

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
116	97	Lower middle	LCN	6.4	53.7	8,041.2	104
				Score/Value	Rank		
<b>INSTITUTIONS</b>				53.9	95		
1.1	<b>Political environment</b>		45.6	92			
1.1.1	Political and operational stability*		61.4	91			
1.1.2	Government effectiveness*		37.7	93			
1.2	<b>Regulatory environment</b>		54.1	101			
1.2.1	Regulatory quality*		37.9	83			
1.2.2	Rule of law*		23.7	114			
1.2.3	Cost of redundancy dismissal, salary weeks		22.9	95			
1.3	<b>Business environment</b>		62.0	94			
1.3.1	Ease of starting a business*		78.4	111			
1.3.2	Ease of resolving insolvency*		45.6	80			
<b>HUMAN CAPITAL &amp; RESEARCH</b>				18.3	99		
2.1	<b>Education</b>		29.7	108			
2.1.1	Expenditure on education, % GDP		3.8	90			
2.1.2	Government funding/pupil, secondary, % GDP/cap...		15.1	84			
2.1.3	School life expectancy, years		11.7	92			
2.1.4	PISA scales in reading, maths, & science		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary		27.8	102	◇		
2.2	<b>Tertiary education</b>		24.4	82			
2.2.1	Tertiary enrolment, % gross		28.7	84			
2.2.2	Graduates in science & engineering, %		22.3	48			
2.2.3	Tertiary inbound mobility, %		0.4	99			
2.3	<b>Research &amp; development (R&amp;D)</b>		0.9	107			
2.3.1	Researchers, FTE/mn pop.		65.9	89			
2.3.2	Gross expenditure on R&D, % GDP		0.1	96			
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*		0.0	78	◇		
<b>INFRASTRUCTURE</b>				35.7	98		
3.1	<b>Information &amp; communication technologies (ICTs)</b>		52.2	92			
3.1.1	ICT access*		48.3	93			
3.1.2	ICT use*		33.0	97			
3.1.3	Government's online service*		62.5	89			
3.1.4	E-participation*		65.2	80			
3.2	<b>General infrastructure</b>		17.9	121	◇		
3.2.1	Electricity output, kWh/mn pop.		942.4	95			
3.2.2	Logistics performance*		23.9	95			
3.2.3	Gross capital formation, % GDP		16.1	116	◇		
3.3	<b>Ecological sustainability</b>		36.8	70			
3.3.1	GDP/unit of energy use		11.4	38	●		
3.3.2	Environmental performance*		53.9	87			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.4	94			
<b>MARKET SOPHISTICATION</b>				44.8	81		
4.1	<b>Credit</b>		36.7	63			
4.1.1	Ease of getting credit*		80.0	20	●		
4.1.2	Domestic credit to private sector, % GDP		51.7	64			
4.1.3	Microfinance gross loans, % GDP		0.4	34			
4.2	<b>Investment</b>		38.3	[85]			
4.2.1	Ease of protecting minority investors*		38.3	122	◇		
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	<b>Trade, competition, &amp; market scale</b>		59.2	72			
4.3.1	Applied tariff rate, weighted avg., %		2.1	55	◆		
4.3.2	Intensity of local competition*		72.8	40	◆		
4.3.3	Domestic market scale, bn PPP\$		53.7	95			
<b>BUSINESS SOPHISTICATION</b>				25.5	97		
5.1	<b>Knowledge workers</b>		33.0	79			
5.1.1	Knowledge-intensive employment, %		10.6	99			
5.1.2	Firms offering formal training, % firms		53.8	15	◆		
5.1.3	GERD performed by business, % GDP		0.1	69			
5.1.4	GERD financed by business, %		40.2	44	◆		
5.1.5	Females employed w/advanced degrees, %		3.5	95			
5.2	<b>Innovation linkages</b>		12.4	124	◇		
5.2.1	University/industry research collaboration*		27.6	113			
5.2.2	State of cluster development*		29.7	122	◇		
5.2.3	GERD financed by abroad, %		3.0	71			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	107	○		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		0.0	93	◇		
5.3	<b>Knowledge absorption</b>		31.1	81			
5.3.1	Intellectual property payments, % total trade		1.3	25	◆		
5.3.2	High-tech imports, % total trade		8.7	47	●		
5.3.3	ICT services imports, % total trade		0.6	100			
5.3.4	FDI net inflows, % GDP		1.8	84			
5.3.5	Research talent, % in business enterprise		n/a	n/a			
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b>				7.9	121	◇	
6.1	<b>Knowledge creation</b>		0.9	128	○		
6.1.1	Patents by origin/bn PPP\$ GDP		0.1	116			
6.1.2	PCT patents by origin/bn PPP\$ GDP		0.0	91			
6.1.3	Utility models by origin/bn PPP\$ GDP		0.1	56			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		0.5	126	○		
6.1.5	Citable documents H-index		1.4	123	◇		
6.2	<b>Knowledge impact</b>		5.1	[121]			
6.2.1	Growth rate of PPP\$ GDP/worker, %		n/a	n/a			
6.2.2	New businesses/th pop. 15-64		0.5	86			
6.2.3	Computer software spending, % GDP		0.0	105	◇		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		4.0	64			
6.2.5	High- & medium-high-tech manufactures, %		n/a	n/a			
6.3	<b>Knowledge diffusion</b>		17.9	60			
6.3.1	Intellectual property receipts, % total trade		0.5	26	◆		
6.3.2	High-tech net exports, % total trade		2.7	47	●		
6.3.3	ICT services exports, % total trade		2.2	50	●		
6.3.4	FDI net outflows, % GDP		-0.3	122	◇		
<b>CREATIVE OUTPUTS</b>				20.4	94		
7.1	<b>Intangible assets</b>		38.0	79			
7.1.1	Trademarks by origin/bn PPP\$ GDP		98.2	15	●		
7.1.2	Industrial designs by origin/bn PPP\$ GDP		0.2	102			
7.1.3	ICTs & business model creation*		49.3	108			
7.1.4	ICTs & organizational model creation*		42.7	102			
7.2	<b>Creative goods &amp; services</b>		4.0	[107]			
7.2.1	Cultural & creative services exports, % total trade		0.0	113			
7.2.2	National feature films/mn pop. 15-69		0.3	102	○		
7.2.3	Entertainment & Media market/th pop. 15-69		n/a	n/a			
7.2.4	Printing & other media, % manufacturing		n/a	n/a			
7.2.5	Creative goods exports, % total trade		0.7	53			
7.3	<b>Online creativity</b>		1.6	92			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		2.5	73	◆		
7.3.2	Country-code TLDs/th pop. 15-69		0.5	92			
7.3.3	Wikipedia edits/mn pop. 15-69		4.8	83			
7.3.4	Mobile app creation/bn PPP\$ GDP		0.0	95	○		

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.