

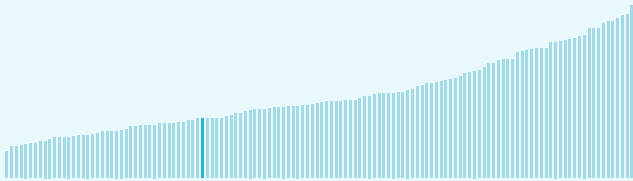
Global Innovation Index 2023



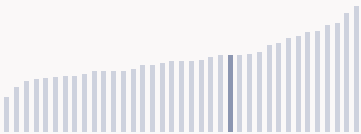
The Global Innovation Index (GII) **ranks world economies according to their innovation capabilities**. Consisting of **roughly 80 indicators**, grouped into innovation inputs and outputs, the GII **aims to capture the multi-dimensional facets of innovation**.

Cabo Verde ranking in the Global Innovation Index 2023

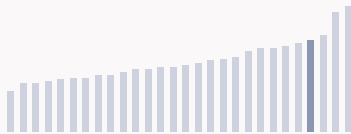
> Cabo Verde ranks **91st** among the 132 economies featured in the GII 2023.



> Cabo Verde ranks **14th** among the 37 lower-middle-income group economies.



> Cabo Verde ranks **4th** among the 28 economies in Sub-Saharan Africa.



> Cabo Verde GII Ranking (2020-2023)

The table shows the rankings of Cabo Verde 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 Cabo Verde in the GII 2023 is between ranks 87 and 99.

	GII Position	Innovation Inputs	Innovation Outputs
2020	100th	99th	90th
2021	89th	96th	88th
2022	n/a	n/a	n/a
2023	91st	74th	106th

Cabo Verde performs worse in innovation outputs than innovation inputs in 2023.

This year Cabo Verde ranks 74th in innovation inputs. This position is the same as last year.

Cabo Verde ranks 106th in innovation outputs. This position is the same as last year.

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→ Expected vs. observed innovation performance

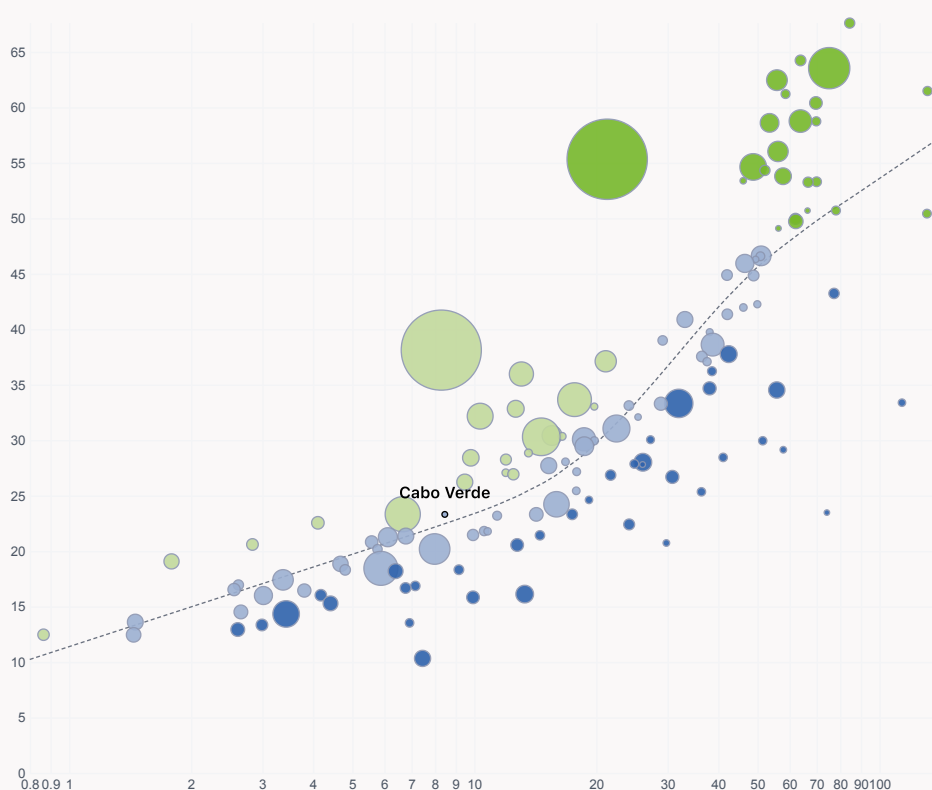
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected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



> Relative to GDP, Cabo Verde's performance is at expectations for its level of development.

