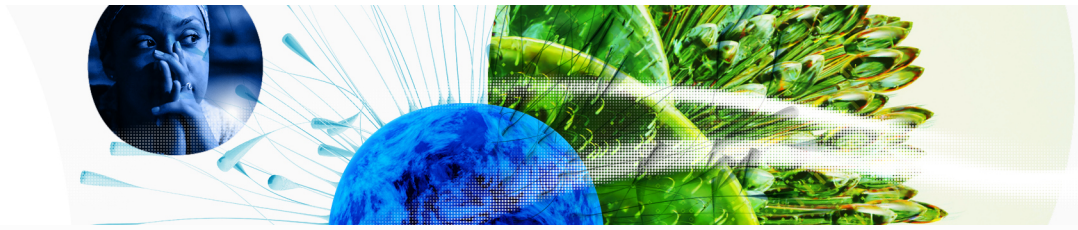
Global Innovation Index 2023



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**.

Côte d'Ivoire ranking in the Global Innovation Index 2023

> Côte d'Ivoire ranks 112nd among the 132 economies featured in the GII 2023.

> Côte d'Ivoire ranks 28th among the 37 lower-middle-income group economies.

> Côte d'Ivoire ranks 12th among the 28 economies in Sub-Saharan Africa.

> Côte d'Ivoire GII Ranking (2020-2023)

The table shows the rankings of Côte d'Ivoire over the past four years. 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 2023 is between ranks 108 and 122.

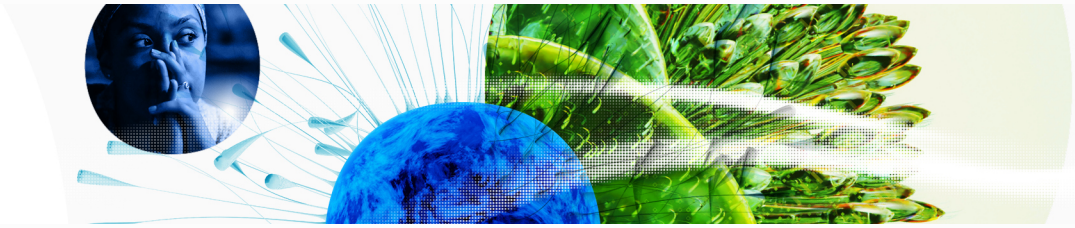
	GII Position	Innovation Inputs	Innovation Outputs
2020	112nd	105th	115th
2021	114th	107th	121st
2022	109th	109th	106th
2023	112nd	112nd	102nd

Côte d'Ivoire performs better in innovation outputs than innovation inputs in 2023.

This year **Côte d'Ivoire ranks 112nd in innovation inputs.** This position is lower than last year.

Côte d'Ivoire ranks 102nd in innovation outputs. This position is higher than last year.

Global Innovation Index 2023



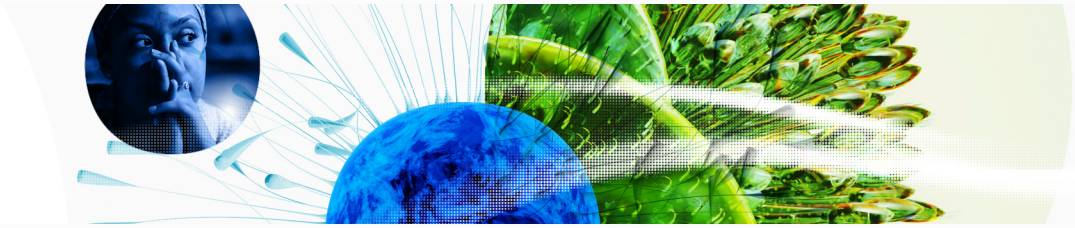
→ Expected vs. observed innovation performance

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.

