Global Innovation Index 2021

COTE DIVOIRE

114th Côte d'Ivoire ranks 114th among the 132 economies featured in the GII 2021.

The Global Innovation Index (GII) ranks world economies according to their 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 changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Côte d'Ivoire in the GII 2021 is between ranks 112 and 119.

Rankings for Côte d'Ivoire (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	114	107	121
2020	112	105	115
2019	103	110	91

- Côte d'Ivoire performs better in innovation inputs than innovation outputs in 2021.
- This year Côte d'Ivoire ranks 107th in innovation inputs, lower than last year but higher than 2019.
- As for innovation outputs, Côte d'Ivoire ranks 121st. This position is lower than both 2020 and 2019.

25th Côte d'Ivoire ranks 25th among the 34 lower middle-income group economies.

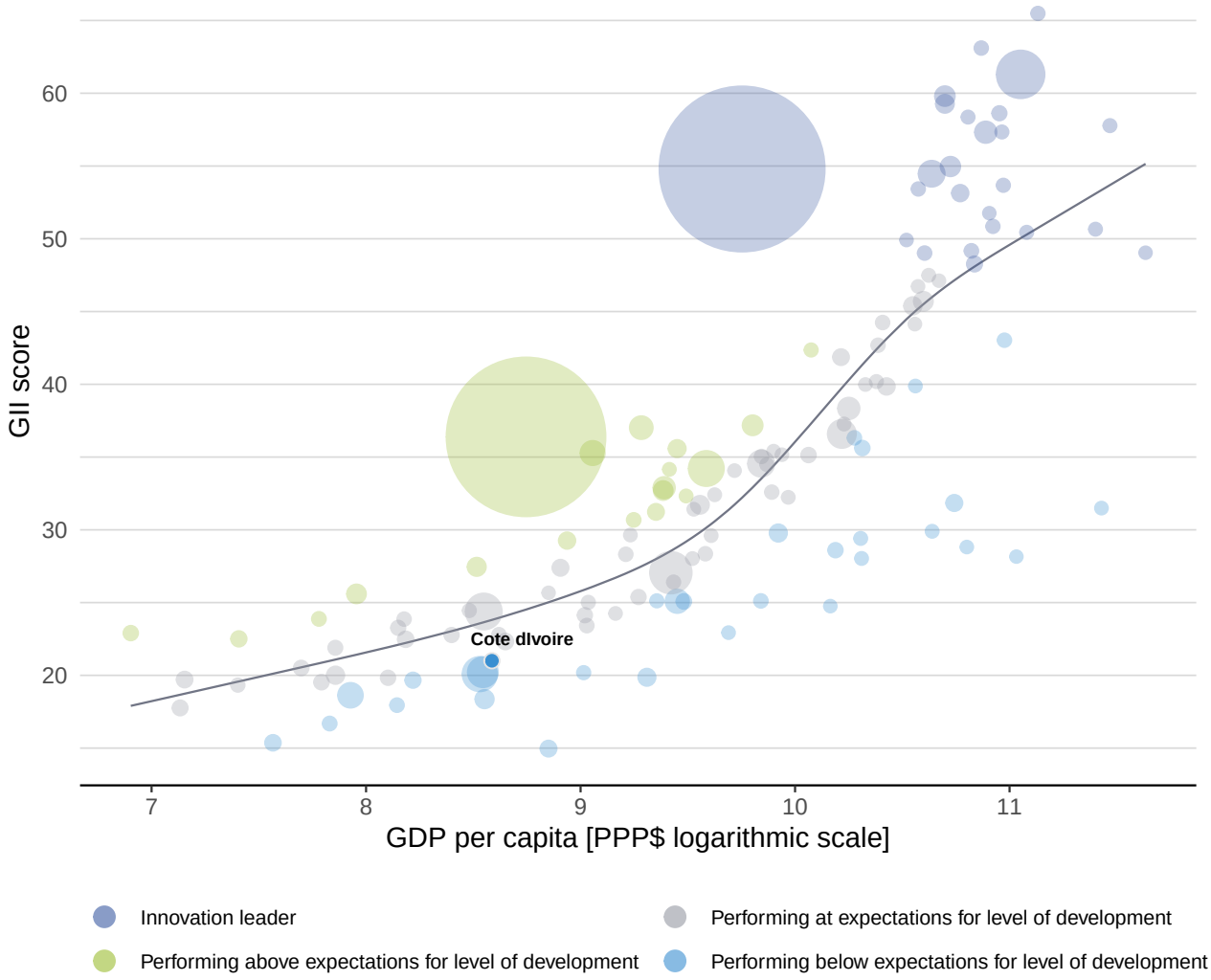
14th Côte d'Ivoire ranks 14th among the 27 economies in Sub-Saharan Africa.

