

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
55	59	Upper middle	LCN	130.8	2,575.2	20,601.7	56
				Score/Value	Rank		
<b>INSTITUTIONS</b>				62.8	66		
1.1	<b>Political environment</b>		51.1	78			
1.1.1	Political and operational stability*		61.4	91			
1.1.2	Government effectiveness*		45.9	72			
1.2	<b>Regulatory environment</b>		59.0	84			
1.2.1	Regulatory quality*		47.2	61			
1.2.2	Rule of law*		31.4	97			
1.2.3	Cost of redundancy dismissal, salary weeks		22.0	94			
1.3	<b>Business environment</b>		78.4	37			
1.3.1	Ease of starting a business*		85.9	75			
1.3.2	Ease of resolving insolvency*		70.8	30	◆		
<b>HUMAN CAPITAL &amp; RESEARCH</b>				33.4	54		
2.1	<b>Education</b>		43.5	76			
2.1.1	Expenditure on education, % GDP		5.2	38			
2.1.2	Government funding/pupil, secondary, % GDP/cap...		15.6	79			
2.1.3	School life expectancy, years		14.3	66			
2.1.4	PISA scales in reading, maths, & science		415.7	55			
2.1.5	Pupil-teacher ratio, secondary		16.9	75			
2.2	<b>Tertiary education</b>		30.7	64			
2.2.1	Tertiary enrolment, % gross		38.2	72			
2.2.2	Graduates in science & engineering, %		25.5	27			
2.2.3	Tertiary inbound mobility, %		0.3	102	○ ◇		
2.3	<b>Research &amp; development (R&amp;D)</b>		25.8	42			
2.3.1	Researchers, FTE/mn pop.		244.2	74			
2.3.2	Gross expenditure on R&D, % GDP		0.5	65			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$		49.0	29	◆		
2.3.4	QS university ranking, average score top 3*		41.2	30	◆		
<b>INFRASTRUCTURE</b>				48.3	59		
3.1	<b>Information &amp; communication technologies (ICTs)</b>		72.8	51			
3.1.1	ICT access*		54.9	79			
3.1.2	ICT use*		49.6	72			
3.1.3	Government's online service*		92.4	22	◆ ◆		
3.1.4	E-participation*		94.4	17	◆ ◆		
3.2	<b>General infrastructure</b>		31.9	76			
3.2.1	Electricity output, kWh/mn pop.		2,586.2	69			
3.2.2	Logistics performance*		46.2	50			
3.2.3	Gross capital formation, % GDP		22.5	70			
3.3	<b>Ecological sustainability</b>		40.1	54			
3.3.1	GDP/unit of energy use		11.6	34			
3.3.2	Environmental performance*		59.7	64			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.7	74			
<b>MARKET SOPHISTICATION</b>				49.9	57		
4.1	<b>Credit</b>		37.3	62			
4.1.1	Ease of getting credit*		90.0	7	◆ ◆		
4.1.2	Domestic credit to private sector, % GDP		35.5	87			
4.1.3	Microfinance gross loans, % GDP		0.4	35			
4.2	<b>Investment</b>		32.8	110	○		
4.2.1	Ease of protecting minority investors*		58.3	68			
4.2.2	Market capitalization, % GDP		34.4	44			
4.2.3	Venture capital deals/bn PPP\$ GDP		0.0	69	○		
4.3	<b>Trade, competition, &amp; market scale</b>		79.5	8	◆ ◆ ◆		
4.3.1	Applied tariff rate, weighted avg., %		1.2	12	◆		
4.3.2	Intensity of local competition*		70.1	59			
4.3.3	Domestic market scale, bn PPP\$		2,575.2	11	◆ ◆ ◆		
<b>BUSINESS SOPHISTICATION</b>				29.4	73		
5.1	<b>Knowledge workers</b>		35.7	68			
5.1.1	Knowledge-intensive employment, %		19.9	74			
5.1.2	Firms offering formal training, % firms		50.8	20	●		
5.1.3	GERD performed by business, % GDP		0.1	55			
5.1.4	GERD financed by business, %		20.7	66			
5.1.5	Females employed w/advanced degrees, %		8.8	74			
5.2	<b>Innovation linkages</b>		20.0	87			
5.2.1	University/industry research collaboration*		43.7	56			
5.2.2	State of cluster development*		53.8	39	◆		
5.2.3	GERD financed by abroad, %		0.6	95	○		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	81			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		0.1	63			
5.3	<b>Knowledge absorption</b>		32.6	67			
5.3.1	Intellectual property payments, % total trade		0.1	104	○		
5.3.2	High-tech imports, % total trade		17.0	10	◆ ◆		
5.3.3	ICT services imports, % total trade		0.0	125	○ ◇		
5.3.4	FDI net inflows, % GDP		3.1	54			
5.3.5	Research talent, % in business enterprise		24.5	50			
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b>				25.5	50		
6.1	<b>Knowledge creation</b>		11.0	67			
6.1.1	Patents by origin/bn PPP\$ GDP		0.5	76			
6.1.2	PCT patents by origin/bn PPP\$ GDP		0.1	65			
6.1.3	Utility models by origin/bn PPP\$ GDP		0.2	42			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		4.3	88			
6.1.5	Citable documents H-index		27.4	34	◆		
6.2	<b>Knowledge impact</b>		36.7	65			
6.2.1	Growth rate of PPP\$ GDP/worker, %		0.3	82			
6.2.2	New businesses/th pop. 15-64		0.5	83	○		
6.2.3	Computer software spending, % GDP		0.2	66			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		2.9	77			
6.2.5	High- & medium-high-tech manufactures, %		0.5	11	◆ ◆		
6.3	<b>Knowledge diffusion</b>		28.7	33	◆		
6.3.1	Intellectual property receipts, % total trade		0.0	102	○ ◇		
6.3.2	High-tech net exports, % total trade		15.0	9	◆ ◆		
6.3.3	ICT services exports, % total trade		0.0	126	○		
6.3.4	FDI net outflows, % GDP		0.7	61			
<b>CREATIVE OUTPUTS</b>				29.2	55		
7.1	<b>Intangible assets</b>		41.4	62			
7.1.1	Trademarks by origin/bn PPP\$ GDP		44.1	59			
7.1.2	Industrial designs by origin/bn PPP\$ GDP		0.7	82			
7.1.3	ICTs & business model creation*		67.6	37	◆		
7.1.4	ICTs & organizational model creation*		57.9	53			
7.2	<b>Creative goods &amp; services</b>		32.1	22	◆ ◆		
7.2.1	Cultural & creative services exports, % total trade		0.0	118	○		
7.2.2	National feature films/mn pop. 15-69		2.0	66			
7.2.3	Entertainment & Media market/th pop. 15-69		7.5	40			
7.2.4	Printing & other media, % manufacturing		0.4	96	○ ◇		
7.2.5	Creative goods exports, % total trade		9.6	1	◆ ◆ ◆		
7.3	<b>Online creativity</b>		2.2	82			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		2.5	72			
7.3.2	Country-code TLDs/th pop. 15-69		3.3	58			
7.3.3	Wikipedia edits/mn pop. 15-69		3.4	93			
7.3.4	Mobile app creation/bn PPP\$ GDP		0.7	66			

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.