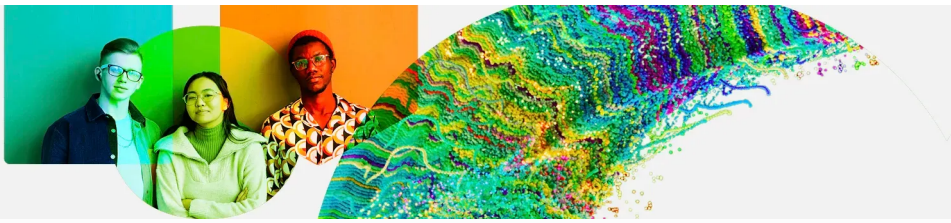
Global Innovation Index 2024



Namibia ranking in the Global Innovation Index 2024

Namibia ranks 102nd 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.

Namibia ranks 32nd among the 34 upper-middle-income group economies.

Namibia ranks 8th among the 27 economies in Sub-Saharan Africa.

Namibia GII Ranking (2020-2024)

The table shows the rankings of Namibia 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 Namibia in the GII 2024 is between ranks 95 and 105.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	104th	101st	104th
2021	100th	88th	110th
2022	96th	84th	113rd
2023	96th	80th	111st
2024	102nd	87th	109th

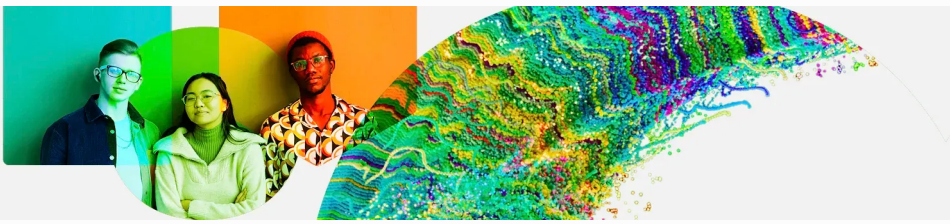
Namibia performs worse in innovation outputs than innovation inputs in 2024.

This year **Namibia ranks 87th in innovation inputs.** This position is lower than last year.

Namibia ranks 109th in innovation outputs. This position is higher than last year.

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

For Namibia, 3 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	
▼ -4.3% 2022 - 2023	n/a	n/a	n/a	▲ 75% 2022 - 2023
▲ 8.8% 2013 - 2023	n/a	n/a	n/a	▲ 5.8% 2013 - 2023

Technology adoption

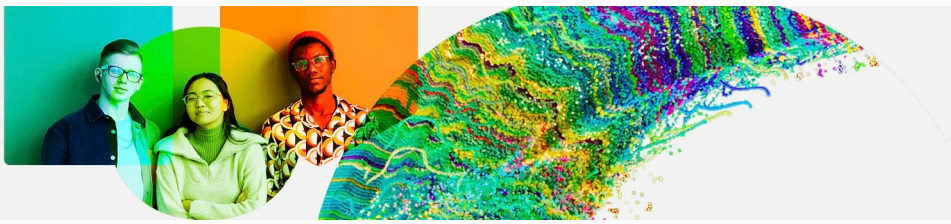
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
n/a	▲ 9.3% 2021 - 2022	n/a	n/a	n/a
n/a	▲ 13.3% 2012 - 2022		n/a	n/a
n/a	3.9 per 100 inhabitants in 2022	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 0.4% 2022 - 2023	▼ -2% 2021 - 2022	▲ 1°C 2023
▼ -1.8% 2013 - 2023	▲ 0.1% 2012 - 2022	n/a
38,428 USD in 2023	58.1 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



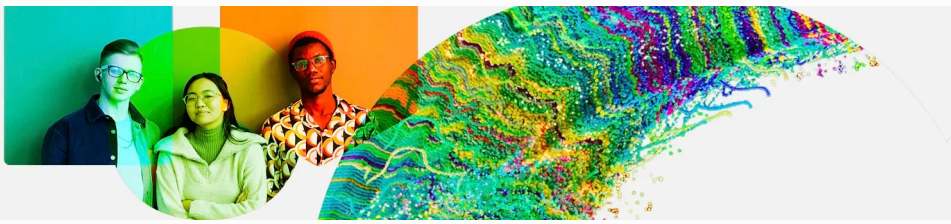
Expected vs. observed innovation performance