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 performing below expectations.

Relative to GDP, Côte d'Ivoire's performance is below expectations for its level of development.

The positive relationship between innovation and development

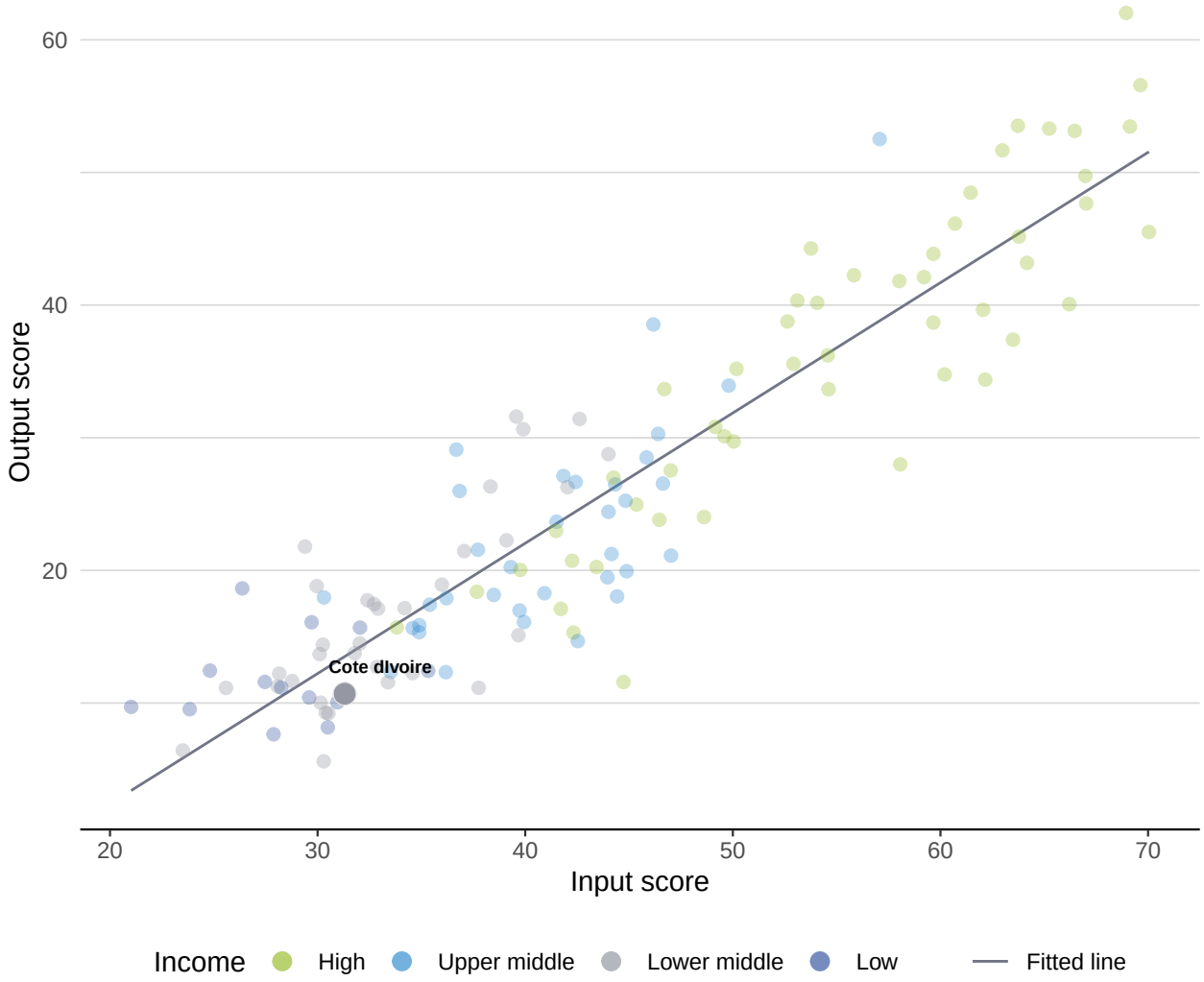


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

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

Innovation input to output performance



BENCHMARKING AGAINST OTHER LOWER MIDDLE-INCOME GROUP ECONOMIES AND SUB-SAHARAN AFRICA

The seven GII pillar scores for Côte d'Ivoire

Lower middle-income group economies