> Innovation overperformers relative to their economic development

↑ **GII Score**



- Innovation leader
- Performing above expectations for level of development
- Performing at expectations for level of development
- Performing below expectations for level of development

Size legend (Population)



→ GDP per capita, PPP logarithmic scale (thousands of \$)

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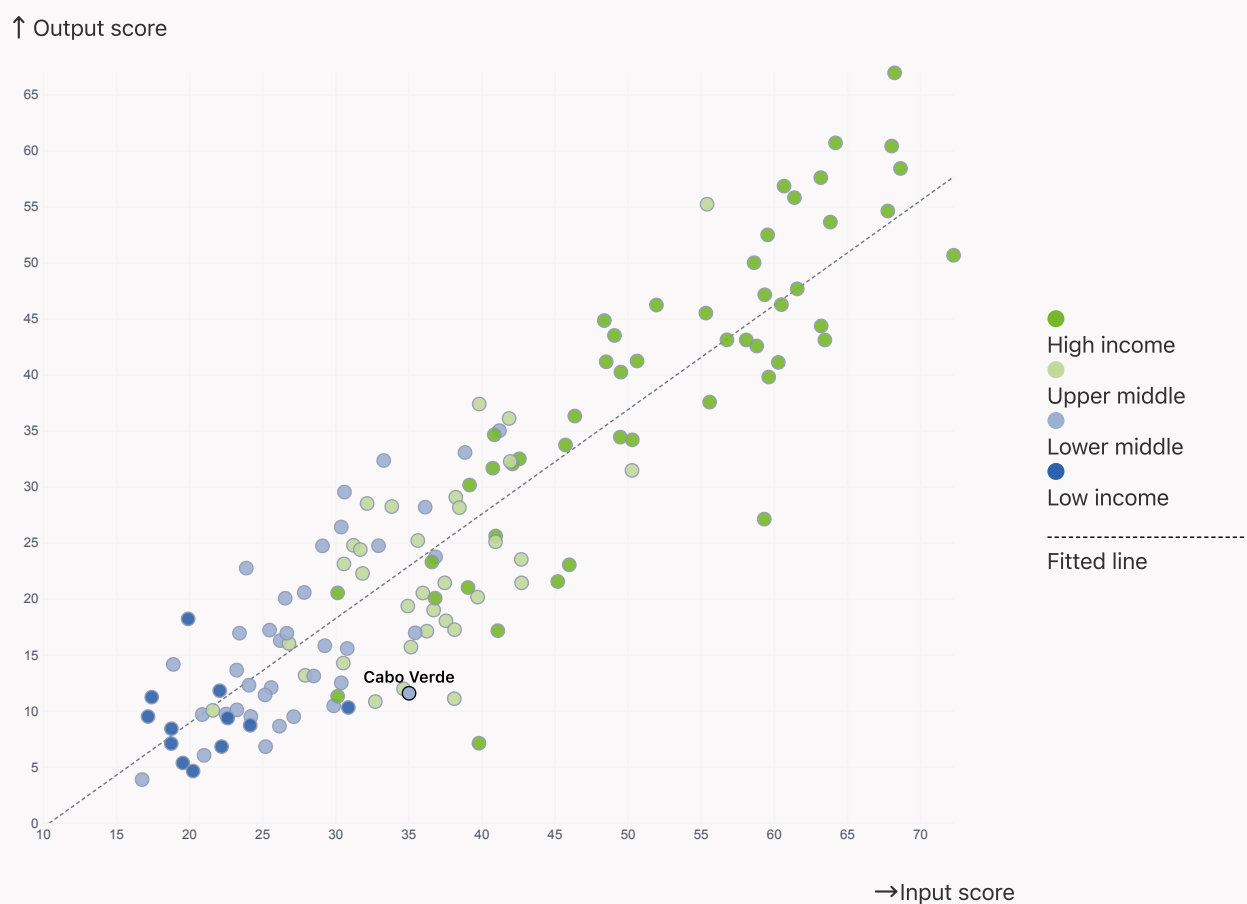
→ Effectively translating innovation investments into innovation outputs

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.



> Cabo Verde produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs



Global Innovation Index 2023



→ Overview of Cabo Verde'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 Cabo Verde are those that rank above the GII (shown in blue) and the weakest are those that rank below.

Highest rankings →

● 44th Institutions

● 64th Infrastructure
● 65th Business sophistication

● 91st Global Innovation Index

● 96th Market sophistication
● 97th Human capital and research
● 98th Knowledge and technology outputs

← Lowest rankings

● 108th Creative outputs

> Highest rankings




Cabo Verde ranks highest in Institutions (44th), Infrastructure (64th) and Business sophistication (65th).

> Lowest rankings



Cabo Verde ranks lowest in Creative outputs (108th), Knowledge and technology outputs (98th) and Human capital and research (97th).

 The full WIPO Intellectual Property Statistics profile for Cabo Verde can be found on [this link](#).

Global Innovation Index 2023



→ Benchmark of Cabo Verde against other country groupings for each of the seven areas of the GII Index

The charts show the relative position of Cabo Verde (blue bar) against other country groupings (grey bars), for each of the seven areas of the GII Index.

> Lower-Middle-Income economies

Cabo Verde performs above the lower-middle-income group average in Business sophistication, Infrastructure, Institutions.



> Sub-Saharan Africa

Cabo Verde performs above the regional average in Knowledge and technology outputs, Business sophistication, Market sophistication, Human capital and research, Infrastructure, Institutions.