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

> Innovation overperformers relative to their economic development

Global Innovation Index 2024

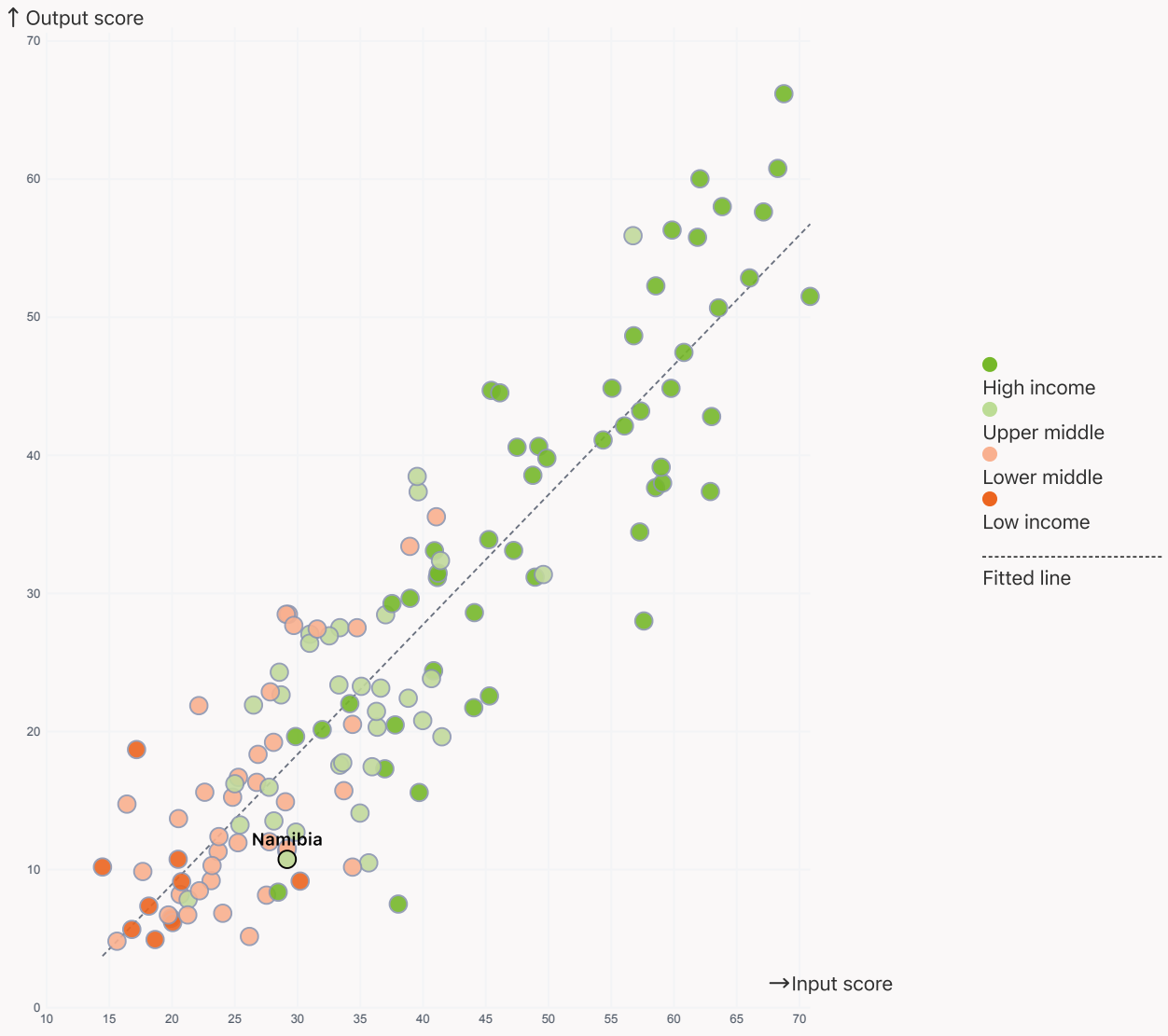


Effectively translating innovation investments into innovation outputs

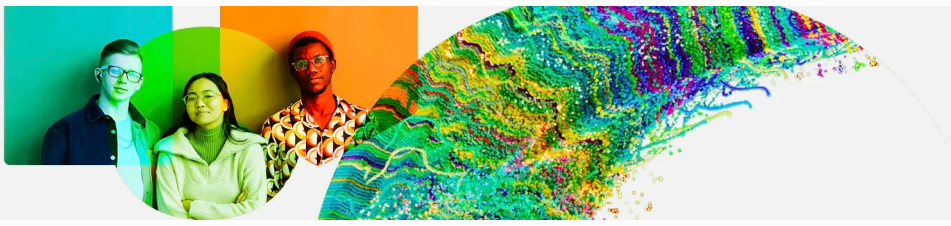
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