Côte d'Ivoire performs above the lower middle-income group average in two pillars, namely: Institutions; and, Business sophistication.

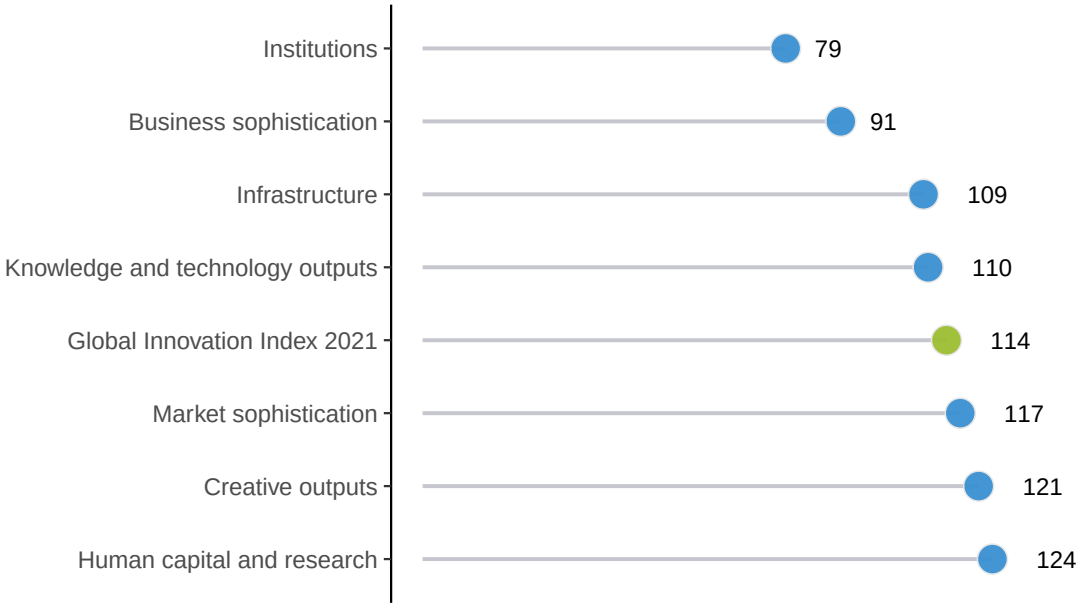
Sub-Saharan Africa

Côte d'Ivoire performs above the regional average in three pillars, namely: Institutions; Infrastructure; and, Business sophistication.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Côte d'Ivoire performs best in Institutions and its weakest performance is in Human capital and research.

The seven GII pillar ranks for Côte d'Ivoire



Note: The highest possible ranking in each pillar is one.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Côte d'Ivoire in the GII 2021.

