

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
33	42	High	EUR	5.4	191.1	35,129.8	36
				Score/Value	Rank		
<b>INSTITUTIONS</b> .....				73.1	38		
1.1	<b>Political environment</b> .....		71.6	38			
1.1.1	Political and operational stability*.....		82.5	32			
1.1.2	Government effectiveness*.....		66.1	38			
1.2	<b>Regulatory environment</b> .....		73.2	40			
1.2.1	Regulatory quality*.....		64.1	37			
1.2.2	Rule of law*.....		61.5	39			
1.2.3	Cost of redundancy dismissal, salary weeks.....		18.8	78			
1.3	<b>Business environment</b> .....		74.5	51			
1.3.1	Ease of starting a business*.....		82.0	98		○ ◇	
1.3.2	Ease of resolving insolvency*.....		66.9	39			
<b>HUMAN CAPITAL &amp; RESEARCH</b> .....				32.4	58		◇
2.1	<b>Education</b> .....		48.9	63			
2.1.1	Expenditure on education, % GDP.....		4.6	58			
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		19.2	53			
2.1.3	School life expectancy, years.....		14.5	63		◇	
2.1.4	PISA scales in reading, maths, & science.....		462.8	41			
2.1.5	Pupil-teacher ratio, secondary.....		11.2	39			
2.2	<b>Tertiary education</b> .....		31.8	61			
2.2.1	Tertiary enrolment, % gross.....		47.8	61			
2.2.2	Graduates in science & engineering, %.....		21.1	57			
2.2.3	Tertiary inbound mobility, %.....		6.0	37			
2.3	<b>Research &amp; development (R&amp;D)</b> .....		16.7	47			
2.3.1	Researchers, FTE/mn pop.....		2,795.0	34			
2.3.2	Gross expenditure on R&D, % GDP.....		0.9	40			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		0.0	43		○ ◇	
2.3.4	QS university ranking, average score top 3*.....		13.8	58			
<b>INFRASTRUCTURE</b> .....				54.2	36		
3.1	<b>Information &amp; communication technologies (ICTs)</b> .....		74.4	47			
3.1.1	ICT access*.....		73.9	53		◇	
3.1.2	ICT use*.....		69.1	36			
3.1.3	Government's online service*.....		73.6	57		◇	
3.1.4	E-participation*.....		80.9	50			
3.2	<b>General infrastructure</b> .....		34.7	65			
3.2.1	Electricity output, kWh/mn pop.....		4,843.8	47			
3.2.2	Logistics performance*.....		45.1	52		◇	
3.2.3	Gross capital formation, % GDP.....		23.5	60			
3.3	<b>Ecological sustainability</b> .....		53.5	15		●	
3.3.1	GDP/unit of energy use.....		9.6	59			
3.3.2	Environmental performance*.....		70.6	27		●	
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		9.0	8		● ◆	
<b>MARKET SOPHISTICATION</b> .....				47.4	67		
4.1	<b>Credit</b> .....		48.7	35			
4.1.1	Ease of getting credit*.....		70.0	40			
4.1.2	Domestic credit to private sector, % GDP.....		59.9	55			
4.1.3	Microfinance gross loans, % GDP.....		n/a	n/a			
4.2	<b>Investment</b> .....		27.0	125		○ ◇	
4.2.1	Ease of protecting minority investors*.....		53.3	87		○	
4.2.2	Market capitalization, % GDP.....		5.1	73		○	
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.0	67		○	
4.3	<b>Trade, competition, &amp; market scale</b> .....		66.6	47			
4.3.1	Applied tariff rate, weighted avg., %.....		1.8	23			
4.3.2	Intensity of local competition*.....		73.7	35			
4.3.3	Domestic market scale, bn PPP\$.....		191.1	63			
<b>BUSINESS SOPHISTICATION</b> .....				35.6	46		
5.1	<b>Knowledge workers</b> .....		47.3	40			
5.1.1	Knowledge-intensive employment, %.....		32.0	41			
5.1.2	Firms offering formal training, % firms.....		43.5	28			
5.1.3	GERD performed by business, % GDP.....		0.5	39			
5.1.4	GERD financed by business, %.....		46.2	34			
5.1.5	Females employed w/advanced degrees, %.....		13.9	46			
5.2	<b>Innovation linkages</b> .....		23.4	70		◇	
5.2.1	University/industry research collaboration*.....		38.3	79		○ ◇	
5.2.2	State of cluster development*.....		46.6	63			
5.2.3	GERD financed by abroad, %.....		10.7	38			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	71		○	
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.3	38			
5.3	<b>Knowledge absorption</b> .....		35.9	51			
5.3.1	Intellectual property payments, % total trade.....		0.8	50			
5.3.2	High-tech imports, % total trade.....		13.4	15		●	
5.3.3	ICT services imports, % total trade.....		1.0	72			
5.3.4	FDI net inflows, % GDP.....		4.4	38			
5.3.5	Research talent, % in business enterprise.....		21.9	54		○	
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b> .....				34.0	29		
6.1	<b>Knowledge creation</b> .....		20.2	44			
6.1.1	Patents by origin/bn PPP\$ GDP.....		1.2	58			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.3	46			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		1.9	12		● ◆	
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		13.6	38			
6.1.5	Citable documents H-index.....		16.3	44			
6.2	<b>Knowledge impact</b> .....		51.5	13		●	
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		1.2	58			
6.2.2	New businesses/th pop. 15-64.....		4.7	28			
6.2.3	Computer software spending, % GDP.....		0.3	37			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		21.6	15		● ◆	
6.2.5	High- & medium-high-tech manufactures, %.....		0.6	4		● ◆	
6.3	<b>Knowledge diffusion</b> .....		30.3	29			
6.3.1	Intellectual property receipts, % total trade.....		0.0	71		○	
6.3.2	High-tech net exports, % total trade.....		9.2	17		●	
6.3.3	ICT services exports, % total trade.....		1.7	62			
6.3.4	FDI net outflows, % GDP.....		3.5	19		●	
<b>CREATIVE OUTPUTS</b> .....				37.1	36		
7.1	<b>Intangible assets</b> .....		46.6	47			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		55.7	41			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		3.1	41			
7.1.3	ICTs & business model creation*.....		66.9	41			
7.1.4	ICTs & organizational model creation*.....		65.0	28			
7.2	<b>Creative goods &amp; services</b> .....		41.0	7		● ◆	
7.2.1	Cultural & creative services exports, % total trade.....		0.4	57			
7.2.2	National feature films/mn pop. 15-69.....		6.6	34			
7.2.3	Entertainment & Media market/th pop. 15-69.....		n/a	n/a			
7.2.4	Printing & other media, % manufacturing.....		0.5	91		○ ◇	
7.2.5	Creative goods exports, % total trade.....		8.5	7		● ◆	
7.3	<b>Online creativity</b> .....		14.4	41			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		3.0	65		◇	
7.3.2	Country-code TLDs/th pop. 15-69.....		26.6	21		●	
7.3.3	Wikipedia edits/mn pop. 15-69.....		26.8	40			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		10.1	43			

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.