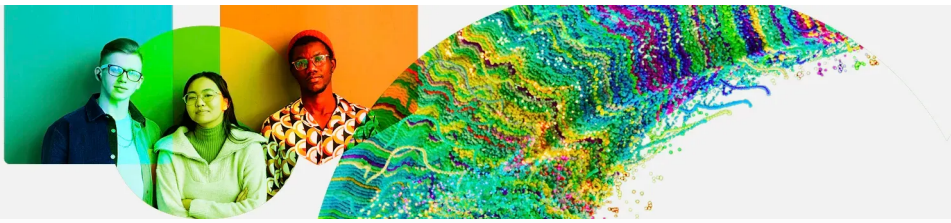
Global Innovation Index 2024



Niger ranking in the Global Innovation Index 2024

Niger ranks 132nd among the 133 economies featured in the GII 2024.

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.

Niger ranks 10th among the 10 low-income group economies.

Niger ranks 26th among the 27 economies in Sub-Saharan Africa.

Niger GII Ranking (2020-2024)

The table shows the rankings of Niger 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 Niger in the GII 2024 is between ranks 124 and 132.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	128th	124th	129th
2021	129th	125th	130th
2022	125th	119th	126th
2023	131st	124th	131st
2024	132nd	130th	130th

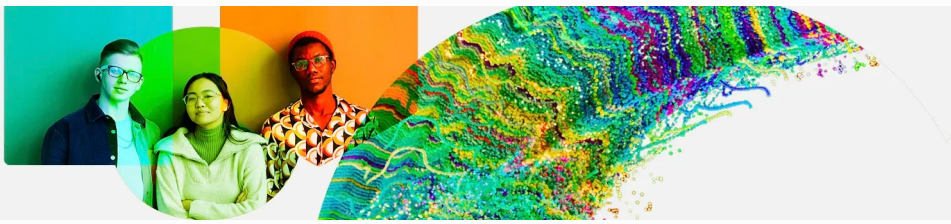
Niger performs the same in innovation outputs as in innovation inputs in 2024.

This year **Niger ranks 130th in innovation inputs.** This position is lower than last year.

Niger ranks 130th in innovation outputs. This position is higher than last year.

Niger has no clusters in the top 100 S&T clusters of the Global Innovation Index.

Global Innovation Index 2024



> Global Innovation Tracker

The Global Innovation Tracker 2024 shows what is the current state of innovation in Niger, how rapidly is technology being embraced and what are the resulting societal impacts.

For Niger, 2 indicators have improved in the short-term and 3 indicators have worsened.

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -5.7% 2022 - 2023	n/a	n/a	n/a	n/a
▲ 5.6% 2013 - 2023	n/a	n/a	n/a	n/a

Technology adoption

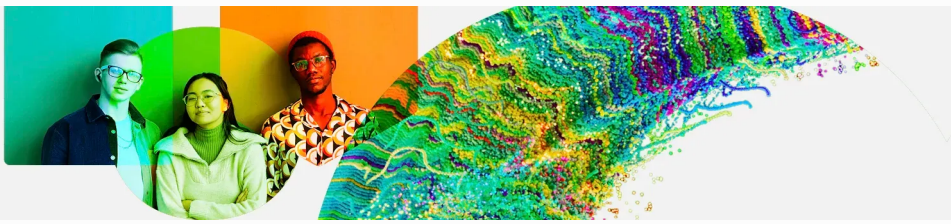
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 3.2% 2021 - 2022	▼ -3.6% 2020 - 2021	n/a	n/a	n/a
▲ 3.3% 2012 - 2022	▲ 14.5% 2011 - 2021		n/a	n/a
8.1 per 100 inhabitants in 2022	0.05 per 100 inhabitants in 2021	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
0% 2022 - 2023	▲ 0.8% 2021 - 2022	▲ 1.7°C 2023
▲ 2% 2013 - 2023	▲ 0.4% 2012 - 2022	n/a
4,192 USD in 2023	62.1 years in 2022	

Notes: Not all indicators of the Global Innovation Tracker are used to calculate the Global Innovation Index. Long-term annual growth refers to the compound annual growth rate (CAGR) over the indicated period. For each variable, a one-year growth rate is set for the short run, and ten-year CAGR is set for the long run; time windows might differ when gaps exist in data availability. The end period corresponds to the most recent available observation, which may differ among countries. Temperature change is an exception: it indicates the change in degrees Celsius with respect to the average temperature in the country from 1951–1980. Figures are rounded.