Knowledge and technology outputs

Top 10 | Score: 58.96

Lower middle income | Score: 17.21

Cabo Verde | Score: 13.85

Sub-Saharan Africa | Score: 12.16

Creative outputs

Top 10 | 56.09

Lower middle income | 16.35

Sub-Saharan Africa | 10.36

Cabo Verde | 9.24

Business sophistication

Top 10 | 64.39

Cabo Verde | 28.38

Lower middle income | 22.71

Sub-Saharan Africa | 19.85

Market sophistication

Top 10 | 61.93

Lower middle income | 28.01

Cabo Verde | 24.74

Sub-Saharan Africa | 20.00

Human capital and research

Top 10 | 60.28

Lower middle income | 21.73

Cabo Verde | 21.35

Sub-Saharan Africa | 17.80

Infrastructure

Top 10 | 62.83

Cabo Verde | 41.14

Lower middle income | 27.83

Sub-Saharan Africa | 23.36

Institutions

Top 10 | 79.85

Cabo Verde | 59.67

Sub-Saharan Africa | 43.27

Lower middle income | 39.43

Global Innovation Index 2023



→ Innovation strengths and weaknesses in Cabo Verde

The table below gives an overview of the indicator strengths and weaknesses of Cabo Verde in the GII 2023.



> Cabo Verde's main innovation strengths are **Gross capital formation, % GDP** (rank 3), **Expenditure on education, % GDP** (rank 13) and **FDI net inflows, % GDP** (rank 17).

Strengths

Rank	Code	Indicator name
3	3.2.3	Gross capital formation, % GDP
13	2.1.1	Expenditure on education, % GDP
17	5.3.4	FDI net inflows, % GDP
24	5.3.3	ICT services imports, % total trade
30	6.2.1	Labor productivity growth, %
35	1.3.1	Policies for doing business
36	6.3.5	ISO 9001 quality/bn PPP\$ GDP
37	1.1.1	Operational stability for businesses
48	4.1.2	Domestic credit to private sector, % GDP
50	1.2.2	Rule of law

Weaknesses

Rank	Code	Indicator name
132	6.1.5	Citable documents H-index
132	4.3.3	Domestic market scale, bn PPP\$
132	6.3.3	High-tech exports, % total trade
130	7.2.4	Creative goods exports, % total trade
128	4.3.1	Applied tariff rate, weighted avg., %
105	4.3.2	Domestic industry diversification
95	5.2.5	Patent families/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\$

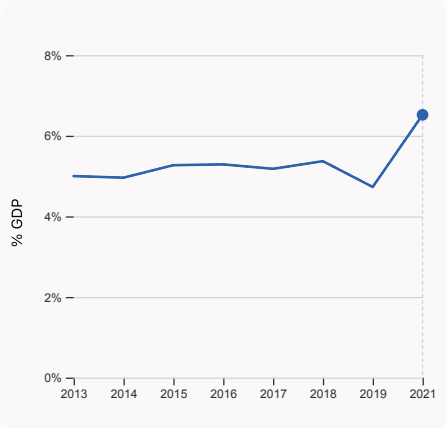
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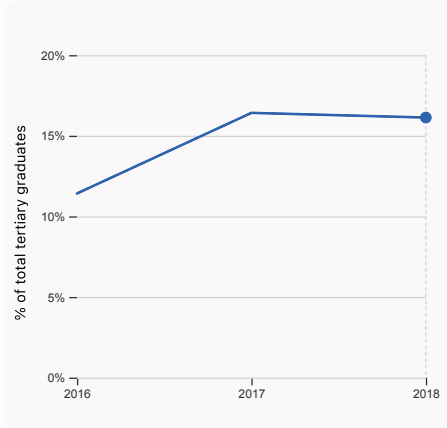
→ Cabo Verde's innovation system

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

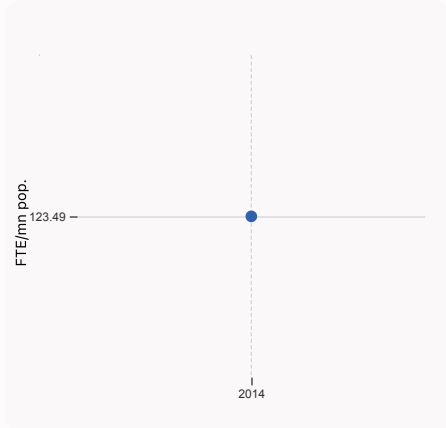
> Innovation inputs in Cabo Verde



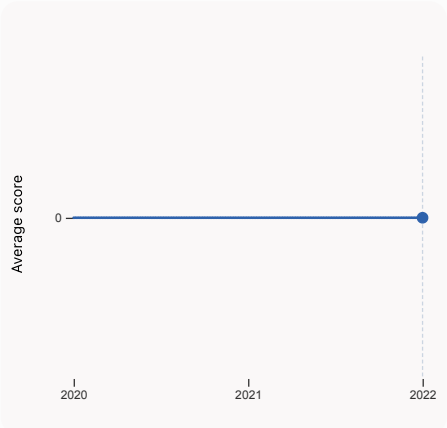
2.1.1 Expenditure on education, % GDP
was equal to 6.52% GDP in 2021, up by 1.79 percentage points from the year prior – and equivalent to an indicator rank of 13.



