

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank	
63	52	Upper middle	EUR	2.1	32.3	15,709.5	84	
				Score/Value	Rank			
INSTITUTIONS				69.7	43			
1.1	Political environment		56.7	64	5.1	Knowledge workers 42.2 50		
1.1.1	Political and operational stability*		70.2	61	5.1.1	Knowledge-intensive employment, %..... 29.0 47		
1.1.2	Government effectiveness*		49.9	63	5.1.2	Firms offering formal training, % firms..... 46.9 25 ●		
1.2	Regulatory environment		70.1	52	5.1.3	GERD performed by business, % GDP..... 0.1 62		
1.2.1	Regulatory quality*		55.5	45	5.1.4	GERD financed by business, %..... 27.4 63		
1.2.2	Rule of law*		40.0	74	5.1.5	Females employed w/advanced degrees, %..... 13.8 47		
1.2.3	Cost of redundancy dismissal, salary weeks.....		13.0	42	5.2	Innovation linkages 18.0 107 ○		
1.3	Business environment		82.4	27 ● ◆	5.2.1	University/industry research collaboration*..... 29.2 108 ○ ◇		
1.3.1	Ease of starting a business*		92.1	42	5.2.2	State of cluster development*..... 37.0 99		
1.3.2	Ease of resolving insolvency*		72.7	28 ● ◆	5.2.3	GERD financed by abroad, %..... 5.9 59		
				Score/Value	Rank			
HUMAN CAPITAL & RESEARCH				26.4	80			
2.1	Education		48.7	[65]	5.2.4	JV-strategic alliance deals/bn PPP\$ GDP..... n/a n/a		
2.1.1	Expenditure on education, % GDP.....		n/a	n/a	5.2.5	Patent families 2+ offices/bn PPP\$ GDP..... 0.0 93 ○ ◇		
2.1.2	Government funding/pupil, secondary, % GDP/cap... n/a		n/a	n/a	5.3	Knowledge absorption 31.2 79		
2.1.3	School life expectancy, years.Ⓞ		13.3	79	5.3.1	Intellectual property payments, % total trade..... 0.9 41		
2.1.4	PISA scales in reading, maths, & science.....		368.9	68 ○	5.3.2	High-tech imports, % total trade..... 5.4 102 ○		
2.1.5	Pupil-teacher ratio, secondary.Ⓞ		9.4	22 ●	5.3.3	ICT services imports, % total trade..... 1.4 52		
2.2	Tertiary education		26.5	77	5.3.4	FDI net inflows, % GDP..... 3.8 43		
2.2.1	Tertiary enrolment, % gross.Ⓞ		41.1	69	5.3.5	Research talent, % in business enterprise..... 21.5 55		
2.2.2	Graduates in science & engineering, %Ⓞ		20.0	66	KNOWLEDGE & TECHNOLOGY OUTPUTS 21.6 66			
2.2.3	Tertiary inbound mobility, %Ⓞ		3.5	58	6.1	Knowledge creation 8.8 74		
2.3	Research & development (R&D)		4.0	80	6.1.1	Patents by origin/bn PPP\$ GDP.Ⓞ..... 1.6 51		
2.3.1	Researchers, FTE/mn pop.....		729.2	55	6.1.2	PCT patents by origin/bn PPP\$ GDP..... 0.2 52		
2.3.2	Gross expenditure on R&D, % GDP.....		0.4	72	6.1.3	Utility models by origin/bn PPP\$ GDP..... n/a n/a		
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		0.0	43 ○ ◇	6.1.4	Scientific & technical articles/bn PPP\$ GDP..... 8.1 57		
2.3.4	QS university ranking, average score top 3*.....		0.0	78 ○ ◇	6.1.5	Citable documents H-index..... 4.7 96		
				Score/Value	Rank			
INFRASTRUCTURE				44.9	71			
3.1	Information & communication technologies (ICTs)		66.6	65	6.2	Knowledge impact 39.3 52		
3.1.1	ICT access*.....		68.3	63	6.2.1	Growth rate of PPP\$ GDP/worker, %..... 0.0 90 ○		
3.1.2	ICT use*.....		56.3	62	6.2.2	New businesses/th pop. 15-64..... 3.9 33		
3.1.3	Government's online service*.....		71.5	69	6.2.3	Computer software spending, % GDP..... 0.1 80		
3.1.4	E-participation*.....		70.2	69	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP..... 14.3 24 ●		
3.2	General infrastructure		19.8	120 ○ ◇	6.2.5	High- & medium-high-tech manufactures, %.....Ⓞ 0.4 20 ● ◆		
3.2.1	Electricity output, kWh/mn pop.....		2,706.3	66	6.3	Knowledge diffusion 16.8 71		
3.2.2	Logistics performance*.....		30.0	80	6.3.1	Intellectual property receipts, % total trade..... 0.1 46		
3.2.3	Gross capital formation, % GDP.....		n/a	n/a	6.3.2	High-tech net exports, % total trade..... 1.1 67		
3.3	Ecological sustainability		48.2	37 ◆	6.3.3	ICT services exports, % total trade..... 2.5 42		
3.3.1	GDP/unit of energy use.....		10.1	49	6.3.4	FDI net outflows, % GDP..... 1.4 45		
3.3.2	Environmental performance*.....		61.1	61	CREATIVE OUTPUTS 28.1 62			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		7.5	12 ● ◆	7.1	Intangible assets 39.3 72		
				Score/Value	Rank			
MARKET SOPHISTICATION				57.1	28 ● ◆			
4.1	Credit		37.6	61	7.1.1	Trademarks by origin/bn PPP\$ GDP..... n/a n/a		
4.1.1	Ease of getting credit*.....		85.0	11 ● ◆	7.1.2	Industrial designs by origin/bn PPP\$ GDP..... 3.2 39		
4.1.2	Domestic credit to private sector, % GDP.....		50.0	68	7.1.3	ICTs & business model creation*..... 48.4 112 ○ ◇		
4.1.3	Microfinance gross loans, % GDP.....		0.3	39	7.1.4	ICTs & organizational model creation*..... 41.1 111 ○ ◇		
4.2	Investment		80.0	[3]	7.2	Creative goods & services 21.0 55		
4.2.1	Ease of protecting minority investors*.....		80.0	6 ● ◆	7.2.1	Cultural & creative services exports, % total trade..... 0.8 35		
4.2.2	Market capitalization, % GDP.....		n/a	n/a	7.2.2	National feature films/mn pop. 15-69..... 5.1 43		
4.2.3	Venture capital deals/bn PPP\$ GDP.....		n/a	n/a	7.2.3	Entertainment & Media market/th pop. 15-69..... n/a n/a		
4.3	Trade, competition, & market scale		53.8	93	7.2.4	Printing & other media, % manufacturing.Ⓞ..... 2.1 18 ●		
4.3.1	Applied tariff rate, weighted avg., %.....		1.9	52	7.2.5	Creative goods exports, % total trade..... 0.2 85		
4.3.2	Intensity of local competition*.....		62.5	95	7.3	Online creativity 12.7 45		
4.3.3	Domestic market scale, bn PPP\$.....		32.3	112 ○ ◇	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69..... 6.7 47		
				Score/Value	Rank			

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.