> Innovation overperformers relative to their economic development

Global Innovation Index 2023

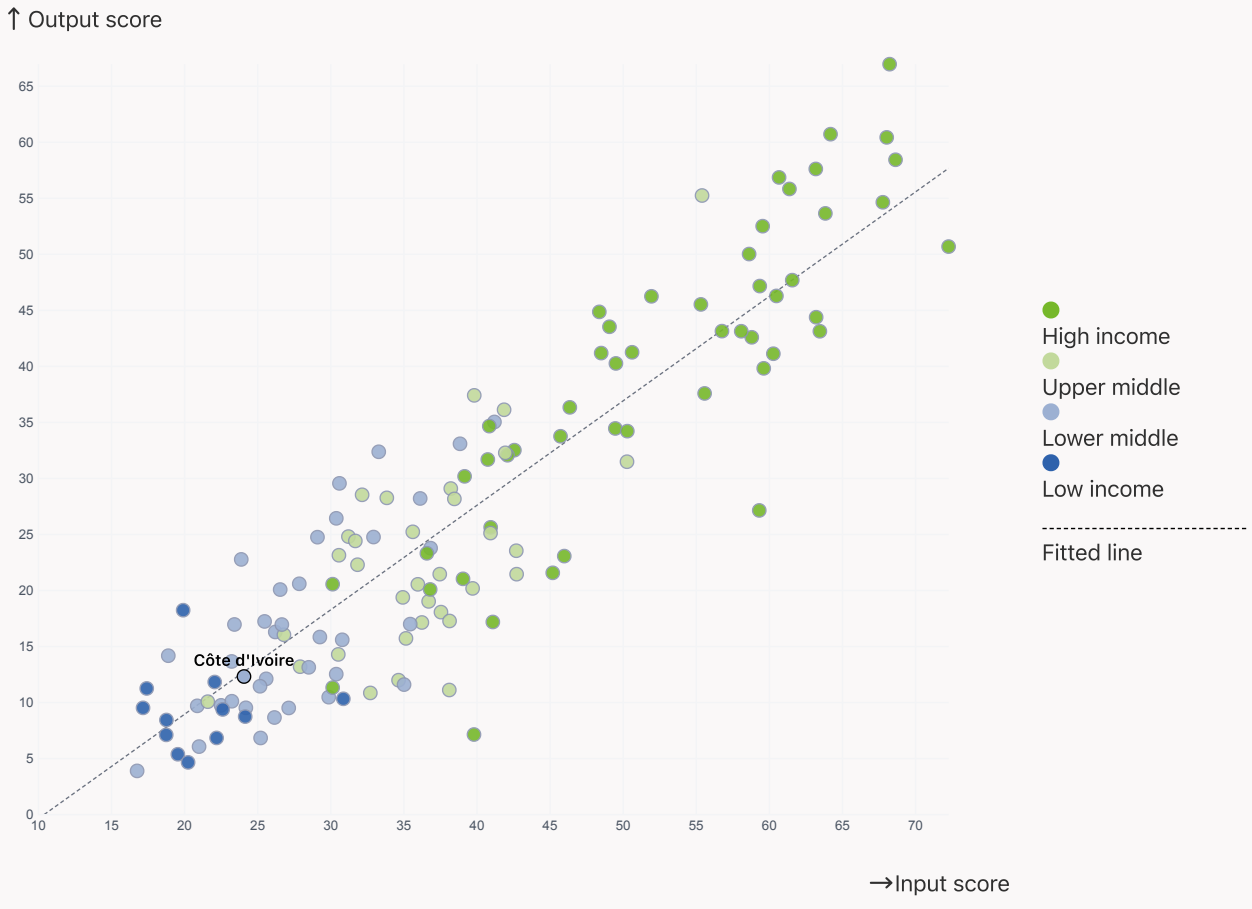


→ Effectively translating innovation investments into innovation outputs

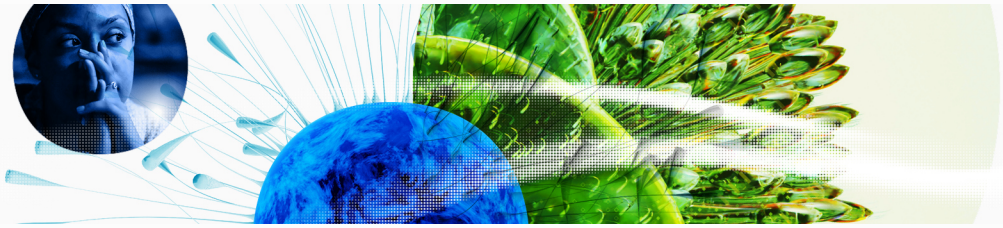
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

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

> Relationship between innovation inputs and outputs

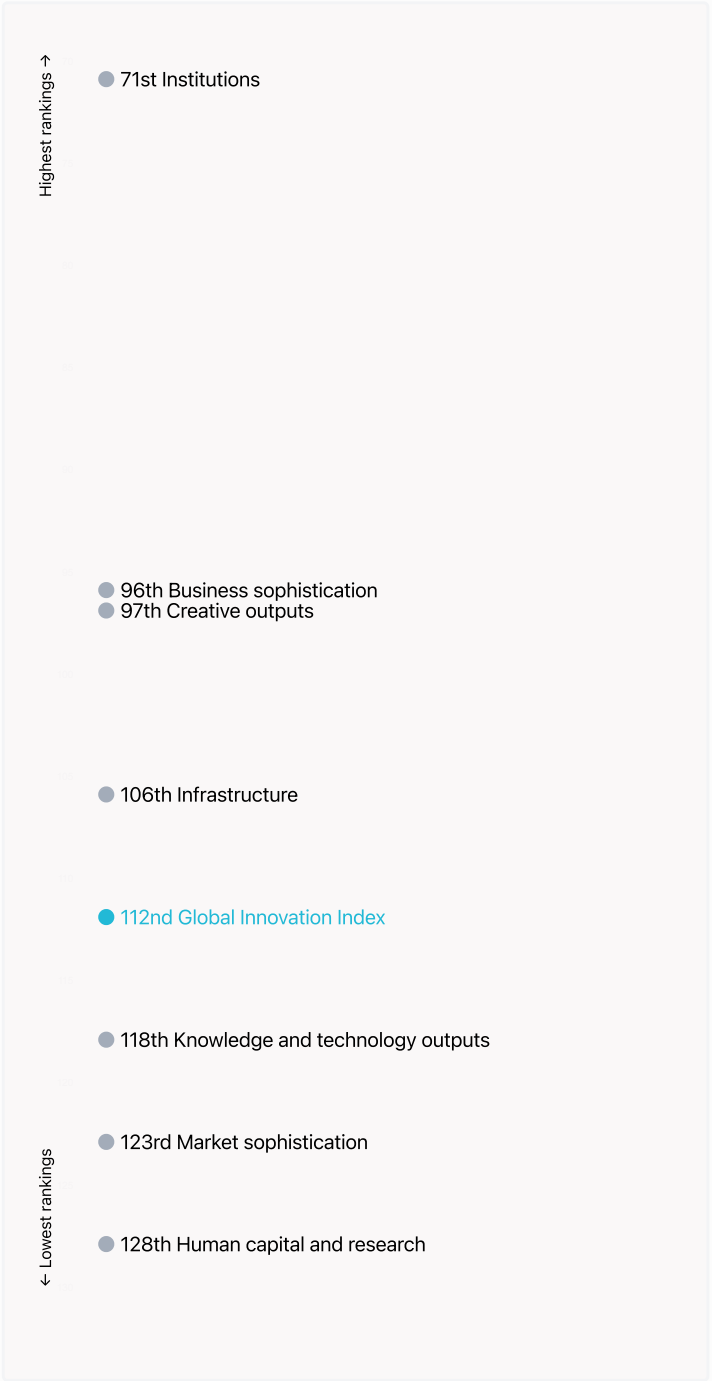


Global Innovation Index 2023



→ Overview of Côte d'Ivoire's rankings in the seven areas of the GII in 2023

The chart shows the ranking for each of the seven areas that the GII comprises. The strongest areas for Côte d'Ivoire are those that rank above the GII (shown in blue) and the weakest are those that rank below.



