

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
128	109	Lower middle	SSF	17.9	76.0	3,621.3	124
			Score/Value Rank				Score/Value Rank
<b>INSTITUTIONS</b> .....				<b>46.0</b>	<b>122</b>		
<b>1.1</b>	<b>Political environment</b> .....	<b>45.9</b>	<b>99</b>				
1.1.1	Political and operational stability*.....	62.5	92				
1.1.2	Government effectiveness*.....	37.6	101				
<b>1.2</b>	<b>Regulatory environment</b> .....	<b>24.8</b>	<b>128</b>	○ ◇			
1.2.1	Regulatory quality*.....	30.1	102				
1.2.2	Rule of law*.....	37.7	83	●			
1.2.3	Cost of redundancy dismissal, salary weeks.....	50.6	127	○ ◇			
<b>1.3</b>	<b>Business environment</b> .....	<b>67.1</b>	<b>78</b>	●			
1.3.1	Ease of starting a business*.....	84.9	90				
1.3.2	Ease of resolving insolvency*.....	49.3	71	●			
<b>HUMAN CAPITAL &amp; RESEARCH</b> .....				<b>15.0</b>	<b>[111]</b>		
<b>2.1</b>	<b>Education</b> .....	<b>42.5</b>	<b>[75]</b>				
2.1.1	Expenditure on education, % GDP.....	4.7	56	●			
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.....	n/a	n/a				
2.1.5	Pupil-teacher ratio, secondary.....	21.1	101				
<b>2.2</b>	<b>Tertiary education</b> .....	<b>2.4</b>	<b>[126]</b>				
2.2.1	Tertiary enrolment, % gross.....	4.1	122	○ ◇			
2.2.2	Graduates in science & engineering, %.....	n/a	n/a				
2.2.3	Tertiary inbound mobility, %.....	n/a	n/a				
<b>2.3</b>	<b>Research &amp; development (R&amp;D)</b> .....	<b>0.0</b>	<b>[121]</b>				
2.3.1	Researchers, FTE/mn pop.....	n/a	n/a				
2.3.2	Gross expenditure on R&D, % GDP.....	n/a	n/a				
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US.....	0.0	42	○ ◇			
2.3.4	QS university ranking, average score top 3*.....	0.0	77	○ ◇			
<b>INFRASTRUCTURE</b> .....				<b>27.4</b>	<b>107</b>		
<b>3.1</b>	<b>Information &amp; communication technologies (ICTs)</b> .....	<b>36.4</b>	<b>115</b>				
3.1.1	ICT access*.....	34.2	116	◇			
3.1.2	ICT use*.....	23.8	110	◇			
3.1.3	Government's online service*.....	47.9	108				
3.1.4	E-participation*.....	39.9	112				
<b>3.2</b>	<b>General infrastructure</b> .....	<b>30.2</b>	<b>51</b>	●			
3.2.1	Electricity output, kWh/mn pop.....	830.0	100				
3.2.2	Logistics performance*.....	21.4	105				
3.2.3	Gross capital formation, % GDP.....	41.1	9	● ◆			
<b>3.3</b>	<b>Ecological sustainability</b> .....	<b>15.7</b>	<b>121</b>	◇			
3.3.1	GDP/unit of energy use.....	5.1	110	◇			
3.3.2	Environmental performance*.....	34.7	103				
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.2	104				
<b>MARKET SOPHISTICATION</b> .....				<b>43.9</b>	<b>85</b>		
<b>4.1</b>	<b>Credit</b> .....	<b>39.9</b>	<b>70</b>	●			
4.1.1	Ease of getting credit*.....	95.0	4	● ◆			
4.1.2	Domestic credit to private sector, % GDP.....	14.7	119				
4.1.3	Microfinance gross loans, % GDP.....	0.1	63				
<b>4.2</b>	<b>Investment</b> .....	<b>33.0</b>	<b>84</b>				
4.2.1	Ease of protecting minority investors*.....	60.0	71	●			
4.2.2	Market capitalization, % GDP.....	13.6	63				
4.2.3	Venture capital deals/bn PPP\$ GDP.....	n/a	n/a				
<b>4.3</b>	<b>Trade, competition, and market scale</b> .....	<b>58.9</b>	<b>80</b>	●			
4.3.1	Applied tariff rate, weighted avg., %.....	3.4	68	●			
4.3.2	Intensity of local competition*.....	66.4	75	●			
4.3.3	Domestic market scale, bn PPP\$.....	76.0	92				
