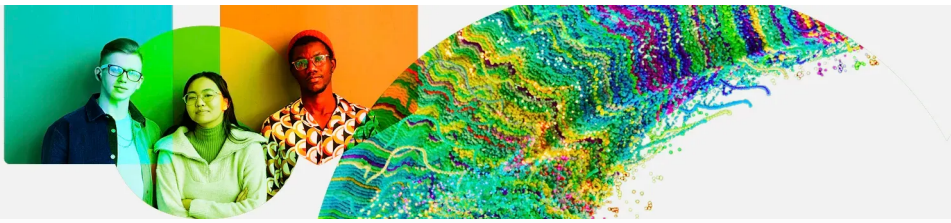
Global Innovation Index 2024



Nigeria ranking in the Global Innovation Index 2024

Nigeria ranks 113rd 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.

Nigeria ranks 27th among the 38 lower-middle-income group economies.

Nigeria ranks 12th among the 27 economies in Sub-Saharan Africa.

Nigeria GII Ranking (2020-2024)

The table shows the rankings of Nigeria 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 Nigeria in the GII 2024 is between ranks 106 and 123.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	117th	115th	121st
2021	118th	115th	124th
2022	114th	113rd	107th
2023	109th	116th	98th
2024	113rd	121st	98th

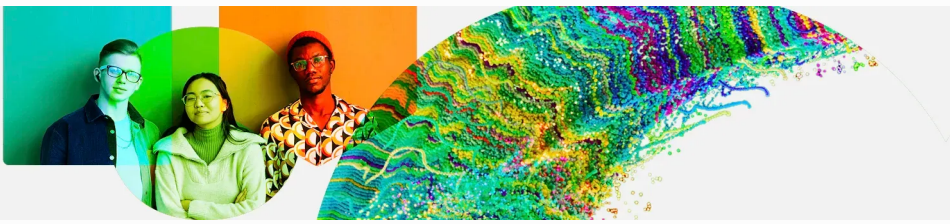
Nigeria performs better in innovation outputs than innovation inputs in 2024.

This year **Nigeria ranks 121st in innovation inputs.** This position is lower than last year.

Nigeria ranks 98th in innovation outputs. This position is the same as last year.

Nigeria 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 Nigeria, how rapidly is technology being embraced and what are the resulting societal impacts.

For Nigeria, 2 indicators have improved in the short-term and 5 indicators have worsened.

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -7.7% 2022 - 2023	n/a	▼ -35.1% 2022 - 2023	▼ -29.3% 2022 - 2023	0% 2022 - 2023
▲ 12.5% 2013 - 2023	▲ 11.1% 2007 - 2019	▲ 30.9% 2013 - 2023	▲ 6% 2013 - 2023	▼ -5.4% 2013 - 2023

Technology adoption

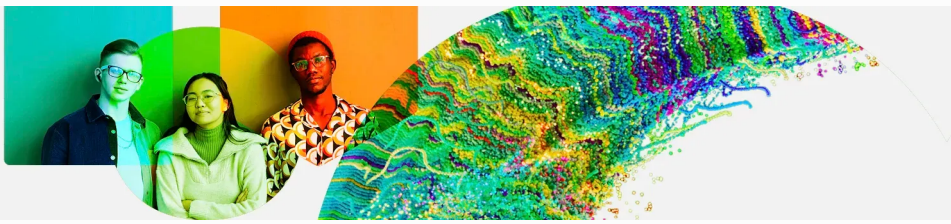
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 2.2% 2021 - 2022	n/a	n/a	n/a	n/a
▲ 2.2% 2012 - 2022	▲ 36.5% 2012 - 2022		n/a	n/a
32 per 100 inhabitants in 2022	0.2 per 100 inhabitants in 2022	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▼ -0.5% 2022 - 2023	▲ 1.8% 2021 - 2022	▲ 1.4°C 2023
▼ -1.8% 2013 - 2023	▲ 0.4% 2012 - 2022	n/a
16,341 USD in 2023	53.6 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



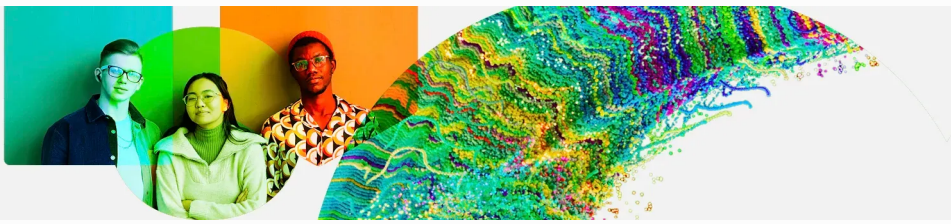
Expected vs. observed innovation performance

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, Nigeria's performance is at expectations for its level of development.

