



GLOBAL INNOVATION INDEX 2019

CÔTE D'IVOIRE

103rd

Côte d'Ivoire ranks 103rd among the 129 economies featured in the GII 2019.

The Global Innovation Index (GII) is a ranking of world economies based on innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of Côte d'Ivoire over the past three years, noting that data availability and the GII model influence year-on-year comparisons of the GII ranks. The confidence interval for Côte d'Ivoire's ranking in the GII 2019 is between 99 and 107.

Côte d'Ivoire's Rankings, 2017 - 2019

	GII	Innovation Inputs	Innovation Outputs
2019	103	110	91
2018	123	122	121
2017	112	121	94

- Côte d'Ivoire performs better in Innovation Outputs than Inputs.
- This year Côte d'Ivoire ranks 110th in Innovation Inputs, better than last year and compared to 2017.
- As for Innovation Outputs, Côte d'Ivoire ranks 91st. This position is better than last year but worse compared to 2017.

16th

Côte d'Ivoire ranks 16th among the 26 lower middle-income economies.

10th

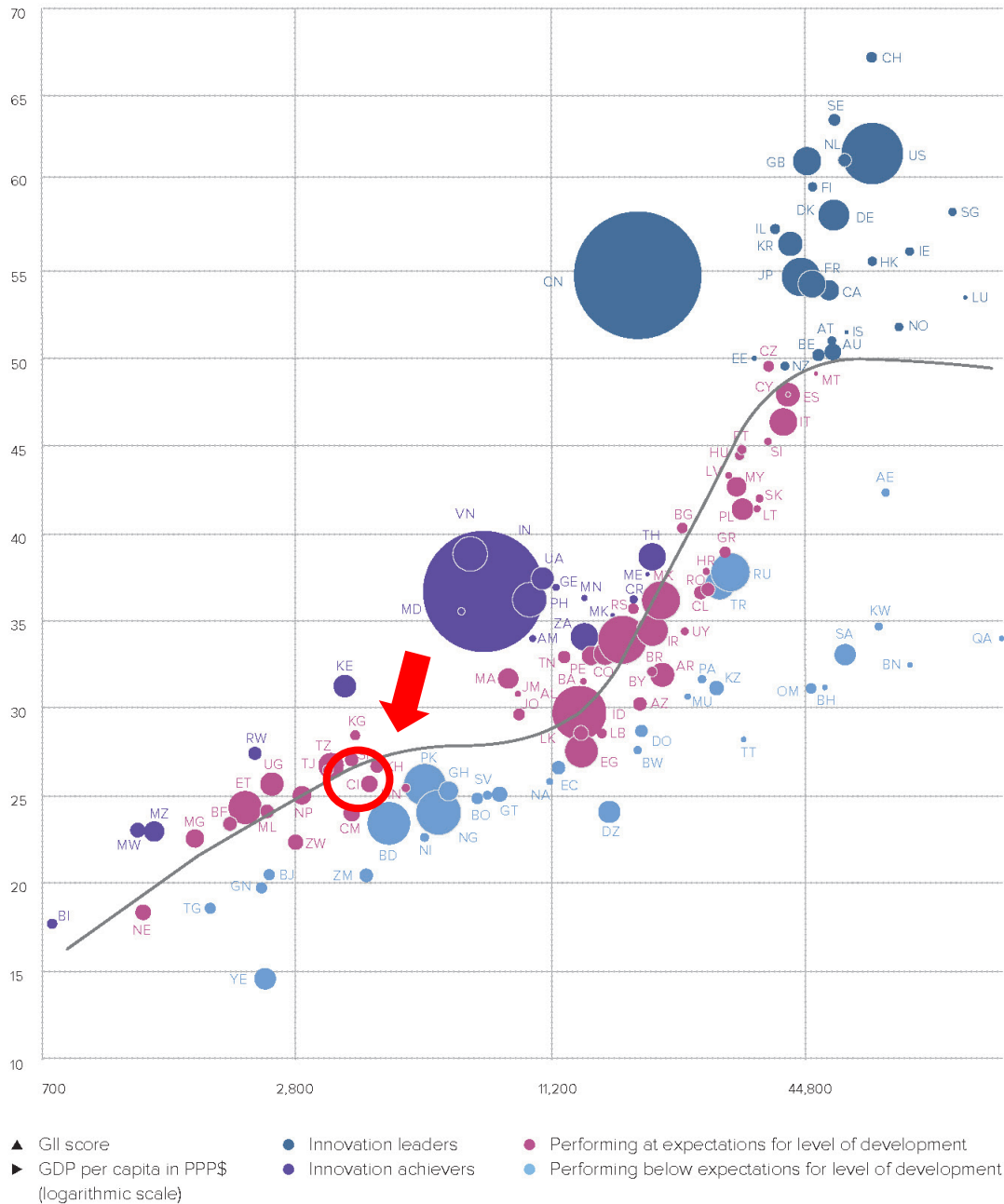
Côte d'Ivoire ranks 10th among the 26 economies in Sub-Saharan Africa.

EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are considered Innovation under-performers relative to GDP.

Relative to GDP, Côte d'Ivoire performs at its expected level of development.

GII scores and GDP per capita in PPP US\$ (bubbles sized by population)

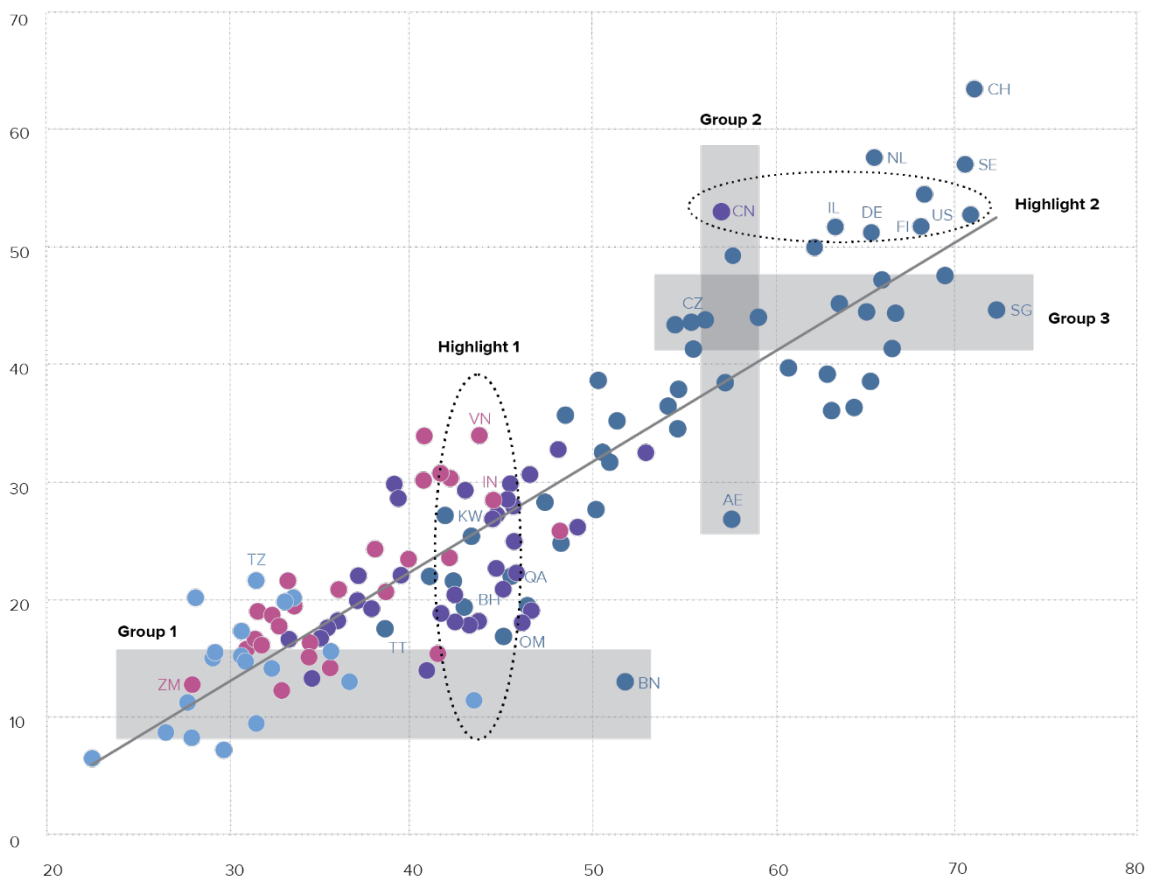


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and innovation outputs, indicating which economies best translate innovation inputs into innovation outputs. Economies appearing above the line are effectively translating their costly innovation investments into more and higher-quality outputs. In contrast, those below the line are not effectively translating innovation inputs into outputs.

Côte d'Ivoire produces more innovation outputs relative to its level of innovation investments.

Innovation input/output performance by income group, 2019



▲ Output score
 ► Input score

● High income
 ● Upper-middle income
 ● Lower-middle income
 ● Low income

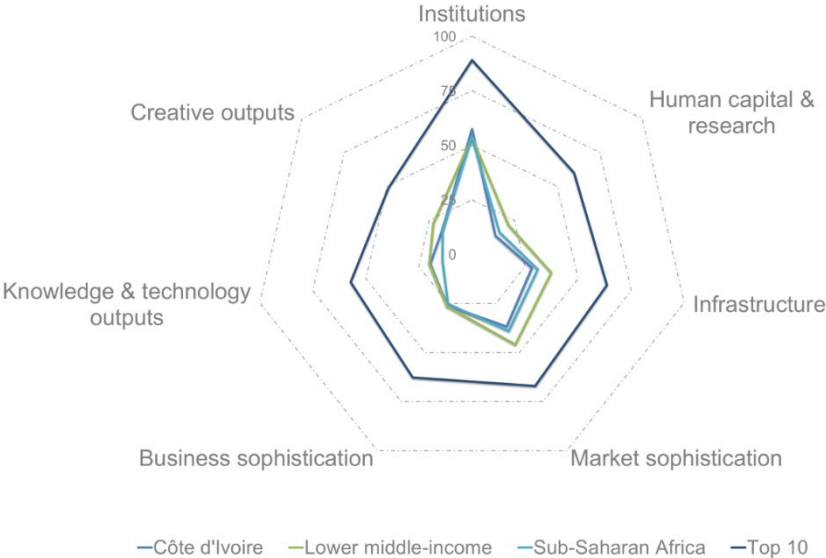
— Fitted values

AE United Arab Emirates	CZ Czech Republic	NL Netherlands	TZ United Republic of Tanzania
BH Bahrain	DE Germany	OM Oman	US United States of America
BN Brunei Darussalam	FI Finland	QA Qatar	VN Viet Nam
CH Switzerland	IL Israel	SE Sweden	ZM Zambia
CN China	IN India	SG Singapore	
	KW Kuwait	TT Trinidad and Tobago	

Source: Global Innovation Index Database, Cornell, INSEAD, and WIPO, 2019.

BENCHMARKING CÔTE D'IVOIRE TO OTHER LOWER MIDDLE-INCOME ECONOMIES AND THE SUB-SAHARAN AFRICA REGION

Côte d'Ivoire's scores in the seven GII pillars



Lower middle-income economies

Côte d'Ivoire has high scores in 1 out of the 7 GII pillars: Institutions, which is above the average of the lower middle-income group.