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

> Relationship between innovation inputs and outputs

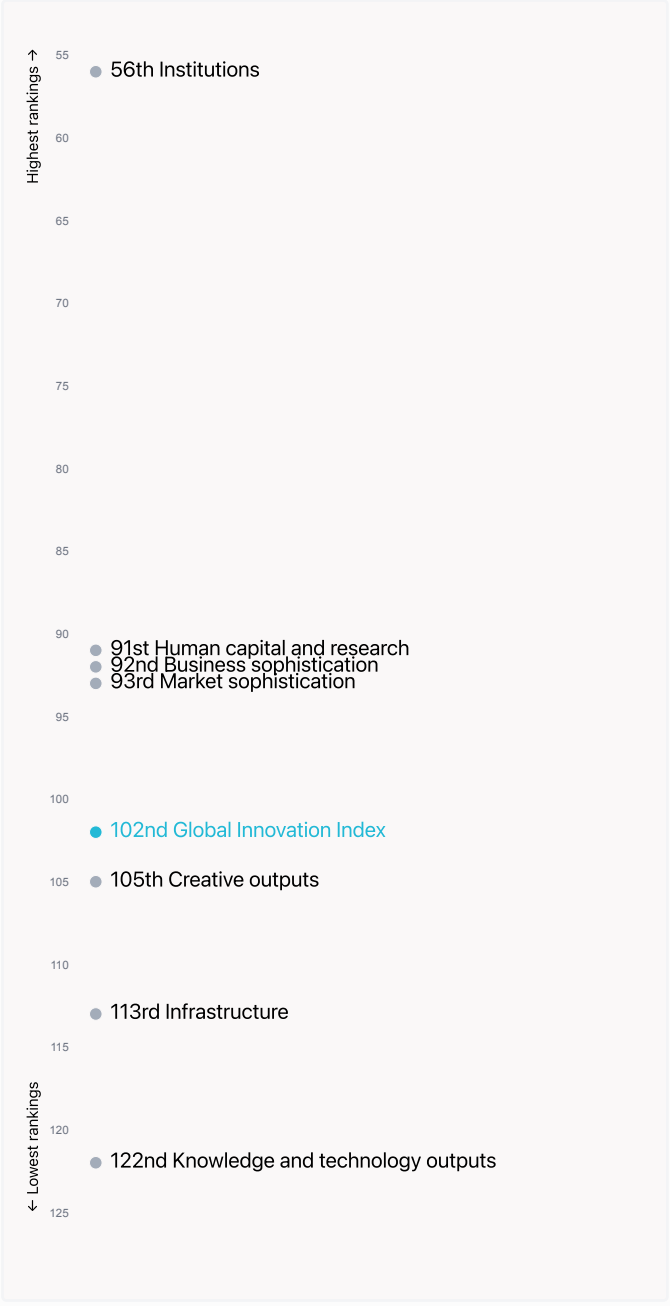


Global Innovation Index 2024



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



Highest rankings

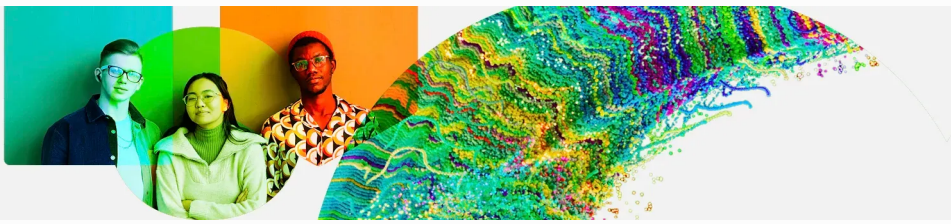
Namibia ranks highest in Institutions (56th), Human capital and research (91st), Business sophistication (92nd) and Market sophistication (93rd).

Lowest rankings

Namibia ranks lowest in Knowledge and technology outputs (122nd), Infrastructure (113rd) and Creative outputs (105th).