Strengths and weaknesses for Côte d'Ivoire

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.2.3	Cost of redudancy dismissal	46	2.1	Education	122
1.3	Business environment	69	2.1.5	Pupil-teacher ratio, secondary	116
1.3.1	Ease of starting a business	27	2.2	Tertiary education	121
3.2	General infrastructure	73	2.3.2	Gross expenditure on R&D, % GDP	110
3.2.2	Logistics performance	49	2.3.3	Global corporate R&D investors, top 3, mn US$	41
3.2.3	Gross capital formation, % GDP	55	2.3.4	QS university ranking, top 3	74
4.1.1	Ease of getting credit	44	3.3.2	Environmental performance	129
4.3.3	Domestic market scale, bn PPP$	74	5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	123
5.1.2	Firms offering formal training, %	41	5.2.5	Patent families/bn PPP$ GDP	100
5.3.3	ICT services imports, % total trade	15	6.1	Knowledge creation	124
6.2.1	Labor productivity growth, %	16	6.1.2	PCT patents by origin/bn PPP$ GDP	98
6.3.3	High-tech exports, % total trade	71	6.2.3	Software spending, % GDP	119
			7.1.1	Trademarks by origin/bn PPP$ GDP	117

Côte d'Ivoire

GII 2021 rank
114

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
121	**107**	**Lower middle**	**SSF**	**26.4**	**144.5**	**5,360**	**112**

		Score/ Value	Rank	
Institutions		**60.6**	**79**	◆
1.1	**Political environment**	**48.6**	**93**	
1.1.1	Political and operational stability*	66.1	74	
1.1.2	Government effectiveness*	39.9	98	
1.2	**Regulatory environment**	**62.2**	**75**	
1.2.1	Regulatory quality*	37.1	90	
1.2.2	Rule of law*	31.8	99	
1.2.3	Cost of redundancy dismissal	13.1	46	●
1.3	**Business environment**	**70.8**	**69**	●
1.3.1	Ease of starting a business*	93.7	27	● ◆
1.3.2	Ease of resolving insolvency*	47.9	77	
Human capital and research		**11.1**	**124**	○ ◇
2.1	**Education**	**26.7**	**122**	○ ◇
2.1.1	Expenditure on education, % GDP	3.3	89	
2.1.2	Government funding/pupil, secondary, % GDP/cap	13.6	80	
2.1.3	School life expectancy, years	10.5	104	
2.1.4	PISA scales in reading, maths and science	n/a	n/a	
2.1.5	Pupil-teacher ratio, secondary	28.9	116	○ ◇
2.2	**Tertiary education**	**6.3**	**121**	○ ◇
2.2.1	Tertiary enrolment, % gross	10.0	115	
2.2.2	Graduates in science and engineering, %	n/a	n/a	
2.2.3	Tertiary inbound mobility, %	2.2	76	
2.3	**Research and development (R&D)**	**0.4**	**114**	
2.3.1	Researchers, FTE/mn pop.	n/a	n/a	
2.3.2	Gross expenditure on R&D, % GDP	0.1	110	○ ◇
2.3.3	Global corporate R&D investors, top 3, mn US$	0.0	41	○ ◇
2.3.4	QS university ranking, top 3*	0.0	74	○ ◇
Infrastructure		**28.0**	**109**	
3.1	**Information and communication technologies (ICTs)**	**40.0**	**110**	
3.1.1	ICT access*	39.4	107	
3.1.2	ICT use*	34.7	102	
3.1.3	Government's online service*	45.3	113	
3.1.4	E-participation*	40.5	115	
3.2	**General infrastructure**	**26.9**	**73**	●
3.2.1	Electricity output, GWh/mn pop.	401.3	112	
3.2.2	Logistics performance*	48.1	49	● ◆
3.2.3	Gross capital formation, % GDP	23.7	55	●
3.3	**Ecological sustainability**	**17.1**	**114**	
3.3.1	GDP/unit of energy use	9.6	72	
3.3.2	Environmental performance*	25.8	129	○ ◇
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.3	100	
Market sophistication		**36.0**	**117**	
4.1	**Credit**	**31.1**	**101**	
4.1.1	Ease of getting credit*	70.0	44	●
4.1.2	Domestic credit to private sector, % GDP	19.6	114	
4.1.3	Microfinance gross loans, % GDP	0.2	49	
4.2	**Investment**	**25.1**	**[83]**	
4.2.1	Ease of protecting minority investors*	42.0	102	
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital investors, deals/bn PPP$ GDP	n/a	n/a	
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	53	
4.3	**Trade, diversification, and market scale**	**51.7**	**114**	
4.3.1	Applied tariff rate, weighted avg., %	7.7	101	
4.3.2	Domestic industry diversification	n/a	n/a	
4.3.3	Domestic market scale, bn PPP$	144.5	74	●