> Innovation overperformers relative to their economic development

Global Innovation Index 2024



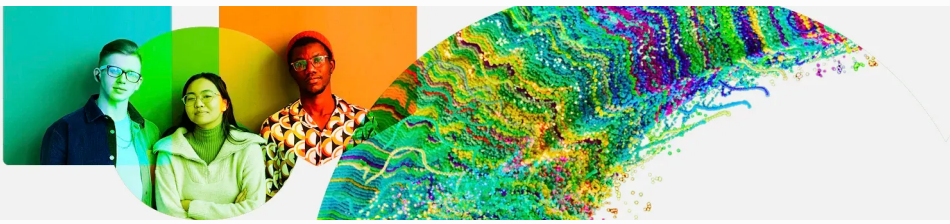
Effectively translating innovation investments into innovation outputs

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.

Nigeria produces more innovation outputs relative to its level of innovation investments.

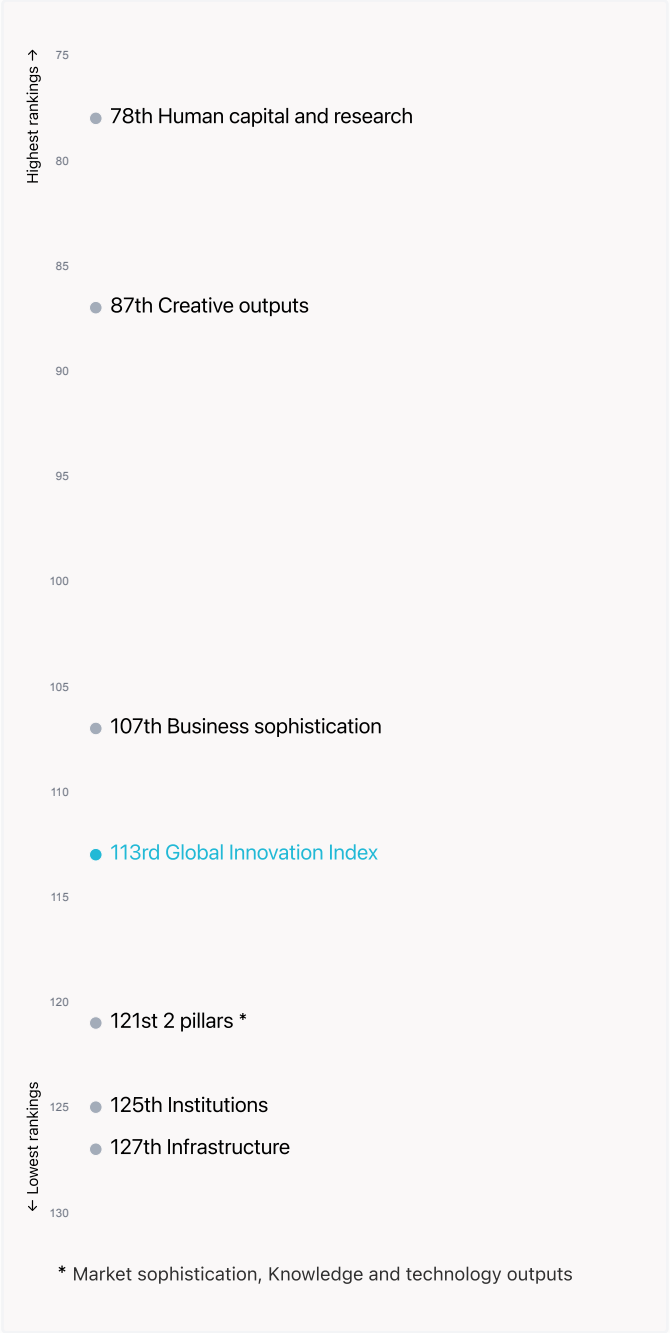
> Relationship between innovation inputs and outputs

