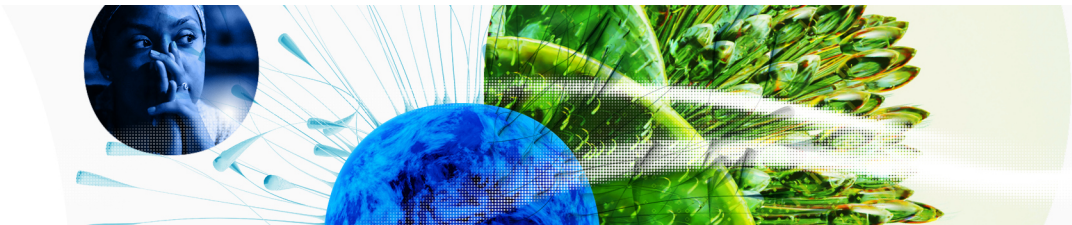


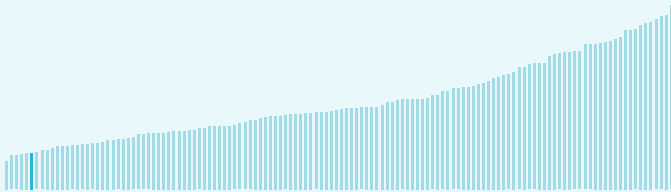
# Global Innovation Index 2023



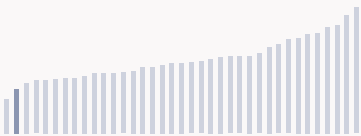
The Global Innovation Index (GII) **ranks world economies according to their innovation capabilities**. Consisting of **roughly 80 indicators**, grouped into innovation inputs and outputs, the GII **aims to capture the multi-dimensional facets of innovation**.

## Mauritania ranking in the Global Innovation Index 2023

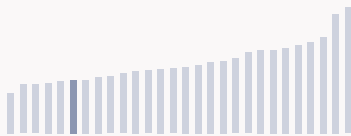
> Mauritania ranks **127th** among the 132 economies featured in the GII 2023.



> Mauritania ranks **36th** among the 37 lower-middle-income group economies.



> Mauritania ranks **23rd** among the 28 economies in Sub-Saharan Africa.



### > Mauritania GII Ranking (2020-2023)

The table shows the rankings of Mauritania 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 Mauritania in the GII 2023 is between ranks 124 and 130.

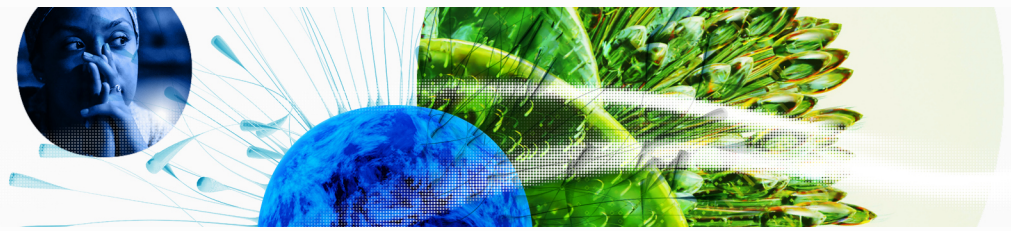
	GII Position	Innovation Inputs	Innovation Outputs
2020	n/a	n/a	n/a
2021	n/a	n/a	n/a
2022	129th	121st	132nd
2023	127th	122nd	129th

Mauritania performs worse in innovation outputs than innovation inputs in 2023.

This year Mauritania ranks 122nd in innovation inputs. This position is lower than last year.

Mauritania ranks 129th in innovation outputs. This position is higher than last year.

# Global Innovation Index 2023



## → Expected vs. observed innovation performance

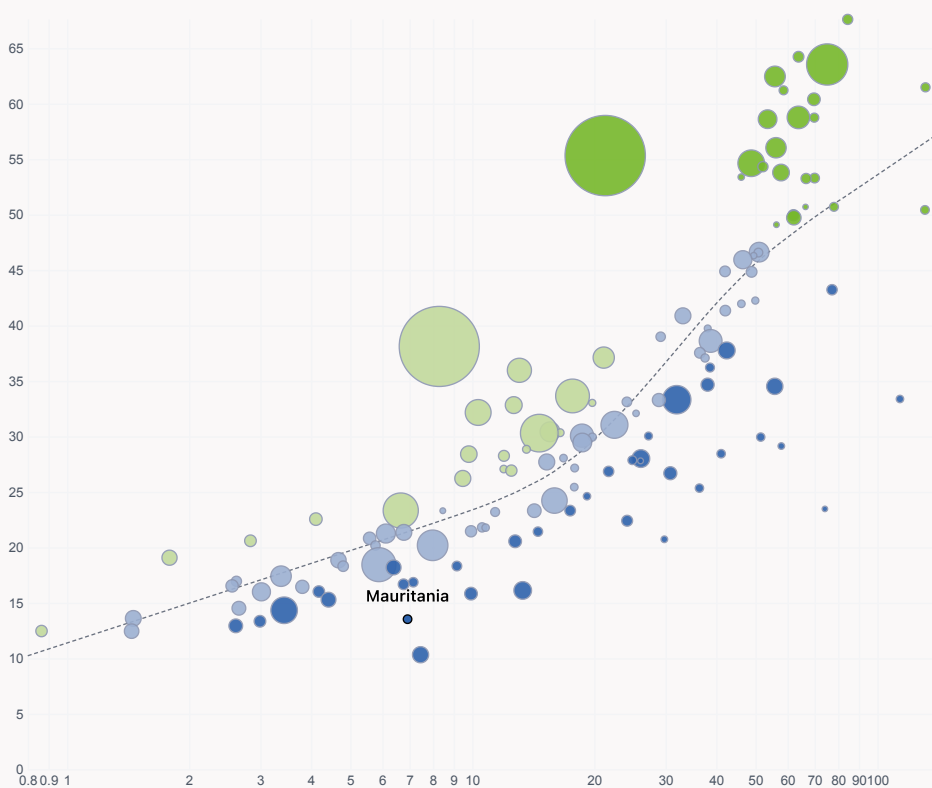
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected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



