

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
3	4	High	EUR	10.0	542.8	52,984.1	3
				Score/Value	Rank		
INSTITUTIONS				90.1	9		
1.1	Political environment		91.1	9			
1.1.1	Political and operational stability*.....		91.2	12			
1.1.2	Government effectiveness*.....		91.1	8			
1.2	Regulatory environment		92.0	13			
1.2.1	Regulatory quality*.....		90.2	10			
1.2.2	Rule of law*.....		97.6	3 ●			
1.2.3	Cost of redundancy dismissal, salary weeks.....		14.4	57 ○			
1.3	Business environment		87.1	14			
1.3.1	Ease of starting a business*.....		94.7	16			
1.3.2	Ease of resolving insolvency*.....		79.5	16			
HUMAN CAPITAL & RESEARCH				62.1	6	◆	
2.1	Education		67.8	6	◆		
2.1.1	Expenditure on education, % GDP.....		7.6	5	◆		
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		23.6	32			
2.1.3	School life expectancy, years.....		18.8	8			
2.1.4	PISA scales in reading, maths, & science.....		495.8	23			
2.1.5	Pupil-teacher ratio, secondary.....		12.9	56 ○			
2.2	Tertiary education		43.1	28			
2.2.1	Tertiary enrolment, % gross.....		63.5	39			
2.2.2	Graduates in science & engineering, %.....		26.6	23			
2.2.3	Tertiary inbound mobility, %.....		6.6	35			
2.3	Research & development (R&D)		75.3	6	◆		
2.3.1	Researchers, FTE/mn pop.....		7,268.2	4	◆		
2.3.2	Gross expenditure on R&D, % GDP.....		3.4	3	●		
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		80.2	10			
2.3.4	QS university ranking, average score top 3*.....		59.1	14			
INFRASTRUCTURE				69.1	2	◆	
3.1	Information & communication technologies (ICTs)		89.5	12			
3.1.1	ICT access*.....		82.7	17			
3.1.2	ICT use*.....		87.1	6	◆		
3.1.3	Government's online service*.....		94.4	14			
3.1.4	E-participation*.....		93.8	19			
3.2	General infrastructure		59.8	4	◆		
3.2.1	Electricity output, kWh/mn pop.....		15,902.8	7			
3.2.2	Logistics performance*.....		93.1	2	●		
3.2.3	Gross capital formation, % GDP.....		26.4	39			
3.3	Ecological sustainability		58.1	10			
3.3.1	GDP/unit of energy use.....		9.7	57 ○			
3.3.2	Environmental performance*.....		80.5	5	●		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		9.3	7	◆		
MARKET SOPHISTICATION				62.1	14		
4.1	Credit		59.4	19			
4.1.1	Ease of getting credit*.....		55.0	77 ○			
4.1.2	Domestic credit to private sector, % GDP.....		132.2	15			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	Investment		54.6	30			
4.2.1	Ease of protecting minority investors*.....		68.3	30			
4.2.2	Market capitalization, % GDP.....		n/a	n/a			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.1	17			
4.3	Trade, competition, & market scale		72.3	29			
4.3.1	Applied tariff rate, weighted avg., %.....		1.8	23 ○			
4.3.2	Intensity of local competition*.....		75.1	25			
4.3.3	Domestic market scale, bn PPP\$.....		542.8	38			
BUSINESS SOPHISTICATION				68.8	1	◆	
5.1	Knowledge workers		81.8	2	◆		
5.1.1	Knowledge-intensive employment, %.....		52.3	5			
5.1.2	Firms offering formal training, % firms.....		70.3	3	●		
5.1.3	GERD performed by business, % GDP.....		2.4	4			
5.1.4	GERD financed by business, %.....		57.3	14			
5.1.5	Females employed w/advanced degrees, %.....		24.8	12			
5.2	Innovation linkages		66.1	2	◆		
5.2.1	University/industry research collaboration*.....		71.8	9			
5.2.2	State of cluster development*.....		67.6	12			
5.2.3	GERD financed by abroad, %.....		6.7	55 ○			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.2	5	◆		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		7.2	1	◆		
5.3	Knowledge absorption		58.4	6			
5.3.1	Intellectual property payments, % total trade.....		1.7	16			
5.3.2	High-tech imports, % total trade.....		7.8	59 ○			
5.3.3	ICT services imports, % total trade.....		3.3	6	◆		
5.3.4	FDI net inflows, % GDP.....		3.0	55 ○			
5.3.5	Research talent, % in business enterprise.....		72.0	4	◆		
KNOWLEDGE & TECHNOLOGY OUTPUTS				61.8	2	◆	
6.1	Knowledge creation		73.5	2	◆		
6.1.1	Patents by origin/bn PPP\$ GDP.....		11.2	10			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		7.7	1	◆		
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		30.2	7	◆		
6.1.5	Citable documents H-index.....		59.5	11			
6.2	Knowledge impact		48.0	20			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		0.4	80 ○			
6.2.2	New businesses/th pop. 15-64.....		8.1	19			
6.2.3	Computer software spending, % GDP.....		0.6	11			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		7.9	38			
6.2.5	High- & medium-high-tech manufactures, %.....		0.5	14			
6.3	Knowledge diffusion		63.9	6	◆		
6.3.1	Intellectual property receipts, % total trade.....		3.7	1	◆		
6.3.2	High-tech net exports, % total trade.....		7.3	23			
6.3.3	ICT services exports, % total trade.....		6.2	6	◆		
6.3.4	FDI net outflows, % GDP.....		3.9	15			
CREATIVE OUTPUTS				51.9	7		
7.1	Intangible assets		56.7	15			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		55.6	42			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		4.1	30			
7.1.3	ICTs & business model creation*.....		81.9	4	●		
7.1.4	ICTs & organizational model creation*.....		82.7	2	◆		
7.2	Creative goods & services		31.8	23			
7.2.1	Cultural & creative services exports, % total trade.....		1.1	26			
7.2.2	National feature films/mn pop. 15-69.....		10.1	19			
7.2.3	Entertainment & Media market/th pop. 15-69.....		71.8	5			
7.2.4	Printing & other media, % manufacturing.....		1.2	47 ○			
7.2.5	Creative goods exports, % total trade.....		1.8	30			
7.3	Online creativity		62.5	3	◆		
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		43.2	17			
7.3.2	Country-code TLDs/th pop. 15-69.....		70.9	8			
7.3.3	Wikipedia edits/mn pop. 15-69.....		106.6	3	◆		
7.3.4	Mobile app creation/bn PPP\$ GDP.....		64.2	8			

NOTES: ● indicates a strength; ○ a weakness; ◆ a strength relative to the other top 25-ranked GII economies; ◇ a weakness relative to the other top 25-ranked GII economies; * 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.