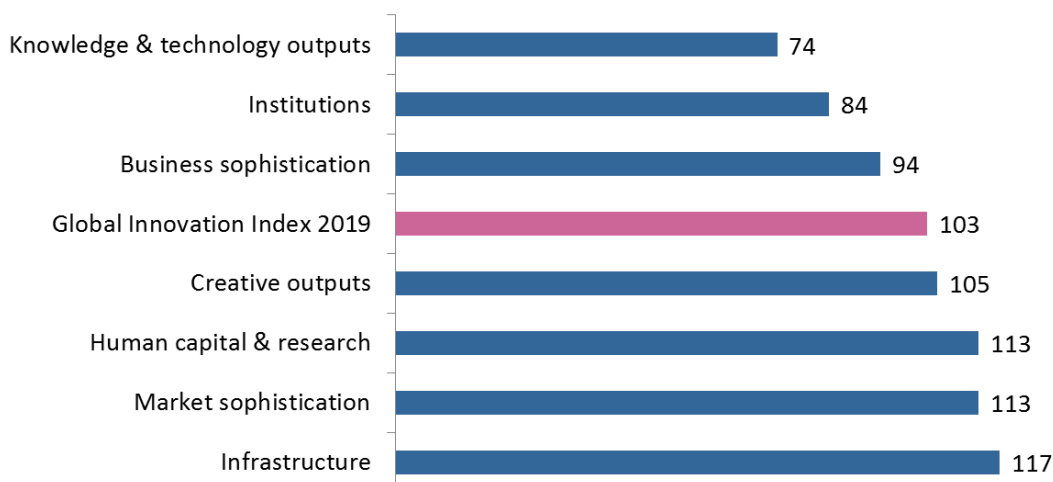
Sub-Saharan Africa Region

Compared to other economies in Sub-Saharan Africa, Côte d'Ivoire performs above average in 4 out of the 7 GII pillars: Institutions, Business sophistication, Knowledge & technology outputs, and Creative outputs.

Top ranks are found in areas such as Business environment and Knowledge impact, where the country ranks in the top 65 worldwide.

OVERVIEW OF CÔTE D'IVOIRE'S RANKINGS IN THE 7 GII AREAS

Côte d'Ivoire performs the best in Knowledge & technology outputs and its weakest performance is in Infrastructure.



*The highest possible ranking in each pillar is 1.

CÔTE D'IVOIRE'S INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of Côte d'Ivoire's strengths and weaknesses in the GII 2019.

Strengths		
Code	Indicator name	Rank
1.2.3	Cost of redundancy dismissal, salary weeks	48
1.3.1	Ease of starting a business*	23
2.1.2	Government funding/pupil, secondary, % GDP/cap	33
3.2.2	Logistics performance*	49
4.1.1	Ease of getting credit*	40
4.1.3	Microfinance gross loans, % GDP	27
5.1.2	Firms offering formal training, % firms	39
5.3.3	ICT services imports, % total trade	29
6.2.1	Growth rate of PPP\$ GDP/worker, %, 3-year average	7
7.1.3	ICTs & business model creation†	53

Weaknesses		
Code	Indicator name	Rank
2.3.3	Global R&D companies, top 3, in mn US\$	43
2.3.4	QS university ranking, average score top 3*	78
3.1	Information & communication technologies (ICTs)	122
3.1.3	Government's online service*	124
3.1.4	E-participation*	126
4.2	Investment	123
4.2.1	Ease of protecting minority investors*	114
5.2.1	University/industry research collaboration†	124
5.2.5	Patent families 2+ offices/bn PPP\$ GDP	93
5.3.1	Intellectual property payments, % total trade	114
6.1.2	PCT patents by origin/bn PPP\$ GDP	99
6.2.3	Computer software spending, % GDP	121

STRENGTHS

- GII strengths for Côte d'Ivoire are found in all the seven GII pillars.
- In Institutions (84), Côte d'Ivoire's strengths are indicators Cost of redundancy dismissal (48) and Ease of starting a business (23).
- In Human capital & research (113), indicator Government funding per pupil (33) is a GII strength for the country.
- In Infrastructure (117), Côte d'Ivoire's strength is indicator Logistics performance (49).
- In Market sophistication (113), GII strengths are indicators Ease of getting credit (40) and Microfinance gross loans (27).
- In Business sophistication (94), Côte d'Ivoire's strengths are indicators Firms offering formal training (39) and ICT services imports (29).
- In Knowledge & technology outputs (74), the only strength for this country is indicator Labor productivity growth, where it positions 7th worldwide.
- In Creative outputs (105), a relative strength is found in indicator ICTs & business model creation (53).