> Relative to GDP, Mauritania's performance is below 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 \$)

# Global Innovation Index 2023



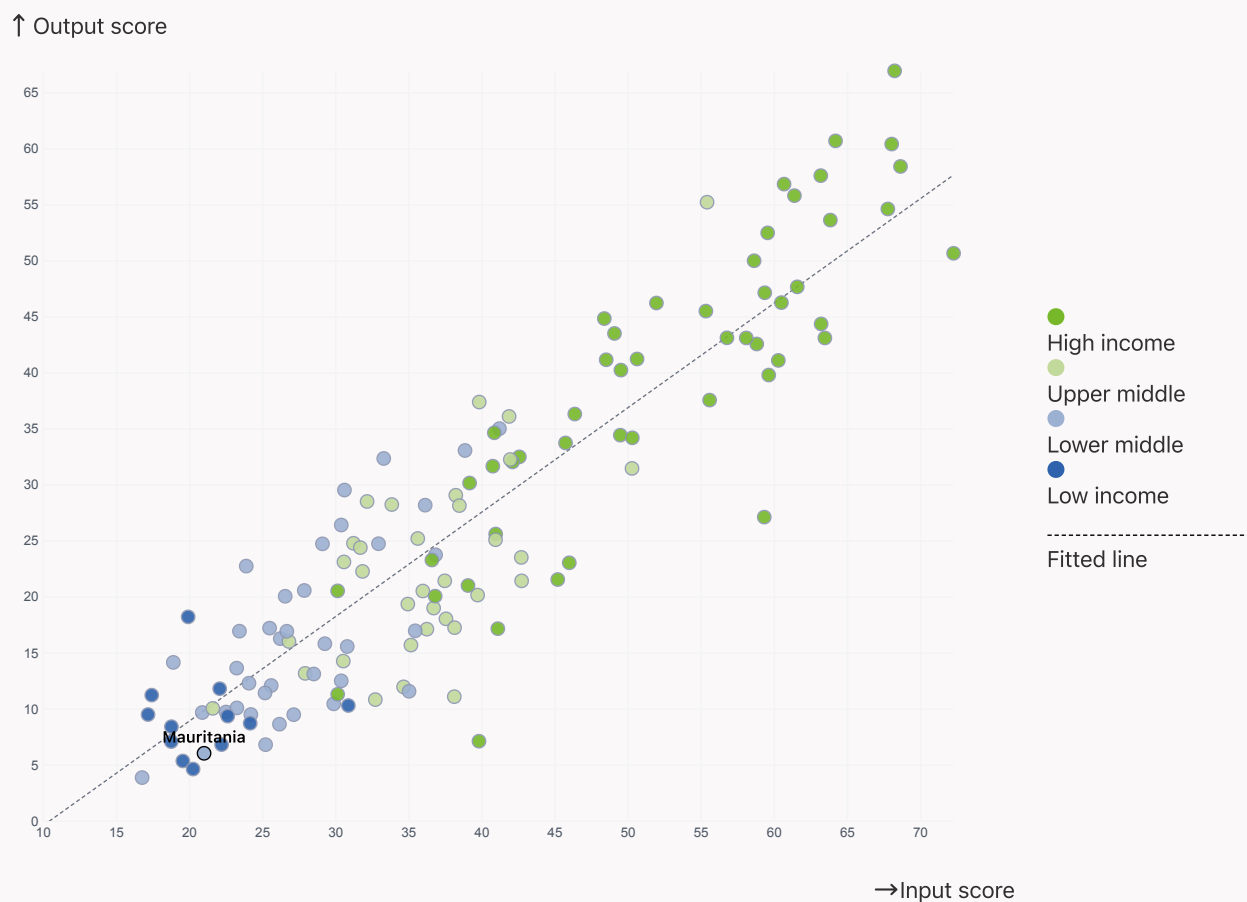
## → Effectively translating innovation investments into innovation outputs

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.