		Score/ Value	Rank	
Business sophistication		**20.9**	**91**	
5.1	**Knowledge workers**	**21.7**	**[98]**	
5.1.1	Knowledge-intensive employment, %	10.3	110	
5.1.2	Firms offering formal training, %	35.5	41	●
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, %	1.3	111	
5.2	**Innovation linkages**	**18.3**	**81**	
5.2.1	University-industry R&D collaboration†	38.1	89	
5.2.2	State of cluster development and depth†	43.8	81	
5.2.3	GERD financed by abroad, % GDP	n/a	n/a	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	123	○
5.2.5	Patent families/bn PPP$ GDP	0.0	100	○ ◇
5.3	**Knowledge absorption**	**22.6**	**78**	
5.3.1	Intellectual property payments, % total trade	0.1	111	
5.3.2	High-tech imports, % total trade	5.9	99	
5.3.3	ICT services imports, % total trade	2.6	15	● ◆
5.3.4	FDI net inflows, % GDP	1.6	92	
5.3.5	Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs		**11.5**	**110**	
6.1	**Knowledge creation**	**2.6**	**124**	○
6.1.1	Patents by origin/bn PPP$ GDP	0.1	109	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.0	98	○ ◇
6.1.3	Utility models by origin/bn PPP$ GDP	0.0	70	
6.1.4	Scientific and technical articles/bn PPP$ GDP	3.1	120	
6.1.5	Citable documents H-index	6.1	95	
6.2	**Knowledge impact**	**23.3**	**88**	
6.2.1	Labor productivity growth, %	3.1	16	●
6.2.2	New businesses/th pop. 15–64	0.7	89	
6.2.3	Software spending, % GDP	0.0	119	○ ◇
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	1.6	95	
6.2.5	High-tech manufacturing, %	n/a	n/a	
6.3	**Knowledge diffusion**	**8.6**	**100**	
6.3.1	Intellectual property receipts, % total trade	0.0	92	
6.3.2	Production and export complexity	21.7	107	
6.3.3	High-tech exports, % total trade	1.1	71	●
6.3.4	ICT services exports, % total trade	1.2	74	
Creative outputs		**9.9**	**121**	
7.1	**Intangible assets**	**16.1**	**116**	
7.1.1	Trademarks by origin/bn PPP$ GDP	6.7	117	○
7.1.2	Global brand value, top 5,000, % GDP	3.6	71	
7.1.3	Industrial designs by origin/bn PPP$ GDP	0.5	88	
7.1.4	ICTs and organizational model creation†	50.3	81	
7.2	**Creative goods and services**	**1.4**	**[123]**	
7.2.1	Cultural and creative services exports, % total trade	0.1	77	
7.2.2	National feature films/mn pop. 15–69	n/a	n/a	
7.2.3	Entertainment and media market/th pop. 15–69	n/a	n/a	
7.2.4	Printing and other media, % manufacturing	n/a	n/a	
7.2.5	Creative goods exports, % total trade	0.0	118	
7.3	**Online creativity**	**5.9**	**118**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	0.4	112	
7.3.2	Country-code TLDs/th pop. 15–69	0.2	113	
7.3.3	Wikipedia edits/mn pop. 15–69	21.1	119	
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 IV 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 either missing or outdated for Côte d'Ivoire.

