

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
<b>50</b>	<b>85</b>	<b>Upper middle</b>	<b>NAWA</b>	<b>2.9</b>	<b>30.7</b>	<b>10,176.1</b>	<b>68</b>
				Score/Value	Rank		
<b>INSTITUTIONS</b> .....				<b>63.2</b>	<b>64</b>		
<b>1.1</b>	<b>Political environment</b> .....		<b>50.5</b>	<b>81</b>			
1.1.1	Political and operational stability*		63.2	86			
1.1.2	Government effectiveness*		44.2	77			
<b>1.2</b>	<b>Regulatory environment</b> .....		<b>69.1</b>	<b>55</b>			
1.2.1	Regulatory quality*		49.5	57			
1.2.2	Rule of law*		42.3	69			
1.2.3	Cost of redundancy dismissal, salary weeks.....		13.0	42			
<b>1.3</b>	<b>Business environment</b> .....		<b>70.1</b>	<b>65</b>			
1.3.1	Ease of starting a business*		96.2	8	◆		
1.3.2	Ease of resolving insolvency*		44.0	85			
<b>HUMAN CAPITAL &amp; RESEARCH</b> .....				<b>16.9</b>	<b>107</b>	◇	
<b>2.1</b>	<b>Education</b> .....		<b>26.9</b>	<b>[112]</b>			
2.1.1	Expenditure on education, % GDP.....		2.8	111	◇		
2.1.2	Government funding/pupil, secondary, % GDP/cap.Ⓞ		14.5	85			
2.1.3	School life expectancy, years.Ⓞ		13.0	81			
2.1.4	PISA scales in reading, maths, & science.....		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary.....		n/a	n/a			
<b>2.2</b>	<b>Tertiary education</b> .....		<b>22.1</b>	<b>87</b>			
2.2.1	Tertiary enrolment, % gross.....		52.2	54			
2.2.2	Graduates in science & engineering, %.....		14.7	88	◇		
2.2.3	Tertiary inbound mobility, %.....		4.3	48			
<b>2.3</b>	<b>Research &amp; development (R&amp;D)</b> .....		<b>1.6</b>	<b>97</b>			
2.3.1	Researchers, FTE/mn pop.....		n/a	n/a			
2.3.2	Gross expenditure on R&D, % GDP.....		0.2	86			
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	◇		
<b>INFRASTRUCTURE</b> .....				<b>40.2</b>	<b>85</b>		
<b>3.1</b>	<b>Information &amp; communication technologies (ICTs)</b>		<b>60.1</b>	<b>78</b>			
3.1.1	ICT access*.....		76.7	36	◆		
3.1.2	ICT use*.....		50.7	70			
3.1.3	Government's online service*.....		56.3	95			
3.1.4	E-participation*.....		56.7	97			
<b>3.2</b>	<b>General infrastructure</b> .....		<b>26.7</b>	<b>93</b>			
3.2.1	Electricity output, kWh/mn pop.....		2,496.6	71			
3.2.2	Logistics performance*.....		25.4	87			
3.2.3	Gross capital formation, % GDP.....		22.5	68			
<b>3.3</b>	<b>Ecological sustainability</b> .....		<b>33.9</b>	<b>82</b>			
3.3.1	GDP/unit of energy use.....		7.8	80			
3.3.2	Environmental performance*.....		62.1	56			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.1	120	◇		
<b>MARKET SOPHISTICATION</b> .....				<b>50.1</b>	<b>55</b>		
<b>4.1</b>	<b>Credit</b> .....		<b>31.2</b>	<b>86</b>			
4.1.1	Ease of getting credit*.....		70.0	40			
4.1.2	Domestic credit to private sector, % GDP.....		51.5	66			
4.1.3	Microfinance gross loans, % GDP.....		0.0	60			
<b>4.2</b>	<b>Investment</b> .....		<b>63.3</b>	<b>[17]</b>			
4.2.1	Ease of protecting minority investors*.....		63.3	48			
4.2.2	Market capitalization, % GDP.....		n/a	n/a			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		n/a	n/a			
<b>4.3</b>	<b>Trade, competition, &amp; market scale</b> .....		<b>55.9</b>	<b>86</b>			
4.3.1	Applied tariff rate, weighted avg., %.....		2.2	56			
4.3.2	Intensity of local competition*.....		73.6	36			
4.3.3	Domestic market scale, bn PPP\$.....		30.7	113	◇		
