

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
<b>66</b>	<b>83</b>	<b>Lower middle</b>	<b>NAWA</b>	<b>36.2</b>	<b>315.4</b>	<b>8,932.6</b>	<b>76</b>
				Score/Value	Rank		
<b>INSTITUTIONS..... 61.1 72</b>				<b>BUSINESS SOPHISTICATION..... 19.8 122</b>			
<b>1.1</b>	<b>Political environment.....</b>	<b>50.7</b>	<b>79</b>	<b>5.1</b>	<b>Knowledge workers.....</b>	<b>20.9</b>	<b>107</b>
1.1.1	Political and operational stability*.....	66.7	74	5.1.1	Knowledge-intensive employment, %.....	6.9	105
1.1.2	Government effectiveness*.....	42.7	81	5.1.2	Firms offering formal training, % firms.....	26.3	60
<b>1.2</b>	<b>Regulatory environment.....</b>	<b>59.7</b>	<b>82</b>	5.1.3	GERD performed by business, % GDP.....	0.2	51
1.2.1	Regulatory quality*.....	35.8	86	5.1.4	GERD financed by business, %.....	29.9	60
1.2.2	Rule of law*.....	41.7	71	5.1.5	Females employed w/advanced degrees, %.....	n/a	n/a
1.2.3	Cost of redundancy dismissal, salary weeks.....	20.7	86	<b>5.2</b>	<b>Innovation linkages.....</b>	<b>16.9</b>	<b>114</b>
<b>1.3</b>	<b>Business environment.....</b>	<b>72.9</b>	<b>55</b>	5.2.1	University/industry research collaboration*.....	31.2	103
1.3.1	Ease of starting a business*.....	93.0	31	5.2.2	State of cluster development*.....	45.9	71
1.3.2	Ease of resolving insolvency*.....	52.8	65	5.2.3	GERD financed by abroad, %.....	1.7	81
				5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	80
				5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.0	80
<b>HUMAN CAPITAL &amp; RESEARCH..... 27.8 75</b>				<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS....20.7 69</b>			
<b>2.1</b>	<b>Education.....</b>	<b>54.0</b>	<b>47</b>	<b>5.3</b>	<b>Knowledge absorption.....</b>	<b>21.5</b>	<b>116</b>
2.1.1	Expenditure on education, % GDP.....	5.3	36	5.3.1	Intellectual property payments, % total trade.....	0.3	82
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	36.5	5	5.3.2	High-tech imports, % total trade.....	6.5	86
2.1.3	School life expectancy, years.....	13.5	75	5.3.3	ICT services imports, % total trade.....	0.5	103
2.1.4	PISA scales in reading, maths, & science.....	n/a	n/a	5.3.4	FDI net inflows, % GDP.....	2.6	62
2.1.5	Pupil-teacher ratio, secondary.....	20.3	90	5.3.5	Research talent, % in business enterprise.....	7.0	67
<b>2.2</b>	<b>Tertiary education.....</b>	<b>21.5</b>	<b>90</b>	<b>5.3</b>	<b>Knowledge absorption.....</b>	<b>21.5</b>	<b>116</b>
2.2.1	Tertiary enrolment, % gross.....	33.8	78	5.3.1	Intellectual property payments, % total trade.....	0.3	82
2.2.2	Graduates in science & engineering, %.....	18.4	71	5.3.2	High-tech imports, % total trade.....	6.5	86
2.2.3	Tertiary inbound mobility, %.....	2.0	75	5.3.3	ICT services imports, % total trade.....	0.5	103
<b>2.3</b>	<b>Research &amp; development (R&amp;D).....</b>	<b>7.9</b>	<b>65</b>	5.3.4	FDI net inflows, % GDP.....	2.6	62
2.3.1	Researchers, FTE/mn pop.....	1,069.0	51	5.3.5	Research talent, % in business enterprise.....	7.0	67
2.3.2	Gross expenditure on R&D, % GDP.....	0.7	49				
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*.....	3.5	73				
<b>INFRASTRUCTURE..... 48.0 61</b>							
<b>3.1</b>	<b>Information &amp; communication technologies (ICTs).....</b>	<b>62.5</b>	<b>74</b>	<b>6.1</b>	<b>Knowledge creation.....</b>	<b>8.4</b>	<b>77</b>