> Highest rankings

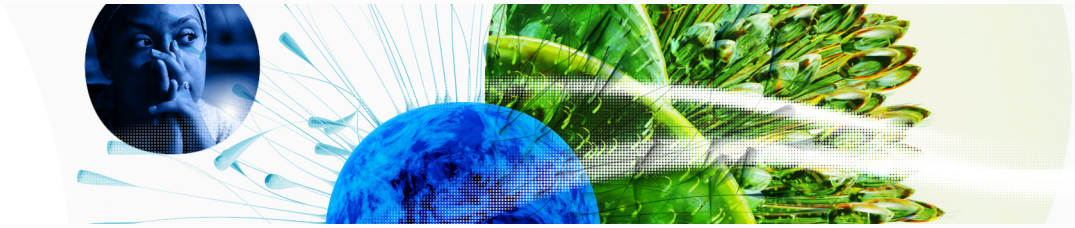
Côte d'Ivoire ranks highest in Institutions (71st), Business sophistication (96th), Creative outputs (97th) and Infrastructure (106th).

> Lowest rankings

Côte d'Ivoire ranks lowest in Human capital and research (128th), Market sophistication (123rd) and Knowledge and technology outputs (118th).

The full WIPO Intellectual Property Statistics profile for Côte d'Ivoire can be found on this link.

Global Innovation Index 2023



→ Benchmark of Côte d'Ivoire against other country groupings for each of the seven areas of the GII Index

The charts shows the relative position of Côte d'Ivoire (blue bar) against other country groupings (grey bars), for each of the seven areas of the GII Index.

> Lower-Middle-Income economies

Côte d'Ivoire performs below the lower-middle-income group average in Knowledge and technology outputs, Creative outputs, Business sophistication, Market sophistication, Human capital and research, Infrastructure.

> Sub-Saharan Africa

Côte d'Ivoire performs below the regional average in Knowledge and technology outputs, Market sophistication, Human capital and research.

Knowledge and technology outputs

- Top 10 | Score: 58.96
- Lower middle income | Score: 17.21
- Sub-Saharan Africa | Score: 12.16
- Côte d'Ivoire | Score: 10.96

Creative outputs

- Top 10 | 56.09
- Lower middle income | 16.35
- Côte d'Ivoire | 13.57
- Sub-Saharan Africa | 10.36

Business sophistication

- Top 10 | 64.39
- Lower middle income | 22.71
- Côte d'Ivoire | 22.12
- Sub-Saharan Africa | 19.85

Market sophistication

- Top 10 | 61.93
- Lower middle income | 28.01
- Sub-Saharan Africa | 20.00
- Côte d'Ivoire | 13.95

Human capital and research

- Top 10 | 60.28
- Lower middle income | 21.73
- Sub-Saharan Africa | 17.80
- Côte d'Ivoire | 10.49

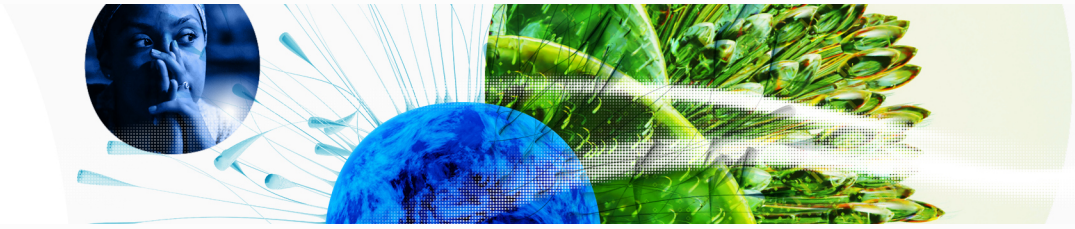
Infrastructure

- Top 10 | 62.83
- Lower middle income | 27.83
- Côte d'Ivoire | 25.85
- Sub-Saharan Africa | 23.36

Institutions

- Top 10 | 79.85
- Côte d'Ivoire | 48.11
- Sub-Saharan Africa | 43.27
- Lower middle income | 39.43

Global Innovation Index 2023



→ Innovation strengths and weaknesses in Côte d'Ivoire

The table below gives an overview of the indicator strengths and weaknesses of Côte d'Ivoire in the GII 2023.

> Côte d'Ivoire's main innovation strengths are **Loans from microfinance institutions, % GDP** (rank 23), **Labor productivity growth, %** (rank 34) and **GDP/unit of energy use** (rank 38).

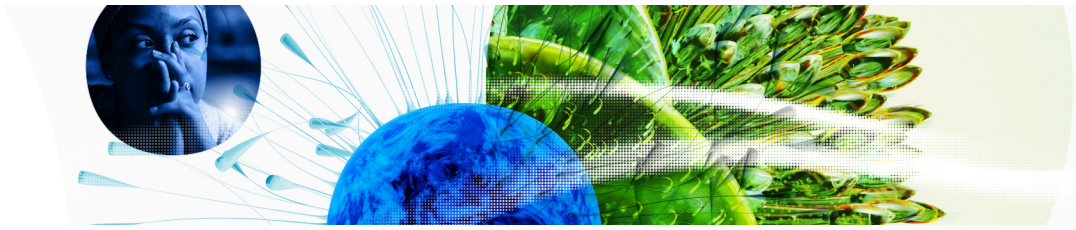
Strengths

Rank	Code	Indicator name
23	4.1.3	Loans from microfinance institutions, % GDP
34	6.2.1	Labor productivity growth, %
38	3.3.1	GDP/unit of energy use
43	3.2.3	Gross capital formation, % GDP
46	5.1.2	Firms offering formal training, %
47	1.2.3	Cost of redundancy dismissal
51	5.3.3	ICT services imports, % total trade
62	7.1.3	Global brand value, top 5,000
63	1.3.1	Policies for doing business
70	1.1.1	Operational stability for businesses

