

**Key indicators**

Population (millions) .....	26.5
GDP (US\$ billions) .....	16.7
GDP per capita, PPP\$ .....	1,170.2
Income group .....	Low income
Region .....	Sub-Saharan Africa

	Score 0–100 or value (hard data)	Rank
<b>Global Innovation Index (out of 141).....</b>	<b>30.1</b>	<b>95</b>
Innovation Output Sub-Index .....	23.3	97
Innovation Input Sub-Index.....	36.9	93
Innovation Efficiency Ratio.....	0.6	104
Global Innovation Index 2014 (out of 143) .....	28.5	107
<b>1 Institutions.....</b>	<b>46.8</b>	<b>116</b>
1.1 Political environment.....	40.7	99
1.1.1 Political stability*.....	57.5	82
1.1.2 Government effectiveness*.....	23.9	108
1.2 Regulatory environment .....	36.2	133 ○
1.2.1 Regulatory quality*.....	36.8	104
1.2.2 Rule of law*.....	25.1	117
1.2.3 Cost of redundancy dismissal, salary weeks.....	37.5	134 ○
1.3 Business environment.....	63.5	89
1.3.1 Ease of starting a business*.....	83.0	87
1.3.2 Ease of resolving insolvency*.....	40.8	99
1.3.3 Ease of paying taxes*.....	66.9	97
<b>2 Human capital &amp; research.....</b>	<b>21.1</b>	<b>102</b>
2.1 Education .....	51.4	44 ●
2.1.1 Expenditure on education, % GDP <sup>Ⓐ</sup> .....	5.0	57 ●
2.1.2 Gov't expenditure/pupil, secondary, % GDP/cap <sup>Ⓐ</sup> .....	86.0	1 ●
2.1.3 School life expectancy, years.....	9.3	118
2.1.4 PISA scales in reading, maths, & science.....	n/a	n/a
2.1.5 Pupil-teacher ratio, secondary.....	31.2	109
2.2 Tertiary education.....	8.3	125
2.2.1 Tertiary enrolment, % gross.....	5.2	124 ○
2.2.2 Graduates in science & engineering, % <sup>Ⓐ</sup> .....	8.9	99 ○
2.2.3 Tertiary inbound mobility, %.....	0.3	102
2.3 Research & development (R&D).....	3.7	87
2.3.1 Researchers, FTE/mn pop. <sup>Ⓐ</sup> .....	38.1	96
2.3.2 Gross expenditure on R&D, % GDP <sup>Ⓐ</sup> .....	0.5	66
2.3.3 QS university ranking, average score top 3*.....	0.0	73 ○
<b>3 Infrastructure.....</b>	<b>28.5</b>	<b>105</b>
3.1 Information & communication technologies (ICTs).....	22.3	118
3.1.1 ICT access*.....	22.1	131 ○
3.1.2 ICT use*.....	2.4	129 ○
3.1.3 Government's online service*.....	31.5	98
3.1.4 E-participation*.....	33.3	92
3.2 General infrastructure.....	47.0	24 ●
3.2.1 Electricity output, kWh/cap.....	601.8	104
3.2.2 Logistics performance*.....	3.5	128 ○
3.2.3 Gross capital formation, % GDP.....	50.1	3 ●
3.3 Ecological sustainability .....	16.0	139 ○
3.3.1 GDP/unit of energy use, 2005 PPP\$/kg oil eq.....	2.1	120 ○
3.3.2 Environmental performance*.....	30.0	128
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.6	77
<b>4 Market sophistication .....</b>	<b>46.0</b>	<b>76</b>
4.1 Credit.....	13.7	125
4.1.1 Ease of getting credit*.....	30.0	113
4.1.2 Domestic credit to private sector, % GDP.....	28.9	101
4.1.3 Microfinance gross loans, % GDP.....	0.2	53

