

| Output rank | Input rank | Income | Region | Population (mn) | GDP, PPP\$ | GDP per capita, PPP\$ | GII 2018 rank |
|---|--|--------|---------|-----------------|------------|-----------------------|---------------|
| 99 | 88 | High | LCN | 1.4 | 44.3 | 32,253.8 | 96 |
| | | | | Score/Value | Rank | | |
| INSTITUTIONS | | | | 63.4 | 63 | ◇ | |
| 1.1 | Political environment | | 59.8 | 52 | ● ◇ | | |
| 1.1.1 | Political and operational stability*..... | | 73.7 | 50 | ● ◇ | | |
| 1.1.2 | Government effectiveness*..... | | 52.8 | 54 | ● ◇ | | |
| 1.2 | Regulatory environment | | 62.0 | 75 | ◇ | | |
| 1.2.1 | Regulatory quality*..... | | 42.6 | 68 | ◇ | | |
| 1.2.2 | Rule of law*..... | | 43.5 | 67 | ◇ | | |
| 1.2.3 | Cost of redundancy dismissal, salary weeks..... | | 20.5 | 84 | | | |
| 1.3 | Business environment | | 68.5 | 69 | | | |
| 1.3.1 | Ease of starting a business*..... | | 88.6 | 61 | | | |
| 1.3.2 | Ease of resolving insolvency*..... | | 48.5 | 69 | | | |
| HUMAN CAPITAL & RESEARCH | | | | 20.5 | [94] | | |
| 2.1 | Education | | 40.4 | [84] | | | |
| 2.1.1 | Expenditure on education, % GDP..... | | n/a | n/a | | | |
| 2.1.2 | Government funding/pupil, secondary, % GDP/cap... .. | | n/a | n/a | | | |
| 2.1.3 | School life expectancy, years..... | | n/a | n/a | | | |
| 2.1.4 | PISA scales in reading, maths, & science..... | | 423.0 | 50 | | | |
| 2.1.5 | Pupil-teacher ratio, secondary..... | | n/a | n/a | | | |
| 2.2 | Tertiary education | | n/a | [n/a] | | | |
| 2.2.1 | Tertiary enrolment, % gross..... | | n/a | n/a | | | |
| 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) | | 0.6 | 114 | ◇ | | |
| 2.3.1 | Researchers, FTE/mn pop..... | | n/a | n/a | | | |
| 2.3.2 | Gross expenditure on R&D, % GDP..... | | 0.1 | 108 | ○ ◇ | | |
| 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*..... | | 0.0 | 78 | ○ ◇ | | |
| INFRASTRUCTURE | | | | 37.5 | 92 | ◇ | |
| 3.1 | Information & communication technologies (ICTs) | | 62.7 | 73 | ◇ | | |
| 3.1.1 | ICT access*..... | | 74.6 | 45 | ● | | |
| 3.1.2 | ICT use*..... | | 54.4 | 65 | ◇ | | |
| 3.1.3 | Government's online service*..... | | 63.9 | 85 | ◇ | | |
| 3.1.4 | E-participation*..... | | 57.9 | 93 | ◇ | | |
| 3.2 | General infrastructure | | 22.1 | 112 | ◇ | | |
| 3.2.1 | Electricity output, kWh/mn pop..... | | 7,819.0 | 23 | ● | | |
| 3.2.2 | Logistics performance*..... | | 16.5 | 111 | ◇ | | |
| 3.2.3 | Gross capital formation, % GDP..... | | n/a | n/a | | | |
| 3.3 | Ecological sustainability | | 27.7 | 107 | ◇ | | |
| 3.3.1 | GDP/unit of energy use..... | | 2.2 | 121 | ○ ◇ | | |
| 3.3.2 | Environmental performance*..... | | 67.4 | 34 | ● | | |
| 3.3.3 | ISO 14001 environmental certificates/bn PPP\$ GDP.. | | 0.5 | 84 | ◇ | | |
| MARKET SOPHISTICATION | | | | 45.6 | 77 | ◇ | |
| 4.1 | Credit | | 27.5 | 100 | ◇ | | |
| 4.1.1 | Ease of getting credit*..... | | 65.0 | 54 | | | |
| 4.1.2 | Domestic credit to private sector, % GDP..... | | 40.5 | 81 | ◇ | | |
| 4.1.3 | Microfinance gross loans, % GDP..... | | 0.0 | 77 | ○ | | |
| 4.2 | Investment | | 61.7 | [20] | | | |
| 4.2.1 | Ease of protecting minority investors*..... | | 61.7 | 54 | ● | | |
| 4.2.2 | Market capitalization, % GDP..... | | n/a | n/a | | | |
| 4.2.3 | Venture capital deals/bn PPP\$ GDP..... | | n/a | n/a | | | |
| 4.3 | Trade, competition, & market scale | | 47.5 | 112 | ◇ | | |
| 4.3.1 | Applied tariff rate, weighted avg., %..... | | 8.6 | 106 | ◇ | | |
| 4.3.2 | Intensity of local competition*..... | | 66.9 | 74 | | | |
| 4.3.3 | Domestic market scale, bn PPP\$..... | | 44.3 | 99 | ◇ | | |
| BUSINESS SOPHISTICATION | | | | 26.2 | 92 | ◇ | |
| 5.1 | Knowledge workers | | 34.7 | 70 | ◇ | | |