Global Innovation Index 2024



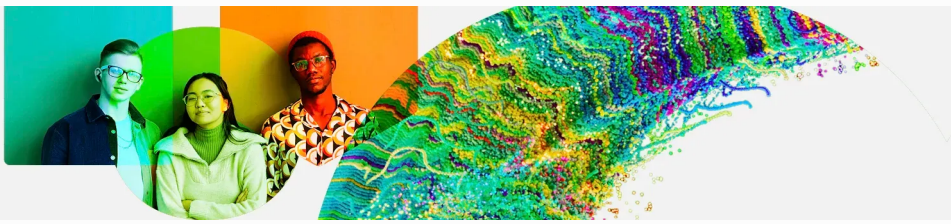
Expected vs. observed innovation performance

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, Niger's performance is below expectations for its level of development.

> Innovation overperformers relative to their economic development

Global Innovation Index 2024



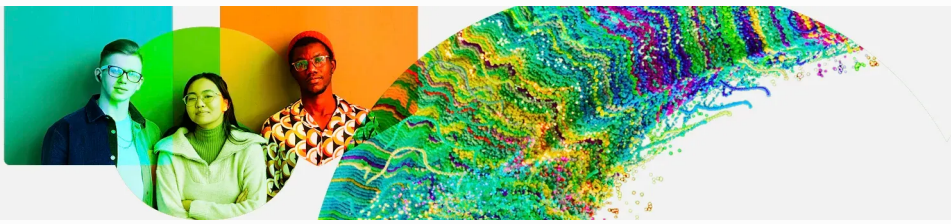
Effectively translating innovation investments into innovation outputs

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.

Niger produces less innovation outputs relative to its level of innovation investments.

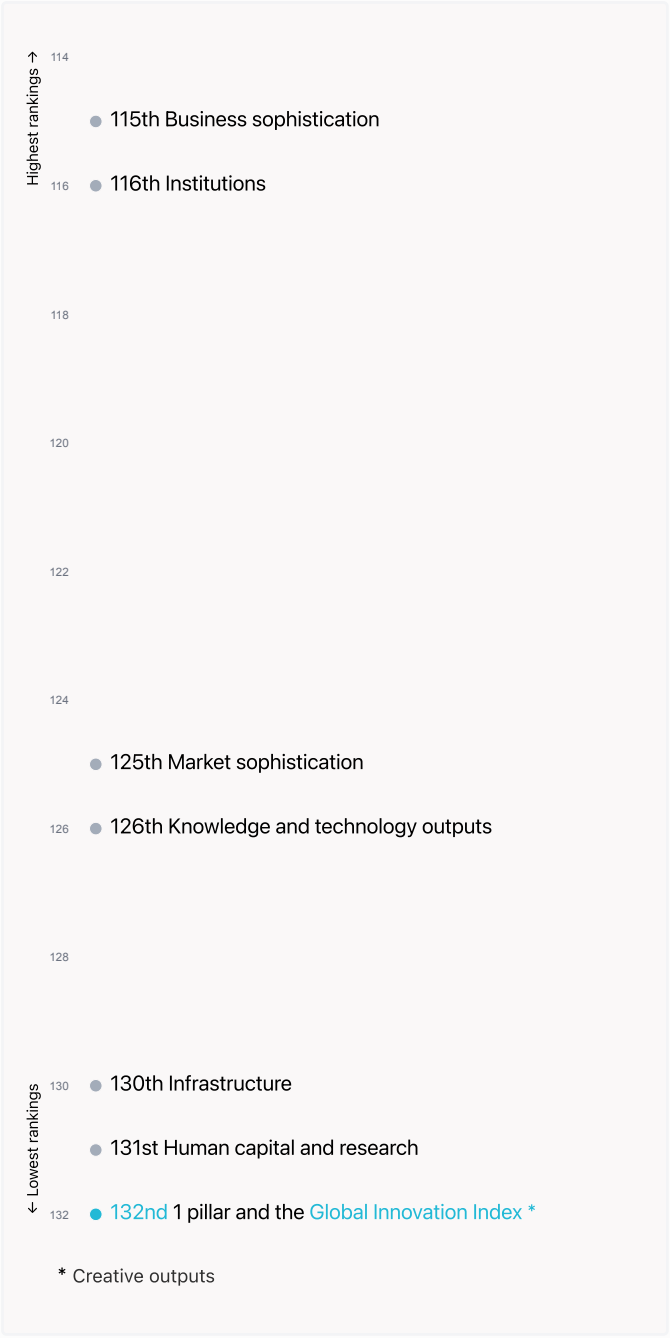
> Relationship between innovation inputs and outputs

