

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
7	7	High	EUR	5.5	257.2	46,429.5	7
				Score/Value	Rank		
<b>INSTITUTIONS</b> .....				93.6	3 ● ◆		
<b>1.1</b>	<b>Political environment</b> .....	<b>92.2</b>	<b>5</b>				
1.1.1	Political and operational stability*.....	89.5	15				
1.1.2	Government effectiveness*.....	93.5	4 ●				
<b>1.2</b>	<b>Regulatory environment</b> .....	<b>96.1</b>	<b>5</b>				
1.2.1	Regulatory quality*.....	90.8	8				
1.2.2	Rule of law*.....	100.0	1 ●				
1.2.3	Cost of redundancy dismissal, salary weeks.....	10.1	31				
<b>1.3</b>	<b>Business environment</b> .....	<b>92.6</b>	<b>1 ● ◆</b>				
1.3.1	Ease of starting a business*.....	92.4	39				
1.3.2	Ease of resolving insolvency*.....	92.8	2 ● ◆				
<b>HUMAN CAPITAL &amp; RESEARCH</b> .....				63.4	2 ● ◆		
<b>2.1</b>	<b>Education</b> .....	<b>69.9</b>	<b>4 ● ◆</b>				
2.1.1	Expenditure on education, % GDP.....	7.1	10 ◆				
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..	25.8	22				
2.1.3	School life expectancy, years.....	19.3	3 ● ◆				
2.1.4	PISA scales in reading, maths, & science.....	522.7	6				
2.1.5	Pupil-teacher ratio, secondary.....	13.2	58 ○				
<b>2.2</b>	<b>Tertiary education</b> .....	<b>53.0</b>	<b>10</b>				
2.2.1	Tertiary enrolment, % gross.....	87.0	10				
2.2.2	Graduates in science & engineering, %.....	29.5	15				
2.2.3	Tertiary inbound mobility, %.....	7.8	29				
<b>2.3</b>	<b>Research &amp; development (R&amp;D)</b> .....	<b>67.3</b>	<b>10</b>				
2.3.1	Researchers, FTE/mn pop.....	6,707.5	6				
2.3.2	Gross expenditure on R&D, % GDP.....	2.8	10				
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....	79.7	11				
2.3.4	QS university ranking, average score top 3*.....	48.0	19				
<b>INFRASTRUCTURE</b> .....				62.1	12		
<b>3.1</b>	<b>Information &amp; communication technologies (ICTs)</b> .....	<b>87.5</b>	<b>16</b>				
3.1.1	ICT access*.....	73.9	52 ○ ◆				
3.1.2	ICT use*.....	79.7	17				
3.1.3	Government's online service*.....	96.5	8				
3.1.4	E-participation*.....	100.0	1 ●				
<b>3.2</b>	<b>General infrastructure</b> .....	<b>51.7</b>	<b>13</b>				
3.2.1	Electricity output, kWh/mn pop.....	12,236.8	10				
3.2.2	Logistics performance*.....	89.1	10				
3.2.3	Gross capital formation, % GDP.....	22.9	66 ○				
<b>3.3</b>	<b>Ecological sustainability</b> .....	<b>47.0</b>	<b>42</b>				
3.3.1	GDP/unit of energy use.....	6.3	96 ○				
3.3.2	Environmental performance*.....	78.6	10				
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..	6.0	18				
<b>MARKET SOPHISTICATION</b> .....				57.3	27		
<b>4.1</b>	<b>Credit</b> .....	<b>54.9</b>	<b>25</b>				
4.1.1	Ease of getting credit*.....	65.0	54 ○				
4.1.2	Domestic credit to private sector, % GDP.....	94.5	29				
4.1.3	Microfinance gross loans, % GDP.....	n/a	n/a				
<b>4.2</b>	<b>Investment</b> .....	<b>51.7</b>	<b>34</b>				
4.2.1	Ease of protecting minority investors*.....	58.3	68 ○				
4.2.2	Market capitalization, % GDP.....	n/a	n/a				
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.2	11				
<b>4.3</b>	<b>Trade, competition, &amp; market scale</b> .....	<b>65.2</b>	<b>52</b>				
4.3.1	Applied tariff rate, weighted avg., %.....	1.8	23				
4.3.2	Intensity of local competition*.....	61.7	99 ○ ◆				
4.3.3	Domestic market scale, bn PPP\$.....	257.2	58				
<b>BUSINESS SOPHISTICATION</b> .....				63.9	5 ◆		