Weaknesses

Rank	Code	Indicator name
123	6.2.3	Software spending, % GDP
123	7.3.3	GitHub commits/mn pop. 15-69
119	2.1.5	Pupil-teacher ratio, secondary
116	6.3.2	Production and export complexity
107	2.3.2	Gross expenditure on R&D, % GDP
95	5.2.5	Patent families/bn PPP$ GDP
75	6.1.3	Utility models by origin/bn PPP$ GDP
71	2.3.4	QS university ranking, top 3
48	6.2.2	Unicorn valuation, % GDP
40	2.3.3	Global corporate R&D investors, top 3, mn US$

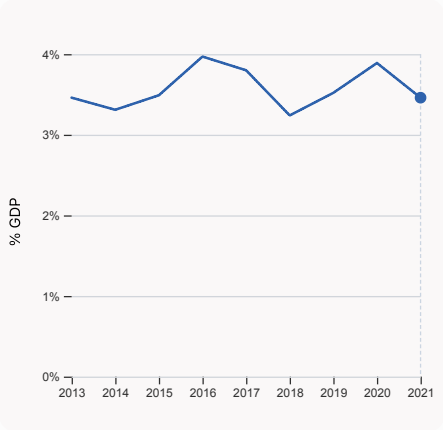
Global Innovation Index 2023



→ Côte d'Ivoire's innovation system

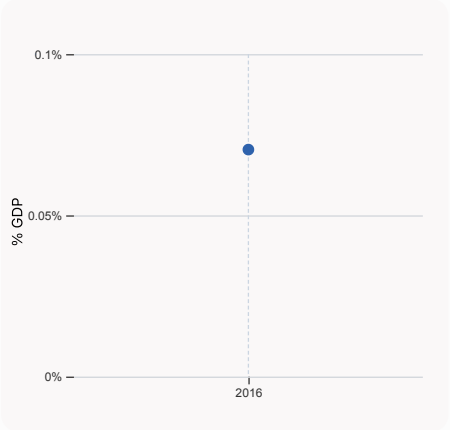
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Côte d'Ivoire



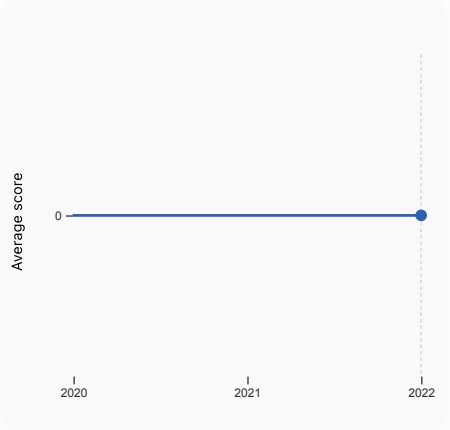
2.1.1 Expenditure on education, % GDP

was equal to 3.46% GDP in 2021, down by 0.43 percentage points from the year prior – and equivalent to an indicator rank of 92.



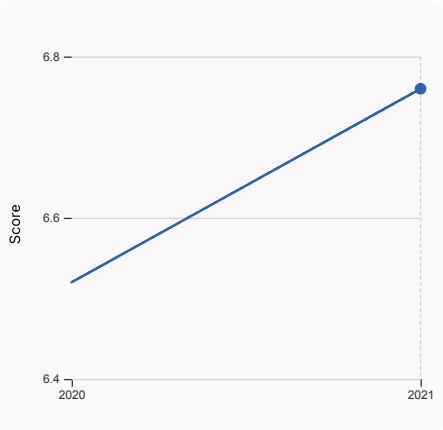
2.3.2 Gross expenditure on R&D, % GDP

was equal to 0.07 % GDP in 2016, equivalent to an indicator rank of 107.



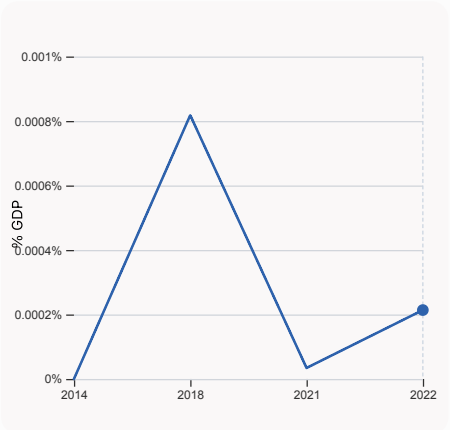
2.3.4 QS university ranking, top 3

was equal to an average score of 0 for the top 3 universities in 2022, equivalent to an indicator rank of 71.



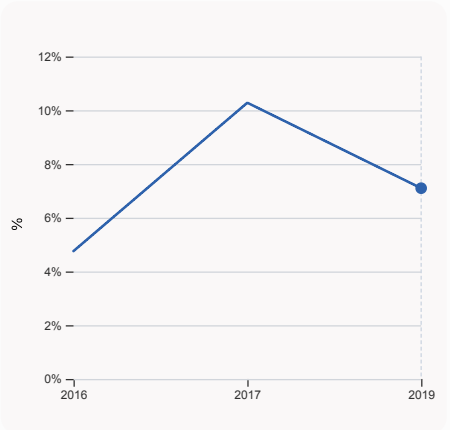
3.1.1 ICT access

was equal to a score of 6.76 in 2021, up by 3.68% from the year prior – and equivalent to an indicator rank of 106.



4.2.4 VC received, value, % GDP

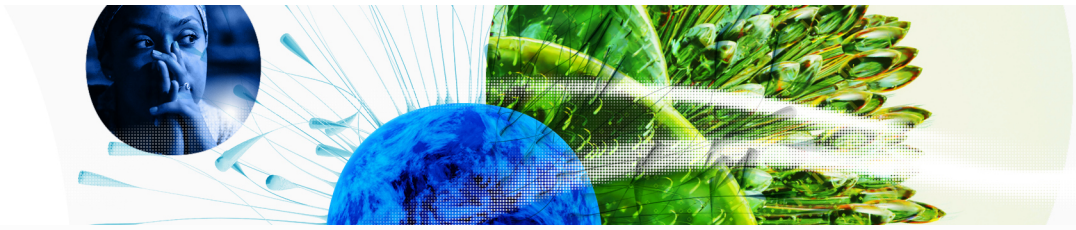
was equal to 0.00021% GDP in 2022, up by 0.00018 percentage points from the year prior – and equivalent to an indicator rank of 79.