Global Innovation Index 2024



Overview of Niger's rankings in the seven areas of the GII in 2024

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



Highest rankings

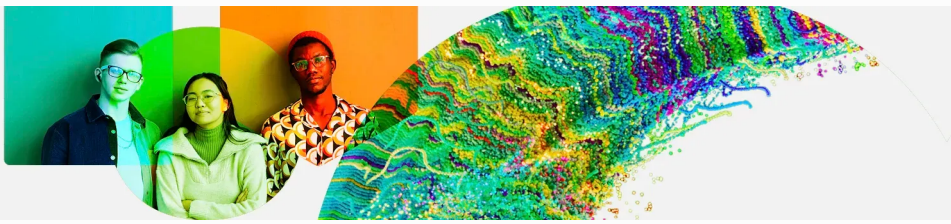
Niger ranks highest in Business sophistication (115th), Institutions (116th), Market sophistication (125th) and Knowledge and technology outputs (126th).

Lowest rankings

Niger ranks lowest in Creative outputs, GII Index (132nd), Human capital and research (131st) and Infrastructure (130th).

The full WIPO Intellectual Property Statistics profile for Niger can be found on this link.

Global Innovation Index 2024



Benchmark of Niger against other economy groupings for each of the seven areas of the GII Index

The charts shows the relative position of Niger (blue bar) against other economy groupings (grey bars), for each of the seven areas of the GII Index.

Low-Income economies

Niger performs above the low-income group average in Business sophistication.

Sub-Saharan Africa

Niger performs below the regional average in all pillars.

Institutions

- Top 10 | Score: 80.81
- Sub-Saharan Africa | Score: 37.83
- Low income | Score: 31.64
- Niger | Score: 26.53

Human capital and research

- Top 10 | Score: 61.30
- Sub-Saharan Africa | Score: 17.86
- Low income | Score: 15.48
- Niger | Score: 10.02

Infrastructure

- Top 10 | Score: 58.57
- Sub-Saharan Africa | Score: 25.40
- Low income | Score: 20.65
- Niger | Score: 17.90

Market sophistication

- Top 10 | Score: 62.12
- Sub-Saharan Africa | Score: 18.79
- Low income | Score: 15.81
- Niger | Score: 11.91

Business sophistication

- Top 10 | Score: 63.64
- Sub-Saharan Africa | Score: 18.73
- Niger | Score: 17.93
- Low income | Score: 15.07

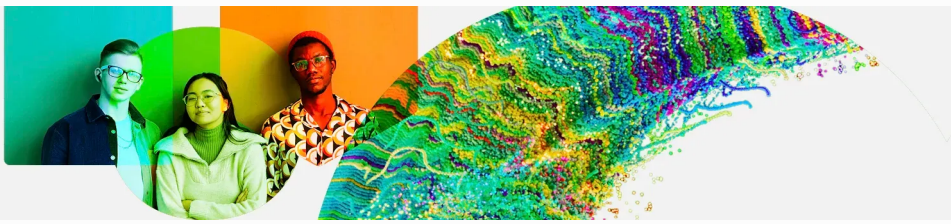
Knowledge and technology outputs

- Top 10 | Score: 57.29
- Sub-Saharan Africa | Score: 10.99
- Low income | Score: 10.02
- Niger | Score: 9.04

Creative outputs

- Top 10 | Score: 56.54
- Sub-Saharan Africa | Score: 10.35
- Low income | Score: 7.56
- Niger | Score: 2.18

Global Innovation Index 2024



Innovation strengths and weaknesses in Niger

The table below gives an overview of the indicator strengths and weaknesses of Niger in the GII 2024.