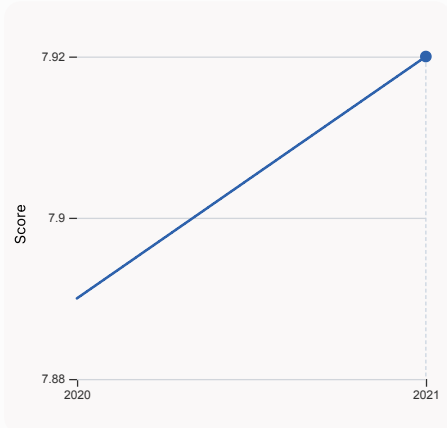
2.2.2 Graduates in science and engineering, %
was equal to 16.13% of total tertiary graduates in 2018, down by 0.29 percentage points from the year prior – and equivalent to an indicator rank of 94.



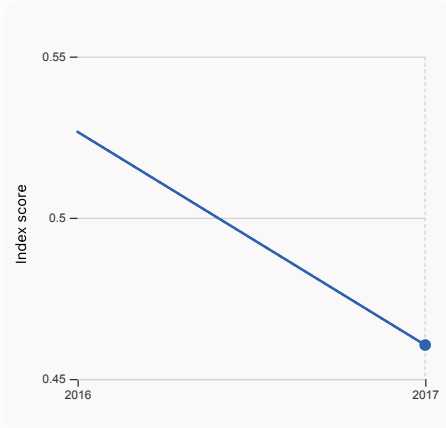
2.3.1 Researchers, FTE/mn pop.
was equal to 123.49 FTE/mn pop. in 2014, equivalent to an indicator rank of 88.



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.

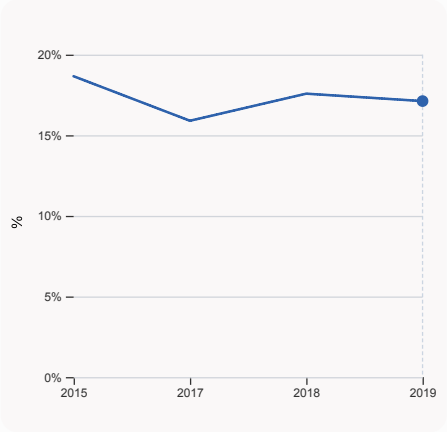


3.1.1 ICT access
was equal to a score of 7.92 in 2021, up by 0.38% from the year prior – and equivalent to an indicator rank of 91.



4.3.2 Domestic industry diversification
was equal to an index score of 0.461 in 2017, down by 12.56% from the year prior – and equivalent to an indicator rank of 105.

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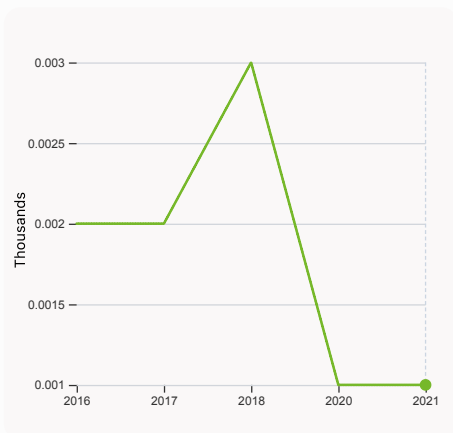
5.1.1 Knowledge-intensive employment, %

was equal to 17.12% in 2019, down by 0.46 percentage points from the year prior – and equivalent to an indicator rank of 84.

Global Innovation Index 2023

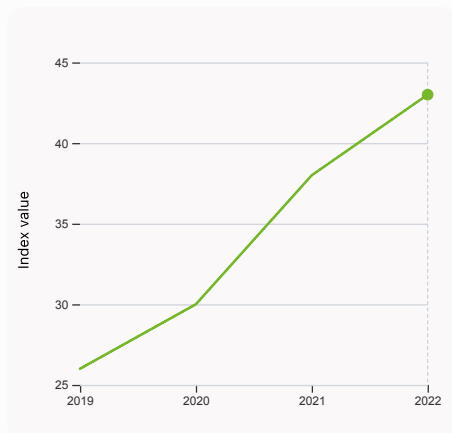


> Innovation outputs in Cabo Verde



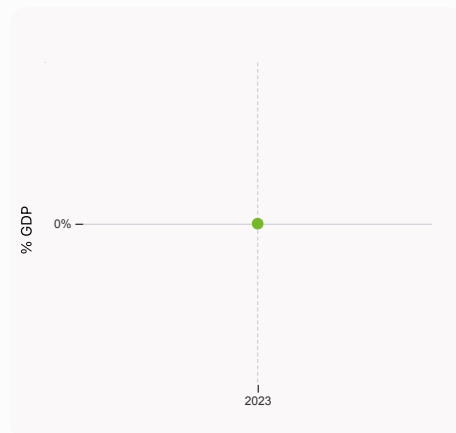
6.1.1 Patents by origin

was equal to 0.001 Thousands in 2021, up by with no change from the year prior – and equivalent to an indicator rank of 94.