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

### > Relationship between innovation inputs and outputs



# Global Innovation Index 2023



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

Highest rankings →

● 89th Institutions

● 108th Business sophistication

● 115th Knowledge and technology outputs

● 119th Human capital and research

● 124th Infrastructure

● 127th Global Innovation Index

● 130th Market sophistication

● 131st Creative outputs

← Lowest rankings

### > Highest rankings



Mauritania ranks highest in Institutions (89th), Business sophistication (108th), Knowledge and technology outputs (115th), Human capital and research (119th) and Infrastructure (124th).

### > Lowest rankings



Mauritania ranks lowest in Creative outputs (131st), Market sophistication (130th) and Infrastructure (124th).



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

# Global Innovation Index 2023



## → Benchmark of Mauritania against other country groupings for each of the seven areas of the GII Index

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

### > Lower-Middle-Income economies

Mauritania 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

Mauritania performs below the regional average in Knowledge and technology outputs, Creative outputs, Market sophistication, Human capital and research, Infrastructure.



### Knowledge and technology outputs

Top 10 | Score: 58.96

Lower middle income | Score: 17.21

Sub-Saharan Africa | Score: 12.16

Mauritania | Score: 11.03

### Creative outputs

Top 10 | 56.09

Lower middle income | 16.35

Sub-Saharan Africa | 10.36

Mauritania | 0.99

### Business sophistication

Top 10 | 64.39

Lower middle income | 22.71

Mauritania | 20.25

Sub-Saharan Africa | 19.85

### Market sophistication

Top 10 | 61.93

Lower middle income | 28.01

Sub-Saharan Africa | 20.00

Mauritania | 8.74

### Human capital and research

Top 10 | 60.28

Lower middle income | 21.73

Sub-Saharan Africa | 17.80

Mauritania | 14.18

### Infrastructure

Top 10 | 62.83

Lower middle income | 27.83

Sub-Saharan Africa | 23.36

Mauritania | 18.48

### Institutions

Top 10 | 79.85

Mauritania | 43.52

Sub-Saharan Africa | 43.27

Lower middle income | 39.43



# Global Innovation Index 2023



## → Innovation strengths and weaknesses in Mauritania

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



> Mauritania's main innovation strengths are **Gross capital formation, % GDP** (rank 7), **Graduates in science and engineering, %** (rank 10) and **Firms offering formal training, %** (rank 18).

### Strengths

Rank	Code	Indicator name
7	3.2.3	Gross capital formation, % GDP
10	2.2.2	Graduates in science and engineering, %
18	5.1.2	Firms offering formal training, %
33	6.2.3	Software spending, % GDP
33	1.2.3	Cost of redundancy dismissal
38	5.3.4	FDI net inflows, % GDP
48	5.2.1	University-industry R&D collaboration
74	1.3.1	Policies for doing business
79	5.3.2	High-tech imports, % total trade
85	6.2.1	Labor productivity growth, %

### Weaknesses

Rank	Code	Indicator name
132	7.2.4	Creative goods exports, % total trade
131	3.1.4	E-participation
131	3.1.3	Government's online service
120	7.1.4	Industrial designs by origin/bn PPP\$ GDP
113	2.3.2	Gross expenditure on R&D, % GDP
101	6.1.2	PCT patents by origin/bn PPP\$ GDP
98	5.1.4	GERD financed by business, %
96	5.2.3	GERD financed by abroad, % 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\$

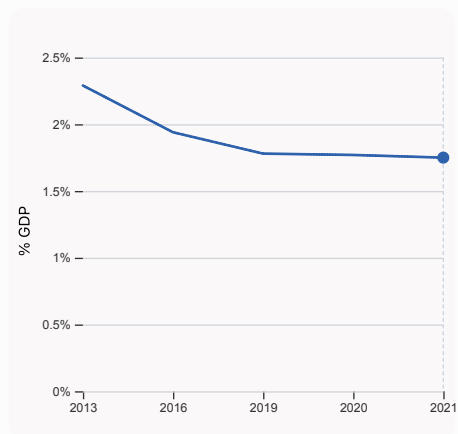
# Global Innovation Index 2023



## → Mauritania's innovation system

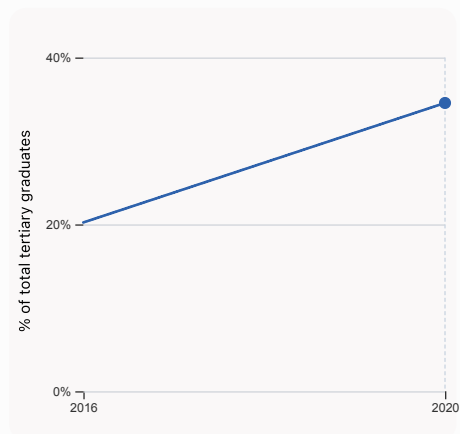
As far as practicable, the plots below present unscaled indicator data.