Niger's main innovation strengths are **High-tech imports, % total trade** (rank 7), **Gross capital formation, % GDP** (rank 23) and **FDI net inflows, % GDP** (rank 41).

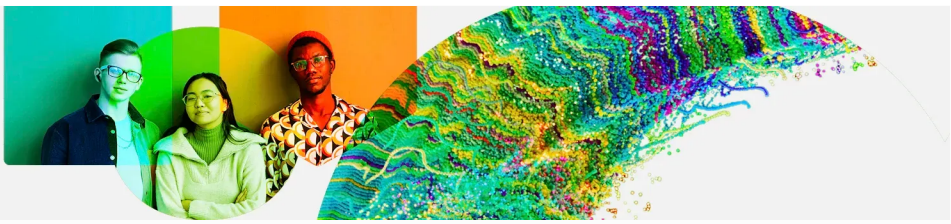
Strengths

Rank	Code	Indicator name
7	5.3.2	High-tech imports, % total trade
23	3.2.3	Gross capital formation, % GDP
41	5.3.4	FDI net inflows, % GDP
41	6.2.1	Labor productivity growth, %
47	7.2.1	Cultural and creative services exports, % total trade
48	6.3.4	ICT services exports, % total trade
49	2.2.3	Tertiary inbound mobility, %
59	4.2.3	VC recipients, deals/bn PPP$ GDP
60	5.3.3	ICT services imports, % total trade
67	2.1.1	Expenditure on education, % GDP

Weaknesses

Rank	Code	Indicator name
133	6.3.5	ISO 9001 quality/bn PPP$ GDP
133	5.2.1	Public Research-Industry co-publications, %
131	7.3.2	GitHub commits/mn pop. 15–69
128	2.2.1	Tertiary enrolment, % gross
128	7.1.2	Trademarks by origin/bn PPP$ GDP
126	3.2.1	Electricity output, GWh/mn pop.
126	7.1.4	Industrial designs by origin/bn PPP$ GDP
121	5.3.1	Intellectual property payments, % total trade
113	2.1.3	School life expectancy, years
102	5.2.5	Patent families/bn PPP$ GDP
99	6.1.2	PCT patents by origin/bn PPP$ GDP
75	2.3.4	QS university ranking, top 3*
74	6.1.3	Utility models by origin/bn PPP$ GDP
49	6.2.2	Unicorn valuation, % GDP
41	2.3.3	Global corporate R&D investors, top 3, mn USD

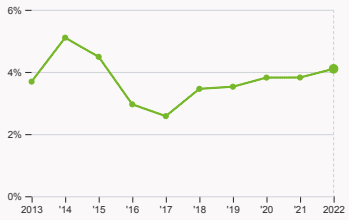
Global Innovation Index 2024



Niger's innovation system

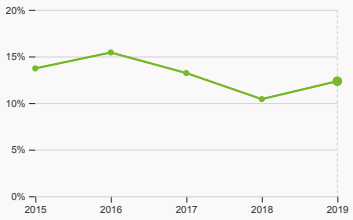
As far as practicable, the plots below present unscaled indicator data.

Innovation inputs in Niger



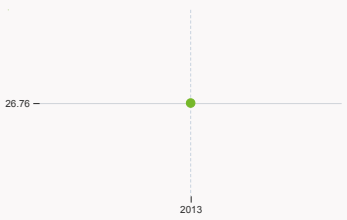
2.1.1 **Expenditure on education**

was equal to 4.1 % GDP in 2022, up by 0.28 percentage points from the year prior – and equivalent to an indicator rank of 67.



