

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
20	32	High	EUR	0.4	20.8	45,605.9	26
				Score/Value	Rank		
INSTITUTIONS				75.2	35		
1.1	Political environment		75.9	30			
1.1.1	Political and operational stability*.....		86.0	21			
1.1.2	Government effectiveness*.....		70.9	31			
1.2	Regulatory environment		88.2	17			
1.2.1	Regulatory quality*.....		76.4	22			
1.2.2	Rule of law*.....		76.6	24			
1.2.3	Cost of redundancy dismissal, salary weeks.....		8.0	1	◆		
1.3	Business environment		61.5	97	○ ◆		
1.3.1	Ease of starting a business*.....		84.9	79	◆		
1.3.2	Ease of resolving insolvency*.....		38.1	105	○ ◆		
HUMAN CAPITAL & RESEARCH				36.6	45		
2.1	Education		60.0	24			
2.1.1	Expenditure on education, % GDP.....		5.3	35			
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		29.9	13	◆		
2.1.3	School life expectancy, years.....		15.9	36			
2.1.4	PISA scales in reading, maths, & science.....		463.4	40			
2.1.5	Pupil-teacher ratio, secondary.....		7.2	4	◆		
2.2	Tertiary education		29.9	69	◆		
2.2.1	Tertiary enrolment, % gross.....		48.8	58			
2.2.2	Graduates in science & engineering, %.....		18.0	72	○		
2.2.3	Tertiary inbound mobility, %.....		8.4	23			
2.3	Research & development (R&D)		19.8	45			
2.3.1	Researchers, FTE/mn pop.....		2,075.0	40			
2.3.2	Gross expenditure on R&D, % GDP.....		0.5	56			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		42.5	39			
2.3.4	QS university ranking, average score top 3*.....		0.0	78	○ ◆		
INFRASTRUCTURE				61.1	18		
3.1	Information & communication technologies (ICTs)		84.6	22			
3.1.1	ICT access*.....		91.3	5	◆		
3.1.2	ICT use*.....		78.1	19			
3.1.3	Government's online service*.....		84.0	36			
3.1.4	E-participation*.....		84.8	39			
3.2	General infrastructure		25.8	98	○ ◆		
3.2.1	Electricity output, kWh/mn pop.....		1,945.5	78	◆		
3.2.2	Logistics performance*.....		35.1	68	◆		
3.2.3	Gross capital formation, % GDP.....		19.9	93	○		
3.3	Ecological sustainability		72.8	1	◆		
3.3.1	GDP/unit of energy use.....		25.6	2	◆		
3.3.2	Environmental performance*.....		80.9	4	◆		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		1.8	52			
MARKET SOPHISTICATION				45.2	80		◆
4.1	Credit		36.2	65			
4.1.1	Ease of getting credit*.....		35.0	110	○ ◆		
4.1.2	Domestic credit to private sector, % GDP.....		79.6	37			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	Investment		44.0	59			
4.2.1	Ease of protecting minority investors*.....		61.7	54			
4.2.2	Market capitalization, % GDP.....		40.8	36			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.1	13			
4.3	Trade, competition, & market scale		55.5	87	◆		
4.3.1	Applied tariff rate, weighted avg., %.....		1.8	23			
4.3.2	Intensity of local competition*.....		80.4	7	◆		
4.3.3	Domestic market scale, bn PPP\$.....		20.8	125	○ ◆		
BUSINESS SOPHISTICATION				54.9	15		
5.1	Knowledge workers		53.8	31			
5.1.1	Knowledge-intensive employment, %.....		42.5	22			
5.1.2	Firms offering formal training, % firms.....		n/a	n/a			
5.1.3	GERD performed by business, % GDP.....		0.3	44			
5.1.4	GERD financed by business, %.....		54.5	18			
5.1.5	Females employed w/advanced degrees, %.....		13.3	50			
5.2	Innovation linkages		55.8	8	◆		
5.2.1	University/industry research collaboration*.....		48.8	42			
5.2.2	State of cluster development*.....		53.8	41			
5.2.3	GERD financed by abroad, %.....		10.7	38			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.3	1	◆		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		5.3	11	◆		
5.3	Knowledge absorption		55.1	11			
5.3.1	Intellectual property payments, % total trade.....		3.6	4	◆		
5.3.2	High-tech imports, % total trade.....		8.4	51			
5.3.3	ICT services imports, % total trade.....		1.2	61			
5.3.4	FDI net inflows, % GDP.....		25.9	6	◆		
5.3.5	Research talent, % in business enterprise.....		57.0	16			
KNOWLEDGE & TECHNOLOGY OUTPUTS				31.9	35		
6.1	Knowledge creation		21.0	41			
6.1.1	Patents by origin/bn PPP\$ GDP.....		5.2	23			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		2.2	16			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		10.0	48			
6.1.5	Citable documents H-index.....		5.4	93	○ ◆		
6.2	Knowledge impact		43.2	37			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		0.4	78	○		
6.2.2	New businesses/th pop. 15-64.....		17.9	4	◆		
6.2.3	Computer software spending, % GDP.....		0.4	30			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		9.9	31			
6.2.5	High- & medium-high-tech manufactures, %.....		0.1	76	○ ◆		
6.3	Knowledge diffusion		31.5	28			
6.3.1	Intellectual property receipts, % total trade.....		2.5	9	◆		
6.3.2	High-tech net exports, % total trade.....		3.8	37			
6.3.3	ICT services exports, % total trade.....		0.5	100	○		
6.3.4	FDI net outflows, % GDP.....		n/a	n/a			
CREATIVE OUTPUTS				55.0	4		◆
7.1	Intangible assets		64.2	4	◆		
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		119.8	8	◆		
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		12.4	10	◆		
7.1.3	ICTs & business model creation*.....		76.1	15			
7.1.4	ICTs & organizational model creation*.....		64.4	31			
7.2	Creative goods & services		54.2	2	◆		
7.2.1	Cultural & creative services exports, % total trade.....		5.9	1	◆		
7.2.2	National feature films/mn pop. 15-69.....		16.4	6	◆		
7.2.3	Entertainment & Media market/th pop. 15-69.....		12.1	32	◆		
7.2.4	Printing & other media, % manufacturing.....		22.4	1	◆		
7.2.5	Creative goods exports, % total trade.....		0.2	81			
7.3	Online creativity		37.3	20			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		93.7	3	◆		
7.3.2	Country-code TLDs/th pop. 15-69.....		15.6	33			
7.3.3	Wikipedia edits/mn pop. 15-69.....		41.9	33			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		11.9	39			

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.