### > Innovation inputs in Mauritania



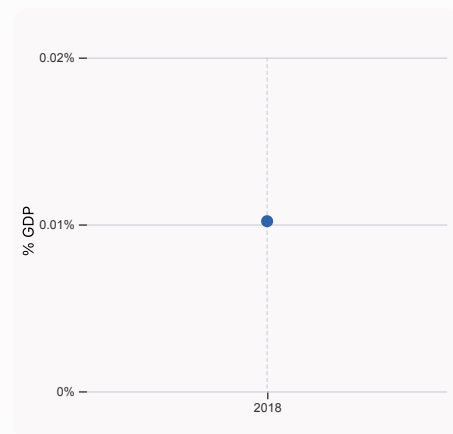
#### 2.1.1 Expenditure on education, % GDP

was equal to 1.75% GDP in 2021, down by 0.02 percentage points from the year prior – and equivalent to an indicator rank of 123.



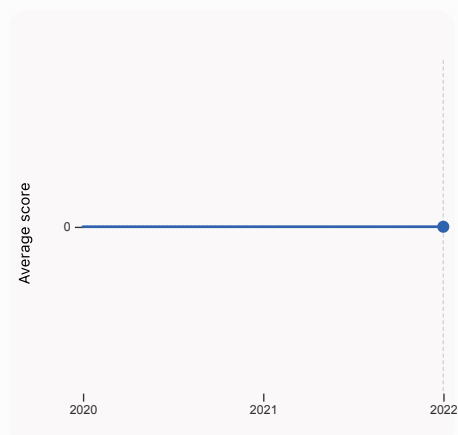
#### 2.2.2 Graduates in science and engineering, %

was equal to 34.55% of total tertiary graduates in 2020, up by 14.32 percentage points from the year prior – and equivalent to an indicator rank of 10.



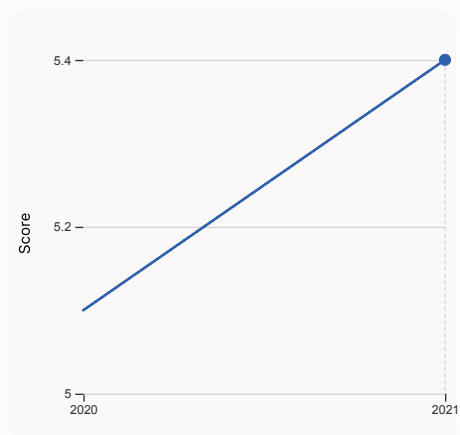
#### 2.3.2 Gross expenditure on R&D, % GDP

was equal to 0.01 % GDP in 2018, equivalent to an indicator rank of 113.



#### 2.3.4 QS university ranking, top 3

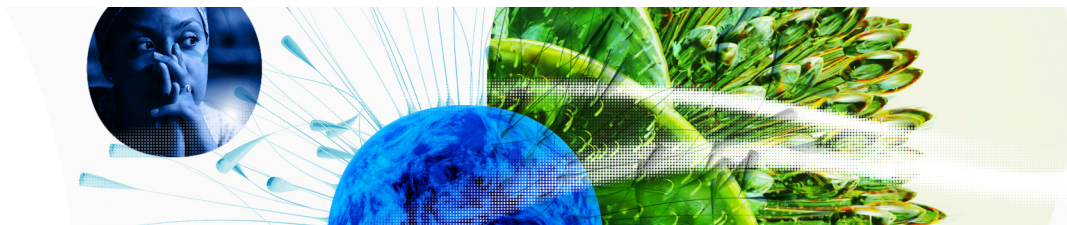
was equal to an average score of 0 for the top 3 universities in 2022, equivalent to an indicator rank of 71.



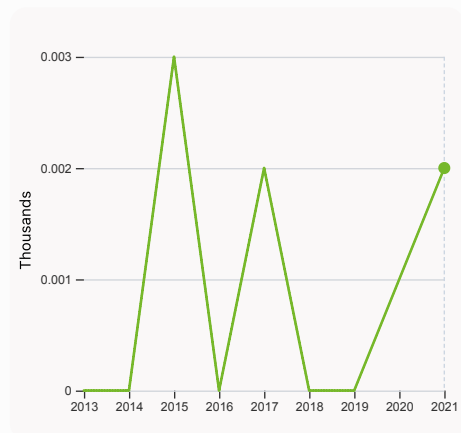
#### 3.1.1 ICT access

was equal to a score of 5.4 in 2021, up by 5.88% from the year prior – and equivalent to an indicator rank of 122.

