.1	87	○		

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.