

## Key indicators

Population (millions) .....	0.6
GDP (US\$ billions) .....	4.2
GDP per capita, PPP\$ .....	16,123.1
Income group .....	Upper-middle income
Region .....	Europe

	Score 0–100 or value (hard data)	Rank
<b>Global Innovation Index (out of 127) .....</b>	<b>38.1</b>	<b>48</b>
Innovation Output Sub-Index .....	29.3	52
Innovation Input Sub-Index .....	46.8	50
Innovation Efficiency Ratio .....	0.6	62
Global Innovation Index 2016 (out of 128) .....	37.4	51

<b>1 Institutions .....</b>	<b>68.4</b>	<b>48</b>
1.1 Political environment .....	56.6	54
1.1.1 Political stability & safety* .....	67.0	54
1.1.2 Government effectiveness* .....	46.3	61
1.2 Regulatory environment .....	68.9	47
1.2.1 Regulatory quality* .....	47.9	63
1.2.2 Rule of law* .....	40.4	59
1.2.3 Cost of redundancy dismissal, salary weeks .....	11.2	39
1.3 Business environment .....	79.6	34
1.3.1 Ease of starting a business* .....	90.1	49
1.3.2 Ease of resolving insolvency* .....	68.4	37
1.3.3 Ease of paying taxes* .....	80.4	48

<b>2 Human capital &amp; research .....</b>	<b>36.3</b>	<b>[49]</b>
2.1 Education .....	56.0	[39]
2.1.1 Expenditure on education, % GDP .....	n/a	n/a
2.1.2 Gov't expenditure/pupil, secondary, % GDP/cap .....	n/a	n/a
2.1.3 School life expectancy, years <sup>Ⓐ</sup> .....	15.1	44
2.1.4 PISA scales in reading, maths, & science .....	418.7	52 ○
2.1.5 Pupil-teacher ratio, secondary .....	n/a	n/a
2.2 Tertiary education .....	48.2	[25]
2.2.1 Tertiary enrolment, % gross <sup>Ⓐ</sup> .....	55.3	48
2.2.2 Graduates in science & engineering, % .....	n/a	n/a
2.2.3 Tertiary inbound mobility, % .....	n/a	n/a
2.3 Research & development (R&D) .....	4.6	77
2.3.1 Researchers, FTE/mn pop. .....	835.8	53
2.3.2 Gross expenditure on R&D, % GDP .....	0.4	72
2.3.3 Global R&D companies, avg. expend. top 3, mn \$US .....	0.0	43 ○
2.3.4 QS university ranking, average score top 3* .....	0.0	75 ○

<b>3 Infrastructure .....</b>	<b>49.5</b>	<b>54</b>
3.1 Information & communication technologies (ICTs) .....	66.4	43
3.1.1 ICT access* .....	68.5	55
3.1.2 ICT use* .....	46.1	60
3.1.3 Government's online service* .....	68.1	47
3.1.4 E-participation* .....	83.1	17 ●
3.2 General infrastructure .....	35.0	74
3.2.1 Electricity output, kWh/cap .....	5,119.4	39
3.2.2 Logistics performance* .....	14.7	114 ○
3.2.3 Gross capital formation, % GDP .....	27.1	30
3.3 Ecological sustainability .....	47.1	55
3.3.1 GDP/unit of energy use .....	9.2	58
3.3.2 Environmental performance* .....	78.9	46
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP .....	1.7	52

<b>4 Market sophistication .....</b>	<b>45.9</b>	<b>65</b>
4.1 Credit .....	40.8	47
4.1.1 Ease of getting credit* .....	85.0	7 ●
4.1.2 Domestic credit to private sector, % GDP .....	50.6	69
4.1.3 Microfinance gross loans, % GDP .....	1.0	26

4.2 Investment .....	55.4	21 ●
4.2.1 Ease of protecting minority investors* .....	63.3	41
4.2.2 Market capitalization, % GDP <sup>Ⓐ</sup> .....	92.6	10 ●
4.2.3 Venture capital deals/bn PPP\$ GDP .....	n/a	n/a
4.3 Trade, competition, & market scale .....	41.4	119 ○
4.3.1 Applied tariff rate, weighted mean, % <sup>Ⓐ</sup> .....	2.6	60
4.3.2 Intensity of local competition <sup>†</sup> .....	54.6	114 ○
4.3.3 Domestic market scale, bn PPP\$ .....	10.6	126 ○

