

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
30	33	High	EUR	2.1	76.1	36,745.9	30
				Score/Value	Rank		
INSTITUTIONS				82.3	20		
1.1	Political environment		78.0	26			
1.1.1	Political and operational stability*		84.2	25			
1.1.2	Government effectiveness*		74.9	25			
1.2	Regulatory environment		80.7	29			
1.2.1	Regulatory quality*		57.5	44			
1.2.2	Rule of law*		73.5	27			
1.2.3	Cost of redundancy dismissal, salary weeks		10.7	34			
1.3	Business environment		88.3	10 ●			
1.3.1	Ease of starting a business*		92.9	35			
1.3.2	Ease of resolving insolvency*		83.7	9 ●			
HUMAN CAPITAL & RESEARCH				46.6	27		
2.1	Education		60.0	25			
2.1.1	Expenditure on education, % GDP		4.9	51			
2.1.2	Government funding/pupil, secondary, % GDP/cap		23.9	29			
2.1.3	School life expectancy, years		17.4	16			
2.1.4	PISA scales in reading, maths, & science		509.3	9 ●			
2.1.5	Pupil-teacher ratio, secondary		9.7	25			
2.2	Tertiary education		40.7	35			
2.2.1	Tertiary enrolment, % gross		77.6	20			
2.2.2	Graduates in science & engineering, %		25.0	30			
2.2.3	Tertiary inbound mobility, %		3.3	61			
2.3	Research & development (R&D)		39.3	25			
2.3.1	Researchers, FTE/mn pop		4,467.8	17			
2.3.2	Gross expenditure on R&D, % GDP		1.9	19			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$		52.3	28			
2.3.4	QS university ranking, average score top 3*		10.5	63			
INFRASTRUCTURE				53.9	37		
3.1	Information & communication technologies (ICTs)		76.9	39			
3.1.1	ICT access*		80.6	24			
3.1.2	ICT use*		65.7	43			
3.1.3	Government's online service*		79.9	45			
3.1.4	E-participation*		81.5	48			
3.2	General infrastructure		37.2	56			
3.2.1	Electricity output, kWh/mn pop		7,721.7	26			
3.2.2	Logistics performance*		58.5	34			
3.2.3	Gross capital formation, % GDP		20.3	92 ○			
3.3	Ecological sustainability		47.5	41			
3.3.1	GDP/unit of energy use		9.1	64			
3.3.2	Environmental performance*		67.6	33			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP		6.3	16			
MARKET SOPHISTICATION				43.6	87 ○ ◇		
4.1	Credit		32.4	81 ○ ◇			
4.1.1	Ease of getting credit*		45.0	94 ○			
4.1.2	Domestic credit to private sector, % GDP		44.8	75 ○ ◇			
4.1.3	Microfinance gross loans, % GDP		n/a	n/a			
4.2	Investment		36.7	92 ○			
4.2.1	Ease of protecting minority investors*		70.0	27			
4.2.2	Market capitalization, % GDP		12.9	67 ○			
4.2.3	Venture capital deals/bn PPP\$ GDP		0.0	50 ○			
4.3	Trade, competition, & market scale		61.6	60			
4.3.1	Applied tariff rate, weighted avg., %		1.8	23			
4.3.2	Intensity of local competition*		73.0	38			
4.3.3	Domestic market scale, bn PPP\$		76.1	87 ○ ◇			
BUSINESS SOPHISTICATION				44.1	27		
5.1	Knowledge workers		63.3	20			
5.1.1	Knowledge-intensive employment, %		43.1	20			
5.1.2	Firms offering formal training, % firms		41.5	32			
5.1.3	GERD performed by business, % GDP		1.4	15			
5.1.4	GERD financed by business, %		69.2	6 ● ◆			
5.1.5	Females employed w/advanced degrees, %		21.8	20			
5.2	Innovation linkages		27.4	56			
5.2.1	University/industry research collaboration†		47.1	46			
5.2.2	State of cluster development†		47.3	57			
5.2.3	GERD financed by abroad, %		10.2	41			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	66 ○			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		1.1	26			
5.3	Knowledge absorption		41.7	35			
5.3.1	Intellectual property payments, % total trade		0.7	58			
5.3.2	High-tech imports, % total trade		5.4	103 ○			
5.3.3	ICT services imports, % total trade		1.5	41			
5.3.4	FDI net inflows, % GDP		3.2	53			
5.3.5	Research talent, % in business enterprise		61.8	10 ●			
KNOWLEDGE & TECHNOLOGY OUTPUTS				30.7	40		
6.1	Knowledge creation		31.8	29			
6.1.1	Patents by origin/bn PPP\$ GDP		10.2	11 ●			
6.1.2	PCT patents by origin/bn PPP\$ GDP		1.5	23			
6.1.3	Utility models by origin/bn PPP\$ GDP		0.2	47 ○			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		35.4	2 ● ◆			
6.1.5	Citable documents H-index		17.5	42			
6.2	Knowledge impact		41.1	44			
6.2.1	Growth rate of PPP\$ GDP/worker, %		1.5	49			
6.2.2	New businesses/th pop. 15-64		3.1	40			
6.2.3	Computer software spending, % GDP		0.1	91 ○ ◇			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		24.1	11 ● ◆			
6.2.5	High- & medium-high-tech manufactures, %		0.3	46			
6.3	Knowledge diffusion		19.3	52			
6.3.1	Intellectual property receipts, % total trade		0.2	40			
6.3.2	High-tech net exports, % total trade		4.5	33			
6.3.3	ICT services exports, % total trade		1.6	66			
6.3.4	FDI net outflows, % GDP		1.0	53			
CREATIVE OUTPUTS				42.1	24		
7.1	Intangible assets		55.3	18			
7.1.1	Trademarks by origin/bn PPP\$ GDP		111.2	9 ● ◆			
7.1.2	Industrial designs by origin/bn PPP\$ GDP		6.4	23			
7.1.3	ICTs & business model creation†		68.0	36			
7.1.4	ICTs & organizational model creation†		61.9	38			
7.2	Creative goods & services		27.3	36			
7.2.1	Cultural & creative services exports, % total trade		0.9	32			
7.2.2	National feature films/mn pop. 15-69		14.2	8 ●			
7.2.3	Entertainment & Media market/th pop. 15-69		n/a	n/a			
7.2.4	Printing & other media, % manufacturing		1.7	27			
7.2.5	Creative goods exports, % total trade		1.0	44			
7.3	Online creativity		30.3	25			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		21.0	28			
7.3.2	Country-code TLDs/th pop. 15-69		24.5	25			
7.3.3	Wikipedia edits/mn pop. 15-69		83.0	12 ●			
7.3.4	Mobile app creation/bn PPP\$ GDP		19.9	22			

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.