<b>BUSINESS SOPHISTICATION</b> .....				<b>26.3</b>	<b>89</b>		
<b>5.1</b>	<b>Knowledge workers</b> .....		<b>36.5</b>	<b>[66]</b>			
5.1.1	Knowledge-intensive employment, %.....		29.4	46			
5.1.2	Firms offering formal training, % firms.....		16.2	82	◇		
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, %.....		14.9	42			
<b>5.2</b>	<b>Innovation linkages</b> .....		<b>20.0</b>	<b>88</b>			
5.2.1	University/industry research collaboration*.....		36.3	89			
5.2.2	State of cluster development*.....		46.0	69			
5.2.3	GERD financed by abroad, %.....		1.7	82			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		n/a	n/a			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.2	47			
<b>5.3</b>	<b>Knowledge absorption</b> .....		<b>22.4</b>	<b>114</b>	◇		
5.3.1	Intellectual property payments, % total trade.Ⓞ		0.0	120	◇		
5.3.2	High-tech imports, % total trade.....		4.8	109			
5.3.3	ICT services imports, % total trade.....		0.5	102			
5.3.4	FDI net inflows, % GDP.....		2.4	74			
5.3.5	Research talent, % in business enterprise.....		n/a	n/a			
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b> .....				<b>25.0</b>	<b>54</b>		
<b>6.1</b>	<b>Knowledge creation</b> .....		<b>22.6</b>	<b>37</b>			
6.1.1	Patents by origin/bn PPP\$ GDP.....		3.9	29	●		
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.2	50			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		1.4	18	●		
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		25.2	13	◆		
6.1.5	Citable documents H-index.....		9.8	69			
<b>6.2</b>	<b>Knowledge impact</b> .....		<b>35.3</b>	<b>70</b>			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		6.2	2	◆		
6.2.2	New businesses/th pop. 15-64.....		1.7	55			
6.2.3	Computer software spending, % GDP.....		0.1	84			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		1.0	107			
6.2.5	High- & medium-high-tech manufactures, %.....		0.0	96	◇		
<b>6.3</b>	<b>Knowledge diffusion</b> .....		<b>17.2</b>	<b>67</b>			
6.3.1	Intellectual property receipts, % total trade.Ⓞ		0.0	109	◇		
6.3.2	High-tech net exports, % total trade.....		0.6	77			
6.3.3	ICT services exports, % total trade.....		4.3	15	◆		
6.3.4	FDI net outflows, % GDP.....		0.3	77			
<b>CREATIVE OUTPUTS</b> .....				<b>32.2</b>	<b>48</b>		
<b>7.1</b>	<b>Intangible assets</b> .....		<b>43.2</b>	<b>55</b>			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		94.7	18	●		
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		1.9	52			
7.1.3	ICTs & business model creation*.....		54.2	88			
7.1.4	ICTs & organizational model creation*.....		52.8	67			
<b>7.2</b>	<b>Creative goods &amp; services</b> .....		<b>22.4</b>	<b>49</b>			
7.2.1	Cultural & creative services exports, % total trade.....		0.6	41			
7.2.2	National feature films/mn pop. 15-69.....		12.5	11	◆		
7.2.3	Entertainment & Media market/th pop. 15-69.....		n/a	n/a			
7.2.4	Printing & other media, % manufacturing.....		1.5	33			
7.2.5	Creative goods exports, % total trade.....		0.6	55			
<b>7.3</b>	<b>Online creativity</b> .....		<b>19.8</b>	<b>34</b>	◆		
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		3.0	64			
7.3.2	Country-code TLDs/th pop. 15-69.....		4.6	53			
7.3.3	Wikipedia edits/mn pop. 15-69.....		102.5	6	◆		
7.3.4	Mobile app creation/bn PPP\$ GDP.....		2.5	60			

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.