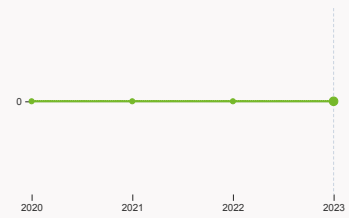
2.2.2 **Graduates in science and engineering**

was equal to 12.34 % of total graduates in 2019, up by 1.92 percentage points from the year prior – and equivalent to an indicator rank of 106.



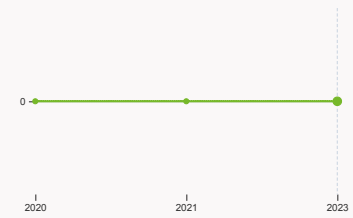
2.3.1 **Researchers**

was equal to 26.76 FTE per million population in 2013 – and equivalent to an indicator rank of NA.



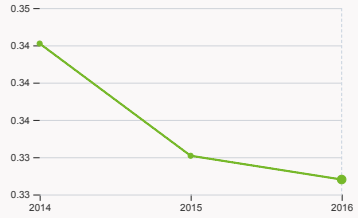
2.3.4 **QS university ranking**

was equal to an average score of 0 for the top three universities in 2023 with no change from the year prior – and equivalent to an indicator rank of 75.



4.2.4 **VC received, value**

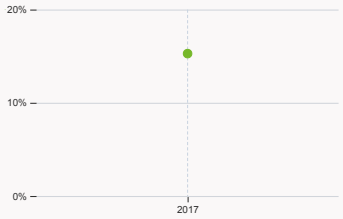
was equal to 0 USD in 2023 with no change from the year prior – and equivalent to an indicator rank of 102.



4.3.2 **Domestic industry diversification**

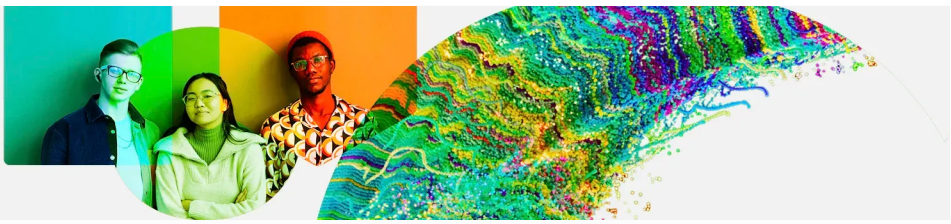
was equal to an index score of 0.33 in 2016, down by 0.96% from the year prior – and equivalent to an indicator rank of 103.

Global Innovation Index 2024



5.1.1 **Knowledge-intensive employment**
was equal to 15.27 % in 2017 – and equivalent to an indicator rank of 90.

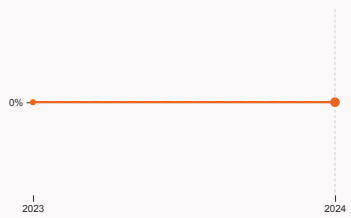
Global Innovation Index 2024



Innovation outputs in Niger

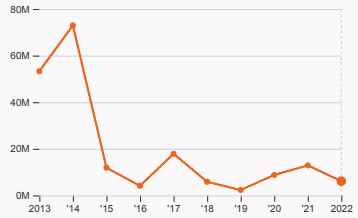
6.1.1 Patents by origin

was equal to 5 patents in 2022, up by 25% from the year prior – and equivalent to an indicator rank of 107.



6.2.2 Unicorn valuation

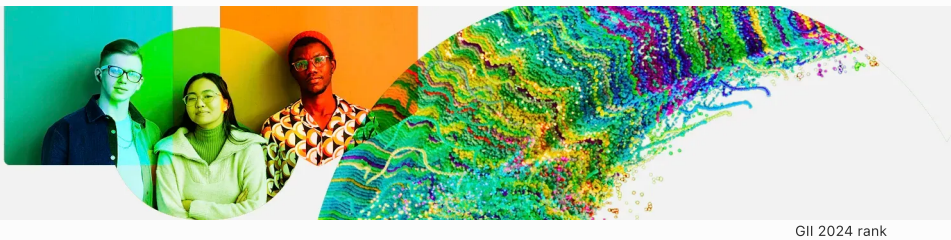
was equal to 0 % GDP in 2024 with no change from the year prior – and equivalent to an indicator rank of 49.



