

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
25	19	High	EUR	8.8	464.0	52,137.4	21
				Score/Value	Rank		
<b>INSTITUTIONS</b>				86.0	17		
1.1	<b>Political environment</b>		83.9	17			
1.1.1	Political and operational stability*		87.7	18			
1.1.2	Government effectiveness*		82.0	16			
1.2	<b>Regulatory environment</b>		93.7	10 ●			
1.2.1	Regulatory quality*		80.5	18			
1.2.2	Rule of law*		94.3	9 ●			
1.2.3	Cost of redundancy dismissal, salary weeks		8.0	1 ●			
1.3	<b>Business environment</b>		80.3	32			
1.3.1	Ease of starting a business*		83.2	91 ○ ◇			
1.3.2	Ease of resolving insolvency*		77.5	20			
<b>HUMAN CAPITAL &amp; RESEARCH</b>				60.2	8 ●		
2.1	<b>Education</b>		60.7	22			
2.1.1	Expenditure on education, % GDP		5.5	28			
2.1.2	Government funding/pupil, secondary, % GDP/cap		27.3	17 ◆			
2.1.3	School life expectancy, years		16.3	28			
2.1.4	PISA scales in reading, maths, & science		492.2	25			
2.1.5	Pupil-teacher ratio, secondary		9.3	20 ◆			
2.2	<b>Tertiary education</b>		61.7	3 ● ◆			
2.2.1	Tertiary enrolment, % gross		86.3	12 ●			
2.2.2	Graduates in science & engineering, %		30.3	12 ◆			
2.2.3	Tertiary inbound mobility, %		16.3	10 ●			
2.3	<b>Research &amp; development (R&amp;D)</b>		58.1	18			
2.3.1	Researchers, FTE/mn pop		5,439.8	9 ●			
2.3.2	Gross expenditure on R&D, % GDP		3.2	6 ●			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$		55.4	25			
2.3.4	QS university ranking, average score top 3*		42.0	28			
<b>INFRASTRUCTURE</b>				61.4	17		
3.1	<b>Information &amp; communication technologies (ICTs)</b>		82.3	26			
3.1.1	ICT access*		85.2	13			
3.1.2	ICT use*		74.7	29 ○			
3.1.3	Government's online service*		86.8	32			
3.1.4	E-participation*		82.6	45 ○			
3.2	<b>General infrastructure</b>		51.3	14			
3.2.1	Electricity output, kWh/mn pop		7,666.0	27			
3.2.2	Logistics performance*		91.8	4 ●			
3.2.3	Gross capital formation, % GDP		25.6	41			
3.3	<b>Ecological sustainability</b>		50.5	28			
3.3.1	GDP/unit of energy use		11.5	37			
3.3.2	Environmental performance*		79.0	8 ●			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP		2.6	37			
<b>MARKET SOPHISTICATION</b>				52.8	44 ○		
4.1	<b>Credit</b>		47.3	39			
4.1.1	Ease of getting credit*		55.0	77 ○			
4.1.2	Domestic credit to private sector, % GDP		84.1	34			
4.1.3	Microfinance gross loans, % GDP		n/a	n/a			
4.2	<b>Investment</b>		38.8	81 ○ ◇			
4.2.1	Ease of protecting minority investors*		68.3	30			
4.2.2	Market capitalization, % GDP		30.8	48 ○ ◇			
4.2.3	Venture capital deals/bn PPP\$ GDP		0.0	38 ○ ◇			
4.3	<b>Trade, competition, &amp; market scale</b>		72.4	28			
4.3.1	Applied tariff rate, weighted avg., %		1.8	23			
4.3.2	Intensity of local competition*		78.8	13			
4.3.3	Domestic market scale, bn PPP\$		464.0	43			
<b>BUSINESS SOPHISTICATION</b>				53.8	18		
5.1	<b>Knowledge workers</b>		65.0	17			
5.1.1	Knowledge-intensive employment, %		41.6	25			
5.1.2	Firms offering formal training, % firms		n/a	n/a			
5.1.3	GERD performed by business, % GDP		2.2	6 ●			
5.1.4	GERD financed by business, %		54.0	21			
5.1.5	Females employed w/advanced degrees, %		17.2	35 ○			
5.2	<b>Innovation linkages</b>		50.8	11 ●			
5.2.1	University/industry research collaboration†		65.2	16			
5.2.2	State of cluster development†		66.7	14			
5.2.3	GERD financed by abroad, %		16.0	24			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP		0.0	31 ○			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP		4.5	12 ●			
5.3	<b>Knowledge absorption</b>		45.6	26			
5.3.1	Intellectual property payments, % total trade		0.8	49			
5.3.2	High-tech imports, % total trade		8.2	54 ○			
5.3.3	ICT services imports, % total trade		2.3	18			
5.3.4	FDI net inflows, % GDP		-1.9	127 ○			
5.3.5	Research talent, % in business enterprise		62.2	9			
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b>				36.7	25 ○		
6.1	<b>Knowledge creation</b>		41.3	18			
6.1.1	Patents by origin/bn PPP\$ GDP		9.7	13			
6.1.2	PCT patents by origin/bn PPP\$ GDP		3.2	11			
6.1.3	Utility models by origin/bn PPP\$ GDP		1.0	23			
6.1.4	Scientific & technical articles/bn PPP\$ GDP		22.0	20			
6.1.5	Citable documents H-index		43.4	17			
6.2	<b>Knowledge impact</b>		43.6	33			
6.2.1	Growth rate of PPP\$ GDP/worker, %		0.9	65 ○			
6.2.2	New businesses/th pop. 15-64		0.6	80 ○ ◇			
6.2.3	Computer software spending, % GDP		0.6	15			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP		8.4	36			
6.2.5	High- & medium-high-tech manufactures, %		0.4	15			
6.3	<b>Knowledge diffusion</b>		25.1	40 ○			
6.3.1	Intellectual property receipts, % total trade		0.6	24			
6.3.2	High-tech net exports, % total trade		7.5	21			
6.3.3	ICT services exports, % total trade		3.0	33			
6.3.4	FDI net outflows, % GDP		-1.2	124 ○ ◇			
<b>CREATIVE OUTPUTS</b>				41.4	25		
7.1	<b>Intangible assets</b>		51.2	30			
7.1.1	Trademarks by origin/bn PPP\$ GDP		53.3	45			
7.1.2	Industrial designs by origin/bn PPP\$ GDP		7.3	17			
7.1.3	ICTs & business model creation†		72.6	27			
7.1.4	ICTs & organizational model creation†		64.9	29 ○			
7.2	<b>Creative goods &amp; services</b>		27.1	38			
7.2.1	Cultural & creative services exports, % total trade		1.2	23			
7.2.2	National feature films/mn pop. 15-69		7.1	28			
7.2.3	Entertainment & Media market/th pop. 15-69		65.3	8			
7.2.4	Printing & other media, % manufacturing		1.3	42 ○			
7.2.5	Creative goods exports, % total trade		0.9	45			
7.3	<b>Online creativity</b>		36.2	22			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69		36.0	19			
7.3.2	Country-code TLDs/th pop. 15-69		57.9	11 ●			
7.3.3	Wikipedia edits/mn pop. 15-69		54.2	20			
7.3.4	Mobile app creation/bn PPP\$ GDP		14.4	33			

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.