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

Global Innovation Index 2024



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

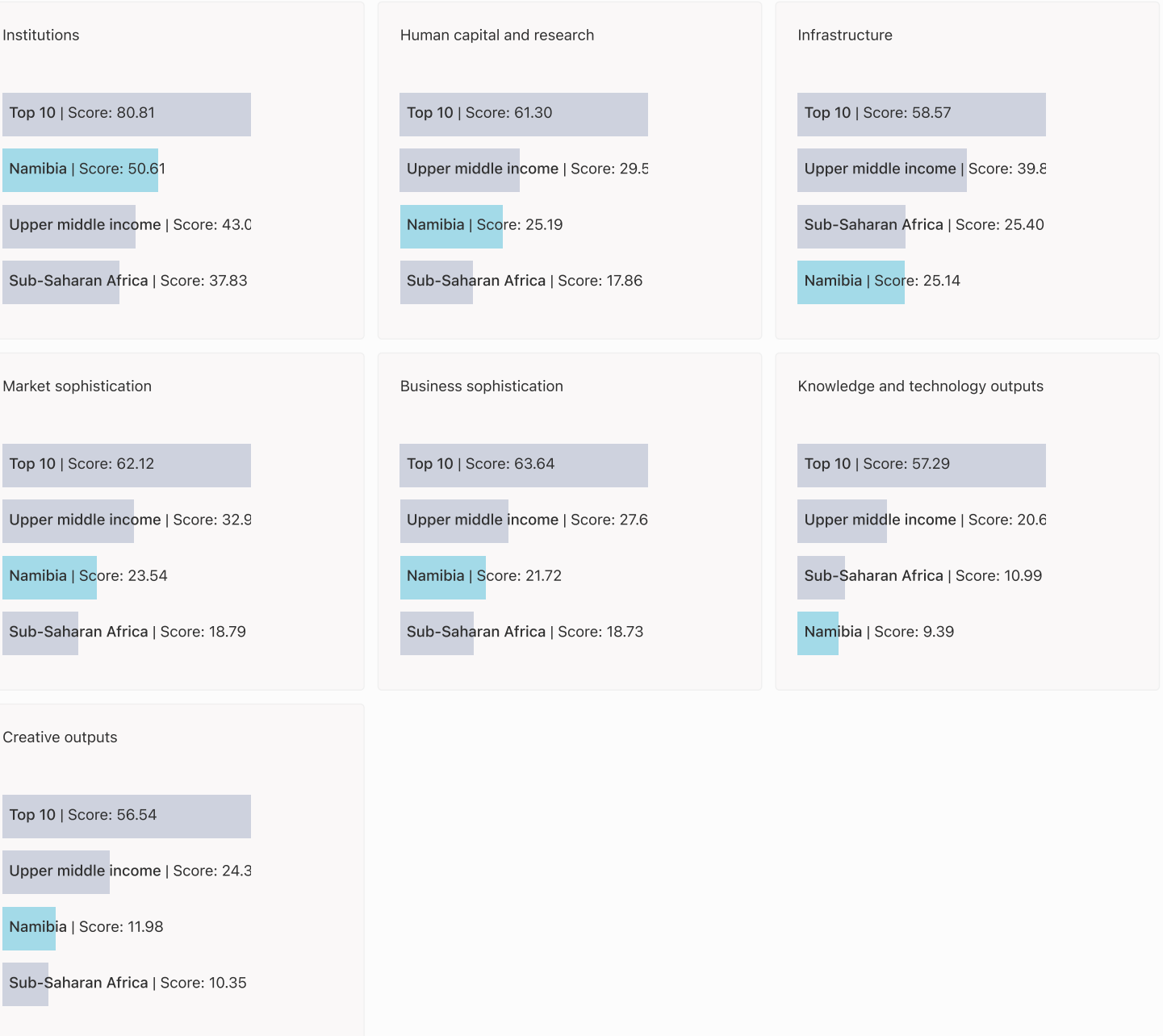
The charts shows the relative position of Namibia (blue bar) against other economy groupings (grey bars), for each of the seven areas of the GII Index.

Upper-Middle-Income economies

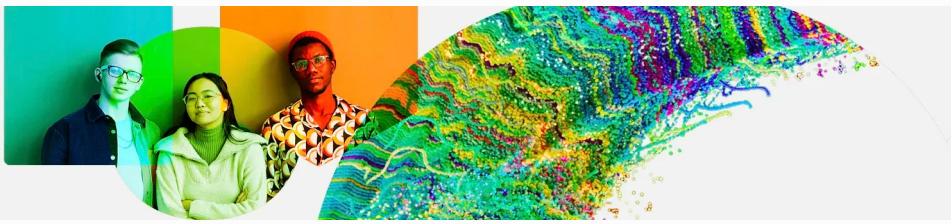
Namibia performs above the upper-middle-income group average in Institutions.

Sub-Saharan Africa

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



Global Innovation Index 2024



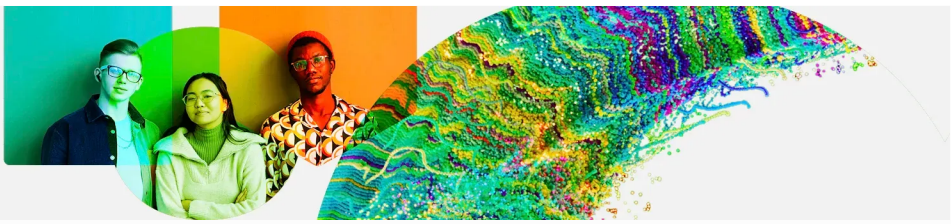
Innovation strengths and weaknesses in Namibia

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

Namibia's main innovation strengths are **Expenditure on education, % GDP** (rank 1), **Public Research-Industry co-publications, %** (rank 32) and **Joint venture/strategic alliance deals/bn PPP$ GDP** (rank 33).