WEAKNESSES

- Côte d'Ivoire weaknesses in the GII are found in five of the seven GII pillars.
- In Human capital & research (113), Côte d'Ivoire's weaknesses are indicators Global R&D companies (43) and Quality of universities (78).
- In Infrastructure (117), relative weaknesses for this country are sub-pillar Information & communication technologies (ICTs) (122) and two of its indicators - Government's online service (124) and E-participation (126).
- In Market sophistication (113), Côte d'Ivoire's weaknesses are sub-pillar Investment (123) and its indicator Ease of protecting minority investors (114).
- In Business sophistication (94), relative weaknesses are found in three indicators: University-industry research collaboration (124), Patent families in two or more offices (93), and Intellectual property payments (114).
- In Knowledge & technology outputs (74), Côte d'Ivoire's weaknesses are indicators PCT patents by origin (99) and Computer software spending (121).

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
91	110	Lower middle	SSF	24.9	106.8	4,177.6	123
				Score/Value	Rank		
INSTITUTIONS				57.5	84		
1.1	Political environment		40.1	105			
1.1.1	Political and operational stability*.....		63.2	86			
1.1.2	Government effectiveness*.....		28.6	116	◇		
1.2	Regulatory environment		61.6	77			
1.2.1	Regulatory quality*.....		32.2	96			
1.2.2	Rule of law*.....		29.7	99			
1.2.3	Cost of redundancy dismissal, salary weeks.....		13.1	48	●		
1.3	Business environment		70.9	63			
1.3.1	Ease of starting a business*.....		93.7	23	● ◆		
1.3.2	Ease of resolving insolvency*.....		48.0	72			
HUMAN CAPITAL & RESEARCH				13.6	113		
2.1	Education		33.7	101			
2.1.1	Expenditure on education, % GDP.....		4.4	65			
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		23.5	33	●		
2.1.3	School life expectancy, years.....		9.6	108	◇		
2.1.4	PISA scales in reading, maths, & science.....		n/a	n/a			
2.1.5	Pupil-teacher ratio, secondary.....		26.3	100			
2.2	Tertiary education		7.2	116	◇		
2.2.1	Tertiary enrolment, % gross.....		9.2	110	◇		
2.2.2	Graduates in science & engineering, %.....		n/a	n/a			
2.2.3	Tertiary inbound mobility, %.....		2.1	73			
2.3	Research & development (R&D)		0.0	[120]			
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	43	◇		
2.3.4	QS university ranking, average score top 3*.....		0.0	78	◇		
INFRASTRUCTURE				28.1	117	◇	
3.1	Information & communication technologies (ICTs)		27.4	122	◇		
3.1.1	ICT access*.....		37.0	107			
3.1.2	ICT use*.....		32.9	98			
3.1.3	Government's online service*.....		22.2	124	◇		
3.1.4	E-participation*.....		17.4	126	◇		
3.2	General infrastructure		31.7	78			
3.2.1	Electricity output, kWh/mn pop.....		432.6	108			
3.2.2	Logistics performance*.....		47.6	49	● ◆		
3.2.3	Gross capital formation, % GDP.....		23.7	58			
3.3	Ecological sustainability		25.3	115			
3.3.1	GDP/unit of energy use.....		6.4	95			
3.3.2	Environmental performance*.....		45.3	108			
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		0.3	96			
MARKET SOPHISTICATION				36.7	113	◇	
4.1	Credit		31.2	87			
4.1.1	Ease of getting credit*.....		70.0	40	●		
4.1.2	Domestic credit to private sector, % GDP.....		26.5	102			
4.1.3	Microfinance gross loans, % GDP.....		0.8	27	●		