# Global Innovation Index 2023

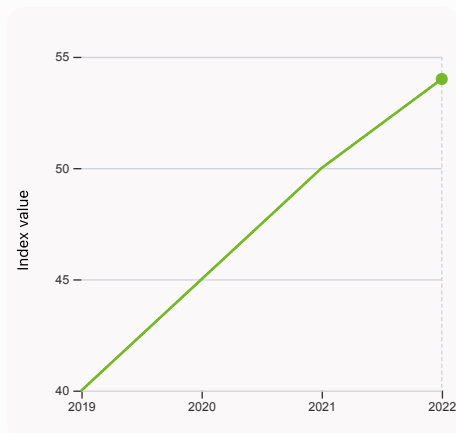


## > Innovation outputs in Mauritania



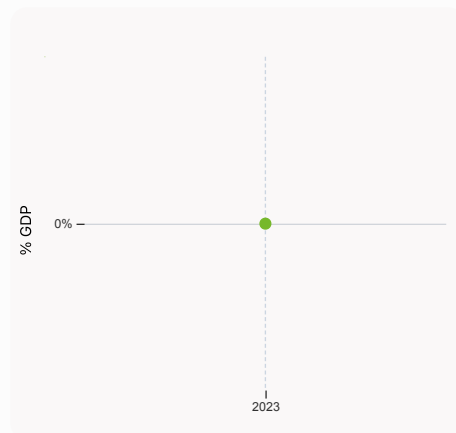
### 6.1.1 Patents by origin

was equal to 0.002 Thousands in 2021, up by 100% from the year prior – and equivalent to an indicator rank of 115.



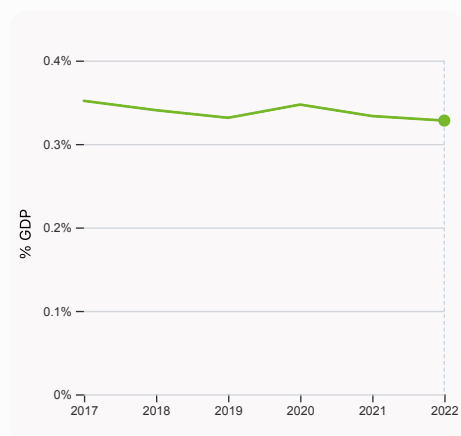
### 6.1.5 Citable documents H-index

was equal to an index value of 54 in 2022, up by 8% from the year prior – and equivalent to an indicator rank of 131.



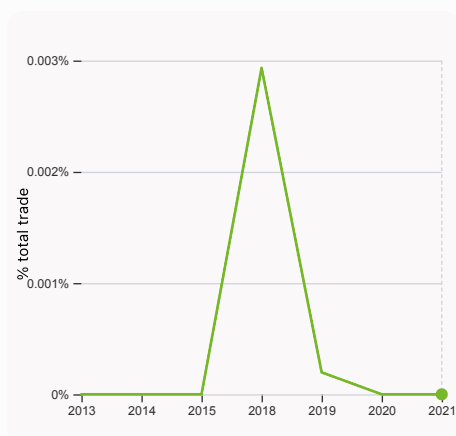
### 6.2.2 Unicorn valuation, % GDP

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



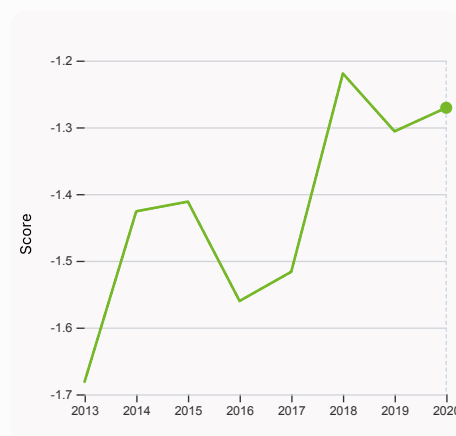
### 6.2.3 Software spending, % GDP

was equal to 0.328% GDP in 2022, down by 0.0054 percentage points from the year prior – and equivalent to an indicator rank of 33.



### 6.3.1 Intellectual property receipts, % total trade

was equal to 0% total trade in 2021 – and equivalent to an indicator rank of 111.

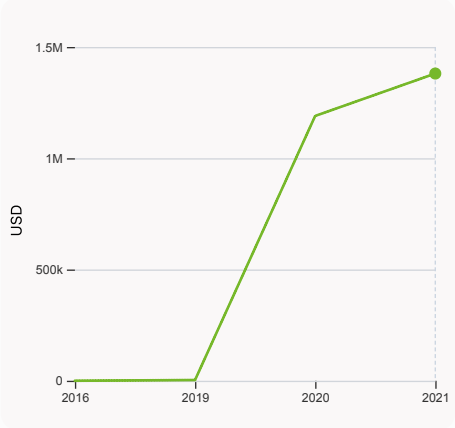
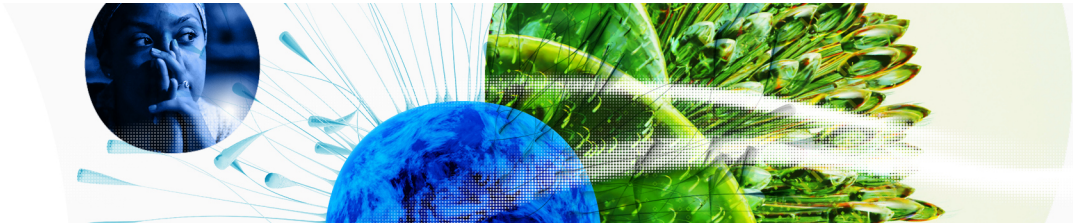


### 6.3.2 Production and export complexity

was equal to a score of -1.271 in 2020, up by 2.71% from the year prior – and equivalent to an indicator rank of 115.