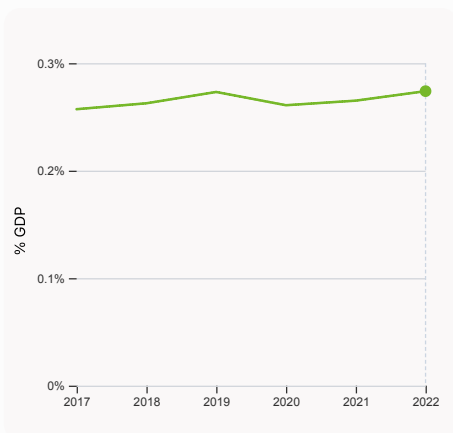
6.1.5 Citable documents H-index

was equal to an index value of 43 in 2022, up by 13.16% from the year prior – and equivalent to an indicator rank of 132.



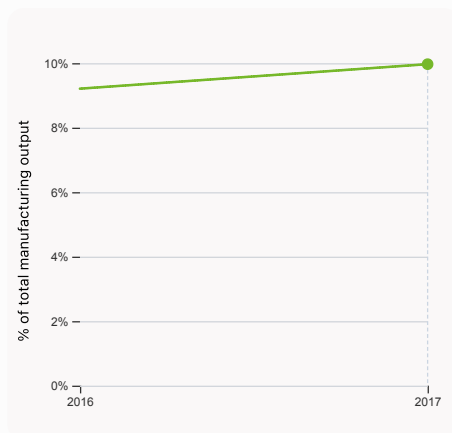
6.2.2 Unicorn valuation, % GDP

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



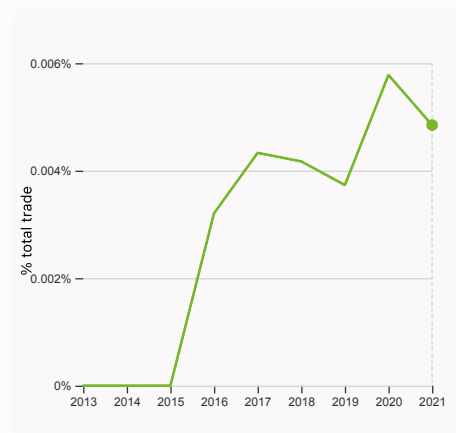
6.2.3 Software spending, % GDP

was equal to 0.274% GDP in 2022, up by 0.0088 percentage points from the year prior – and equivalent to an indicator rank of 53.



6.2.4 High-tech manufacturing, %

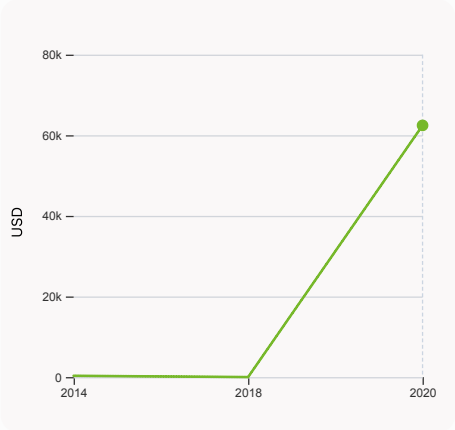
was equal to 9.97% of total manufacturing output in 2017, up by 0.76 percentage points from the year prior – and equivalent to an indicator rank of 92.



6.3.1 Intellectual property receipts, % total trade

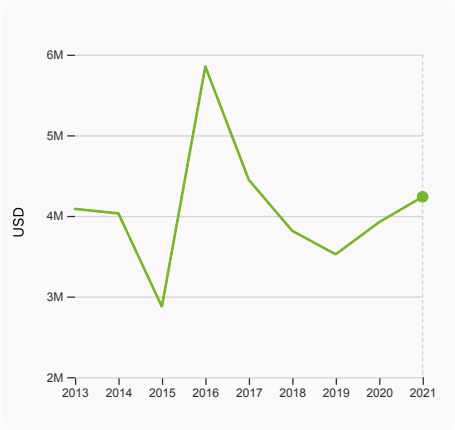
was equal to 0.005% total trade in 2021, down by 0.00093 percentage points from the year prior – and equivalent to an indicator rank of 97.

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6.3.3 High-tech exports

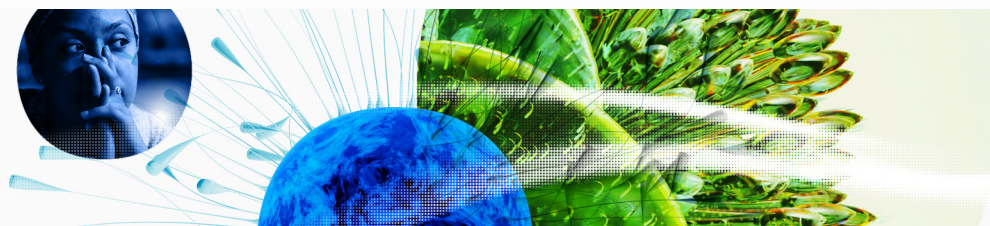
was equal to 62,449 USD in 2020, up by 520308.33% from the year prior – and equivalent to an indicator rank of 132.