Global Innovation Index 2024



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



Highest rankings

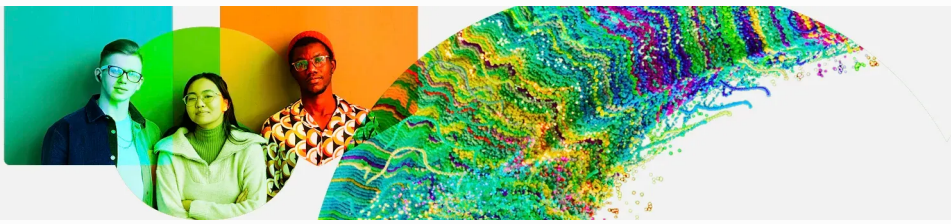
Nigeria ranks highest in Human capital and research (78th), Creative outputs (87th) and Business sophistication (107th).

Lowest rankings

Nigeria ranks lowest in Infrastructure (127th), Institutions (125th) and Market sophistication, Knowledge and technology outputs (121st).

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

Global Innovation Index 2024



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

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

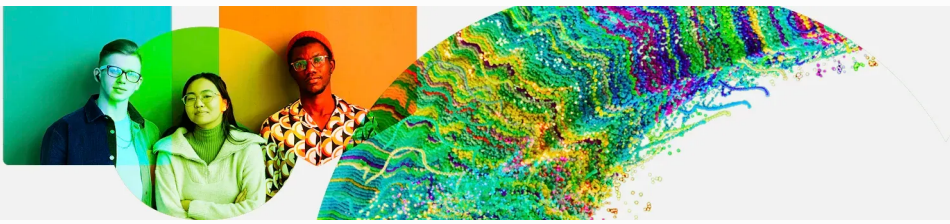
Lower-Middle-Income economies

Nigeria performs above the lower-middle-income group average in Human capital and research, Creative outputs.

Sub-Saharan Africa

Nigeria performs above the regional average in Human capital and research, Business sophistication, Creative outputs.

Global Innovation Index 2024



Innovation strengths and weaknesses in Nigeria

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

Nigeria's main innovation strengths are **Domestic market scale, bn PPP$** (rank 26), **Unicorn valuation, % GDP** (rank 38) and **VC recipients, deals/bn PPP$ GDP** (rank 42).

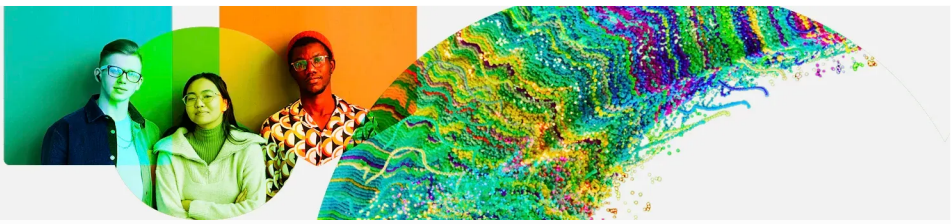
Strengths

Rank	Code	Indicator name
26	4.3.3	Domestic market scale, bn PPP$
38	6.2.2	Unicorn valuation, % GDP
42	4.2.3	VC recipients, deals/bn PPP$ GDP
45	7.1.1	Intangible asset intensity, top 15, %
46	4.2.4	VC received, value, % GDP
55	5.1.1	Knowledge-intensive employment, %
61	7.1.3	Global brand value, top 5,000, % GDP
61	6.1.5	Citable documents H-index
61	7.1.4	Industrial designs by origin/bn PPP$ GDP

Weaknesses

Rank	Code	Indicator name
131	7.2.4	Creative goods exports, % total trade
127	1.1.1	Operational stability for businesses*
127	1.2.1	Regulatory quality*
127	3.3.3	ISO 14001 environment/bn PPP$ GDP
119	6.3.2	Production and export complexity
116	6.3.1	Intellectual property receipts, % total trade
106	2.3.1	Researchers, FTE/mn pop.
102	5.2.5	Patent families/bn PPP$ GDP
75	2.3.4	QS university ranking, top 3*
41	2.3.3	Global corporate R&D investors, top 3, mn USD

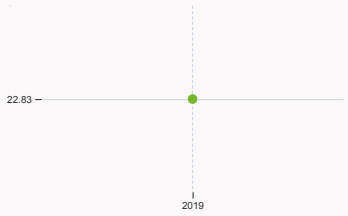
Global Innovation Index 2024



Nigeria's innovation system

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

Innovation inputs in Nigeria

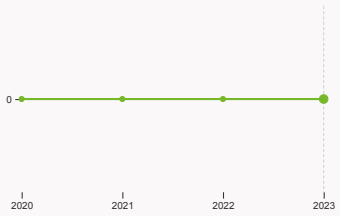


2.3.1 **Researchers**

was equal to 22.83 FTE per million population in 2019 – and equivalent to an indicator rank of 106.