| 5.1.1 | Knowledge-intensive employment, %..... | | 29.9 | 44 | ● | | |
| 5.1.2 | Firms offering formal training, % firms..... | | 28.0 | 56 | | | |
| 5.1.3 | GERD performed by business, % GDP..... | | 0.0 | 89 | ○ ◇ | | |
| 5.1.4 | GERD financed by business, %..... | | n/a | n/a | | | |
| 5.1.5 | Females employed w/advanced degrees, %..... | | 12.8 | 53 | ● | | |
| 5.2 | Innovation linkages | | 20.3 | 85 | ◇ | | |
| 5.2.1 | University/industry research collaboration*..... | | 29.7 | 107 | ◇ | | |
| 5.2.2 | State of cluster development*..... | | 43.3 | 79 | ◇ | | |
| 5.2.3 | GERD financed by abroad, %..... | | n/a | n/a | | | |
| 5.2.4 | JV-strategic alliance deals/bn PPP\$ GDP..... | | 0.0 | 76 | | | |
| 5.2.5 | Patent families 2+ offices/bn PPP\$ GDP..... | | 0.0 | 93 | ○ ◇ | | |
| 5.3 | Knowledge absorption | | 23.5 | 110 | ◇ | | |
| 5.3.1 | Intellectual property payments, % total trade..... | | 0.6 | 59 | | | |
| 5.3.2 | High-tech imports, % total trade..... | | 6.3 | 89 | | | |
| 5.3.3 | ICT services imports, % total trade..... | | 0.5 | 108 | ◇ | | |
| 5.3.4 | FDI net inflows, % GDP..... | | -0.4 | 123 | ○ | | |
| 5.3.5 | Research talent, % in business enterprise..... | | n/a | n/a | | | |
| KNOWLEDGE & TECHNOLOGY OUTPUTS | | | | 14.9 | 103 | ◇ | |
| 6.1 | Knowledge creation | | 2.5 | 118 | ◇ | | |
| 6.1.1 | Patents by origin/bn PPP\$ GDP..... | | 0.1 | 118 | | | |
| 6.1.2 | PCT patents by origin/bn PPP\$ GDP..... | | 0.1 | 62 | | | |
| 6.1.3 | Utility models by origin/bn PPP\$ GDP..... | | 0.0 | 63 | ○ ◇ | | |
| 6.1.4 | Scientific & technical articles/bn PPP\$ GDP..... | | 2.7 | 106 | ◇ | | |
| 6.1.5 | Citable documents H-index..... | | 4.0 | 102 | ◇ | | |
| 6.2 | Knowledge impact | | 35.2 | [71] | | | |
| 6.2.1 | Growth rate of PPP\$ GDP/worker, %..... | | -2.0 | 109 | ○ ◇ | | |
| 6.2.2 | New businesses/th pop. 15-64..... | | n/a | n/a | | | |
| 6.2.3 | Computer software spending, % GDP..... | | n/a | n/a | | | |
| 6.2.4 | ISO 9001 quality certificates/bn PPP\$ GDP..... | | 2.5 | 81 | ◇ | | |
| 6.2.5 | High- & medium-high-tech manufactures, %..... | | n/a | n/a | | | |
| 6.3 | Knowledge diffusion | | 6.9 | 124 | ○ ◇ | | |
| 6.3.1 | Intellectual property receipts, % total trade..... | | 0.0 | 84 | | | |
| 6.3.2 | High-tech net exports, % total trade..... | | 0.0 | 119 | ◇ | | |
| 6.3.3 | ICT services exports, % total trade..... | | 0.1 | 121 | ◇ | | |
| 6.3.4 | FDI net outflows, % GDP..... | | 0.4 | 70 | | | |
| CREATIVE OUTPUTS | | | | 20.2 | 95 | ◇ | |
| 7.1 | Intangible assets | | 36.1 | 91 | ◇ | | |
| 7.1.1 | Trademarks by origin/bn PPP\$ GDP..... | | 13.9 | 97 | ◇ | | |
| 7.1.2 | Industrial designs by origin/bn PPP\$ GDP..... | | 6.9 | 19 | ● | | |
| 7.1.3 | ICTs & business model creation*..... | | 52.7 | 95 | ◇ | | |
| 7.1.4 | ICTs & organizational model creation*..... | | 49.8 | 82 | ◇ | | |
| 7.2 | Creative goods & services | | 4.9 | [102] | | | |
| 7.2.1 | Cultural & creative services exports, % total trade..... | | 0.0 | 101 | ◇ | | |
| 7.2.2 | National feature films/mn pop. 15-69..... | | n/a | n/a | | | |
| 7.2.3 | Entertainment & Media market/th pop. 15-69..... | | n/a | n/a | | | |
| 7.2.4 | Printing & other media, % manufacturing..... | | 0.7 | 83 | | | |
| 7.2.5 | Creative goods exports, % total trade..... | | 0.1 | 92 | | | |
| 7.3 | Online creativity | | 3.7 | 72 | ◇ | | |
| 7.3.1 | Generic top-level domains (TLDs)/th pop. 15-69..... | | 4.3 | 58 | ● | | |
| 7.3.2 | Country-code TLDs/th pop. 15-69..... | | 1.4 | 71 | ◇ | | |
| 7.3.3 | Wikipedia edits/mn pop. 15-69..... | | 8.0 | 67 | ◇ | | |
| 7.3.4 | Mobile app creation/bn PPP\$ GDP..... | | n/a | n/a | | | |

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.