4.2	Investment		28.2	123	◇		
4.2.1	Ease of protecting minority investors*.....		40.0	114	◇		
4.2.2	Market capitalization, % GDP.....		n/a	n/a			
4.2.3	Venture capital deals/bn PPP\$ GDP.....		0.0	43			
4.3	Trade, competition, & market scale		50.8	105			
4.3.1	Applied tariff rate, weighted avg., %.....		10.3	114	◇		
4.3.2	Intensity of local competition*.....		70.2	57			
4.3.3	Domestic market scale, bn PPP\$.....		106.8	76			
BUSINESS SOPHISTICATION				26.1	[94]		
5.1	Knowledge workers		28.8	[85]			
5.1.1	Knowledge-intensive employment, %.....		n/a	n/a			
5.1.2	Firms offering formal training, % firms.....		35.5	39	●		
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, %.....		0.8	108			
5.2	Innovation linkages		17.4	[113]			
5.2.1	University/industry research collaboration*.....		22.1	124	◇		
5.2.2	State of cluster development*.....		32.5	116	◇		
5.2.3	GERD financed by abroad, %.....		n/a	n/a			
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		n/a	n/a			
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	93	◇		
5.3	Knowledge absorption		32.1	72			
5.3.1	Intellectual property payments, % total trade.....		0.0	114	◇		
5.3.2	High-tech imports, % total trade.....		5.6	96			
5.3.3	ICT services imports, % total trade.....		1.9	29	● ◆		
5.3.4	FDI net inflows, % GDP.....		1.6	94			
5.3.5	Research talent, % in business enterprise.....		n/a	n/a			
KNOWLEDGE & TECHNOLOGY OUTPUTS				19.7	74		
6.1	Knowledge creation		3.3	115			
6.1.1	Patents by origin/bn PPP\$ GDP.....		0.2	97			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.0	99	◇		
6.1.3	Utility models by origin/bn PPP\$ GDP.....		n/a	n/a			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		1.9	113			
6.1.5	Citable documents H-index.....		5.3	94			
6.2	Knowledge impact		45.8	[26]			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		5.1	7	● ◆		
6.2.2	New businesses/th pop. 15-64.....		n/a	n/a			
6.2.3	Computer software spending, % GDP.....		0.0	121	◇		
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		2.1	86			
6.2.5	High- & medium-high-tech manufactures, %.....		n/a	n/a			
6.3	Knowledge diffusion		10.1	102			
6.3.1	Intellectual property receipts, % total trade.....		0.0	91			
6.3.2	High-tech net exports, % total trade.....		1.1	66			
6.3.3	ICT services exports, % total trade.....		1.2	76			
6.3.4	FDI net outflows, % GDP.....		0.1	103			
CREATIVE OUTPUTS				17.6	105		
7.1	Intangible assets		34.5	97			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		9.5	106			
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		1.5	58			
7.1.3	ICTs & business model creation*.....		63.7	53	● ◆		
7.1.4	ICTs & organizational model creation*.....		50.3	80			
7.2	Creative goods & services		1.1	[124]			
7.2.1	Cultural & creative services exports, % total trade.....		0.1	93			
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 & other media, % manufacturing.....		n/a	n/a			
7.2.5	Creative goods exports, % total trade.....		0.1	103			
7.3	Online creativity		0.3	116			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		0.5	109			
7.3.2	Country-code TLDs/th pop. 15-69.....		0.2	108			
7.3.3	Wikipedia edits/mn pop. 15-69.....		0.5	108			
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.