Strengths			Weaknesses		
Rank	**Code**	**Indicator name**	**Rank**	**Code**	**Indicator name**
1	2.1.1	Expenditure on education, % GDP	127	4.3.3	Domestic market scale, bn PPP$
32	5.2.1	Public Research-Industry co-publications, %	126	3.2.3	Gross capital formation, % GDP
33	5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	124	6.2.1	Labor productivity growth, %
38	5.3.4	FDI net inflows, % GDP	123	2.1.5	Pupil–teacher ratio, secondary
44	6.1.2	PCT patents by origin/bn PPP$ GDP	113	2.2.2	Graduates in science and engineering, %
47	1.2.2	Rule of law*	104	6.2.4	High-tech manufacturing, %
50	7.3.3	Mobile app creation/bn PPP$ GDP	75	7.1.3	Global brand value, top 5,000, % GDP
50	3.3.1	GDP/unit of energy use	75	2.3.4	QS university ranking, top 3*
50	7.1.4	Industrial designs by origin/bn PPP$ GDP	49	6.2.2	Unicorn valuation, % GDP
51	5.3.3	ICT services imports, % total trade	41	2.3.3	Global corporate R&D investors, top 3, mn USD

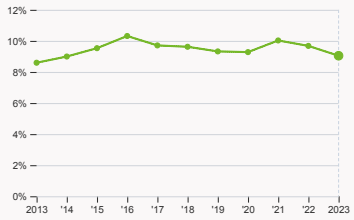
Global Innovation Index 2024



Namibia's innovation system

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

Innovation inputs in Namibia

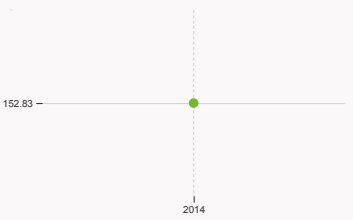


2.1.1 **Expenditure on education**

was equal to 9.04 % GDP in 2023, down by 0.63 percentage points from the year prior – and equivalent to an indicator rank of 1.

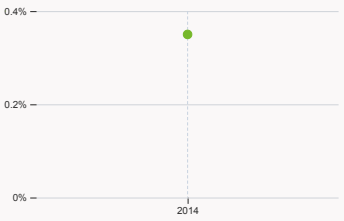
2.2.2 **Graduates in science and engineering**

was equal to 8.92 % of total graduates in 2020, down by 3.86 percentage points from the year prior – and equivalent to an indicator rank of 113.



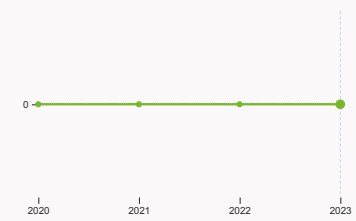
2.3.1 **Researchers**

was equal to 152.83 FTE per million population in 2014 – and equivalent to an indicator rank of 88.



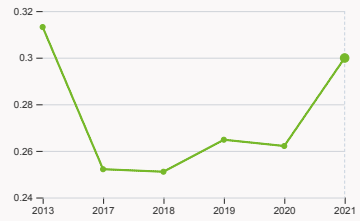
2.3.2 **Gross expenditure on R&D**

was equal to 0.35 % GDP in 2014 – and equivalent to an indicator rank of 68.



2.3.4 **QS university ranking**

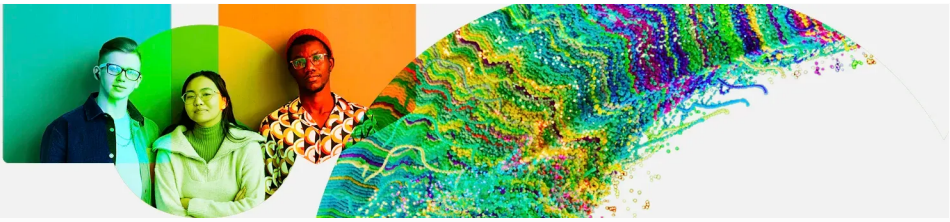
was equal to an average score of 0 for the top three universities in 2023 with no change from the year prior – and equivalent to an indicator rank of 75.

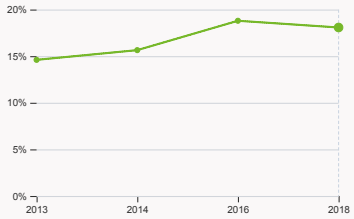


4.3.2 **Domestic industry diversification**

was equal to an index score of 0.3 in 2021, up by 14.41% from the year prior – and equivalent to an indicator rank of 101.

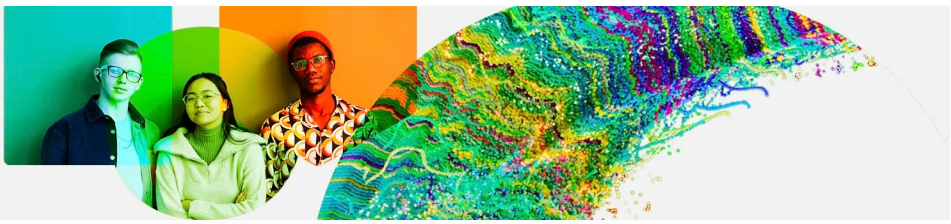
Global Innovation Index 2024



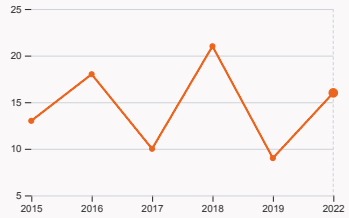


5.1.1 **Knowledge-intensive employment**
was equal to 18.08 % in 2018, down by 0.72 percentage points from the year prior – and equivalent to an indicator rank of 84.

