

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
8	14	High	EUR	83.8	4,454.5	53,571	9
				Score/Value	Rank		
Institutions				84.3	17		
1.1 Political environment	85.2	14			5.1 Knowledge workers	65.0	12
1.1.1 Political and operational stability*	83.9	13			5.1.1 Knowledge-intensive employment, %	46.1	16
1.1.2 Government effectiveness*	85.9	13			5.1.2 Firms offering formal training, %	n/a	n/a
1.2 Regulatory environment	81.1	29			5.1.3 GERD performed by business, % GDP	2.2	8
1.2.1 Regulatory quality*	88.5	9			5.1.4 GERD financed by business, %	66.0	7
1.2.2 Rule of law*	89.4	14			5.1.5 Females employed w/advanced degrees, %	14.0	53 ◊
1.2.3 Cost of redundancy dismissal	21.6	91 ○ ◊			5.2 Innovation linkages	54.2	12
1.3 Business environment	86.7	14			5.2.1 University-industry R&D collaboration†	68.5	9
1.3.1 Ease of starting a business*	83.7	96 ○ ◊			5.2.2 State of cluster development and depth†	69.9	5 ● ◆
1.3.2 Ease of resolving insolvency*	89.8	4 ● ◆			5.2.3 GERD financed by abroad, % GDP	0.2	23
				Score/Value	Rank		
Human capital and research				62.7	3 ● ◆		
2.1 Education	60.1	27			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.1	31
2.1.1 Expenditure on education, % GDP	4.9	44			5.2.5 Patent families/bn PPP\$ GDP	5.5	6 ◆
2.1.2 Government funding/pupil, secondary, % GDP/cap	23.4	25			5.3 Knowledge absorption	44.3	21
2.1.3 School life expectancy, years	16.9	18			5.3.1 Intellectual property payments, % total trade	0.9	41
2.1.4 PISA scales in reading, maths and science	500.4	18			5.3.2 High-tech imports, % total trade	10.0	33
2.1.5 Pupil-teacher ratio, secondary	11.8	49 ○			5.3.3 ICT services imports, % total trade	2.5	19
2.2 Tertiary education	54.7	5 ● ◆			5.3.4 FDI net inflows, % GDP	3.1	45
2.2.1 Tertiary enrolment, % gross	70.3	33			5.3.5 Research talent, % in businesses	60.7	12
2.2.2 Graduates in science and engineering, %	35.3	6 ◆			Knowledge and technology outputs 53.3 9		
2.2.3 Tertiary inbound mobility, %	10.0	21			6.1 Knowledge creation	69.5	5 ●
2.3 Research and development (R&D)	73.2	6 ●			6.1.1 Patents by origin/bn PPP\$ GDP	15.7	1 ● ◆
2.3.1 Researchers, FTE/mn pop.	5,381.7	13			6.1.2 PCT patents by origin/bn PPP\$ GDP	4.2	9
2.3.2 Gross expenditure on R&D, % GDP	3.2	6			6.1.3 Utility models by origin/bn PPP\$ GDP	1.8	12
2.3.3 Global corporate R&D investors, top 3, mn US\$	94.1	2 ● ◆			6.1.4 Scientific and technical articles/bn PPP\$ GDP	25.9	35
2.3.4 QS university ranking, top 3*	70.4	10			6.1.5 Citable documents H-index	87.0	3 ● ◆
				Score/Value	Rank		
Infrastructure				55.6	21		
3.1 Information and communication technologies (ICTs)	80.2	32			6.2 Knowledge impact	43.8	15
3.1.1 ICT access*	90.8	6 ●			6.2.1 Labor productivity growth, %	-1.4	94 ○
3.1.2 ICT use*	81.5	19			6.2.2 New businesses/th pop. 15-64	1.4	73 ○
3.1.3 Government's online service*	73.5	59 ◊			6.2.3 Software spending, % GDP	0.5	19
3.1.4 E-participation*	75.0	57 ○ ◊			6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	11.0	26
3.2 General infrastructure	44.2	20			6.2.5 High-tech manufacturing, %	57.1	7
3.2.1 Electricity output, GWh/mn pop.	7,259.6	28			6.3 Knowledge diffusion	46.5	19
3.2.2 Logistics performance*	100.0	1 ● ◆			6.3.1 Intellectual property receipts, % total trade	1.4	16
3.2.3 Gross capital formation, % GDP	21.4	76 ○			6.3.2 Production and export complexity	92.1	4 ● ◆
3.3 Ecological sustainability	42.3	32			6.3.3 High-tech exports, % total trade	12.3	12
3.3.1 GDP/unit of energy use	13.8	34			6.3.4 ICT services exports, % total trade	2.5	45
3.3.2 Environmental performance*	77.2	10			Creative outputs 50.0 11		
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	1.9	44			7.1 Intangible assets	58.4	6 ●
				Score/Value	Rank		
Market sophistication				57.8	20		
4.1 Credit	51.2	27			7.1.1 Trademarks by origin/bn PPP\$ GDP	60.5	34
4.1.1 Ease of getting credit*	70.0	44 ○			7.1.2 Global brand value, top 5,000, % GDP	145.9	12
4.1.2 Domestic credit to private sector, % GDP	80.2	37			7.1.3 Industrial designs by origin/bn PPP\$ GDP	12.0	11 ◆
4.1.3 Microfinance gross loans, % GDP	n/a	n/a			7.1.4 ICTs and organizational model creation†	78.0	8
4.2 Investment	32.5	60 ○ ◊			7.2 Creative goods and services	25.6	36
4.2.1 Ease of protecting minority investors*	62.0	60 ○			7.2.1 Cultural and creative services exports, % total trade	0.9	31
4.2.2 Market capitalization, % GDP	53.4	32			7.2.2 National feature films/mn pop. 15-69	4.0	49 ○
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	0.1	25			7.2.3 Entertainment and media market/th pop. 15-69	52.8	12
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	0.1	24			7.2.4 Printing and other media, % manufacturing	0.9	66 ○
4.3 Trade, diversification, and market scale	89.8	2 ● ◆			7.2.5 Creative goods exports, % total trade	2.1	29
4.3.1 Applied tariff rate, weighted avg., %	1.8	25			7.3 Online creativity	57.9	13
4.3.2 Domestic industry diversification	96.5	19			7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	52.1	14
4.3.3 Domestic market scale, bn PPP\$	4,454.5	5 ● ◆			7.3.2 Country-code TLDs/th pop. 15-69	84.8	6 ● ◆
				Score/Value	Rank		

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 appendices 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.