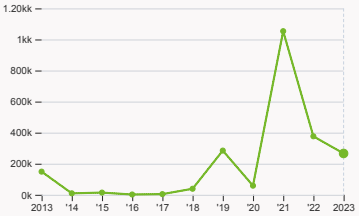
2.3.2 **Gross expenditure on R&D**

was equal to 0.28 % GDP in 2019 – and equivalent to an indicator rank of 74.



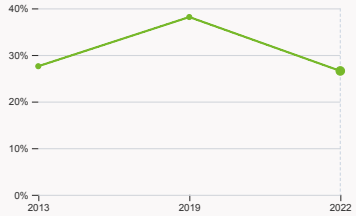
2.3.4 **QS university ranking**

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**

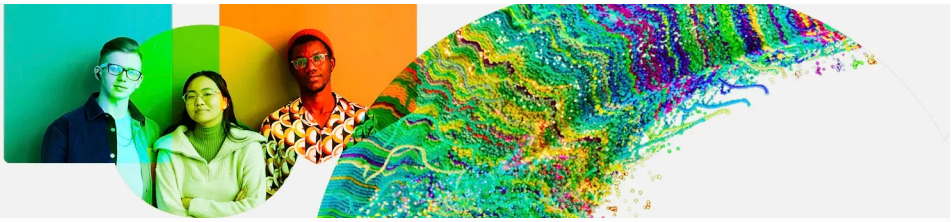
was equal to 266.09 thousand USD in 2023, down by 29.33% from the year prior – and equivalent to an indicator rank of 46.



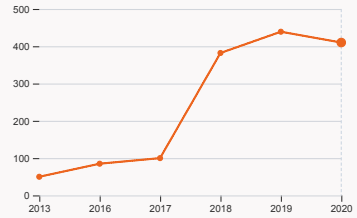
5.1.1 **Knowledge-intensive employment**

was equal to 26.58 % in 2022, down by 11.56 percentage points from the year prior – and equivalent to an indicator rank of 55.

Global Innovation Index 2024

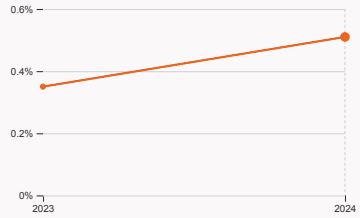


Innovation outputs in Nigeria



6.1.1 Patents by origin

was equal to 410 patents in 2020, down by 6.61% from the year prior – and equivalent to an indicator rank of 83.



6.2.2 Unicorn valuation

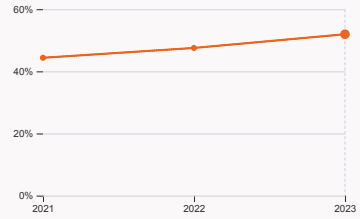
was equal to 0.51 % GDP in 2024, up by 0.16 percentage points from the year prior – and equivalent to an indicator rank of 38.

6.3.2 Production and export complexity

was equal to a score of -1.62 in 2021, up by 3.57% from the year prior – and equivalent to an indicator rank of 119.

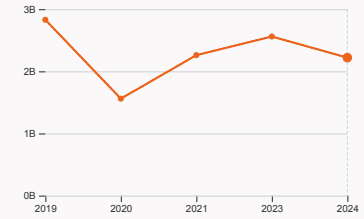
6.3.3 High-tech exports

was equal to 76.75 million USD in 2022, down by 60.82% from the year prior – and equivalent to an indicator rank of 119.



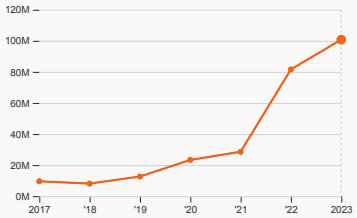
7.1.1 Intangible asset intensity

was equal to 51.93 % for the top 15 companies in 2023, up by 4.41 percentage points from the year prior – and equivalent to an indicator rank of 45.