Global Innovation Index 2024

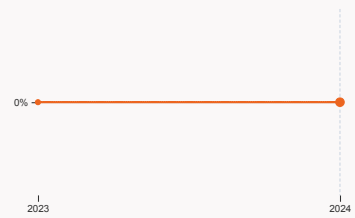


Innovation outputs in Namibia



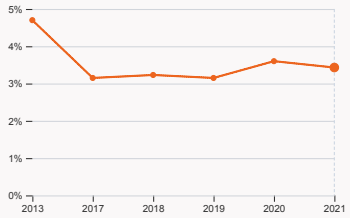
6.1.1 Patents by origin

was equal to 16 patents in 2022, up by 77.78% from the year prior – and equivalent to an indicator rank of 72.



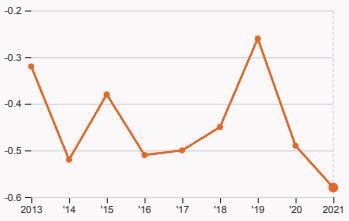
6.2.2 Unicorn valuation

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



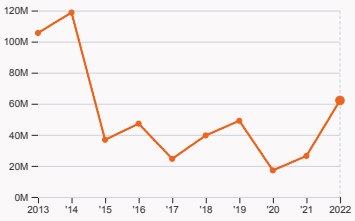
6.2.4 High-tech manufacturing

was equal to 3.43 % of total manufacturing output in 2021, down by 0.17 percentage points from the year prior – and equivalent to an indicator rank of 104.



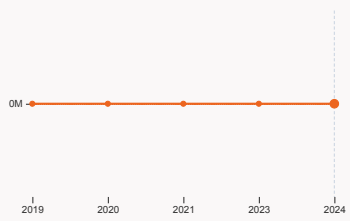
6.3.2 Production and export complexity

was equal to a score of -0.58 in 2021, down by 18.37% from the year prior – and equivalent to an indicator rank of 93.



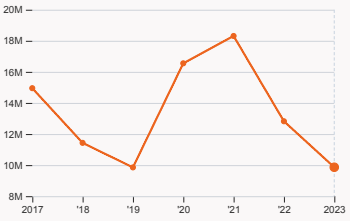
6.3.3 High-tech exports

was equal to 62.11 million USD in 2022, up by 135.27% from the year prior – and equivalent to an indicator rank of 78.



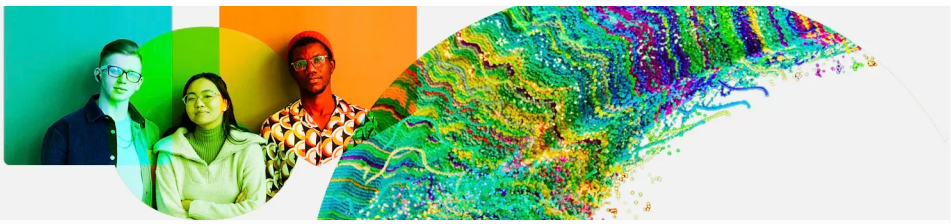
7.1.3 Global brand value

was equal to 0 million USD for the brands in the top 5,000 in 2024 with no change from the year prior – and equivalent to an indicator rank of 75.



7.3.3 Mobile app creation

was equal to 9.86 million global downloads of mobile apps in 2023, down by 23.09% from the year prior – and equivalent to an indicator rank of 50.



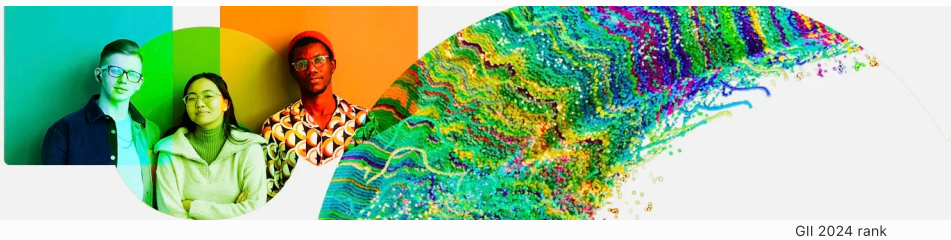
Namibia's innovation top performers

7.1.1 Top 15 intangible-asset intensive companies in Namibia

Rank	Firm	Intensity, %
1	PARATUS NAMIBIA HOLDINGS LIMITED	32.22
2	CAPRICORN GROUP LIMITED	2.08
3	ALPHA NAMIBIA INDUSTRIES RENEWABLE POWER LIMITED	36.47