3.1.1	ICT access*.....	63.6	70	6.1.1	Patents by origin/bn PPP\$ GDP.....	0.7	74
3.1.2	ICT use*.....	42.2	84	6.1.2	PCT patents by origin/bn PPP\$ GDP.....	0.2	55
3.1.3	Government's online service*.....	66.7	75	6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a
3.1.4	E-participation*.....	77.5	56	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	5.8	72
<b>3.2</b>	<b>General infrastructure.....</b>	<b>37.5</b>	<b>53</b>	6.1.5	Citable documents H-index.....	10.0	67
3.2.1	Electricity output, kWh/mn pop.....	899.5	96	<b>6.2</b>	<b>Knowledge impact.....</b>	<b>36.2</b>	<b>67</b>
3.2.2	Logistics performance*.....	22.3	101	6.2.1	Growth rate of PPP\$ GDP/worker, %.....	2.3	39
3.2.3	Gross capital formation, % GDP.....	34.4	13	6.2.2	New businesses/th pop. 15-64.....	1.7	59
<b>3.3</b>	<b>Ecological sustainability.....</b>	<b>43.9</b>	<b>47</b>	6.2.3	Computer software spending, % GDP.....	0.3	58
3.3.1	GDP/unit of energy use.....	13.2	23	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	2.9	78
3.3.2	Environmental performance*.....	63.5	49	6.2.5	High- & medium-high-tech manufactures, %.....	0.3	38
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.6	82	<b>6.3</b>	<b>Knowledge diffusion.....</b>	<b>17.6</b>	<b>64</b>
				6.3.1	Intellectual property receipts, % total trade.....	0.0	88
				6.3.2	High-tech net exports, % total trade.....	1.5	61
				6.3.3	ICT services exports, % total trade.....	3.4	25
				6.3.4	FDI net outflows, % GDP.....	0.7	59
<b>MARKET SOPHISTICATION..... 42.9 94</b>				<b>CREATIVE OUTPUTS.....26.0 69</b>			
<b>4.1</b>	<b>Credit.....</b>	<b>26.8</b>	<b>101</b>	<b>7.1</b>	<b>Intangible assets.....</b>	<b>48.3</b>	<b>43</b>
4.1.1	Ease of getting credit*.....	45.0	94	7.1.1	Trademarks by origin/bn PPP\$ GDP.....	56.9	39
4.1.2	Domestic credit to private sector, % GDP.....	63.0	51	7.1.2	Industrial designs by origin/bn PPP\$ GDP.....	12.4	9
4.1.3	Microfinance gross loans, % GDP.....	0.4	37	7.1.3	ICTs & business model creation*.....	60.4	63
<b>4.2</b>	<b>Investment.....</b>	<b>36.3</b>	<b>96</b>	7.1.4	ICTs & organizational model creation*.....	51.3	76
4.2.1	Ease of protecting minority investors*.....	60.0	61	<b>7.2</b>	<b>Creative goods &amp; services.....</b>	<b>5.6</b>	<b>98</b>
4.2.2	Market capitalization, % GDP.....	54.1	30	7.2.1	Cultural & creative services exports, % total trade.....	0.4	53
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	52	7.2.2	National feature films/mn pop. 15-69.....	1.5	72
<b>4.3</b>	<b>Trade, competition, &amp; market scale.....</b>	<b>65.6</b>	<b>49</b>	7.2.3	Entertainment & Media market/th pop. 15-69.....	0.8	58
4.3.1	Applied tariff rate, weighted avg., %.....	3.2	66	7.2.4	Printing & other media, % manufacturing.....	0.7	84
4.3.2	Intensity of local competition*.....	67.2	73	7.2.5	Creative goods exports, % total trade.....	0.1	101
4.3.3	Domestic market scale, bn PPP\$.....	315.4	52	<b>7.3</b>	<b>Online creativity.....</b>	<b>1.6</b>	<b>91</b>
				7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	1.6	86
				7.3.2	Country-code TLDs/th pop. 15-69.....	0.8	85
				7.3.3	Wikipedia edits/mn pop. 15-69.....	5.2	81
				7.3.4	Mobile app creation/bn PPP\$ GDP.....	0.4	71

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.