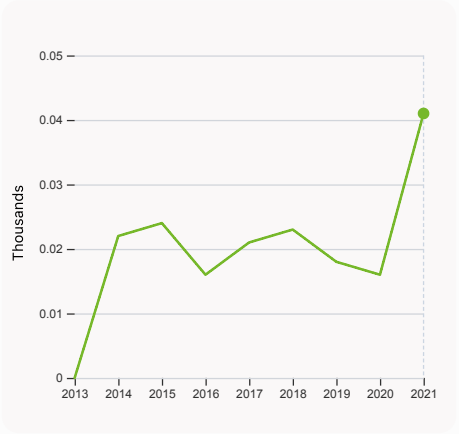
5.1.1 Knowledge-intensive employment, %

was equal to 7.1% in 2019, down by 3.18 percentage points from the year prior – and equivalent to an indicator rank of 115.

Global Innovation Index 2023

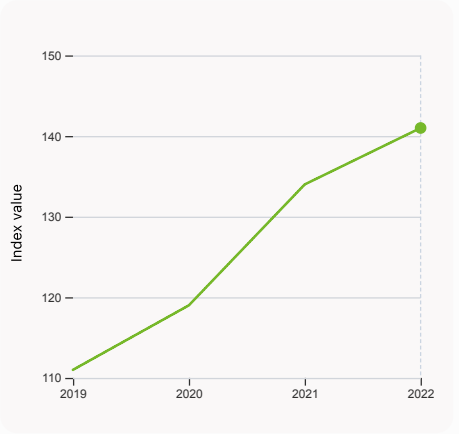


> Innovation outputs in Côte d'Ivoire



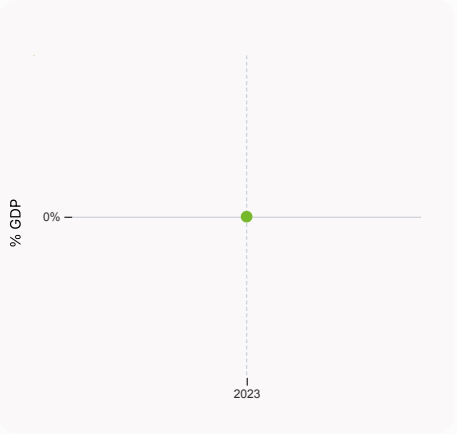
6.1.1 Patents by origin

was equal to 0.041 Thousands in 2021, up by 156.25% from the year prior – and equivalent to an indicator rank of 91.



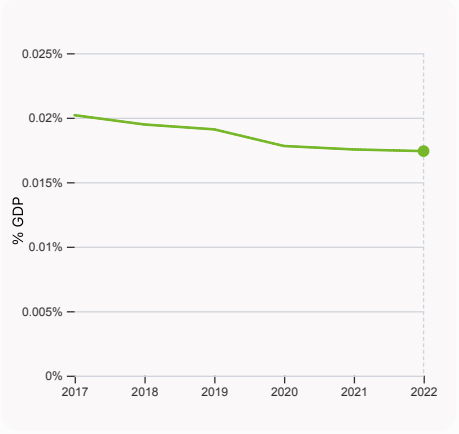
6.1.5 Citable documents H-index

was equal to an index value of 141 in 2022, up by 5.22% from the year prior – and equivalent to an indicator rank of 98.



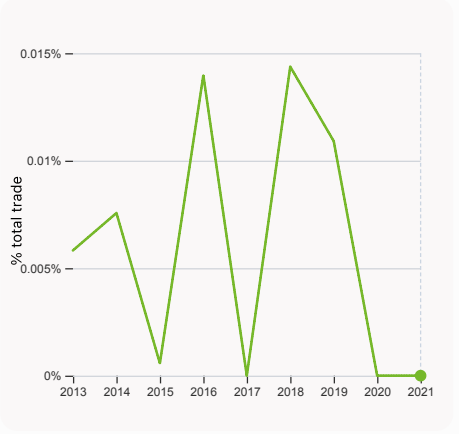
6.2.2 Unicorn valuation, % GDP

was equal to 0 % GDP in 2023 – and equivalent to an indicator rank of 48.



6.2.3 Software spending, % GDP

was equal to 0.017% GDP in 2022, down by 0.00013 percentage points from the year prior – and equivalent to an indicator rank of 123.



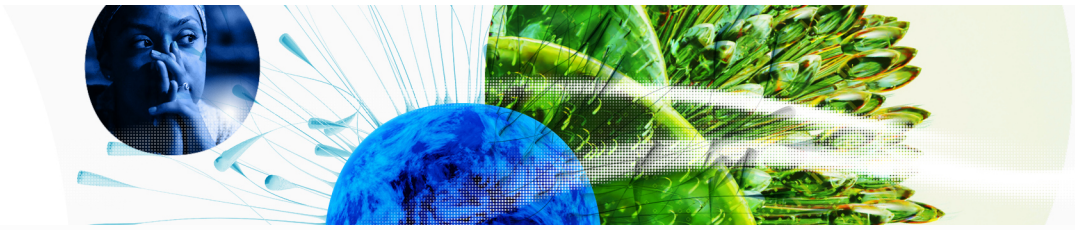
6.3.1 Intellectual property receipts, % total trade

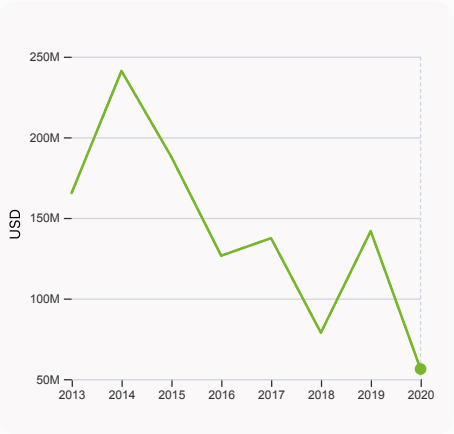
was equal to 0% total trade in 2021 – and equivalent to an indicator rank of 99.