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

Global Innovation Index 2024



Namibia

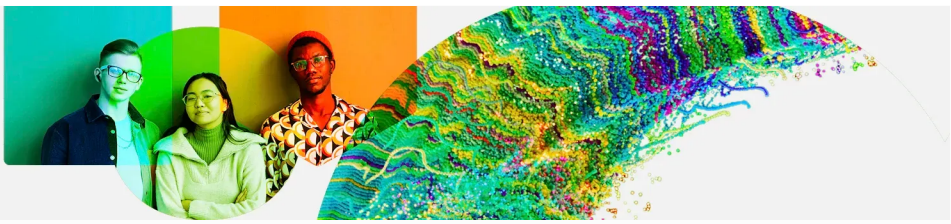
GII 2024 rank **102**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
109	87	Upper middle	SSA	3.0	30.7	11,603

	Score / Value	Rank	
Institutions	**50.6**	**56**	
1.1 Institutional environment	**53.8**	**66**	
1.1.1 Operational stability for businesses*	62.7	65	
1.1.2 Government effectiveness*	45	65	
1.2 Regulatory environment	**48.4**	**56**	
1.2.1 Regulatory quality*	41.4	73	
1.2.2 Rule of law*	55.4	47	●◆
1.3 Business environment	**49.5**	**[60]**	
1.3.1 Policy stability for doing business†	49.5	64	
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	**25.2**	**91**	
2.1 Education	**65.5**	**[13]**	
2.1.1 Expenditure on education, % GDP	9	1	●◆
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	32	123	○◇
2.2 Tertiary education	**8.3**	**114**	◇
2.2.1 Tertiary enrolment, % gross	28.4	92	◇
2.2.2 Graduates in science and engineering, %	8.9	113	○◇
2.2.3 Tertiary inbound mobility, %	3.2	62	
2.3 Research and development (R&D)	**1.8**	**93**	
2.3.1 Researchers, FTE/mn pop.	152.8	88	
2.3.2 Gross expenditure on R&D, % GDP	0.3	68	
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	**25.1**	**113**	◇
3.1 Information and communication technologies (ICTs)	**45.1**	**107**	◇
3.1.1 ICT access*	64.5	99	◇
3.1.2 ICT use*	55.3	102	◇
3.1.3 Government's online service*	37.2	113	◇
3.1.4 E-participation*	23.3	116	◇
3.2 General infrastructure	**12.9**	**119**	◇
3.2.1 Electricity output, GWh/mn pop.	514.2	110	◇
3.2.2 Logistics performance*	36.4	65	
3.2.3 Gross capital formation, % GDP	14.1	126	○◇
3.3 Ecological sustainability	**17.5**	**78**	
3.3.1 GDP/unit of energy use	12	50	●◆
3.3.2 Low-carbon energy use, %	18	64	
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.8	82	
Market sophistication	**23.5**	**[93]**	
4.1 Credit	**20**	**[87]**	
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	59.4	53	
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
4.2 Investment	**6.1**	**[71]**	
4.2.1 Market capitalization, % GDP	17.8	66	
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	**44.6**	**91**	
4.3.1 Applied tariff rate, weighted avg., %	2.3	69	
4.3.2 Domestic industry diversification	51.4	101	◇
4.3.3 Domestic market scale, bn PPP$	30.7	127	○