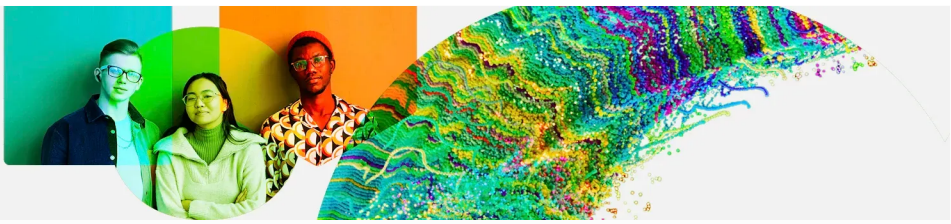
7.1.3 Global brand value

was equal to 2.22 billion USD for the brands in the top 5,000 in 2024, down by 13.28% from the year prior – and equivalent to an indicator rank of 61.



7.3.3 Mobile app creation

was equal to 100.73 million global downloads of mobile apps in 2023, up by 23.46% from the year prior – and equivalent to an indicator rank of 83.



Nigeria's innovation top performers

Data not available.

6.2.2 Top Unicorn Companies in Nigeria

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	OPAY	Financial Services	Lagos	2

Source: CBInsights, Tracker – The Complete List of Unicorn Companies: https://www.cbinsights.com/research-unicorn-companies

7.1.1 Top 15 intangible-asset intensive companies in Nigeria

Rank	Firm	Intensity, %
1	BUA FOODS PLC	85.93
2	BUA CEMENT PLC	77.25
3	TRANSNATIONAL CORPORATION OF NIGERIA PLC	33.96

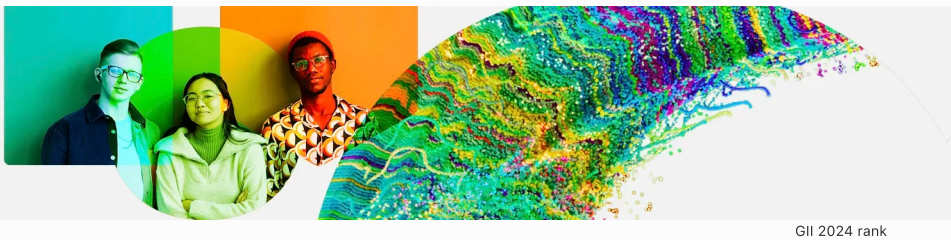
Source: Brand Finance (https://brandirectory.com/reports/gift-2022).
Note: Brand Finance only provides within economy ranks.

7.1.3 Top 5,000 companies in Nigeria with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	ACCESS BANK	Banking	474.7
2	DANGOTE CEMENT	Engineering	432.9
3	FLOUR MILLS NIGERIA	Food	432.8

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

Global Innovation Index 2024



Nigeria

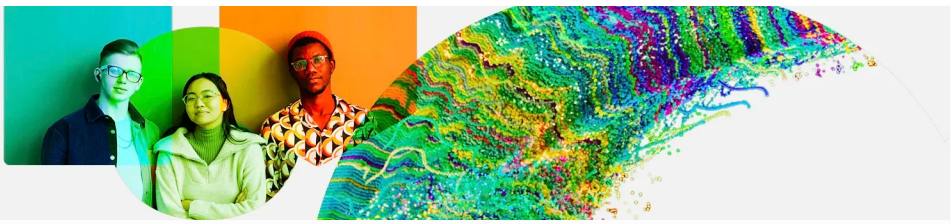
GII 2024 rank **113**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
98	121	Lower middle	SSA	227.9	1,365.9	6,147.7

