

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
41	37	High	EUR	38.1	1,201.9	31,938.7	39
				Score/Value	Rank		
<b>INSTITUTIONS</b>				73.6	37		
1.1	<b>Political environment</b>			68.2	39		
1.1.1	Political and operational stability*			80.7	35		
1.1.2	Government effectiveness*			61.9	40		
1.2	<b>Regulatory environment</b>			72.9	42		
1.2.1	Regulatory quality*			65.6	36		
1.2.2	Rule of law*			58.9	42		
1.2.3	Cost of redundancy dismissal, salary weeks			18.8	77	○	
1.3	<b>Business environment</b>			79.7	34		
1.3.1	Ease of starting a business*			82.9	93	○ ◇	
1.3.2	Ease of resolving insolvency*			76.5	23	●	
<b>HUMAN CAPITAL &amp; RESEARCH</b>				41.2	40		
2.1	<b>Education</b>			57.0	39		
2.1.1	Expenditure on education, % GDP			4.8	54		
2.1.2	Government funding/pupil, secondary, % GDP/cap			22.1	41		
2.1.3	School life expectancy, years			16.4	23	●	
2.1.4	PISA scales in reading, maths, & science			503.9	17		
2.1.5	Pupil-teacher ratio, secondary			9.2	19	●	
2.2	<b>Tertiary education</b>			35.5	52		
2.2.1	Tertiary enrolment, % gross			66.6	34		
2.2.2	Graduates in science & engineering, %			22.9	44		
2.2.3	Tertiary inbound mobility, %			3.4	59		
2.3	<b>Research &amp; development (R&amp;D)</b>			31.0	37		
2.3.1	Researchers, FTE/mn pop			3,001.9	30		
2.3.2	Gross expenditure on R&D, % GDP			1.0	35		
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$			39.9	42		
2.3.4	QS university ranking, average score top 3*			25.4	42		
<b>INFRASTRUCTURE</b>				53.8	38		
3.1	<b>Information &amp; communication technologies (ICTs)</b>			81.5	28		
3.1.1	ICT access*			74.0	50	◇	
3.1.2	ICT use*			69.8	35		
3.1.3	Government's online service*			93.1	17	●	
3.1.4	E-participation*			89.3	31		
3.2	<b>General infrastructure</b>			38.2	49		
3.2.1	Electricity output, kWh/mn pop			4,421.3	50		
3.2.2	Logistics performance*			69.0	27		
3.2.3	Gross capital formation, % GDP			21.5	81	○	
3.3	<b>Ecological sustainability</b>			41.5	50		
3.3.1	GDP/unit of energy use			9.7	57		
3.3.2	Environmental performance*			64.1	46		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP			2.6	39		
<b>MARKET SOPHISTICATION</b>				47.9	65		
4.1	<b>Credit</b>			33.5	75	○ ◇	
4.1.1	Ease of getting credit*			75.0	29		
4.1.2	Domestic credit to private sector, % GDP			52.5	63		
4.1.3	Microfinance gross loans, % GDP			0.1	54	○	
4.2	<b>Investment</b>			35.3	98	○	
4.2.1	Ease of protecting minority investors*			61.7	54		
4.2.2	Market capitalization, % GDP			32.2	45	○	
4.2.3	Venture capital deals/bn PPP\$ GDP			0.0	41		
4.3	<b>Trade, competition, &amp; market scale</b>			75.0	21	●	
4.3.1	Applied tariff rate, weighted avg., %			1.8	23		
4.3.2	Intensity of local competition*			70.2	58		
4.3.3	Domestic market scale, bn PPP\$			1,201.9	22	●	
<b>BUSINESS SOPHISTICATION</b>				38.4	38		
5.1	<b>Knowledge workers</b>			52.3	32		
5.1.1	Knowledge-intensive employment, %			38.6	30		
5.1.2	Firms offering formal training, % firms			34.6	42		
5.1.3	GERD performed by business, % GDP			0.7	30		
5.1.4	GERD financed by business, %			53.1	22		
5.1.5	Females employed w/advanced degrees, %			20.4	23	●	
5.2	<b>Innovation linkages</b>			21.7	75	○ ◇	
5.2.1	University/industry research collaboration†			35.1	92	○ ◇	
5.2.2	State of cluster development†			46.6	64		
5.2.3	GERD financed by abroad, %			5.5	63	○	
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP			0.0	52		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP			0.4	34		
5.3	<b>Knowledge absorption</b>			41.2	37		
5.3.1	Intellectual property payments, % total trade			1.1	32		
5.3.2	High-tech imports, % total trade			9.3	40		
5.3.3	ICT services imports, % total trade			1.3	56		
5.3.4	FDI net inflows, % GDP			3.0	56		
5.3.5	Research talent, % in business enterprise			47.1	28		
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b>				30.9	39		
6.1	<b>Knowledge creation</b>			24.3	36		
6.1.1	Patents by origin/bn PPP\$ GDP			3.9	28		
6.1.2	PCT patents by origin/bn PPP\$ GDP			0.3	45		
6.1.3	Utility models by origin/bn PPP\$ GDP			0.8	27		
6.1.4	Scientific & technical articles/bn PPP\$ GDP			16.5	32		
6.1.5	Citable documents H-index			35.5	25		
6.2	<b>Knowledge impact</b>			43.2	36		
6.2.1	Growth rate of PPP\$ GDP/worker, %			3.6	16	● ◆	
6.2.2	New businesses/th pop. 15-64			1.7	58		
6.2.3	Computer software spending, % GDP			0.3	42		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP			10.5	30		
6.2.5	High- & medium-high-tech manufactures, %			0.3	35		
6.3	<b>Knowledge diffusion</b>			25.1	39		
6.3.1	Intellectual property receipts, % total trade			0.2	41		
6.3.2	High-tech net exports, % total trade			6.5	25	●	
6.3.3	ICT services exports, % total trade			2.3	47		
6.3.4	FDI net outflows, % GDP			1.6	40		
<b>CREATIVE OUTPUTS</b>				32.4	46		
7.1	<b>Intangible assets</b>			42.6	58		
7.1.1	Trademarks by origin/bn PPP\$ GDP			38.2	67	○	
7.1.2	Industrial designs by origin/bn PPP\$ GDP			n/a	n/a		
7.1.3	ICTs & business model creation†			60.8	60	◇	
7.1.4	ICTs & organizational model creation†			51.9	73	○ ◇	
7.2	<b>Creative goods &amp; services</b>			27.2	37		
7.2.1	Cultural & creative services exports, % total trade			1.1	25		
7.2.2	National feature films/mn pop. 15-69			1.8	69	○ ◇	
7.2.3	Entertainment & Media market/th pop. 15-69			11.5	33	◇	
7.2.4	Printing & other media, % manufacturing			1.2	54		
7.2.5	Creative goods exports, % total trade			4.4	12	● ◆	
7.3	<b>Online creativity</b>			17.4	38		
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69			6.9	46		
7.3.2	Country-code TLDs/th pop. 15-69			25.7	23	●	
7.3.3	Wikipedia edits/mn pop. 15-69			34.3	36		
7.3.4	Mobile app creation/bn PPP\$ GDP			13.8	34		

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.