7.2.1 Cultural and creative services exports

was equal to 4,237,000 USD in 2021, up by 8.032% from the year prior – and equivalent to an indicator rank of 50.

Global Innovation Index 2023



GII 2023 rank

Cabo Verde

91

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
106	74	Lower middle	SSA	0.6	4.8	8,459.8

Score / Value Rank

Score / Value Rank

Institutions

59.7 44

1.1 Institutional environment

51.3 52

1.1.1 Operational stability for businesses*

64.6 37 ●

1.1.2 Government effectiveness*

37.9 67

1.2 Regulatory environment

65.5 60

1.2.1 Regulatory quality*

49.2 57

1.2.2 Rule of law*

50.0 50 ●

1.2.3 Cost of redundancy dismissal

17.4 75

1.3 Business environment

62.2 30

1.3.1 Policies for doing business*

62.2 35 ●

1.3.2 Entrepreneurship policies and culture*

n/a n/a

Human capital and research

21.3 97

2.1 Education

51.1 66

2.1.1 Expenditure on education, % GDP

6.5 13 ●

2.1.2 Government funding/pupil, secondary, % GDP/cap

16.1 71

2.1.3 School life expectancy, years

12.7 88

2.1.4 PISA scales in reading, maths and science

n/a n/a

2.1.5 Pupil-teacher ratio, secondary

15.3 79

2.2 Tertiary education

12.5 106

2.2.1 Tertiary enrolment, % gross

23.6 96

2.2.2 Graduates in science and engineering, %

16.1 94

2.2.3 Tertiary inbound mobility, %

1.4 83

2.3 Research and development (R&D)

0.4 112

2.3.1 Researchers, FTE/mn pop.

123.5 88

2.3.2 Gross expenditure on R&D, % GDP

n/a n/a

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

41.1 64

3.1 Information and communication technologies (ICTs)

48.6 101

3.1.1 ICT access*

68.6 91

3.1.2 ICT use*

58.3 96

3.1.3 Government's online service*

44.4 99

3.1.4 E-participation*

23.3 115

3.2 General infrastructure

53.7 11

3.2.1 Electricity output, GWh/mn pop.

n/a n/a

3.2.2 Logistics performance*

n/a n/a

3.2.3 Gross capital formation, % GDP

44.7 3 ●

3.3 Ecological sustainability

21.1 78

3.3.1 GDP/unit of energy use

n/a n/a

3.3.2 Environmental performance*

39.0 67

3.3.3 ISO 14001 environment/bn PPP\$ GDP

0.5 88

Market sophistication

24.7 96

4.1 Credit

26.7 73

4.1.1 Finance for startups and scaleups*

n/a n/a

4.1.2 Domestic credit to private sector, % GDP

73.2 48 ●

4.1.3 Loans from microfinance institutions, % GDP

n/a n/a

4.2 Investment

n/a n/a

4.2.1 Market capitalization, % GDP

n/a n/a

4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP

n/a n/a

4.2.3 VC recipients, deals/bn PPP\$ GDP

n/a n/a

4.2.4 VC received, value, % GDP

n/a n/a

4.3 Trade, diversification, and market scale

22.7 124 ◇

4.3.1 Applied tariff rate, weighted avg., %

12.2 128 ○ ◇

4.3.2 Domestic industry diversification

47.0 105 ○ ◇

4.3.3 Domestic market scale, bn PPP\$

4.8 132 ○ ◇

Business sophistication

28.4 65

5.1 Knowledge workers

23.8 82

5.1.1 Knowledge-intensive employment, %

17.1 84

5.1.2 Firms offering formal training, %

n/a n/a

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, %

7.6 86

5.2 Innovation linkages

23.1 63

5.2.1 University-industry R&D collaboration*

35.5 85

5.2.2 State of cluster development*

33.8 86

5.2.3 GERD financed by abroad, % GDP

n/a n/a

5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP

n/a n/a

5.2.5 Patent families/bn PPP\$ GDP

0.0 95 ○ ◇

5.3 Knowledge absorption

38.2 50

5.3.1 Intellectual property payments, % total trade

0.5 68

5.3.2 High-tech imports, % total trade

6.8 91

5.3.3 ICT services imports, % total trade

2.7 24 ●

5.3.4 FDI net inflows, % GDP

5.2 17 ●

5.3.5 Research talent, % in businesses

n/a n/a

Knowledge and technology outputs

13.8 98

6.1 Knowledge creation

9.2 84

6.1.1 Patents by origin/bn PPP\$ GDP

0.2 94