6.3.2 Production and export complexity

was equal to a score of -1.351 in 2020, down by 21.013% from the year prior – and equivalent to an indicator rank of 116.

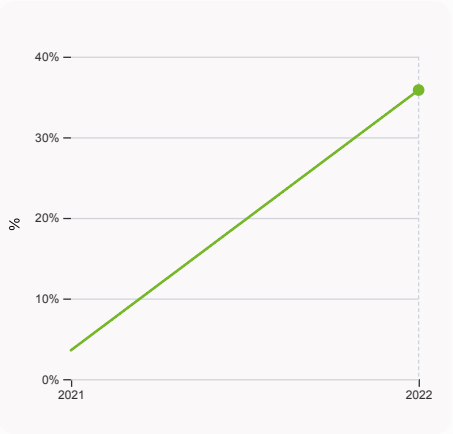
Global Innovation Index 2023





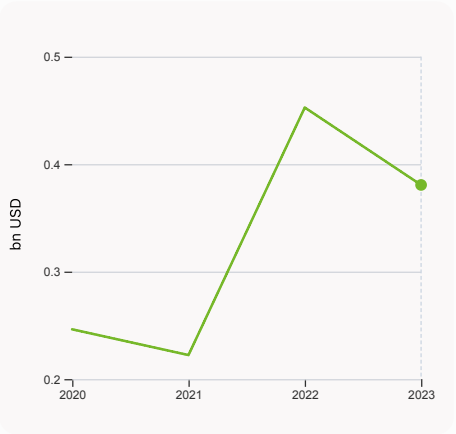
6.3.3 High-tech exports

was equal to 56,250,563 USD in 2020, down by 60.33% from the year prior – and equivalent to an indicator rank of 91.



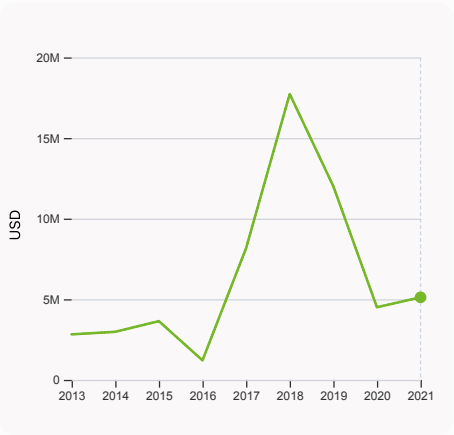
7.1.1 Intangible asset intensity, top 15, %

was equal to 35.86% in 2022, up by 32.28 percentage points from the year prior – and equivalent to an indicator rank of 65.



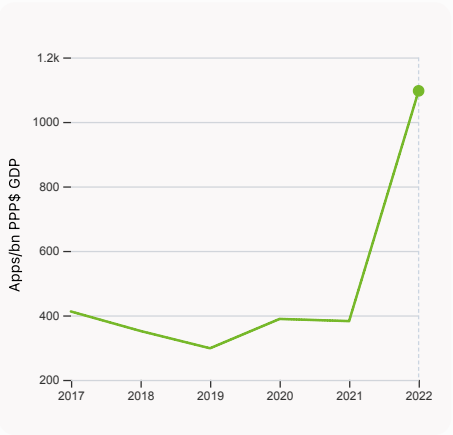
7.1.3 Global brand value, top 5,000

was equal to 0.381 bn USD in 2023, down by 15.91% from the year prior – and equivalent to an indicator rank of 62.



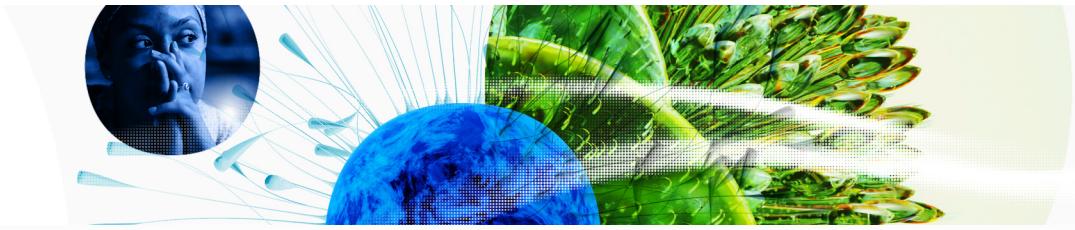
7.2.1 Cultural and creative services exports

was equal to 5,121,000 USD in 2021, up by 13.67% from the year prior – and equivalent to an indicator rank of 93.



7.3.4 Mobile app creation/bn PPP$ GDP

was equal to 1,096.32 Apps/bn PPP$ GDP in 2022, up by 186.78% from the year prior – and equivalent to an indicator rank of 115.



→ Côte d'Ivoire's innovation top performers

> 7.1.1 Top 15 intangible-asset intensive companies in Côte d'Ivoire

Rank	Firm	Intensity, %
1	CFAO MOTORS COTE D IVOIRE	78.88
2	ECOBANK COTE D'IVOIRE	33.92
3	CIE IVOIRIENNE D'ELECTRICITE SA	55.90

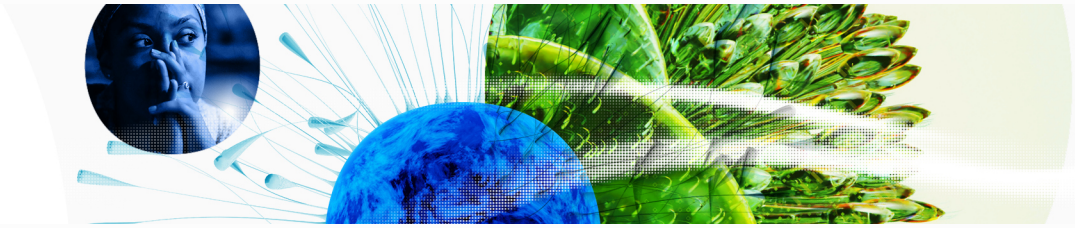
Source: Brand Finance (https://brandirectory.com/reports/gift-2022).
Note: Brand Finance only provides within economy ranks.

