








Output rank	Input rank	Income	Region	Efficiency ratio	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2017 rank
101	85	Lower-middle	CSA	106	6.0	22.6	3,667.5	95

				Score/Value	Rank					Score/Value	Rank
	<b>Institutions</b> .....			<b>50.7</b>	<b>98</b>		<b>Business sophistication</b> .....			<b>27.3</b>	<b>79</b>
1.1	Political environment.....			31.7	114	5.1	Knowledge workers.....			36.3	60
1.1.1	Political stability & safety*.....			49.5	96	5.1.1	Knowledge-intensive employment, %.....			19.1	76
1.1.2	Government effectiveness*.....			22.9	118	5.1.2	Firms offering formal training, % firms.....			62.7	6 ●◆
1.2	Regulatory environment.....			<b>55.1</b>	<b>98</b>	5.1.3	GERD performed by business, % GDP.....			0.0	80
1.2.1	Regulatory quality*.....			35.1	93	5.1.4	GERD financed by business, %.....			4.7	79
1.2.2	Rule of law*.....			13.9	119	5.1.5	Females employed w/advanced degrees, % <sup>Ⓔ</sup> .....			10.8	61
1.2.3	Cost of redundancy dismissal, salary weeks.....			17.3	66	5.2	Innovation linkages.....			<b>14.9</b>	<b>120</b>
1.3	Business environment.....			<b>65.3</b>	<b>78</b>	5.2.1	University/industry research collaboration <sup>†</sup> .....			25.5	117 ○◇
1.3.1	Ease of starting a business*.....			92.9	26 ●◆	5.2.2	State of cluster development <sup>†</sup> .....			30.0	116 ○◇
1.3.2	Ease of resolving insolvency*.....			37.7	103	5.2.3	GERD financed by abroad, %.....			1.9	75
						5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....			0.0	58
						5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....			0.1	74
	<b>Human capital &amp; research</b> .....			<b>29.9</b>	<b>68</b>	5.3	Knowledge absorption.....			<b>30.6</b>	<b>65</b>
2.1	Education.....			<b>58.7</b>	<b>23</b> ●◆	5.3.1	Intellectual property payments, % total trade.....			0.2	92
2.1.1	Expenditure on education, % GDP.....			6.0	22 ●◆	5.3.2	High-tech net imports, % total trade.....			8.1	61
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	n/a		n/a		5.3.3	ICT services imports, % total trade.....			1.0	70
2.1.3	School life expectancy, years.....			13.4	73	5.3.4	FDI net inflows, % GDP.....			9.6	14 ●◆
2.1.4	PISA scales in reading, maths & science.....	n/a		n/a		5.3.5	Research talent, % in business enterprise.....			n/a	n/a
2.1.5	Pupil-teacher ratio, secondary.....			11.0	35		<b>Knowledge &amp; technology outputs</b> .....			<b>19.5</b>	<b>82</b>
2.2	Tertiary education.....			<b>30.3</b>	<b>69</b>	6.1	Knowledge creation.....			10.5	67
2.2.1	Tertiary enrolment, % gross.....			45.9	60	6.1.1	Patents by origin/bn PPP\$ GDP.....			4.2	29 ●◆
2.2.2	Graduates in science & engineering, %.....			19.2	65	6.1.2	PCT patents by origin/bn PPP\$ GDP <sup>Ⓔ</sup> .....			0.0	81
2.2.3	Tertiary inbound mobility, %.....			6.0	34	6.1.3	Utility models by origin/bn PPP\$ GDP.....			0.8	31
2.3	Research & development (R&D).....			<b>0.8</b>	<b>107</b>	6.1.4	Scientific & technical articles/bn PPP\$ GDP.....			3.5	94
2.3.1	Researchers, FTE/mn pop.....	n/a		n/a		6.1.5	Citable documents H index.....			1.4	121 ○◇
2.3.2	Gross expenditure on R&D, % GDP.....			0.1	102	6.2	Knowledge impact.....			27.4	95
2.3.3	Global R&D companies, top 3, mn US\$.....			0.0	40 ○◇	6.2.1	Growth rate of PPP\$ GDP/worker, %.....			2.7	22 ●