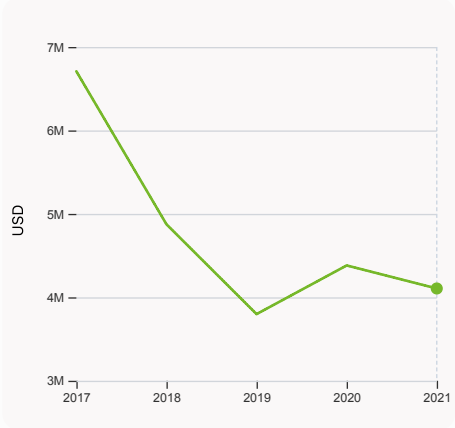


# Global Innovation Index 2023



### 6.3.3 High-tech exports

was equal to 1,380,710 USD in 2021, up by 16.0054% from the year prior – and equivalent to an indicator rank of 126.



### 7.2.1 Cultural and creative services exports

was equal to 4,106,000 USD in 2021, down by 6.3% from the year prior – and equivalent to an indicator rank of 80.

# Global Innovation Index 2023

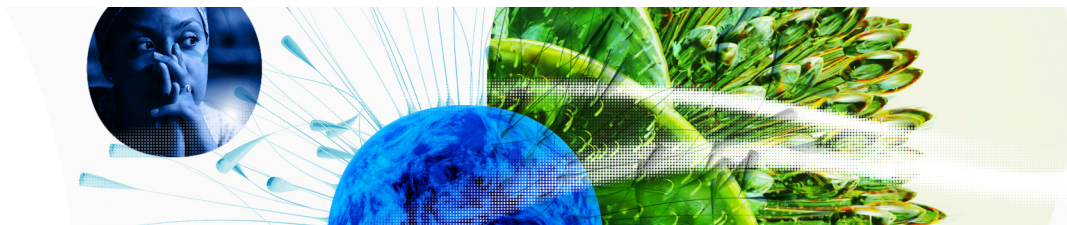


GII 2023 rank

127

## Mauritania

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
129	122	Lower middle	SSA	4.7	30.0	6,924.9
Score / Value Rank				Score / Value Rank		
Institutions		43.5	89	Business sophistication		20.2 108
1.1 Institutional environment		29.1	102	5.1 Knowledge workers		23.3 88
1.1.1 Operational stability for businesses*		41.7	87	5.1.1 Knowledge-intensive employment, %		n/a n/a
1.1.2 Government effectiveness*		16.5	114	5.1.2 Firms offering formal training, %		52.7 18
1.2 Regulatory environment		56.3	85	5.1.3 GERD performed by business, % GDP		n/a n/a
1.2.1 Regulatory quality*		14.7	127	5.1.4 GERD financed by business, %		0.0 98
1.2.2 Rule of law*		20.1	108	5.1.5 Females employed w/advanced degrees, %		0.7 124
1.2.3 Cost of redundancy dismissal		10.5	33	5.2 Innovation linkages		14.0 103
1.3 Business environment		45.2	69	5.2.1 University-industry R&D collaboration†		53.1 48
1.3.1 Policies for doing business†		45.2	74	5.2.2 State of cluster development†		12.7 124
1.3.2 Entrepreneurship policies and culture†		n/a	n/a	5.2.3 GERD financed by abroad, % GDP		0.0 96
Human capital and research		14.2	119	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP		0.0 85
2.1 Education		16.3	131	5.2.5 Patent families/bn PPP\$ GDP		0.0 95
2.1.1 Expenditure on education, % GDP		1.7	123	5.3 Knowledge absorption		23.5 112
2.1.2 Government funding/pupil, secondary, % GDP/cap		8.6	93	5.3.1 Intellectual property payments, % total trade		0.0 108
2.1.3 School life expectancy, years		8.7	111	5.3.2 High-tech imports, % total trade		7.4 79
2.1.4 PISA scales in reading, maths and science		n/a	n/a	5.3.3 ICT services imports, % total trade		0.4 113
2.1.5 Pupil-teacher ratio, secondary		28.8	118	5.3.4 FDI net inflows, % GDP		3.6 38
2.2 Tertiary education		26.2	77	5.3.5 Research talent, % in businesses		n/a n/a
2.2.1 Tertiary enrolment, % gross		5.9	123	Knowledge and technology outputs		11.0 115
2.2.2 Graduates in science and engineering, %		34.6	10	6.1 Knowledge creation		0.8 131
2.2.3 Tertiary inbound mobility, %		1.4	82	6.1.1 Patents by origin/bn PPP\$ GDP		0.1 115
2.3 Research and development (R&D)		0.0	119	6.1.2 PCT patents by origin/bn PPP\$ GDP		0.0 101
2.3.1 Researchers, FTE/mn pop.		n/a	n/a	6.1.3 Utility models by origin/bn PPP\$ GDP		0.0 75
2.3.2 Gross expenditure on R&D, % GDP		0.0	113	6.1.4 Scientific and technical articles/bn PPP\$ GDP		n/a n/a