<b>5 Business sophistication .....</b>	<b>34.1</b>	<b>58</b>
5.1 Knowledge workers .....	37.4	62
5.1.1 Knowledge-intensive employment, % .....	37.4	32
5.1.2 Firms offering formal training, % firms .....	23.7	67
5.1.3 GERD performed by business, % of GDP <sup>Ⓐ</sup> .....	0.1	57
5.1.4 GERD financed by business, % <sup>Ⓐ</sup> .....	28.5	53
5.1.5 Females employed w/advanced degrees, % total .....	n/a	n/a
5.2 Innovation linkages .....	29.6	57
5.2.1 University/industry research collaboration <sup>†</sup> .....	36.4	88
5.2.2 State of cluster development <sup>†</sup> .....	34.8	103 ○
5.2.3 GERD financed by abroad, % <sup>Ⓐ</sup> .....	20.7	20 ●
5.2.4 JV-strategic alliance deals/bn PPP\$ GDP .....	n/a	n/a
5.2.5 Patent families 2+ offices/bn PPP\$ GDP <sup>Ⓐ</sup> .....	0.2	48
5.3 Knowledge absorption .....	35.3	53
5.3.1 Intellectual property payments, % total trade .....	0.2	86 ○
5.3.2 High-tech imports less re-imports, % total trade .....	6.4	90
5.3.3 ICT services imports, % total trade .....	2.3	15 ●
5.3.4 FDI net inflows, % GDP .....	12.8	7 ●
5.3.5 Research talent, % in business enterprise <sup>Ⓐ</sup> .....	19.0	57

<b>6 Knowledge &amp; technology outputs .....</b>	<b>22.5</b>	<b>57</b>
6.1 Knowledge creation .....	11.2	60
6.1.1 Patents by origin/bn PPP\$ GDP .....	2.3	42
6.1.2 PCT patent applications/bn PPP\$ GDP .....	0.2	51
6.1.3 Utility models by origin/bn PPP\$ GDP .....	n/a	n/a
6.1.4 Scientific & technical articles/bn PPP\$ GDP .....	21.5	36
6.1.5 Citable documents H index .....	0.3	125 ○
6.2 Knowledge impact .....	36.1	45
6.2.1 Growth rate of PPP\$ GDP/worker, % .....	0.4	73
6.2.2 New businesses/th pop. 15–64 .....	6.9	17 ●
6.2.3 Computer software spending, % GDP .....	0.4	22 ●
6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP .....	8.4	41
6.2.5 High- & medium-high-tech manufactures, % .....	n/a	n/a
6.3 Knowledge diffusion .....	20.1	78
6.3.1 Intellectual property receipts, % total trade .....	0.0	74
6.3.2 High-tech exports less re-exports, % total trade .....	0.6	77
6.3.3 ICT services exports, % total trade .....	3.2	26
6.3.4 FDI net outflows, % GDP .....	0.4	72

<b>7 Creative outputs .....</b>	<b>36.1</b>	<b>48</b>
7.1 Intangible assets .....	41.7	65
7.1.1 Trademarks by origin/bn PPP\$ GDP .....	n/a	n/a
7.1.2 Industrial designs by origin/bn PPP\$ GDP .....	0.8	68
7.1.3 ICTs & business model creation <sup>†</sup> .....	56.7	79
7.1.4 ICTs & organizational model creation <sup>†</sup> .....	45.5	90 ○
7.2 Creative goods & services .....	16.5	70
7.2.1 Cultural & creative services exports, % of total trade .....	0.1	57
7.2.2 National feature films/mn pop. 15–69 .....	13.3	10 ●
7.2.3 Global ent. & media market/th pop. 15–69 .....	n/a	n/a
7.2.4 Printing & publishing manufactures, % .....	n/a	n/a
7.2.5 Creative goods exports, % total trade .....	0.2	75
7.3 Online creativity .....	44.6	22 ●
7.3.1 Generic top-level domains (TLDs)/th pop. 15–69 .....	1.4	89
7.3.2 Country-code TLDs/th pop. 15–69 .....	100.0	1 ●
7.3.3 Wikipedia edits/mn pop. 15–69 <sup>Ⓐ</sup> .....	5.5	51
7.3.4 Video uploads on YouTube/pop. 15–69 .....	23.8	53

NOTES: ● indicates a strength; ○ a weakness; \* an index; † a survey question.

Ⓐ indicates that the country'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; see page 181 of this appendix for details.