DATA AVAILABILITY

The following tables list data that are missing or are outdated for Côte d'Ivoire.

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.4	PISA scales in reading, maths & science	n/a	2015	OECD Programme for International Student Assessment (PISA)
2.2.2	Graduates in science & engineering, %	n/a	2016	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	n/a	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	n/a	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.2.2	Market capitalization, % GDP	n/a	2017	World Federation of Exchanges
5.1.1	Knowledge-intensive employment, %	n/a	2017	Source: International Labour Organization
5.1.3	GERD performed by business, % GDP	n/a	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.4	GERD financed by business, %	n/a	2016	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.2.3	GERD financed by abroad, %	n/a	2016	UNESCO Institute for Statistics
5.2.4	JV–strategic alliance deals/bn PPP\$ GDP	n/a	2018	Thomson Reuters
5.3.5	Research talent, % in business enterprise	n/a	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2017	World Intellectual Property Organization
6.2.2	New businesses/th pop. 15–64	n/a	2016	World Bank
6.2.5	High- & medium-high-tech manufactures, %	n/a	2016	United Nations Industrial Development Organization
7.2.2	National feature films/mn pop. 15–69	n/a	2017	UNESCO Institute for Statistics
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	2017	PwC
7.2.4	Printing & other media, % manufacturing	n/a	2016	United Nations Industrial Development Organization
7.3.4	Mobile app creation/bn PPP\$ GDP	n/a	2018	App Annie