2.3.3 Global corporate R&D investors, top 3, mn US\$		0.0	40	6.1.5 Citable documents H-index		0.6 131
2.3.4 QS university ranking, top 3*		0.0	71	6.2 Knowledge impact		26.3 67
Infrastructure		18.5	124	6.2.1 Labor productivity growth, %		0.4 85
3.1 Information and communication technologies (ICTs)		19.2	129	6.2.2 Unicorn valuation, % GDP		0.0 48
3.1.1 ICT access*		30.4	122	6.2.3 Software spending, % GDP		0.3 33
3.1.2 ICT use*		46.5	107	6.2.4 High-tech manufacturing, %		n/a n/a
3.1.3 Government's online service*		0.0	131	6.3 Knowledge diffusion		6.0 123
3.1.4 E-participation*		0.0	131	6.3.1 Intellectual property receipts, % total trade		0.0 111
3.2 General infrastructure		28.1	61	6.3.2 Production and export complexity		25.9 115
3.2.1 Electricity output, GWh/mn pop.		n/a	n/a	6.3.3 High-tech exports, % total trade		0.0 126
3.2.2 Logistics performance*		9.1	106	6.3.4 ICT services exports, % total trade		0.4 107
3.2.3 Gross capital formation, % GDP		40.6	7	6.3.5 ISO 9001 quality/bn PPP\$ GDP		0.3 127
3.3 Ecological sustainability		8.1	131	Creative outputs		1.0 131
3.3.1 GDP/unit of energy use		n/a	n/a	7.1 Intangible assets		1.3 130
3.3.2 Environmental performance*		15.6	123	7.1.1 Intangible asset intensity, top 15, %		n/a n/a
3.3.3 ISO 14001 environment/bn PPP\$ GDP		0.1	121	7.1.2 Trademarks by origin/bn PPP\$ GDP		5.2 121
Market sophistication		8.7	130	7.1.3 Global brand value, top 5,000		n/a n/a
4.1 Credit		6.6	122	7.1.4 Industrial designs by origin/bn PPP\$ GDP		0.0 120
4.1.1 Finance for startups and scaleups†		n/a	n/a	7.2 Creative goods and services		1.2 113
4.1.2 Domestic credit to private sector, % GDP		22.2	113	7.2.1 Cultural and creative services exports, % total trade		0.1 80
4.1.3 Loans from microfinance institutions, % GDP		n/a	n/a	7.2.2 National feature films/mn pop. 15-69		n/a n/a
4.2 Investment		n/a	n/a	7.2.3 Entertainment and media market/th pop. 15-69		n/a n/a
4.2.1 Market capitalization, % GDP		n/a	n/a	7.2.4 Creative goods exports, % total trade		0.0 132
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP		n/a	n/a	7.3 Online creativity		0.2 131
4.2.3 VC recipients, deals/bn PPP\$ GDP		n/a	n/a	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69		0.2 119
4.2.4 VC received, value, % GDP		n/a	n/a	7.3.2 Country-code TLDs/th pop. 15-69		0.1 121
4.3 Trade, diversification, and market scale		10.8	130	7.3.3 GitHub commits/mn pop. 15-69		0.2 127
4.3.1 Applied tariff rate, weighted avg., %		12.2	129	7.3.4 Mobile app creation/bn PPP\$ GDP		n/a n/a
4.3.2 Domestic industry diversification		n/a	n/a			
4.3.3 Domestic market scale, bn PPP\$		30.0	125			



## → Data availability

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

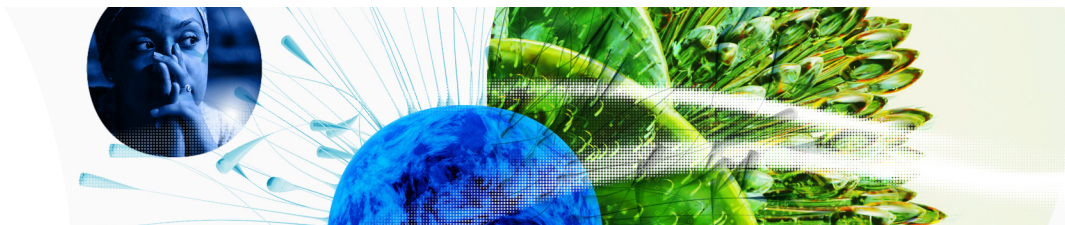


> Mauritania has missing data for twenty one indicators and outdated data for ten indicators.