6.1.2 PCT patents by origin/bn PPP\$ GDP

n/a n/a

6.1.3 Utility models by origin/bn PPP\$ GDP

n/a n/a

6.1.4 Scientific and technical articles/bn PPP\$ GDP

n/a n/a

6.1.5 Citable documents H-index

0.0 132 ○ ◇

6.2 Knowledge impact

25.2 72

6.2.1 Labor productivity growth, %

2.2 30 ●

6.2.2 Unicorn valuation, % GDP

0.0 48 ○ ◇

6.2.3 Software spending, % GDP

0.3 53

6.2.4 High-tech manufacturing, %

10.0 92

6.3 Knowledge diffusion

7.1 121

6.3.1 Intellectual property receipts, % total trade

0.0 97

6.3.2 Production and export complexity

n/a n/a

6.3.3 High-tech exports, % total trade

0.0 132 ○ ◇

6.3.4 ICT services exports, % total trade

1.2 82

6.3.5 ISO 9001 quality/bn PPP\$ GDP

7.4 36 ●

Creative outputs

9.2 108

7.1 Intangible assets

14.5 99

7.1.1 Intangible asset intensity, top 15, %

n/a n/a

7.1.2 Trademarks by origin/bn PPP\$ GDP

15.0 99

7.1.3 Global brand value, top 5,000

n/a n/a

7.1.4 Industrial designs by origin/bn PPP\$ GDP

1.0 67

7.2 Creative goods and services

5.7 84

7.2.1 Cultural and creative services exports, % total trade

0.6 50

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

0.0 130 ○

7.3 Online creativity

2.3 124 ◇

7.3.1 Generic top-level domains (TLDs)/th pop. 15-69

2.1 81

7.3.2 Country-code TLDs/th pop. 15-69

2.3 69

7.3.3 GitHub commits/mn pop. 15-69

2.4 97

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 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.

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→ Data availability

The following tables list indicators that are either missing or outdated for Cabo Verde.

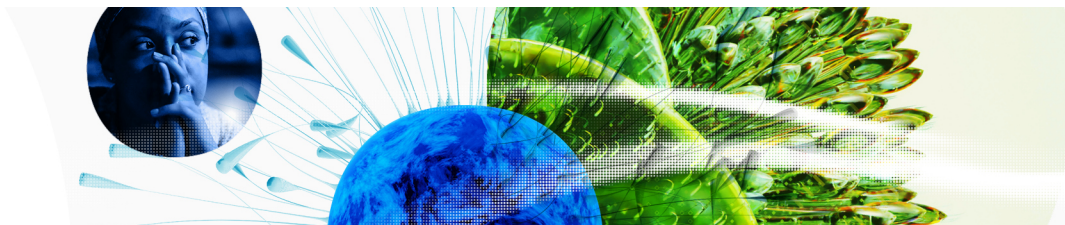


> Cabo Verde has missing data for twenty six indicators and outdated data for fourteen indicators.

> Missing data for Cabo Verde

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
2.3.2	Gross expenditure on R&D, % GDP	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	n/a	2021	International Energy Agency
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 ÕÇô The Logistics Performance Index and its Indicators.
3.3.1	GDP/unit of energy use	n/a	2020	International Energy Agency
4.1.1	Finance for startups and scaleups	n/a	2022	Global Entrepreneurship Monitor
4.1.3	Loans from microfinance institutions, % GDP	n/a	2021	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges; World Bank
4.2.2	Venture capital (VC) investors, deals/bn PPP\$ GDP	n/a	2022	Refinitiv; International Monetary Fund
4.2.3	VC recipients, deals/bn PPP\$ GDP	n/a	2022	Refinitiv; International Monetary Fund
4.2.4	VC received, value, % GDP	n/a	2022	Refinitiv; International Monetary Fund
5.1.2	Firms offering formal training, %	n/a	2019	World Bank Enterprise Surveys
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

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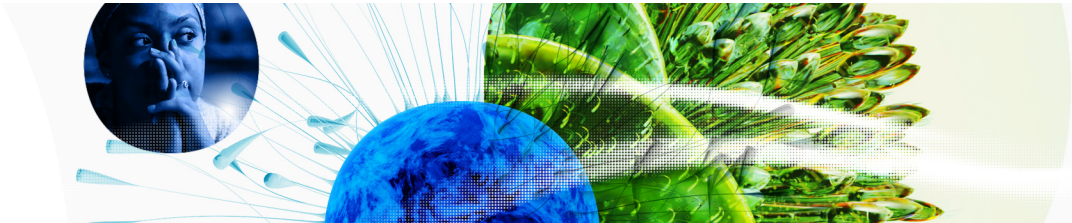


Code	Indicator name	Economy Year	Model Year	Source
5.2.4	Joint venture/strategic alliance deals/bn PPP\$ GDP	n/a	2022	Refinitiv; International Monetary Fund
5.3.5	Research talent, % in businesses	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	2022	World Intellectual Property Organization; International Monetary Fund
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2021	World Intellectual Property Organization; International Monetary Fund
6.3.2	Production and export complexity	n/a	2020	Harvard University, Growth Lab
7.1.1	Intangible asset intensity, top 15, %	n/a	2022	Brand Finance
7.1.3	Global brand value, top 5,000	n/a	2023	Brand Finance; International Monetary Fund
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
7.3.4	Mobile app creation/bn PPP\$ GDP	n/a	2022	data.ia; International Monetary Fund