6.3.3 High-tech exports

was equal to 6.11 million USD in 2022, down by 52.56% from the year prior – and equivalent to an indicator rank of 109.

Global Innovation Index 2024



Niger

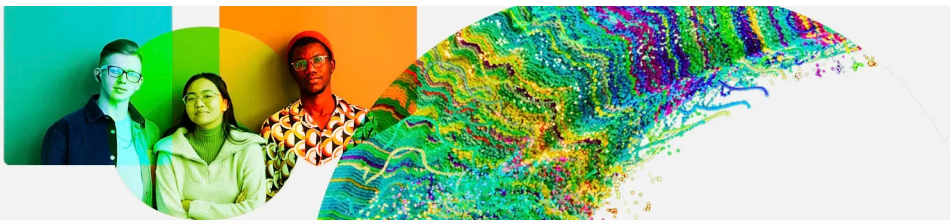
GII 2024 rank **132**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
130	130	Low	SSA	26.2	42.7	1,579

	Score / Value	Rank	
Institutions	**26.5**	**116**	
1.1 Institutional environment	**26.6**	**120**	
1.1.1 Operational stability for businesses*	26	124	
1.1.2 Government effectiveness*	27.3	107	
1.2 Regulatory environment	**26.4**	**104**	
1.2.1 Regulatory quality*	22.9	113	
1.2.2 Rule of law*	29.9	94	
1.3 Business environment	**n/a**	**[n/a]**	
1.3.1 Policy stability for doing business†	n/a	n/a	
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	**10**	**131**	◇
2.1 Education	**21.8**	**130**	◇
2.1.1 Expenditure on education, % GDP	4.1	67	●◆
2.1.2 Government funding/pupil, secondary, % GDP/cap	11.8	84	◇
2.1.3 School life expectancy, years	6.7	113	○◇
2.1.4 PISA scales in reading, maths and science	n/a	n/a	
2.1.5 Pupil–teacher ratio, secondary	29.7	120	
2.2 Tertiary education	**8.3**	**113**	
2.2.1 Tertiary enrolment, % gross	4.3	128	○◇
2.2.2 Graduates in science and engineering, %	12.3	106	◇
2.2.3 Tertiary inbound mobility, %	5.4	49	●◆
2.3 Research and development (R&D)	**0**	**[120]**	
2.3.1 Researchers, FTE/mn pop.	n/a	n/a	
2.3.2 Gross expenditure on R&D, % GDP	n/a	n/a	
2.3.3 Global corporate R&D investors, top 3, mn USD	0	41	○◇
2.3.4 QS university ranking, top 3*	0	75	○◇
Infrastructure	**17.9**	**130**	
3.1 Information and communication technologies (ICTs)	**22.2**	**127**	
3.1.1 ICT access*	10.7	128	
3.1.2 ICT use*	n/a	n/a	
3.1.3 Government's online service*	32.6	119	
3.1.4 E-participation*	23.3	116	
3.2 General infrastructure	**25.5**	**84**	
3.2.1 Electricity output, GWh/mn pop.	28.5	126	○◇
3.2.2 Logistics performance*	n/a	n/a	
3.2.3 Gross capital formation, % GDP	30.4	23	●◆
3.3 Ecological sustainability	**6**	**125**	
3.3.1 GDP/unit of energy use	8.2	88	◆
3.3.2 Low-carbon energy use, %	2.1	118	◇
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.08	131	◇
Market sophistication	**11.9**	**125**	
4.1 Credit	**1.9**	**132**	◇
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	12.6	126	◇
4.1.3 Loans from microfinance institutions, % GDP	0.2	52	
4.2 Investment	**5.7**	**[74]**	
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	0.04	59	●◆
4.2.4 VC received, value, % GDP	0.00001	102	
4.3 Trade, diversification and market scale	**28.1**	**116**	
4.3.1 Applied tariff rate, weighted avg., %	7.9	119	
4.3.2 Domestic industry diversification	45.8	103	
4.3.3 Domestic market scale, bn PPP$	42.7	119	