> 7.1.3 Top 5,000 companies in Côte d'Ivoire with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	MOOV	Telecoms	380.6

Source: Brand Finance (https://brandirectory.com).
Note: Rank corresponds to within economy ranks.

Global Innovation Index 2023



Côte d'Ivoire

GII 2023 rank **112**

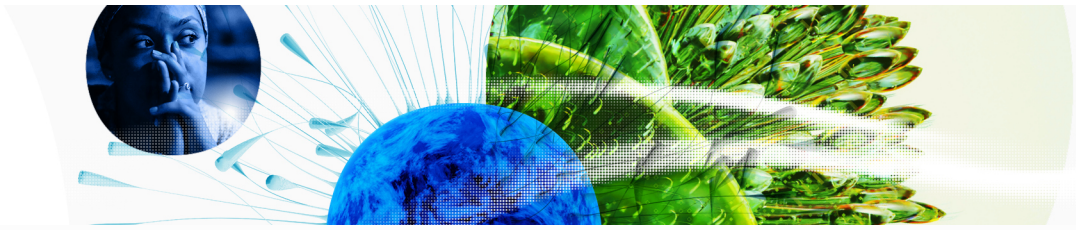
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
102	112	Lower middle	SSA	28.2	181.5	6,397.0

	Score / Value	Rank
Institutions	**48.1**	**71**
1.1 Institutional environment	**36.8**	**86**
1.1.1 Operational stability for businesses*	50.7	70 ●
1.1.2 Government effectiveness*	22.9	100
1.2 Regulatory environment	**59.1**	**75**
1.2.1 Regulatory quality*	35.4	86
1.2.2 Rule of law*	21.2	103
1.2.3 Cost of redundancy dismissal	13.1	47 ●
1.3 Business environment	**48.4**	**60**
1.3.1 Policies for doing business†	48.4	63 ●
1.3.2 Entrepreneurship policies and culture†	n/a	n/a
Human capital and research	**10.5**	**128** ◇
2.1 Education	**26.1**	**125**
2.1.1 Expenditure on education, % GDP	3.5	92
2.1.2 Government funding/pupil, secondary, % GDP/cap	10.8	89
2.1.3 School life expectancy, years	10.7	101
2.1.4 PISA scales in reading, maths and science	n/a	n/a
2.1.5 Pupil-teacher ratio, secondary	29.3	119 ○ ◇
2.2 Tertiary education	**5.0**	**121** ◇
2.2.1 Tertiary enrolment, % gross	9.9	115
2.2.2 Graduates in science and engineering, %	n/a	n/a
2.2.3 Tertiary inbound mobility, %	2.4	73
2.3 Research and development (R&D)	**0.4**	**113**
2.3.1 Researchers, FTE/mn pop.	n/a	n/a
2.3.2 Gross expenditure on R&D, % GDP	0.1	107 ○
2.3.3 Global corporate R&D investors, top 3, mn US$	0.0	40 ○ ◇
2.3.4 QS university ranking, top 3*	0.0	71 ○ ◇
Infrastructure	**25.9**	**106**
3.1 Information and communication technologies (ICTs)	**46.0**	**104**
3.1.1 ICT access*	51.0	106
3.1.2 ICT use*	47.0	106
3.1.3 Government's online service*	49.9	91
3.1.4 E-participation*	36.0	93
3.2 General infrastructure	**12.7**	**116**
3.2.1 Electricity output, GWh/mn pop.	426.5	113
3.2.2 Logistics performance*	n/a	n/a
3.2.3 Gross capital formation, % GDP	26.2	43 ●
3.3 Ecological sustainability	**18.8**	**85**
3.3.1 GDP/unit of energy use	12.9	38 ●
3.3.2 Environmental performance*	23.6	100
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.3	106
Market sophistication	**14.0**	**123** ◇
4.1 Credit	**10.5**	**110**
4.1.1 Finance for startups and scaleups†	n/a	n/a
4.1.2 Domestic credit to private sector, % GDP	21.1	114
4.1.3 Loans from microfinance institutions, % GDP	1.3	23 ●
4.2 Investment	**4.1**	**86**
4.2.1 Market capitalization, % GDP	13.5	67
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.0	66
4.2.3 VC recipients, deals/bn PPP$ GDP	0.0	65
4.2.4 VC received, value, % GDP	0.0	79
4.3 Trade, diversification, and market scale	**27.2**	**118**
4.3.1 Applied tariff rate, weighted avg., %	7.6	104
4.3.2 Domestic industry diversification	n/a	n/a
4.3.3 Domestic market scale, bn PPP$	181.5	73

