

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
47	86	Upper middle	CSA	82.0	1,652.9	19,556.6	65
				Score/Value	Rank		
<b>INSTITUTIONS</b> .....				48.8	116	◇	
1.1	<b>Political environment</b> .....		46.7	90			
1.1.1	Political and operational stability*.....		56.1	105	◇		
1.1.2	Government effectiveness*.....		41.9	85			
1.2	<b>Regulatory environment</b> .....		48.0	115	◇		
1.2.1	Regulatory quality*.....		9.8	127	◇		
1.2.2	Rule of law*.....		28.3	105			
1.2.3	Cost of redundancy dismissal, salary weeks.....		23.1	96			
1.3	<b>Business environment</b> .....		51.7	123	◇		
1.3.1	Ease of starting a business*.....		67.8	123	◇		
1.3.2	Ease of resolving insolvency*.....		35.6	109	◇		
<b>HUMAN CAPITAL &amp; RESEARCH</b> .....				37.6	43		
2.1	<b>Education</b> .....		41.0	80			
2.1.1	Expenditure on education, % GDP.....		3.8	87			
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		17.7	63			
2.1.3	School life expectancy, years.....		14.9	55			
2.1.4	PISA scales in reading, maths, & science.....		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary.....		19.0	84			
2.2	<b>Tertiary education</b> .....		62.6	2	◆		
2.2.1	Tertiary enrolment, % gross.....		68.8	30	●		
2.2.2	Graduates in science & engineering, %.....		43.9	3	◆		
2.2.3	Tertiary inbound mobility, %.....		0.4	97	○		
2.3	<b>Research &amp; development (R&amp;D)</b> .....		9.1	59			
2.3.1	Researchers, FTE/mn pop.....		671.0	60			
2.3.2	Gross expenditure on R&D, % GDP.....		0.3	83			
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*.....		23.4	45			
<b>INFRASTRUCTURE</b> .....				46.0	68		
3.1	<b>Information &amp; communication technologies (ICTs)</b> .....		59.6	79			
3.1.1	ICT access*.....		72.7	58			
3.1.2	ICT use*.....		49.8	71			
3.1.3	Government's online service*.....		63.2	87			
3.1.4	E-participation*.....		52.8	102			
3.2	<b>General infrastructure</b> .....		48.6	23	◆		
3.2.1	Electricity output, kWh/mn pop.....		3,601.1	56			
3.2.2	Logistics performance*.....		36.9	63			
3.2.3	Gross capital formation, % GDP.....		39.1	8	◆		
3.3	<b>Ecological sustainability</b> .....		29.8	97	◇		
3.3.1	GDP/unit of energy use.....		5.9	101	◇		
3.3.2	Environmental performance*.....		58.2	70			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.4	88			
<b>MARKET SOPHISTICATION</b> .....				40.0	100	◇	
4.1	<b>Credit</b> .....		40.2	54			
4.1.1	Ease of getting credit*.....		50.0	87			
4.1.2	Domestic credit to private sector, % GDP.....		66.1	47			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	<b>Investment</b> .....		25.2	128	◇		
4.2.1	Ease of protecting minority investors*.....		33.3	125	◇		
4.2.2	Market capitalization, % GDP.....		24.6	53			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		n/a	n/a			
4.3	<b>Trade, competition, &amp; market scale</b> .....		54.7	90			
4.3.1	Applied tariff rate, weighted avg., %.....		15.2	127	◇		
4.3.2	Intensity of local competition*.....		58.0	113	◇		
4.3.3	Domestic market scale, bn PPP\$.....		1,652.9	18	◆		
<b>BUSINESS SOPHISTICATION</b> .....				22.6	113	◇	
5.1	<b>Knowledge workers</b> .....		26.3	[93]			
5.1.1	Knowledge-intensive employment, %.....		18.7	76			
5.1.2	Firms offering formal training, % firms.....		n/a	n/a			
5.1.3	GERD performed by business, % GDP.....		0.1	65			
5.1.4	GERD financed by business, %.....		30.9	57			
5.1.5	Females employed w/advanced degrees, %.....		n/a	n/a			
5.2	<b>Innovation linkages</b> .....		20.3	84			
5.2.1	University/industry research collaboration*.....		33.6	97			
5.2.2	State of cluster development*.....		43.9	78			
5.2.3	GERD financed by abroad, %.....		n/a	n/a			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	110	◇		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	78			
5.3	<b>Knowledge absorption</b> .....		21.1	120	◇		
5.3.1	Intellectual property payments, % total trade.....		0.2	92			
5.3.2	High-tech imports, % total trade.....		4.9	107			
5.3.3	ICT services imports, % total trade.....		0.5	104			
5.3.4	FDI net inflows, % GDP.....		0.8	108	◇		
5.3.5	Research talent, % in business enterprise.....		15.0	60			
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b> .....				27.2	46		
6.1	<b>Knowledge creation</b> .....		27.9	32	◆		
6.1.1	Patents by origin/bn PPP\$ GDP.....		9.3	14	◆		
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.1	64			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		17.6	27	◆		
6.1.5	Citable documents H-index.....		17.6	41			
6.2	<b>Knowledge impact</b> .....		46.3	23	◆		
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		3.4	18	●		
6.2.2	New businesses/th pop. 15-64.....		n/a	n/a			
6.2.3	Computer software spending, % GDP.....		0.3	59			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		1.5	100			
6.2.5	High- & medium-high-tech manufactures, %.....		0.4	30	●		
6.3	<b>Knowledge diffusion</b> .....		7.5	116	◇		
6.3.1	Intellectual property receipts, % total trade.....		0.0	86			
6.3.2	High-tech net exports, % total trade.....		0.3	91			
6.3.3	ICT services exports, % total trade.....		0.6	95			
6.3.4	FDI net outflows, % GDP.....		0.0	108			
<b>CREATIVE OUTPUTS</b> .....				32.5	45		
7.1	<b>Intangible assets</b> .....		62.6	6	◆		
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		200.7	4	◆		
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		10.9	13	◆		
7.1.3	ICTs & business model creation*.....		57.6	78			
7.1.4	ICTs & organizational model creation*.....		47.4	91			
7.2	<b>Creative goods &amp; services</b> .....		1.4	120	◇		
7.2.1	Cultural & creative services exports, % total trade.....		n/a	n/a			
7.2.2	National feature films/mn pop. 15-69.....		1.7	71			
7.2.3	Entertainment & Media market/th pop. 15-69.....		1.7	54	◇		
7.2.4	Printing & other media, % manufacturing.....		0.2	102	◇		
7.2.5	Creative goods exports, % total trade.....		0.1	111			
7.3	<b>Online creativity</b> .....		3.2	77			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		1.8	79			
7.3.2	Country-code TLDs/th pop. 15-69.....		4.7	50			
7.3.3	Wikipedia edits/mn pop. 15-69.....		9.4	64			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		0.0	96	○		

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.