	Score / Value	Rank	
Business sophistication	**21.7**	**92**	
5.1 Knowledge workers	**18.9**	**106**	◇
5.1.1 Knowledge-intensive employment, %	18.1	84	
5.1.2 Firms offering formal training, %	25.4	66	
5.1.3 GERD performed by business, % GDP	0.04	76	
5.1.4 GERD financed by business, %	11.1	75	
5.1.5 Females employed w/advanced degrees, %	7.4	90	◇
5.2 Innovation linkages	**26**	**57**	
5.2.1 Public Research-Industry co-publications, %	2.4	32	●◆
5.2.2 University-industry R&D collaboration†	46.2	61	
5.2.3 State of cluster development†	42.3	77	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.03	33	●◆
5.2.5 Patent families/bn PPP$ GDP	0.08	55	
5.3 Knowledge absorption	**20.3**	**94**	
5.3.1 Intellectual property payments, % total trade	0.1	102	◇
5.3.2 High-tech imports, % total trade	7.4	81	
5.3.3 ICT services imports, % total trade	1.5	51	●◆
5.3.4 FDI net inflows, % GDP	3.8	38	●◆
5.3.5 Research talent, % in businesses	6.9	67	
Knowledge and technology outputs	**9.4**	**122**	◇
6.1 Knowledge creation	**8.9**	**87**	
6.1.1 Patents by origin/bn PPP$ GDP	0.6	72	
6.1.2 PCT patents by origin/bn PPP$ GDP	0.2	44	●◆
6.1.3 Utility models by origin/bn PPP$ GDP	0.1	48	
6.1.4 Scientific and technical articles/bn PPP$ GDP	10.1	72	
6.1.5 Citable documents H-index	4.3	109	
6.2 Knowledge impact	**11**	**127**	○◇
6.2.1 Labor productivity growth, %	-1.5	124	○◇
6.2.2 Unicorn valuation, % GDP	0	49	○◇
6.2.3 Software spending, % GDP	0.1	95	
6.2.4 High-tech manufacturing, %	3.4	104	○◇
6.3 Knowledge diffusion	**8.2**	**102**	◇
6.3.1 Intellectual property receipts, % total trade	0.04	76	
6.3.2 Production and export complexity	28.4	93	
6.3.3 High-tech exports, % total trade	1	78	
6.3.4 ICT services exports, % total trade	0.4	109	
6.3.5 ISO 9001 quality/bn PPP$ GDP	1.8	97	
Creative outputs	**12**	**105**	◇
7.1 Intangible assets	**7**	**107**	◇
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	13.2	102	◇
7.1.3 Global brand value, top 5,000, % GDP	0	75	○◇
7.1.4 Industrial designs by origin/bn PPP$ GDP	1.3	50	●◆
7.2 Creative goods and services	**8.5**	**[80]**	
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	0.1	91	
7.3 Online creativity	**25.3**	**65**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	3.6	64	
7.3.2 GitHub commits/mn pop. 15–69	2.3	100	
7.3.3 Mobile app creation/bn PPP$ GDP	70.2	50	●◆

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 Namibia.

Namibia has missing data for twelve indicators and outdated data for fourteen indicators.

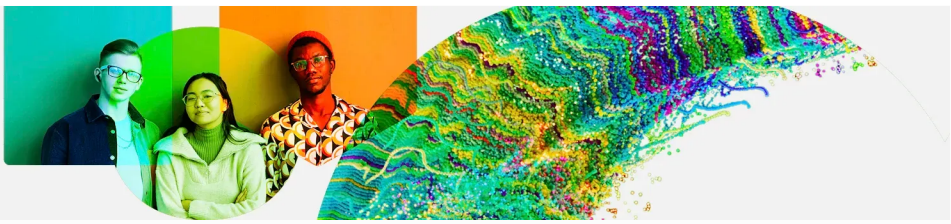
Missing data for Namibia

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture†	n/a	2023	Global Entrepreneurship Monitor
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
4.1.1	Finance for startups and scaleups†	n/a	2023	Global Entrepreneurship Monitor
4.1.3	Loans from microfinance institutions, % GDP	n/a	2022	International Monetary Fund, Financial Access Survey (FAS)
4.2.2	Venture capital (VC) investors, deals/bn PPP$ GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
4.2.3	VC recipients, deals/bn PPP$ GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
4.2.4	VC received, value, % GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
7.1.1	Intangible asset intensity, top 15, %	n/a	2023	Brand Finance
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

Outdated data for Namibia

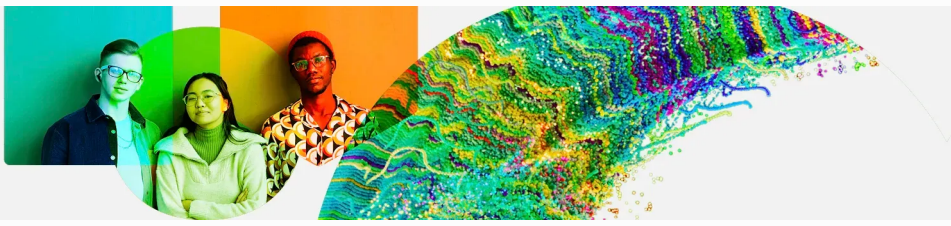
Code	Indicator name	Economy Year	Model Year	Source
1.3.1	Policy stability for doing business†	2022	2023	World Economic Forum, Executive Opinion Survey (EOS)
2.2.1	Tertiary enrolment, % gross	2020	2022	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	2020	2022	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2014	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

Global Innovation Index 2024



Code	Indicator name	Economy Year	Model Year	Source
2.3.2	Gross expenditure on R&D, % GDP	2014	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.1	Knowledge-intensive employment, %	2018	2022	International Labour Organization
5.1.2	Firms offering formal training, %	2014	2023	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2014	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.4	GERD financed by business, %	2014	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2018	2023	International Labour Organization
5.2.2	University-industry R&D collaboration†	2022	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.2.3	State of cluster development†	2022	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.3.5	Research talent, % in businesses	2014	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

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.