Missing data for Côte d'Ivoire

Code	Indicator name	Economy year	Model year	Source
2.1.4	PISA scales in reading, maths and science	n/a	2018	OECD Programme for International Student Assessment (PISA)
2.2.2	Graduates in science and engineering, %	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.1	Researchers, FTE/mn pop.	n/a	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.2.2	Market capitalization, % GDP	n/a	2019	World Federation of Exchanges
4.2.3	Venture capital investors, deals/bn PPP$ GDP	n/a	2020	Refinitiv Eikon
4.3.2	Domestic industry diversification	n/a	2018	United Nations Industrial Development Organization
5.1.3	GERD performed by business, % GDP	n/a	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.4	GERD financed by business, %	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.2.3	GERD financed by abroad, % GDP	n/a	2018	UNESCO Institute for Statistics
5.3.5	Research talent, % in businesses	n/a	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
6.2.5	High-tech manufacturing, %	n/a	2018	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 and media market/th pop. 15–69	n/a	2020	PwC
7.2.4	Printing and other media, % manufacturing	n/a	2018	United Nations Industrial Development Organization
7.3.4	Mobile app creation/bn PPP$ GDP	n/a	2020	App Annie

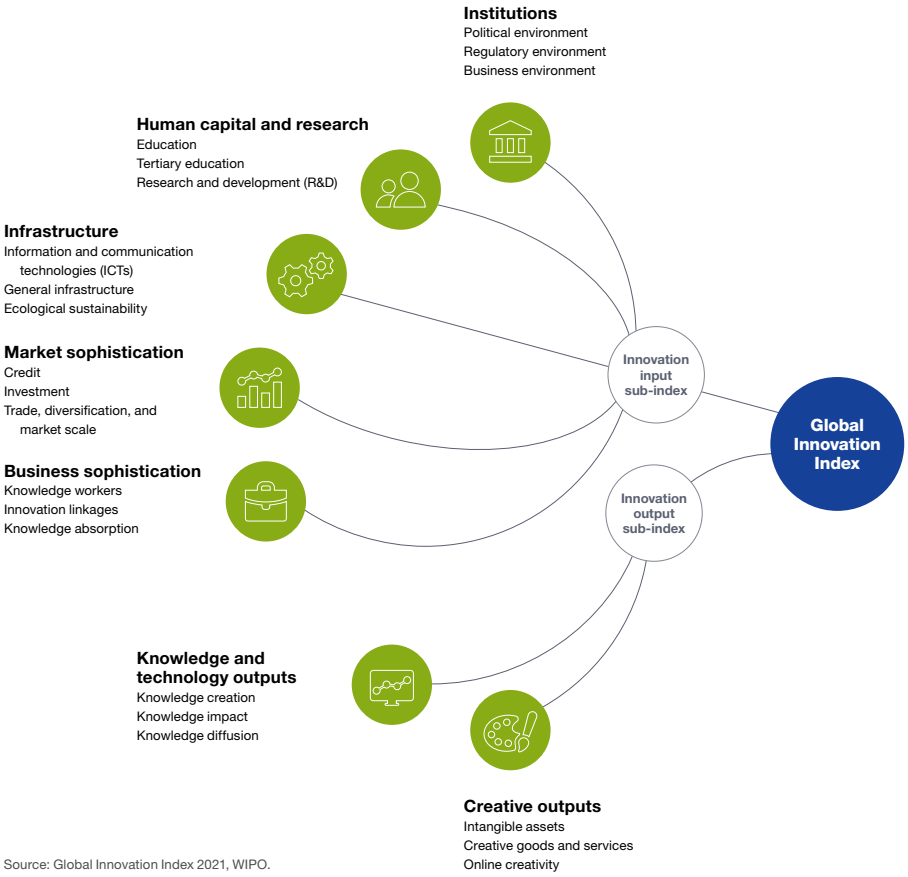
Outdated data for Côte d'Ivoire

Code	Indicator name	Economy year	Model year	Source
2.2.3	Tertiary inbound mobility, %	2017	2018	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2016	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	2018	2020	Refinitiv Eikon
5.1.1	Knowledge-intensive employment, %	2017	2019	International Labour Organization
5.1.2	Firms offering formal training, %	2016	2019	World Bank
5.1.5	Females employed w/advanced degrees, %	2017	2019	International Labour Organization

ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations.

Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich 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 economies that incorporate the GII into their innovation agendas.



Source: Global Innovation Index 2021, WIPO.

The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include 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 consisting of three sub-pillars.