Outdated data

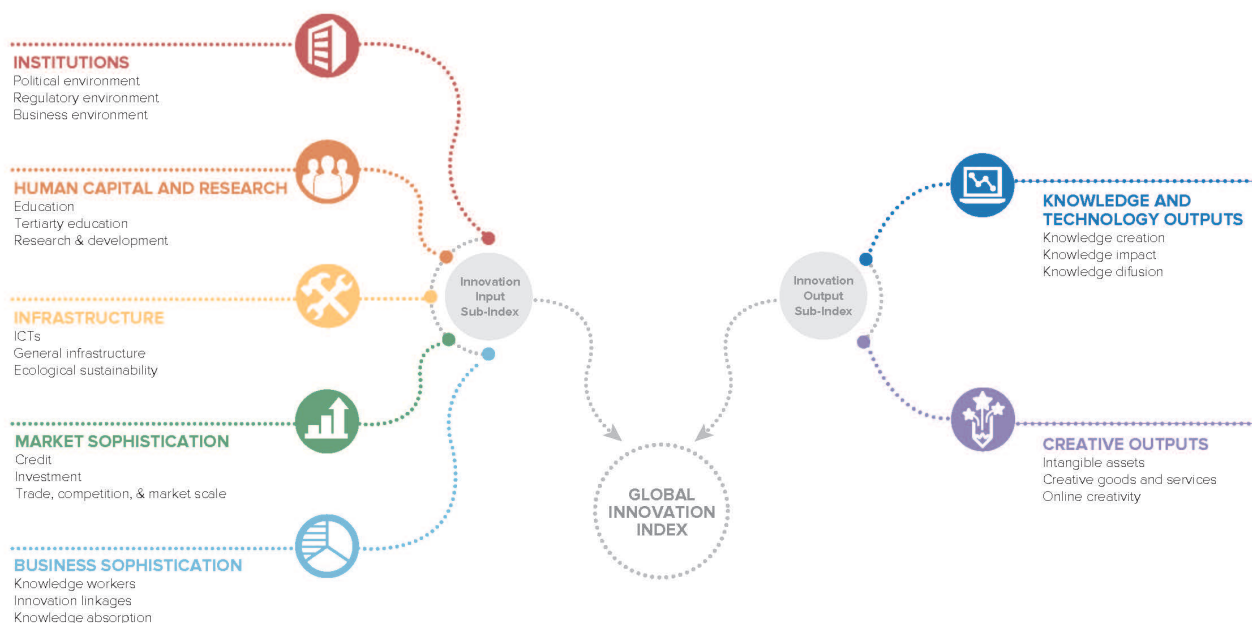
Code	Indicator name	Country year	Model year	Source
2.2.1	Tertiary enrolment, % gross	2016	2017	UNESCO Institute for Statistics
5.1.5	Females employed w/advanced degrees, %	2016	2017	International Labour Organization
6.3.1	Intellectual property receipts, % total trade	2016	2017	World Trade Organization
7.3.3	Wikipedia edits/mn pop. 15–69	2014	2017	Wikimedia Foundation

ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. In 2019, the GII presents its 12th edition devoted to the theme **Creating Healthy Lives—The Future of Medical Innovation**.

Recognizing that innovation is a key driver of economic development, the GII aims to provide a rich innovation ranking and analysis referencing around 130 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a “tool for action” for countries that incorporate the GII into their innovation agendas.

Framework of the Global Innovation Index 2019



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that includes institutions, human capital and research, infrastructure, credit, investment, linkages; the creation, absorption and diffusion of knowledge; and creative outputs.

The GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each containing three sub-pillars.