	Score / Value	Rank	
Business sophistication	**17.9**	**[115]**	
5.1 Knowledge workers	**18.2**	**[107]**	
5.1.1 Knowledge-intensive employment, %	15.3	90	◆
5.1.2 Firms offering formal training, %	27.5	59	
5.1.3 GERD performed by business, % GDP	n/a	n/a	
5.1.4 GERD financed by business, %	n/a	n/a	
5.1.5 Females employed w/advanced degrees, %	0.2	126	◇
5.2 Innovation linkages	**1.1**	**[133]**	
5.2.1 Public Research-Industry co-publications, %	0.1	133	○◇
5.2.2 University-industry R&D collaboration†	n/a	n/a	
5.2.3 State of cluster development†	n/a	n/a	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.008	91	
5.2.5 Patent families/bn PPP$ GDP	0	102	○◇
5.3 Knowledge absorption	**34.5**	**43**	●◆
5.3.1 Intellectual property payments, % total trade	0	121	○◇
5.3.2 High-tech imports, % total trade	21.9	7	●◆
5.3.3 ICT services imports, % total trade	1.4	60	●◆
5.3.4 FDI net inflows, % GDP	3.5	41	●◆
5.3.5 Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs	**9**	**126**	
6.1 Knowledge creation	**2.4**	**124**	◇
6.1.1 Patents by origin/bn PPP$ GDP	0.1	107	
6.1.2 PCT patents by origin/bn PPP$ GDP	0	99	○◇
6.1.3 Utility models by origin/bn PPP$ GDP	0	74	○◇
6.1.4 Scientific and technical articles/bn PPP$ GDP	3.5	113	◇
6.1.5 Citable documents H-index	3.1	120	
6.2 Knowledge impact	**19.2**	**106**	
6.2.1 Labor productivity growth, %	1.5	41	●◆
6.2.2 Unicorn valuation, % GDP	0	49	○◇
6.2.3 Software spending, % GDP	0.02	122	
6.2.4 High-tech manufacturing, %	n/a	n/a	
6.3 Knowledge diffusion	**5.5**	**117**	
6.3.1 Intellectual property receipts, % total trade	0.0005	111	
6.3.2 Production and export complexity	n/a	n/a	
6.3.3 High-tech exports, % total trade	0.2	109	
6.3.4 ICT services exports, % total trade	2.6	48	●◆
6.3.5 ISO 9001 quality/bn PPP$ GDP	0.1	133	○◇
Creative outputs	**2.2**	**[132]**	
7.1 Intangible assets	**0**	**[132]**	
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	1.2	128	○◇
7.1.3 Global brand value, top 5,000, % GDP	n/a	n/a	
7.1.4 Industrial designs by origin/bn PPP$ GDP	0	126	○◇
7.2 Creative goods and services	**8.5**	**[79]**	
7.2.1 Cultural and creative services exports, % total trade	0.6	47	●◆
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	0.004	129	
7.3 Online creativity	**0.2**	**132**	◇
7.3.1 Top-level domains (TLDs)/th pop. 15–69	0.3	112	◆
7.3.2 GitHub commits/mn pop. 15–69	0	131	○◇
7.3.3 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, 🕒 that the economy's data is outdated. Square brackets [ ] indicate the the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level; n/a represents missing values; a dash - indicates an indicator which is not relevant to this economy and thus not considered for DMC thresholds.



Data availability

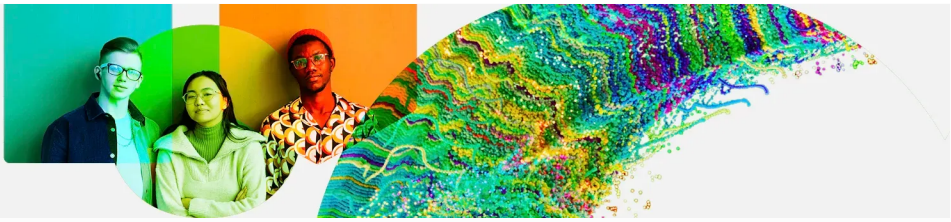
The following tables list indicators that are either missing or outdated for Niger.