<b>BUSINESS SOPHISTICATION</b> .....				<b>21.4</b>	<b>91</b>		
<b>5.1</b>	<b>Knowledge workers</b> .....	<b>27.2</b>	<b>[78]</b>				
5.1.1	Knowledge-intensive employment, %.....	19.1	79				
5.1.2	Firms offering formal training, %.....	28.2	53	●			
5.1.3	GERD performed by business, % GDP.....	n/a	n/a				
5.1.4	GERD financed by business, %.....	n/a	n/a				
5.1.5	Females employed w/advanced degrees, %.....	6.2	82				
<b>5.2</b>	<b>Innovation linkages</b> .....	<b>17.1</b>	<b>95</b>				
5.2.1	University/industry research collaboration*.....	30.2	111				
5.2.2	State of cluster development*.....	41.7	90				
5.2.3	GERD financed by abroad, % GDP.....	n/a	n/a				
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	101				
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.0	101	○ ◇			
<b>5.3</b>	<b>Knowledge absorption</b> .....	<b>19.7</b>	<b>100</b>				
5.3.1	Intellectual property payments, % total trade.....	0.1	98				
5.3.2	High-tech imports, % total trade.....	6.3	89				
5.3.3	ICT services imports, % total trade.....	0.7	90				
5.3.4	FDI net inflows, % GDP.....	2.7	64	●			
5.3.5	Research talent, % in business enterprise.....	n/a	n/a				
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b> .....				<b>8.5</b>	<b>123</b>	◇	
<b>6.1</b>	<b>Knowledge creation</b> .....	<b>4.0</b>	<b>115</b>				
6.1.1	Patents by origin/bn PPP\$ GDP.....	0.2	106				
6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.0	100	○ ◇			
6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a				
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	2.6	108				
6.1.5	Citable documents H-index.....	6.8	92				
<b>6.2</b>	<b>Knowledge impact</b> .....	<b>10.0</b>	<b>117</b>	◇			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....	-0.3	99	◇			
6.2.2	New businesses/th pop. 15-64.....	1.1	82				
6.2.3	Computer software spending, % GDP.....	0.0	108	◇			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	0.5	120	◇			
6.2.5	High- and medium-high-tech manufacturing, %.....	10.1	80				
<b>6.3</b>	<b>Knowledge diffusion</b> .....	<b>11.7</b>	<b>111</b>				
6.3.1	Intellectual property receipts, % total trade.....	n/a	n/a				
6.3.2	High-tech net exports, % total trade.....	0.3	94				
6.3.3	ICT services exports, % total trade.....	0.4	105				
6.3.4	FDI net outflows, % GDP.....	0.1	108				
<b>CREATIVE OUTPUTS</b> .....				<b>7.5</b>	<b>126</b>	○ ◇	
<b>7.1</b>	<b>Intangible assets</b> .....	<b>12.7</b>	<b>123</b>	◇			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....	15.6	100				
7.1.2	Global brand value, top 5,000, % GDP.....	0.0	80	○ ◇			
7.1.3	Industrial designs by origin/bn PPP\$ GDP.....	0.4	85				
7.1.4	ICTs & organizational model creation*.....	37.3	119	○ ◇			
<b>7.2</b>	<b>Creative goods and services</b> .....	<b>0.3</b>	<b>[130]</b>				
7.2.1	Cultural & creative services exports, % total trade.....	0.0	112	○			
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 and other media, % manufacturing.....	n/a	n/a				
7.2.5	Creative goods exports, % total trade.....	0.0	112				
<b>7.3</b>	<b>Online creativity</b> .....	<b>4.5</b>	<b>111</b>				
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	0.1	124	○ ◇			
7.3.2	Country-code TLDs/th pop. 15-69.....	0.1	116				
7.3.3	Wikipedia edits/mn pop. 15-69.....	17.6	111				
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.