4.2 Investment .....	51.7	23
4.2.1 Ease of protecting investors*.....	51.7	83
4.2.2 Market capitalization, % GDP.....	n/a	n/a
4.2.3 Total value of stocks traded, % GDP.....	n/a	n/a
4.2.4 Venture capital deals/tr PPP\$ GDP.....	n/a	n/a
4.3 Trade & competition .....	72.7	86
4.3.1 Applied tariff rate, weighted mean, % <sup>Ⓐ</sup> .....	4.8	78
4.3.2 Intensity of local competition <sup>†</sup> .....	61.9	93
<b>5 Business sophistication .....</b>	<b>41.9</b>	<b>36 ●</b>
5.1 Knowledge workers.....	16.9	128
5.1.1 Knowledge-intensive employment, %.....	n/a	n/a
5.1.2 Firms offering formal training, % firms <sup>Ⓐ</sup> .....	22.1	85
5.1.3 GERD performed by business, % of GDP.....	n/a	n/a
5.1.4 GERD financed by business, %.....	n/a	n/a
5.1.5 Females employed w/advanced degrees, % total <sup>Ⓐ</sup> .....	0.5	86 ○
5.2 Innovation linkages .....	57.9	5 ●
5.2.1 University/industry research collaboration <sup>†</sup> .....	38.0	86
5.2.2 State of cluster development <sup>†</sup> .....	42.5	82
5.2.3 GERD financed by abroad, % <sup>Ⓐ</sup> .....	78.1	1 ●
5.2.4 JV-strategic alliance deals/tr PPP\$ GDP.....	0.0	36 ●
5.2.5 Patent families 3+ offices/bn PPP\$ GDP.....	n/a	n/a
5.3 Knowledge absorption.....	51.0	12 ●
5.3.1 Royalty & license fees payments, % total trade <sup>Ⓐ</sup> .....	0.1	102
5.3.2 High-tech imports less re-imports, % total trade.....	14.4	16 ●
5.3.3 Comm., computer & info. services imp., % total trade <sup>Ⓐ</sup> .....	0.7	79
5.3.4 FDI net inflows, % GDP.....	42.1	1 ●
<b>6 Knowledge &amp; technology outputs .....</b>	<b>29.0</b>	<b>52 ●</b>
6.1 Knowledge creation.....	6.5	92
6.1.1 Domestic resident patent app./bn PPP\$ GDP.....	n/a	n/a
6.1.2 PCT resident patent app./bn PPP\$ GDP.....	n/a	n/a
6.1.3 Domestic res utility model app./bn PPP\$ GDP.....	n/a	n/a
6.1.4 Scientific & technical articles/bn PPP\$ GDP.....	5.5	94
6.1.5 Citable documents H index.....	60.0	105
6.2 Knowledge impact.....	53.4	14
6.2.1 Growth rate of PPP\$ GDP/worker, %.....	4.0	14 ●
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.....	1.8	97
6.2.5 High- & medium-high-tech manufactures, %.....	n/a	n/a
6.3 Knowledge diffusion.....	27.0	71 ●
6.3.1 Royalty & license fees receipts, % total trade <sup>Ⓐ</sup> .....	0.0	77
6.3.2 High-tech exports less re-exports, % total trade.....	0.8	69 ●
6.3.3 Comm., computer & info. services exp., % total trade <sup>Ⓐ</sup> .....	0.4	95
6.3.4 FDI net outflows, % GDP.....	3.3	19 ●
<b>7 Creative outputs .....</b>	<b>17.6</b>	<b>128</b>
7.1 Intangible assets.....	33.7	119
7.1.1 Domestic res trademark app./bn PPP\$ GDP.....	n/a	n/a
7.1.2 Madrid trademark app. holders/bn PPP\$ GDP.....	0.1	58
7.1.3 ICTs & business model creation <sup>†</sup> .....	44.1	115
7.1.4 ICTs & organizational model creation <sup>†</sup> .....	39.4	119
7.2 Creative goods & services.....	2.9	120
7.2.1 Cultural & creative services exports, % total trade.....	0.1	55
7.2.2 National feature films/mn pop. 15–69.....	n/a	n/a
7.2.3 Global ent. & media output/th pop. 15–69.....	n/a	n/a
7.2.4 Printing & publishing output manufactures, %.....	n/a	n/a
7.2.5 Creative goods exports, % total trade.....	0.0	117
7.3 Online creativity.....	0.1	134 ○
7.3.1 Generic top-level domains (TLDs)/th pop. 15–69.....	0.0	137 ○
7.3.2 Country-code TLDs/th pop. 15–69.....	0.1	119
7.3.3 Wikipedia edits/pop. 15–69.....	27.5	129
7.3.4 Video uploads on YouTube/pop. 15–69.....	n/a	n/a

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

Ⓐ indicates that the country's data are older than the base year; see Appendix II for details, including the year of the data.