

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
52	46	High	EUR	4.2	107.4	26,221.4	41
				Score/Value	Rank		
INSTITUTIONS				69.3	45		
1.1	Political environment		66.7	42			
1.1.1	Political and operational stability*.....		78.9	42			
1.1.2	Government effectiveness*.....		60.5	41			
1.2	Regulatory environment		71.7	46			
1.2.1	Regulatory quality*.....		53.3	49	◇		
1.2.2	Rule of law*.....		55.2	48	◇		
1.2.3	Cost of redundancy dismissal, salary weeks.....		15.1	61			
1.3	Business environment		69.4	68			
1.3.1	Ease of starting a business*.....		82.6	95	○ ◇		
1.3.2	Ease of resolving insolvency*.....		56.2	54			
HUMAN CAPITAL & RESEARCH				35.6	50		
2.1	Education		59.1	28	●		
2.1.1	Expenditure on education, % GDP.....		4.6	60			
2.1.2	Government funding/pupil, secondary, % GDP/cap... n/a		n/a	n/a			
2.1.3	School life expectancy, years.....		15.0	54			
2.1.4	PISA scales in reading, maths, & science.....		475.4	34			
2.1.5	Pupil-teacher ratio, secondary.....		6.7	1	● ◆		
2.2	Tertiary education		36.4	48			
2.2.1	Tertiary enrolment, % gross.....		67.5	32			
2.2.2	Graduates in science & engineering, %.....		25.3	28			
2.2.3	Tertiary inbound mobility, %.....		0.4	98	○ ◇		
2.3	Research & development (R&D)		11.5	52	◇		
2.3.1	Researchers, FTE/mn pop.....		1,865.4	42			
2.3.2	Gross expenditure on R&D, % GDP.....		0.9	41			
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*.....		4.7	68	◇		
INFRASTRUCTURE				51.6	46		
3.1	Information & communication technologies (ICTs)		71.1	57	◇		
3.1.1	ICT access*.....		75.8	40			
3.1.2	ICT use*.....		63.4	49	◇		
3.1.3	Government's online service*.....		68.1	73	◇		
3.1.4	E-participation*.....		77.0	57			
3.2	General infrastructure		30.7	85	◇		
3.2.1	Electricity output, kWh/mn pop.....		3,025.2	63			
3.2.2	Logistics performance*.....		48.7	48			
3.2.3	Gross capital formation, % GDP.....		20.4	90	○		
3.3	Ecological sustainability		52.9	19	●		
3.3.1	GDP/unit of energy use.....		10.1	48			
3.3.2	Environmental performance*.....		65.5	37			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		9.5	6	● ◆		
MARKET SOPHISTICATION				46.0	71		
4.1	Credit		40.6	53			
4.1.1	Ease of getting credit*.....		55.0	77			
4.1.2	Domestic credit to private sector, % GDP.....		57.4	58			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	Investment		38.3	84			
4.2.1	Ease of protecting minority investors*.....		66.7	35			
4.2.2	Market capitalization, % GDP.....		39.2	38			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.0	44			
4.3	Trade, competition, & market scale		59.2	71			
4.3.1	Applied tariff rate, weighted avg., %.....		2.0	53			
4.3.2	Intensity of local competition*.....		57.1	117	○ ◇		
4.3.3	Domestic market scale, bn PPP\$.....		107.4	75			
BUSINESS SOPHISTICATION				34.3	49		
5.1	Knowledge workers		52.3	33			
5.1.1	Knowledge-intensive employment, %.....		36.3	34			
5.1.2	Firms offering formal training, % firms.....		49.3	22	●		
5.1.3	GERD performed by business, % GDP.....		0.4	40			
5.1.4	GERD financed by business, %.....		42.9	42			
5.1.5	Females employed w/advanced degrees, %.....		16.8	37			
5.2	Innovation linkages		18.5	99	○ ◇		
5.2.1	University/industry research collaboration*.....		27.7	111	○ ◇		
5.2.2	State of cluster development*.....		30.4	119	○ ◇		
5.2.3	GERD financed by abroad, %.....		10.8	37			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	46			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.1	56			
5.3	Knowledge absorption		32.2	70			
5.3.1	Intellectual property payments, % total trade.....		1.1	31			
5.3.2	High-tech imports, % total trade.....		6.1	91	○		
5.3.3	ICT services imports, % total trade.....		1.5	43			
5.3.4	FDI net inflows, % GDP.....		2.5	70			
5.3.5	Research talent, % in business enterprise.....		21.3	56	◇		
KNOWLEDGE & TECHNOLOGY OUTPUTS				25.6	49		
6.1	Knowledge creation		17.9	50			
6.1.1	Patents by origin/bn PPP\$ GDP.....		1.5	53			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.4	40			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		0.5	34			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		22.7	19	●		
6.1.5	Citable documents H-index.....		15.9	45			
6.2	Knowledge impact		40.4	46			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		1.4	53			
6.2.2	New businesses/th pop. 15-64.....		5.0	27	●		
6.2.3	Computer software spending, % GDP.....		0.1	99	○ ◇		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		23.3	12	● ◆		
6.2.5	High- & medium-high-tech manufactures, %.....		0.2	51			
6.3	Knowledge diffusion		18.5	56			
6.3.1	Intellectual property receipts, % total trade.....		0.2	38			
6.3.2	High-tech net exports, % total trade.....		3.1	42			
6.3.3	ICT services exports, % total trade.....		2.8	36			
6.3.4	FDI net outflows, % GDP.....		0.2	88	○		
CREATIVE OUTPUTS				31.0	51		
7.1	Intangible assets		40.6	65	◇		
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		46.8	54			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		4.9	27	●		
7.1.3	ICTs & business model creation*.....		57.9	76	◇		
7.1.4	ICTs & organizational model creation*.....		51.9	72	◇		
7.2	Creative goods & services		30.1	31	●		
7.2.1	Cultural & creative services exports, % total trade.....		1.9	7	● ◆		
7.2.2	National feature films/mn pop. 15-69.....		2.0	64	◇		
7.2.3	Entertainment & Media market/th pop. 15-69.....		n/a	n/a			
7.2.4	Printing & other media, % manufacturing.....		2.7	9	● ◆		
7.2.5	Creative goods exports, % total trade.....		0.8	50			
7.3	Online creativity		12.6	46			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		14.2	32	●		
7.3.2	Country-code TLDs/th pop. 15-69.....		9.7	40			
7.3.3	Wikipedia edits/mn pop. 15-69.....		33.2	37			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		4.3	53			

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.