

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
14	16	High	EUR	65.2	2,968.5	45,775.1	16
				Score/Value	Rank		
INSTITUTIONS				83.2	19		
1.1	Political environment		80.4	22			
1.1.1	Political and operational stability*		82.5	32	◇		
1.1.2	Government effectiveness*		79.3	21			
1.2	Regulatory environment		85.5	20			
1.2.1	Regulatory quality*		73.0	26			
1.2.2	Rule of law*		84.4	19			
1.2.3	Cost of redundancy dismissal, salary weeks		13.0	41			
1.3	Business environment		83.7	21			
1.3.1	Ease of starting a business*		93.3	27			
1.3.2	Ease of resolving insolvency*		74.1	26			
HUMAN CAPITAL & RESEARCH				55.8	11		
2.1	Education		57.8	32			
2.1.1	Expenditure on education, % GDP		5.5	27			
2.1.2	Government funding/pupil, secondary, % GDP/cap...		26.5	19	◆		
2.1.3	School life expectancy, years		15.5	38			
2.1.4	PISA scales in reading, maths, & science		495.7	24			
2.1.5	Pupil-teacher ratio, secondary		12.9	57	○		
2.2	Tertiary education		44.8	25			
2.2.1	Tertiary enrolment, % gross		64.4	37			
2.2.2	Graduates in science & engineering, %		25.6	26			
2.2.3	Tertiary inbound mobility, %		9.9	20			
2.3	Research & development (R&D)		64.6	11			
2.3.1	Researchers, FTE/mn pop.		4,441.1	18			
2.3.2	Gross expenditure on R&D, % GDP		2.2	12			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$		87.8	7	●		
2.3.4	QS university ranking, average score top 3*		69.3	10	●		
INFRASTRUCTURE				62.3	11		
3.1	Information & communication technologies (ICTs)		89.6	10	●		
3.1.1	ICT access*		83.4	16			
3.1.2	ICT use*		80.3	14			
3.1.3	Government's online service*		97.9	4	●		
3.1.4	E-participation*		96.6	13			
3.2	General infrastructure		47.5	29			
3.2.1	Electricity output, kWh/mn pop.		8,177.3	20			
3.2.2	Logistics performance*		83.3	16			
3.2.3	Gross capital formation, % GDP		23.7	59	○		
3.3	Ecological sustainability		49.9	31			
3.3.1	GDP/unit of energy use		10.3	46			
3.3.2	Environmental performance*		84.0	2	●◆		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		2.2	46			
MARKET SOPHISTICATION				62.9	12		
4.1	Credit		49.2	33			
4.1.1	Ease of getting credit*		50.0	87	○		
4.1.2	Domestic credit to private sector, % GDP		101.6	26			
4.1.3	Microfinance gross loans, % GDP		n/a	n/a			
4.2	Investment		57.5	25			
4.2.1	Ease of protecting minority investors*		66.7	35			
4.2.2	Market capitalization, % GDP		93.2	14			
4.2.3	Venture capital deals/bn PPP\$ GDP		0.2	5	●		
4.3	Trade, competition, & market scale		81.9	6	●		
4.3.1	Applied tariff rate, weighted avg., %		1.8	23			
4.3.2	Intensity of local competition*		80.0	8	●		
4.3.3	Domestic market scale, bn PPP\$		2,968.5	10	●		
BUSINESS SOPHISTICATION				53.3	19		
5.1	Knowledge workers		66.2	15			
5.1.1	Knowledge-intensive employment, %		45.1	16			
5.1.2	Firms offering formal training, % firms		n/a	n/a			
5.1.3	GERD performed by business, % GDP		1.4	13			
5.1.4	GERD financed by business, %		54.0	20			
5.1.5	Females employed w/advanced degrees, %		21.6	21			
5.2	Innovation linkages		41.6	26			
5.2.1	University/industry research collaboration*		54.6	30	◇		
5.2.2	State of cluster development*		63.2	20			
5.2.3	GERD financed by abroad, %		7.6	51	○		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	30			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		3.5	14			
5.3	Knowledge absorption		52.1	17			
5.3.1	Intellectual property payments, % total trade		1.9	14			
5.3.2	High-tech imports, % total trade		10.8	23			
5.3.3	ICT services imports, % total trade		2.2	22			
5.3.4	FDI net inflows, % GDP		1.8	85	○		
5.3.5	Research talent, % in business enterprise		60.3	14			
KNOWLEDGE & TECHNOLOGY OUTPUTS				45.0	15		
6.1	Knowledge creation		42.7	16			
6.1.1	Patents by origin/bn PPP\$ GDP		8.8	15			
6.1.2	PCT patents by origin/bn PPP\$ GDP		2.7	13			
6.1.3	Utility models by origin/bn PPP\$ GDP		0.1	57	○		
6.1.4	Scientific & technical articles/bn PPP\$ GDP		15.8	33			
6.1.5	Citable documents H-index		79.2	5	●◆		
6.2	Knowledge impact		44.7	29			
6.2.1	Growth rate of PPP\$ GDP/worker, %		0.7	69	○		
6.2.2	New businesses/th pop. 15-64		1.8	52	○		
6.2.3	Computer software spending, % GDP		0.6	10	●		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		7.6	41			
6.2.5	High- & medium-high-tech manufactures, %		0.5	13			
6.3	Knowledge diffusion		47.7	13			
6.3.1	Intellectual property receipts, % total trade		2.0	12			
6.3.2	High-tech net exports, % total trade		12.8	10	●		
6.3.3	ICT services exports, % total trade		2.2	51	○		
6.3.4	FDI net outflows, % GDP		2.4	27			
CREATIVE OUTPUTS				45.0	16		
7.1	Intangible assets		58.8	10	●		
7.1.1	Trademarks by origin/bn PPP\$ GDP		97.9	16			
7.1.2	Industrial designs by origin/bn PPP\$ GDP		6.3	24			
7.1.3	ICTs & business model creation*		77.2	13			
7.1.4	ICTs & organizational model creation*		70.9	19			
7.2	Creative goods & services		26.6	39			
7.2.1	Cultural & creative services exports, % total trade		1.3	20			
7.2.2	National feature films/mn pop. 15-69		6.8	31			
7.2.3	Entertainment & Media market/th pop. 15-69		52.3	15			
7.2.4	Printing & other media, % manufacturing		1.0	61	○		
7.2.5	Creative goods exports, % total trade		1.7	32			
7.3	Online creativity		35.7	23			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		40.9	18			
7.3.2	Country-code TLDs/th pop. 15-69		20.7	28			
7.3.3	Wikipedia edits/mn pop. 15-69		64.7	15			
7.3.4	Mobile app creation/bn PPP\$ GDP		37.7	14			

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.