Niger has missing data for twenty two indicators and outdated data for twelve indicators.

Missing data for Niger

Code	Indicator name	Economy Year	Model Year	Source
1.3.1	Policy stability for doing business†	n/a	2023	World Economic Forum, Executive Opinion Survey (EOS)
1.3.2	Entrepreneurship policies and culture†	n/a	2023	Global Entrepreneurship Monitor
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
2.3.1	Researchers, FTE/mn pop.	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.1.2	ICT use*	n/a	2022	World Intellectual Property Organization; International Telecommunication Union ITU DataHub (accessed May 1st, 2024)
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 The Logistics Performance Index and its Indicators.
4.1.1	Finance for startups and scaleups†	n/a	2023	Global Entrepreneurship Monitor
4.2.1	Market capitalization, % GDP	n/a	2022	World Federation of Exchanges; World Bank
4.2.2	Venture capital (VC) investors, deals/bn PPP$ GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
5.1.3	GERD performed by business, % GDP	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.4	GERD financed by business, %	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.2.2	University-industry R&D collaboration†	n/a	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.2.3	State of cluster development†	n/a	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.3.5	Research talent, % in businesses	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

Global Innovation Index 2024

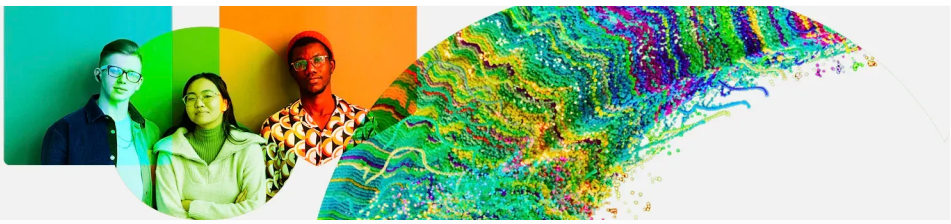


Code	Indicator name	Economy Year	Model Year	Source
6.2.4	High-tech manufacturing, %	n/a	2021	United Nations Industrial Development Organization
6.3.2	Production and export complexity	n/a	2021	Harvard University, Growth Lab
7.1.1	Intangible asset intensity, top 15, %	n/a	2023	Brand Finance
7.1.3	Global brand value, top 5,000, % GDP	n/a	2024	Brand Finance; International Monetary Fund
7.2.2	National feature films/mn pop. 15–69	n/a	2022	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2023	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund
7.3.3	Mobile app creation/bn PPP$ GDP	n/a	2023	data.ia (a Sensor Tower Company); International Monetary Fund

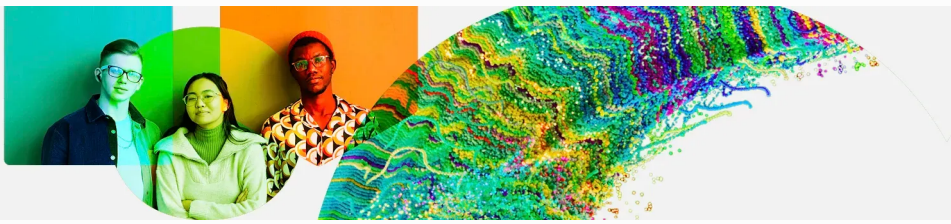
Outdated data for Niger

Code	Indicator name	Economy Year	Model Year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	2017	2020	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2017	2022	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2017	2022	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2020	2022	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2019	2021	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	2019	2022	UNESCO Institute for Statistics
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency
4.3.2	Domestic industry diversification	2016	2021	United Nations Industrial Development Organization (UNIDO), Industrial Statistics Database (INDSTAT) Rev.3 and 4
5.1.1	Knowledge-intensive employment, %	2017	2022	International Labour Organization
5.1.2	Firms offering formal training, %	2017	2023	World Bank Enterprise Surveys
5.1.5	Females employed w/advanced degrees, %	2019	2023	International Labour Organization
6.1.3	Utility models by origin/bn PPP$ GDP	2021	2022	World Intellectual Property Organization; International Monetary Fund

Global Innovation Index 2024



Global Innovation Index 2024



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, 2024.

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.