

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank			
54	40	High	EUR	11.1	312.5	29,123.0	42			
INSTITUTIONS 67.2 51 ◊				BUSINESS SOPHISTICATION 32.4 59 ◊						
1.1	Political environment		59.5	53	◊	5.1	Knowledge workers		46.1	43
1.1.1	Political and operational stability*		70.2	61	◊	5.1.1	Knowledge-intensive employment, %		29.8	45
1.1.2	Government effectiveness*		54.1	50	◊	5.1.2	Firms offering formal training, % firms		n/a	n/a
1.2	Regulatory environment		68.2	60	◊	5.1.3	GERD performed by business, % GDP		0.6	36
1.2.1	Regulatory quality*		48.3	58	◊	5.1.4	GERD financed by business, %		44.8	36
1.2.2	Rule of law*		48.6	57	◊	5.1.5	Females employed w/advanced degrees, %		17.9	29
1.2.3	Cost of redundancy dismissal, salary weeks		15.9	67		5.2	Innovation linkages		21.5	77
1.3	Business environment		73.9	53		5.2.1	University/industry research collaboration†		25.6	122
1.3.1	Ease of starting a business*		92.4	40		5.2.2	State of cluster development†		32.3	117
1.3.2	Ease of resolving insolvency*		55.4	57		5.2.3	GERD financed by abroad, %		14.9	27
						5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	37
						5.2.5	Patent families 2+ offices/bn PPP\$ GDP		0.3	39
2.1	Education		61.9	16	●	5.3	Knowledge absorption		29.5	86
2.1.1	Expenditure on education, % GDP		n/a	n/a		5.3.1	Intellectual property payments, % total trade		0.5	67
2.1.2	Government funding/pupil, secondary, % GDP/cap		22.6	38		5.3.2	High-tech imports, % total trade		5.4	100
2.1.3	School life expectancy, years		17.9	12	●	5.3.3	ICT services imports, % total trade		1.1	69
2.1.4	PISA scales in reading, maths, & science		458.5	42		5.3.4	FDI net inflows, % GDP		1.3	101
2.1.5	Pupil-teacher ratio, secondary		8.4	12	●	5.3.5	Research talent, % in business enterprise		30.3	41
2.2	Tertiary education		54.8	8	●◆	5.3	Knowledge absorption		29.5	86
2.2.1	Tertiary enrolment, % gross		126.4	1	●◆	5.3.1	Intellectual property payments, % total trade		0.5	67
2.2.2	Graduates in science & engineering, %		28.2	19	●	5.3.2	High-tech imports, % total trade		5.4	100
2.2.3	Tertiary inbound mobility, %		3.3	60		5.3.3	ICT services imports, % total trade		1.1	69
2.3	Research & development (R&D)		31.7	36		5.3.4	FDI net inflows, % GDP		1.3	101
2.3.1	Researchers, FTE/mn pop		3,152.8	28		5.3.5	Research talent, % in business enterprise		30.3	41
2.3.2	Gross expenditure on R&D, % GDP		1.1	32		5.3	Knowledge absorption		29.5	86
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$		41.8	41		5.3.1	Intellectual property payments, % total trade		0.5	67
2.3.4	QS university ranking, average score top 3*		21.9	47		5.3.2	High-tech imports, % total trade		5.4	100
3.1	Information & communication technologies (ICTs)		78.2	35		5.3.3	ICT services imports, % total trade		1.1	69
3.1.1	ICT access*		79.8	30		5.3.4	FDI net inflows, % GDP		1.3	101
3.1.2	ICT use*		63.2	50	◊	5.3.5	Research talent, % in business enterprise		30.3	41
3.1.3	Government's online service*		81.9	41		6.1	Knowledge creation		19.9	46
3.1.4	E-participation*		87.6	34		6.1.1	Patents by origin/bn PPP\$ GDP		2.0	44
3.2	General infrastructure		25.5	100	○◊	6.1.2	PCT patents by origin/bn PPP\$ GDP		0.4	42
3.2.1	Electricity output, kWh/mn pop		5,479.7	38		6.1.3	Utility models by origin/bn PPP\$ GDP		0.0	61
3.2.2	Logistics performance*		53.4	41		6.1.4	Scientific & technical articles/bn PPP\$ GDP		20.5	23
3.2.3	Gross capital formation, % GDP		12.6	121	○◊	6.1.5	Citable documents H-index		31.9	29
3.3	Ecological sustainability		51.5	25		6.2	Knowledge impact		42.3	40
3.3.1	GDP/unit of energy use		11.2	39		6.2.1	Growth rate of PPP\$ GDP/worker, %		-0.2	93
3.3.2	Environmental performance*		73.6	22	●	6.2.2	New businesses/th pop. 15-64		0.8	77
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP		5.1	22	●	6.2.3	Computer software spending, % GDP		0.6	14
4.1	Credit		48.9	34		6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		25.7	7
4.1.1	Ease of getting credit*		50.0	87		6.2.5	High- & medium-high-tech manufactures, %		0.1	69
4.1.2	Domestic credit to private sector, % GDP		100.4	27		6.3	Knowledge diffusion		13.2	84
4.1.3	Microfinance gross loans, % GDP		n/a	n/a		6.3.1	Intellectual property receipts, % total trade		0.1	54
4.2	Investment		34.2	103	○◊	6.3.2	High-tech net exports, % total trade		2.0	54
4.2.1	Ease of protecting minority investors*		63.3	48		6.3.3	ICT services exports, % total trade		1.6	64
4.2.2	Market capitalization, % GDP		22.0	59	○	6.3.4	FDI net outflows, % GDP		0.1	104
4.2.3	Venture capital deals/bn PPP\$ GDP		0.0	57		7.1	Intangible assets		42.9	57
4.3	Trade, competition, & market scale		67.7	43		7.1.1	Trademarks by origin/bn PPP\$ GDP		n/a	n/a
4.3.1	Applied tariff rate, weighted avg., %		1.8	23		7.1.2	Industrial designs by origin/bn PPP\$ GDP		3.6	34
4.3.2	Intensity of local competition†		67.9	69		7.1.3	ICTs & business model creation†		52.7	96
4.3.3	Domestic market scale, bn PPP\$		312.5	53		7.1.4	ICTs & organizational model creation†		44.6	96
						7.2	Creative goods & services		22.5	48
						7.2.1	Cultural & creative services exports, % total trade		0.7	38
						7.2.2	National feature films/mn pop. 15-69		11.2	13
						7.2.3	Entertainment & Media market/th pop. 15-69		19.7	27
						7.2.4	Printing & other media, % manufacturing		1.4	36
						7.2.5	Creative goods exports, % total trade		1.1	42
						7.3	Online creativity		12.0	48
						7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		12.0	35
						7.3.2	Country-code TLDs/th pop. 15-69		16.3	31
						7.3.3	Wikipedia edits/mn pop. 15-69		24.3	43
						7.3.4	Mobile app creation/bn PPP\$ GDP		3.4	57
						7.3	Online creativity		12.0	48
						7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		12.0	35
						7.3.2	Country-code TLDs/th pop. 15-69		16.3	31
						7.3.3	Wikipedia edits/mn pop. 15-69		24.3	43
						7.3.4	Mobile app creation/bn PPP\$ GDP		3.4	57

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.