> Outdated data for Cabo Verde

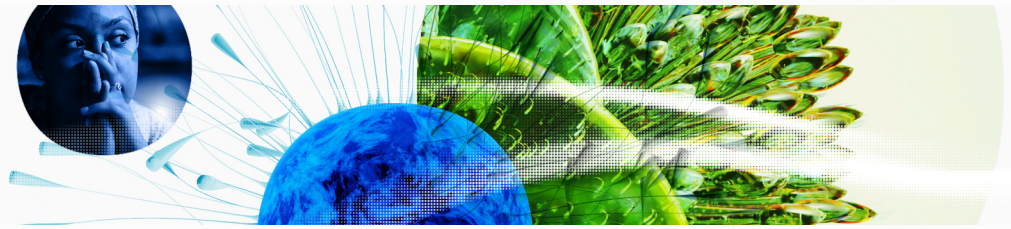
Code	Indicator name	Economy Year	Model Year	Source
2.1.3	School life expectancy, years	2018	2020	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2019	2020	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2018	2020	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2018	2020	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	2018	2020	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2014	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.3.2	Domestic industry diversification	2017	2020	United Nations Industrial Development Organization
5.1.1	Knowledge-intensive employment, %	2019	2022	International Labour Organization
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
6.2.4	High-tech manufacturing, %	2017	2020	United Nations Industrial Development Organization

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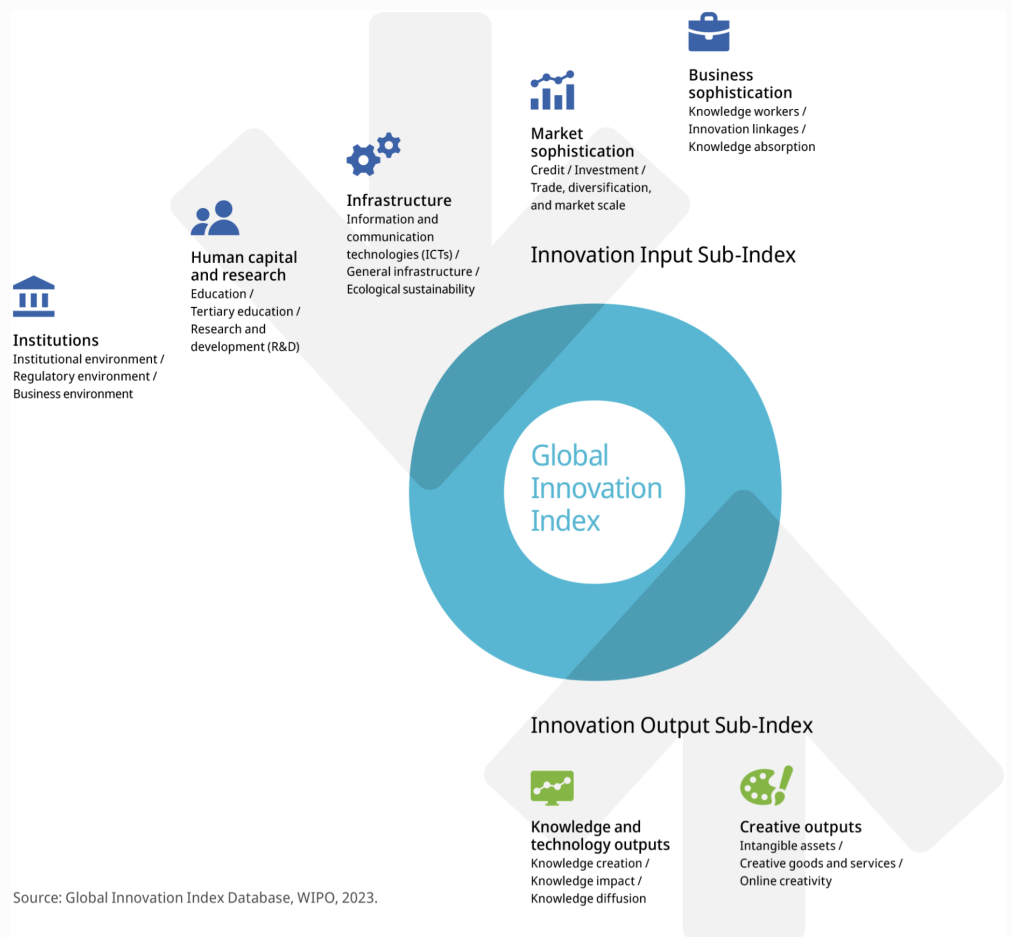
Code	Indicator name	Economy Year	Model Year	Source
6.3.3	High-tech exports, % total trade	2020	2021	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development; Trade Data Monitor.
7.1.4	Industrial designs by origin/bn PPP\$ GDP	2020	2021	World Intellectual Property Organization; International Monetary Fund
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

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→ 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.



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.