	Score / Value	Rank
Business sophistication	**22.1**	**96**
5.1 Knowledge workers	**17.5**	**107**
5.1.1 Knowledge-intensive employment, %	7.1	115
5.1.2 Firms offering formal training, %	35.5	46 ●
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, %	1.2	116
5.2 Innovation linkages	**20.9**	**68**
5.2.1 University-industry R&D collaboration†	42.0	71
5.2.2 State of cluster development†	39.9	71
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	116
5.2.5 Patent families/bn PPP$ GDP	0.0	95 ○ ◇
5.3 Knowledge absorption	**28.0**	**88**
5.3.1 Intellectual property payments, % total trade	0.1	103
5.3.2 High-tech imports, % total trade	5.7	106
5.3.3 ICT services imports, % total trade	1.7	51 ●
5.3.4 FDI net inflows, % GDP	1.5	88
5.3.5 Research talent, % in businesses	n/a	n/a
Knowledge and technology outputs	**11.0**	**118**
6.1 Knowledge creation	**2.9**	**122**
6.1.1 Patents by origin/bn PPP$ GDP	0.3	91
6.1.2 PCT patents by origin/bn PPP$ GDP	0.0	96
6.1.3 Utility models by origin/bn PPP$ GDP	0.0	75 ○ ◇
6.1.4 Scientific and technical articles/bn PPP$ GDP	n/a	n/a
6.1.5 Citable documents H-index	5.5	98
6.2 Knowledge impact	**21.2**	**97**
6.2.1 Labor productivity growth, %	1.9	34 ●
6.2.2 Unicorn valuation, % GDP	0.0	48 ○ ◇
6.2.3 Software spending, % GDP	0.0	123 ○ ◇
6.2.4 High-tech manufacturing, %	n/a	n/a
6.3 Knowledge diffusion	**8.8**	**112**
6.3.1 Intellectual property receipts, % total trade	0.0	99
6.3.2 Production and export complexity	24.2	116 ○ ◇
6.3.3 High-tech exports, % total trade	0.4	91
6.3.4 ICT services exports, % total trade	0.9	91
6.3.5 ISO 9001 quality/bn PPP$ GDP	1.5	93
Creative outputs	**13.6**	**97**
7.1 Intangible assets	**22.2**	**81**
7.1.1 Intangible asset intensity, top 15, %	35.9	65
7.1.2 Trademarks by origin/bn PPP$ GDP	7.2	114
7.1.3 Global brand value, top 5,000	0.5	62 ●
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.5	81
7.2 Creative goods and services	**0.4**	**125**
7.2.1 Cultural and creative services exports, % total trade	0.0	93
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 Creative goods exports, % total trade	0.0	119
7.3 Online creativity	**9.4**	**118**
7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	0.5	112
7.3.2 Country-code TLDs/th pop. 15-69	0.3	108
7.3.3 GitHub commits/mn pop. 15-69	0.4	123 ○
7.3.4 Mobile app creation/bn PPP$ GDP	36.4	115 ◇

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 appendices for details, including the year of the data, at https://www.wipo.int/gii-ranking. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

Global Innovation Index 2023



→ Data availability

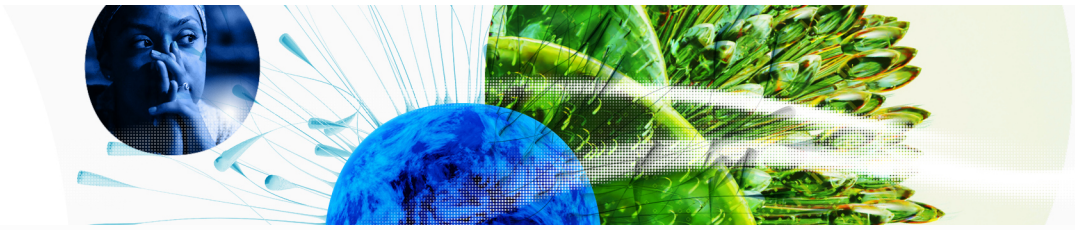
The following tables list indicators that are either missing or outdated for Côte d'Ivoire.

> Côte d'Ivoire has missing data for fourteen indicators and outdated data for eight indicators.

> Missing data for Côte d'Ivoire

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture	n/a	2022	Global Entrepreneurship Monitor
2.1.4	PISA scales in reading, maths and science	n/a	2018	OECD, PISA
2.2.2	Graduates in science and engineering, %	n/a	2020	UNESCO Institute for Statistics; Eurostat; OECD
2.3.1	Researchers, FTE/mn pop.	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.2	Logistics performance	n/a	2023	World Bank, Logistics Performance Index 2023 (https://lpi.worldbank.org/); and World Bank 2023, Connecting to Compete 2023: Trade Logistics in the Global Economy ÔÇô The Logistics Performance Index and its Indicators.
4.1.1	Finance for startups and scaleups	n/a	2022	Global Entrepreneurship Monitor
4.3.2	Domestic industry diversification	n/a	2020	United Nations Industrial Development Organization
5.1.3	GERD performed by business, % GDP	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.4	GERD financed by business, %	n/a	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.2.3	GERD financed by abroad, % GDP	n/a	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.3.5	Research talent, % in businesses	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.2.4	High-tech manufacturing, %	n/a	2020	United Nations Industrial Development Organization
7.2.2	National feature films/mn pop. 15-69	n/a	2021	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15-69	n/a	2022	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

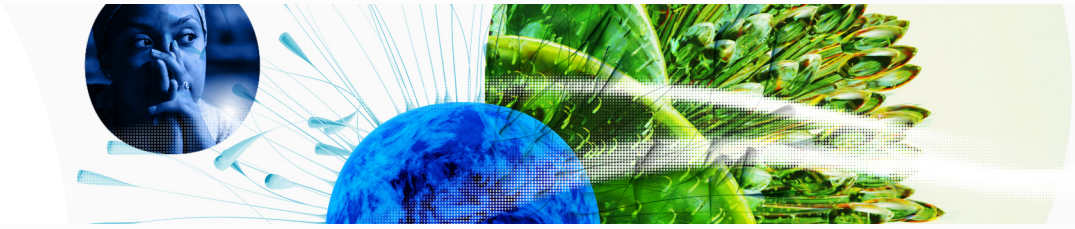
Global Innovation Index 2023



> Outdated data for Côte d'Ivoire

Code	Indicator name	Economy Year	Model Year	Source
2.3.2	Gross expenditure on R&D, % GDP	2016	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	2020	2021	International Energy Agency
5.1.1	Knowledge-intensive employment, %	2019	2022	International Labour Organization
5.1.2	Firms offering formal training, %	2016	2019	World Bank Enterprise Surveys
5.1.5	Females employed w/advanced degrees, %	2019	2022	International Labour Organization
5.3.2	High-tech imports, % total trade	2020	2021	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development
6.3.3	High-tech exports, % total trade	2020	2021	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development; Trade Data Monitor.
7.2.4	Creative goods exports, % total trade	2020	2021	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development

Global Innovation Index 2023



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 Database, WIPO, 2023.

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.