<b>5.1</b>	<b>Knowledge workers</b> .....	<b>74.0</b>	<b>6</b>				
5.1.1	Knowledge-intensive employment, %.....	47.4	10				
5.1.2	Firms offering formal training, % firms.....	n/a	n/a				
5.1.3	GERD performed by business, % GDP.....	1.8	10				
5.1.4	GERD financed by business, %.....	57.0	15				
5.1.5	Females employed w/advanced degrees, %.....	27.2	5 ◆				
<b>5.2</b>	<b>Innovation linkages</b> .....	<b>62.6</b>	<b>4 ● ◆</b>				
5.2.1	University/industry research collaboration*.....	74.7	5				
5.2.2	State of cluster development*.....	64.9	17				
5.2.3	GERD financed by abroad, %.....	12.1	35				
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.1	10				
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	6.5	3 ● ◆				
<b>5.3</b>	<b>Knowledge absorption</b> .....	<b>54.9</b>	<b>12</b>				
5.3.1	Intellectual property payments, % total trade.....	1.0	37				
5.3.2	High-tech imports, % total trade.....	7.7	60 ○				
5.3.3	ICT services imports, % total trade.....	3.7	4 ● ◆				
5.3.4	FDI net inflows, % GDP.....	4.9	31				
5.3.5	Research talent, % in business enterprise.....	55.5	20				
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b> .....				55.1	9		
<b>6.1</b>	<b>Knowledge creation</b> .....	<b>58.5</b>	<b>9</b>				
6.1.1	Patents by origin/bn PPP\$ GDP.....	13.1	7				
6.1.2	PCT patents by origin/bn PPP\$ GDP.....	7.1	1 ● ◆				
6.1.3	Utility models by origin/bn PPP\$ GDP.....	2.0	11				
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	30.9	6 ◆				
6.1.5	Citable documents H-index.....	42.9	19				
<b>6.2</b>	<b>Knowledge impact</b> .....	<b>44.9</b>	<b>28</b>				
6.2.1	Growth rate of PPP\$ GDP/worker, %.....	1.3	57 ○				
6.2.2	New businesses/th pop. 15-64.....	4.0	32				
6.2.3	Computer software spending, % GDP.....	0.6	17				
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	10.8	29				
6.2.5	High- & medium-high-tech manufactures, %.....	0.3	34				
<b>6.3</b>	<b>Knowledge diffusion</b> .....	<b>61.9</b>	<b>7</b>				
6.3.1	Intellectual property receipts, % total trade.....	3.3	6 ◆				
6.3.2	High-tech net exports, % total trade.....	4.4	34				
6.3.3	ICT services exports, % total trade.....	8.1	5 ◆				
6.3.4	FDI net outflows, % GDP.....	4.0	14				
<b>CREATIVE OUTPUTS</b> .....				48.1	13		
<b>7.1</b>	<b>Intangible assets</b> .....	<b>55.3</b>	<b>19</b>				
7.1.1	Trademarks by origin/bn PPP\$ GDP.....	44.7	58 ○				
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....	3.9	32				
7.1.3	ICTs & business model creation*.....	84.4	2 ● ◆				
7.1.4	ICTs & organizational model creation*.....	80.4	3 ● ◆				
<b>7.2</b>	<b>Creative goods &amp; services</b> .....	<b>24.7</b>	<b>44</b>				
7.2.1	Cultural & creative services exports, % total trade.....	1.0	29				
7.2.2	National feature films/mn pop. 15-69.....	10.7	15				
7.2.3	Entertainment & Media market/th pop. 15-69.....	57.5	13				
7.2.4	Printing & other media, % manufacturing.....	1.1	58 ○				
7.2.5	Creative goods exports, % total trade.....	0.5	56				
<b>7.3</b>	<b>Online creativity</b> .....	<b>57.3</b>	<b>6</b>				
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	29.2	21				
7.3.2	Country-code TLDs/th pop. 15-69.....	34.0	18				
7.3.3	Wikipedia edits/mn pop. 15-69.....	98.1	8				
7.3.4	Mobile app creation/bn PPP\$ GDP.....	100.0	1 ● ◆				

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.