2.3.4	QS university ranking, average score top 3*.....			0.0	78 ○◇	6.2.2	New businesses/th pop. 15-64.....			1.3	65
	<b>Infrastructure</b> .....			<b>36.0</b>	<b>94</b>	6.2.3	Computer software spending, % GDP.....			0.1	90
3.1	Information & communication technologies (ICTs).....			<b>44.1</b>	<b>90</b>	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....			0.2	124 ○◇
3.1.1	ICT access*.....			45.4	93	6.2.5	High- & medium-high-tech manufactures, %.....			0.0	94
3.1.2	ICT use*.....			29.1	96	6.3	Knowledge diffusion.....			20.5	61
3.1.3	Government's online service*.....			42.8	96	6.3.1	Intellectual property receipts, % total trade.....			0.0	73
3.1.4	E-participation*.....			59.3	65	6.3.2	High-tech net exports, % total trade.....			1.9	54
3.2	General infrastructure.....			<b>37.6</b>	<b>64</b>	6.3.3	ICT services exports, % total trade.....			3.0	35 ●
3.2.1	Electricity output, kWh/cap.....			2,186.2	75	6.3.4	FDI net outflows, % GDP.....			1.4	44
3.2.2	Logistics performance*.....			4.3	122		<b>Creative outputs</b> .....			<b>14.8</b>	<b>115</b>
3.2.3	Gross capital formation, % GDP.....			33.9	13 ●◆	7.1	Intangible assets.....			23.0	118
3.3	Ecological sustainability.....			<b>26.1</b>	<b>112</b>	7.1.1	Trademarks by origin/bn PPP\$ GDP.....			12.5	99
3.3.1	GDP/unit of energy use.....			4.7	107	7.1.2	Industrial designs by origin/bn PPP\$ GDP.....			0.8	75
3.3.2	Environmental performance*.....			54.9	82	7.1.3	ICTs & business model creation <sup>†</sup> .....			39.0	118 ○◇
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP <sup>Ⓔ</sup> .....			0.1	124 ○	7.1.4	ICTs & organizational model creation <sup>†</sup> .....			34.8	116 ○◇
	<b>Market sophistication</b> .....			<b>46.1</b>	<b>67</b>	7.2	Creative goods & services.....			<b>10.9</b>	<b>89</b>
4.1	Credit.....			<b>50.5</b>	<b>28</b> ●◆	7.2.1	Cultural & creative services exports, % total trade.....			n/a	n/a
4.1.1	Ease of getting credit*.....			75.0	26 ●	7.2.2	National feature films/mn pop. 15-69 <sup>Ⓔ</sup> .....			0.5	91
4.1.2	Domestic credit to private sector, % GDP.....			21.2	110	7.2.3	Entertainment & Media market/th pop. 15-69.....			n/a	n/a
4.1.3	Microfinance gross loans, % GDP.....			4.2	10 ●◆	7.2.4	Printing & other media, % manufacturing.....			0.8	67
4.2	Investment.....			<b>41.4</b>	<b>59</b>	7.2.5	Creative goods exports, % total trade.....			0.2	78
4.2.1	Ease of protecting minority investors*.....			61.7	50	7.3	Online creativity.....			<b>2.2</b>	<b>87</b>
4.2.2	Market capitalization, % GDP <sup>Ⓔ</sup> .....			2.3	85 ○◇	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....			0.1	116
4.2.3	Venture capital deals/bn PPP\$ GDP.....	n/a		n/a		7.3.2	Country-code TLDs/th pop. 15-69.....			0.4	94
4.3	Trade, competition, & market scale.....			<b>46.4</b>	<b>107</b>	7.3.3	Wikipedia edits/mn pop. 15-69 <sup>Ⓔ</sup> .....			7.3	69
4.3.1	Applied tariff rate, weighted mean, %.....			3.2	65	7.3.4	Mobile app creation/bn PPP\$ GDP.....			3.5	67
4.3.2	Intensity of local competition <sup>†</sup> .....			55.4	115						
4.3.3	Domestic market scale, bn PPP\$.....			22.6	119						

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

<sup>Ⓔ</sup> 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 215 of this appendix for details.