

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
21	29	High	EUR	10.6	396.4	37,371.0	27
				Score/Value	Rank		
INSTITUTIONS				78.6	29		
1.1	Political environment		75.6	31			
1.1.1	Political and operational stability*.....		84.2	25			
1.1.2	Government effectiveness*.....		71.3	30			
1.2	Regulatory environment		78.4	33			
1.2.1	Regulatory quality*.....		75.0	25			
1.2.2	Rule of law*.....		75.9	26			
1.2.3	Cost of redundancy dismissal, salary weeks.....		20.2	83	O		
1.3	Business environment		81.8	29			
1.3.1	Ease of starting a business*.....		83.6	89	O ◇		
1.3.2	Ease of resolving insolvency*.....		80.1	14	●		
HUMAN CAPITAL & RESEARCH				43.4	34		
2.1	Education		59.7	26			
2.1.1	Expenditure on education, % GDP.....		5.8	23			
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		23.7	31			
2.1.3	School life expectancy, years.....		16.8	19			
2.1.4	PISA scales in reading, maths, & science.....		490.8	28			
2.1.5	Pupil-teacher ratio, secondary.....		11.5	44			
2.2	Tertiary education		43.2	26			
2.2.1	Tertiary enrolment, % gross.....		63.7	38			
2.2.2	Graduates in science & engineering, %.....		23.5	39			
2.2.3	Tertiary inbound mobility, %.....		11.5	15			
2.3	Research & development (R&D)		27.3	40			
2.3.1	Researchers, FTE/mn pop.....		3,689.9	25			
2.3.2	Gross expenditure on R&D, % GDP.....		1.8	20			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		0.0	43	O ◇		
2.3.4	QS university ranking, average score top 3*.....		25.4	42			
INFRASTRUCTURE				56.4	32		
3.1	Information & communication technologies (ICTs)		67.3	64	◇		
3.1.1	ICT access*.....		71.9	60	◇		
3.1.2	ICT use*.....		70.0	34			
3.1.3	Government's online service*.....		65.3	82	O ◇		
3.1.4	E-participation*.....		61.8	88	O ◇		
3.2	General infrastructure		48.6	22			
3.2.1	Electricity output, kWh/mn pop.....		8,107.8	21			
3.2.2	Logistics performance*.....		75.6	22			
3.2.3	Gross capital formation, % GDP.....		26.5	37			
3.3	Ecological sustainability		53.4	16	●		
3.3.1	GDP/unit of energy use.....		7.8	79	O		
3.3.2	Environmental performance*.....		67.7	32			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		11.7	3	● ◆		
MARKET SOPHISTICATION				52.4	46		
4.1	Credit		46.6	41			
4.1.1	Ease of getting credit*.....		70.0	40			
4.1.2	Domestic credit to private sector, % GDP.....		51.6	65			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	Investment		39.2	80	O		
4.2.1	Ease of protecting minority investors*.....		58.3	68	O		
4.2.2	Market capitalization, % GDP.....		n/a	n/a			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.0	70	O		
4.3	Trade, competition, & market scale		71.5	31			
4.3.1	Applied tariff rate, weighted avg., %.....		1.8	23			
4.3.2	Intensity of local competition*.....		78.2	16			
4.3.3	Domestic market scale, bn PPP\$.....		396.4	46			
BUSINESS SOPHISTICATION				46.3	25		
5.1	Knowledge workers		55.2	30			
5.1.1	Knowledge-intensive employment, %.....		38.0	31			
5.1.2	Firms offering formal training, % firms.....		55.1	13			
5.1.3	GERD performed by business, % GDP.....		1.1	19			
5.1.4	GERD financed by business, %.....		39.3	46			
5.1.5	Females employed w/advanced degrees, %.....		12.2	58	◇		
5.2	Innovation linkages		34.5	40			
5.2.1	University/industry research collaboration*.....		50.9	39			
5.2.2	State of cluster development*.....		50.5	46			
5.2.3	GERD financed by abroad, %.....		25.0	13	● ◆		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	62	O		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.7	30			
5.3	Knowledge absorption		49.1	21			
5.3.1	Intellectual property payments, % total trade.....		0.8	47			
5.3.2	High-tech imports, % total trade.....		17.4	8	● ◆		
5.3.3	ICT services imports, % total trade.....		1.3	55			
5.3.4	FDI net inflows, % GDP.....		3.6	47			
5.3.5	Research talent, % in business enterprise.....		51.6	23			
KNOWLEDGE & TECHNOLOGY OUTPUTS				43.8	16		●
6.1	Knowledge creation		35.1	24			
6.1.1	Patents by origin/bn PPP\$ GDP.....		2.7	34			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.5	37			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		3.2	6	● ◆		
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		23.4	17			
6.1.5	Citable documents H-index.....		28.8	31			
6.2	Knowledge impact		54.5	10	● ◆		
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		1.7	47			
6.2.2	New businesses/th pop. 15-64.....		4.0	31			
6.2.3	Computer software spending, % GDP.....		0.3	35			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		29.7	3	● ◆		
6.2.5	High- & medium-high-tech manufactures, %.....		0.6	5	● ◆		
6.3	Knowledge diffusion		41.7	19			
6.3.1	Intellectual property receipts, % total trade.....		0.3	30			
6.3.2	High-tech net exports, % total trade.....		17.1	1	● ◆		
6.3.3	ICT services exports, % total trade.....		2.3	45			
6.3.4	FDI net outflows, % GDP.....		1.7	35			
CREATIVE OUTPUTS				43.1	21		
7.1	Intangible assets		50.0	36			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		61.9	34			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		6.5	21			
7.1.3	ICTs & business model creation*.....		65.7	49			
7.1.4	ICTs & organizational model creation*.....		66.3	26			
7.2	Creative goods & services		42.2	6	● ◆		
7.2.1	Cultural & creative services exports, % total trade.....		0.5	47			
7.2.2	National feature films/mn pop. 15-69.....		7.1	29			
7.2.3	Entertainment & Media market/th pop. 15-69.....		22.2	26			
7.2.4	Printing & other media, % manufacturing.....		1.0	66	O		
7.2.5	Creative goods exports, % total trade.....		10.1	1	● ◆		
7.3	Online creativity		30.1	26			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		17.1	30			
7.3.2	Country-code TLDs/th pop. 15-69.....		48.5	15	●		
7.3.3	Wikipedia edits/mn pop. 15-69.....		56.1	18			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		17.2	27			

NOTES: ● indicates a strength; O 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.