## > Missing data for Mauritania

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
2.3.1	Researchers, FTE/mn pop.	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	n/a	2021	International Energy Agency
3.3.1	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
4.3.2	Domestic industry diversification	n/a	2020	United Nations Industrial Development Organization
5.1.1	Knowledge-intensive employment, %	n/a	2022	International Labour Organization
5.1.3	GERD performed by business, % GDP	n/a	2021	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
7.1.1	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

# Global Innovation Index 2023

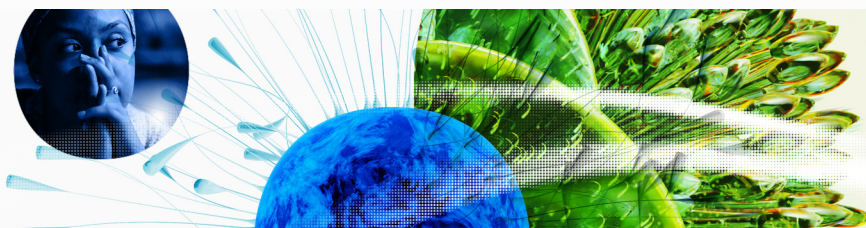


Code	Indicator name	Economy Year	Model Year	Source
7.2.2	National feature films/mn pop. 15-69	n/a	2021	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15-69	n/a	2022	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund
7.3.4	Mobile app creation/bn PPP\$ GDP	n/a	2022	data.ia; International Monetary Fund

## > Outdated data for Mauritania

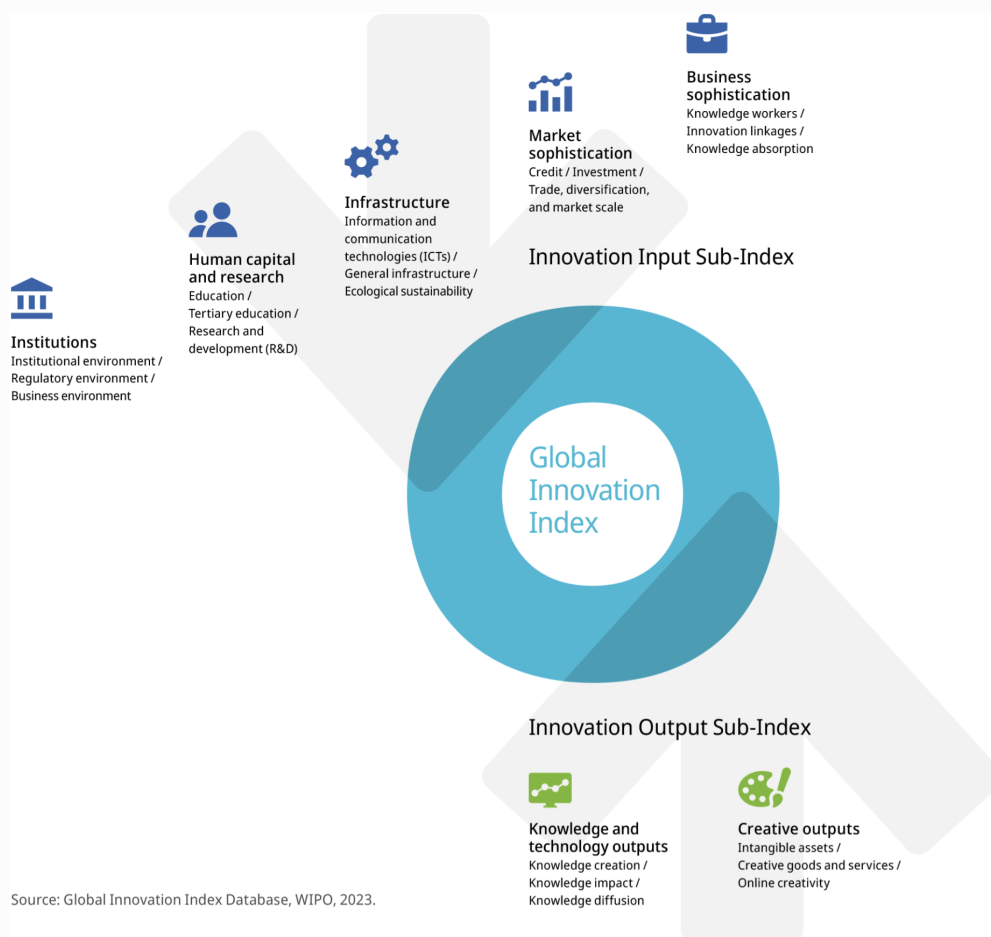
Code	Indicator name	Economy Year	Model Year	Source
1.3.1	Policies for doing business	2020	2022	World Economic Forum, Executive Opinion Survey (EOS)
2.1.5	Pupil-teacher ratio, secondary	2019	2020	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2018	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.1.2	Domestic credit to private sector, % GDP	2019	2020	International Monetary Fund; World Bank and OECD GDP estimates.
5.1.2	Firms offering formal training, %	2014	2019	World Bank Enterprise Surveys
5.1.4	GERD financed by business, %	2018	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2019	2022	International Labour Organization
5.2.1	University-industry R&D collaboration	2020	2022	World Economic Forum, Executive Opinion Survey (EOS)
5.2.2	State of cluster development	2020	2022	World Economic Forum, Executive Opinion Survey (EOS)
5.2.3	GERD financed by abroad, % GDP	2018	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

# 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.



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.