	Score / Value	Rank	
Institutions	**21.1**	**125**	◇
1.1 Institutional environment	**19.5**	**129**	○ ◇
1.1.1 Operational stability for businesses*	22	127	○ ◇
1.1.2 Government effectiveness*	16.9	125	◇
1.2 Regulatory environment	**14.6**	**123**	
1.2.1 Regulatory quality*	11.5	127	○ ◇
1.2.2 Rule of law*	17.6	114	
1.3 Business environment	**29.3**	**[99]**	
1.3.1 Policy stability for doing business†	29.3	103	
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	**27.3**	**[78]**	
2.1 Education	**75.6**	**[1]**	
2.1.1 Expenditure on education, % GDP	n/a	n/a	
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3 School life expectancy, years	n/a	n/a	
2.1.4 PISA scales in reading, maths and science	n/a	n/a	
2.1.5 Pupil–teacher ratio, secondary	15.3	81	
2.2 Tertiary education	**5.2**	**[122]**	
2.2.1 Tertiary enrolment, % gross	11.8	113	
2.2.2 Graduates in science and engineering, %	n/a	n/a	
2.2.3 Tertiary inbound mobility, %	n/a	n/a	
2.3 Research and development (R&D)	**1.2**	**99**	
2.3.1 Researchers, FTE/mn pop.	22.8	106	○
2.3.2 Gross expenditure on R&D, % GDP	0.3	74	
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	**19.7**	**127**	○ ◇
3.1 Information and communication technologies (ICTs)	**36.7**	**115**	
3.1.1 ICT access*	43.8	113	
3.1.2 ICT use*	26.6	115	◇
3.1.3 Government's online service*	47.5	96	
3.1.4 E-participation*	29.1	106	
3.2 General infrastructure	**16.5**	**110**	
3.2.1 Electricity output, GWh/mn pop.	168.9	118	
3.2.2 Logistics performance*	22.7	82	
3.2.3 Gross capital formation, % GDP	22.4	83	
3.3 Ecological sustainability	**5.9**	**126**	◇
3.3.1 GDP/unit of energy use	6.3	106	
3.3.2 Low-carbon energy use, %	5.7	102	
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.1	127	○
Market sophistication	**15.2**	**121**	
4.1 Credit	**3.8**	**128**	○
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	14.1	124	
4.1.3 Loans from microfinance institutions, % GDP	0.5	41	
4.2 Investment	**11.6**	**55**	● ◆
4.2.1 Market capitalization, % GDP	22	58	
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.06	60	
4.2.3 VC recipients, deals/bn PPP$ GDP	0.07	42	● ◆
4.2.4 VC received, value, % GDP	0.001	46	● ◆
4.3 Trade, diversification and market scale	**30.3**	**114**	
4.3.1 Applied tariff rate, weighted avg., %	8.4	122	
4.3.2 Domestic industry diversification	n/a	n/a	
4.3.3 Domestic market scale, bn PPP$	1,365.9	26	● ◆

	Score / Value	Rank	
Business sophistication	**19.5**	**107**	
5.1 Knowledge workers	**28.6**	**[77]**	
5.1.1 Knowledge-intensive employment, %	26.6	55	● ◆
5.1.2 Firms offering formal training, %	30.7	56	
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, %	2.7	107	
5.2 Innovation linkages	**12.2**	**118**	
5.2.1 Public Research-Industry co-publications, %	1	86	
5.2.2 University-industry R&D collaboration†	15	123	◇
5.2.3 State of cluster development†	32.6	98	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.009	89	
5.2.5 Patent families/bn PPP$ GDP	0	102	○ ◇
5.3 Knowledge absorption	**17.9**	**103**	
5.3.1 Intellectual property payments, % total trade	0.4	75	
5.3.2 High-tech imports, % total trade	5.3	108	
5.3.3 ICT services imports, % total trade	0.8	96	
5.3.4 FDI net inflows, % GDP	0.4	109	
5.3.5 Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs	**9.5**	**121**	
6.1 Knowledge creation	**7.3**	**99**	
6.1.1 Patents by origin/bn PPP$ GDP	0.4	83	
6.1.2 PCT patents by origin/bn PPP$ GDP	0.003	98	
6.1.3 Utility models by origin/bn PPP$ GDP	-	-	
6.1.4 Scientific and technical articles/bn PPP$ GDP	4.3	109	
6.1.5 Citable documents H-index	13.6	61	● ◆
6.2 Knowledge impact	**19.8**	**103**	
6.2.1 Labor productivity growth, %	-1.2	121	
6.2.2 Unicorn valuation, % GDP	0.5	38	● ◆
6.2.3 Software spending, % GDP	0.1	84	
6.2.4 High-tech manufacturing, %	n/a	n/a	
6.3 Knowledge diffusion	**1.3**	**132**	○ ◇
6.3.1 Intellectual property receipts, % total trade	0	116	○ ◇
6.3.2 Production and export complexity	2.4	119	○ ◇
6.3.3 High-tech exports, % total trade	0.1	119	
6.3.4 ICT services exports, % total trade	0.4	110	
6.3.5 ISO 9001 quality/bn PPP$ GDP	0.6	122	
Creative outputs	**17.8**	**87**	
7.1 Intangible assets	**24.4**	**73**	● ◆
7.1.1 Intangible asset intensity, top 15, %	51.9	45	● ◆
7.1.2 Trademarks by origin/bn PPP$ GDP	10.5	109	
7.1.3 Global brand value, top 5,000, % GDP	0.6	61	● ◆
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.9	61	● ◆
7.2 Creative goods and services	**0.6**	**[125]**	
7.2.1 Cultural and creative services exports, % total trade	n/a	n/a	
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	1.1	58	
7.2.4 Creative goods exports, % total trade	0.001	131	○
7.3 Online creativity	**21.8**	**92**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	0.4	109	
7.3.2 GitHub commits/mn pop. 15–69	4.2	88	
7.3.3 Mobile app creation/bn PPP$ GDP	60.8	83	

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

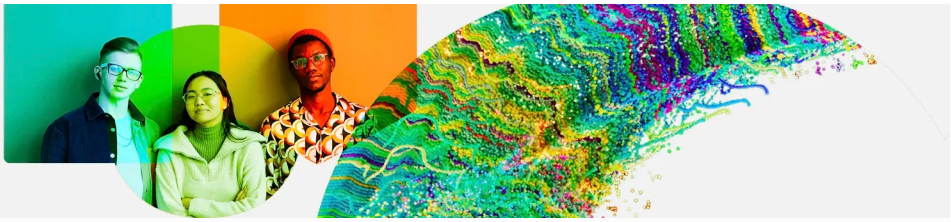
The following tables list indicators that are either missing or outdated for Nigeria.

Nigeria has missing data for sixteen indicators and outdated data for ten indicators.

Missing data for Nigeria

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture†	n/a	2023	Global Entrepreneurship Monitor
2.1.1	Expenditure on education, % GDP	n/a	2022	UNESCO Institute for Statistics
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2020	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	n/a	2022	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
2.2.2	Graduates in science and engineering, %	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	n/a	2022	UNESCO Institute for Statistics
4.1.1	Finance for startups and scaleups†	n/a	2023	Global Entrepreneurship Monitor
4.3.2	Domestic industry diversification	n/a	2021	United Nations Industrial Development Organization (UNIDO), Industrial Statistics Database (INDSTAT) Rev.3 and 4
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
5.3.5	Research talent, % in businesses	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	2022	World Intellectual Property Organization; International Monetary Fund
6.2.4	High-tech manufacturing, %	n/a	2021	United Nations Industrial Development Organization
7.2.1	Cultural and creative services exports, % total trade	n/a	2022	World Trade Organization Global Services Trade Data Hub
7.2.2	National feature films/mn pop. 15–69	n/a	2022	OMDIA; United Nations, World Population Prospects

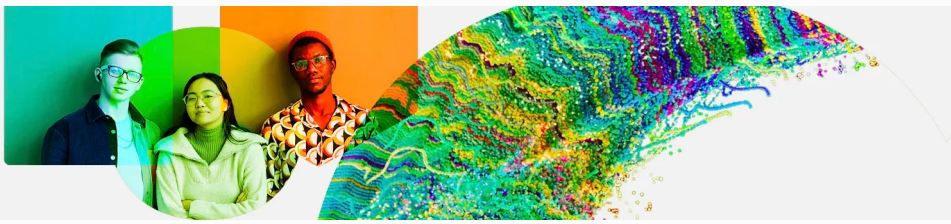
Global Innovation Index 2024



Outdated data for Nigeria

Code	Indicator name	Economy Year	Model Year	Source
2.1.5	Pupil–teacher ratio, secondary	2021	2022	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2018	2022	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2019	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2019	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency
5.1.2	Firms offering formal training, %	2014	2023	World Bank Enterprise Surveys
5.1.5	Females employed w/advanced degrees, %	2022	2023	International Labour Organization
6.1.1	Patents by origin/bn PPP$ GDP	2020	2022	World Intellectual Property Organization; International Monetary Fund
7.1.2	Trademarks by origin/bn PPP$ GDP	2019	2022	World Intellectual Property Organization; International Monetary Fund
7.1.4	Industrial designs by origin/bn PPP$ GDP	2020	2022	World Intellectual Property Organization; International Monetary Fund

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.