Global Innovation Index 2025

Botswana ranking in the Global Innovation Index 2025

Botswana ranks 87th among the 139 economies featured in the GII 2025.

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.

Botswana ranks 27th among the 36 Upper middle-income group economies.

Botswana ranks 4th among the 32 economies in Sub-Saharan Africa.

Botswana GII Ranking (2020-2025)

The table shows the rankings of Botswana over the past six 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 Botswana in the GII 2025 is between ranks 86 and 110.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	89th	84th	105th
2021	106th	98th	109th
2022	86th	74th	94th
2023	85th	61st	110th
2024	87th	64th	110th
2025	87th	58th	115th

Botswana performs worse in innovation outputs than innovation inputs in 2025.

This year **Botswana ranks 58th in innovation inputs.** This position is higher than last year.

Botswana ranks 115th in innovation outputs. This position is lower than last year.

Botswana has no clusters in the world's top innovation clusters of the Global Innovation Index.

Global Innovation Index 2025

> Global Innovation Tracker

The Global Innovation Tracker 2025 shows what is the current state of innovation in Botswana, how rapidly is technology being embraced and what are the resulting societal impacts.

For Botswana, 1 indicator has improved in the short-term and 4 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	▼ -2.1 % 2023 - 2024	n/a	n/a	n/a
Long term (annual growth)	▲ 6.5 % 2014 - 2024	n/a	n/a	n/a

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	n/a	▼ -23.5% 2022 - 2023	0% 2022 - 2023	n/a	n/a
Long term (annual growth)	n/a	▲ 14.6% 2013 - 2023	n/a	n/a	n/a
Penetration	n/a	3.4 per 100 inhabitants in 2023	23 per 100 inhabitants in 2023	n/a	n/a

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▼ -2.1 % 2023 - 2024	▲ 0.6 % 2022 - 2023	+ 1.8 °C 2024
Long term (annual growth)	▼ -0.6 % 2014 - 2024	▲ 1.2 % 2013 - 2023	+ 0.2 °C 2014
Level	43,610.8 USD in 2024	69.2 years in 2023	n/a

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 countries. from 1951–1980. Figures are rounded.

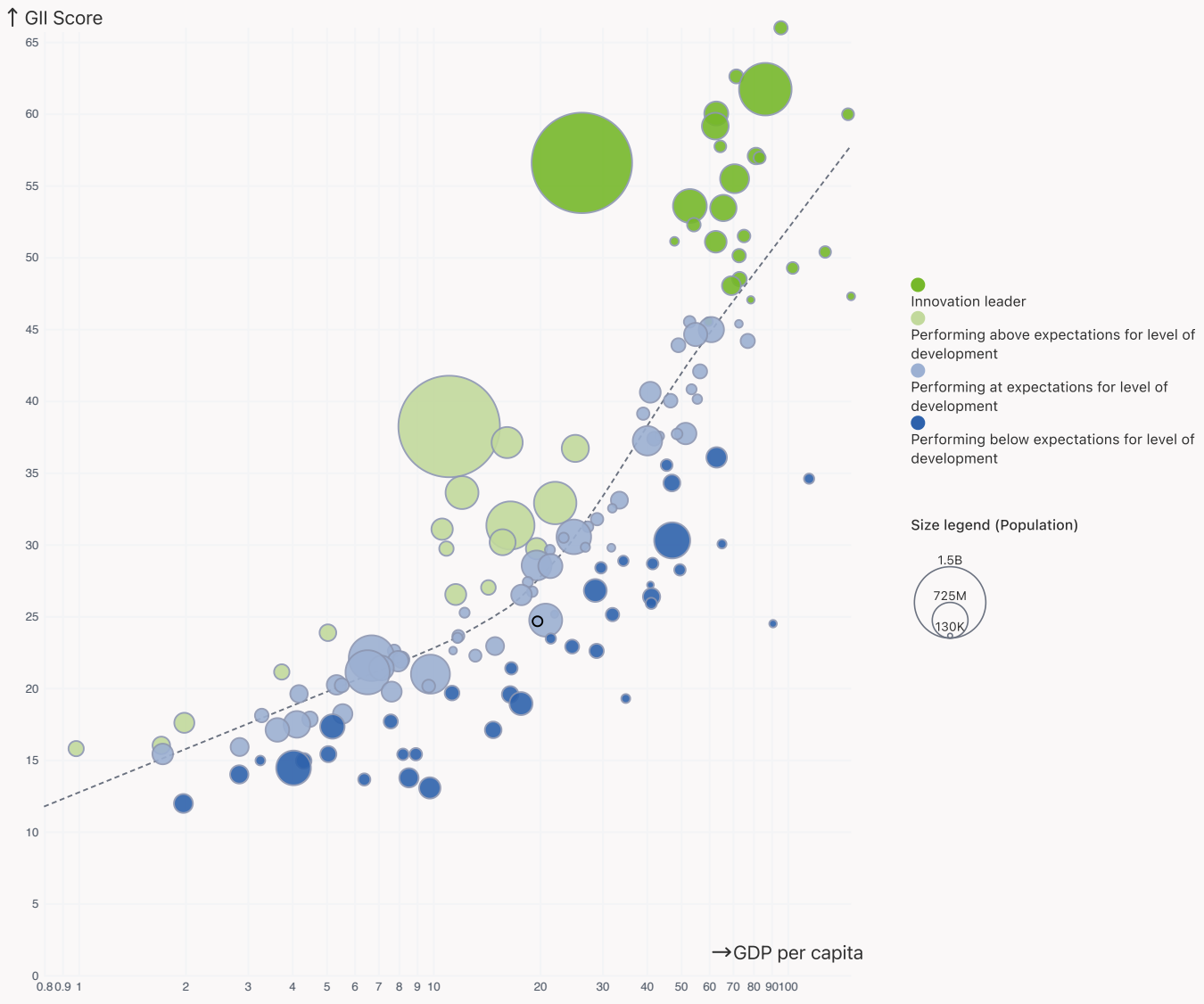
Global Innovation Index 2025

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 Botswana performs at expectations for its level of development.

> Innovation overperformers relative to their economic development



Global Innovation Index 2025

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.

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

> Relationship between innovation inputs and outputs

Global Innovation Index 2025

Overview of Botswana's rankings in the seven areas of the GII in 2025

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

Highest Rankings

Botswana ranks highest in Market sophistication (39th), Institutions (42nd), Business sophistication (62nd) and Human capital and research (76th).

Lowest Rankings

Botswana ranks lowest in Creative outputs (116th), Knowledge and technology outputs (107th) and Infrastructure (94th).

The full WIPO Intellectual Property Statistics profile for Botswana can be found on https://www.wipo.int/edocs/statistics-country-profile/en/bw.pdf

Global Innovation Index 2025

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

Upper middle-income economies

Botswana performs above the Upper middle-income group average in Institutions, Market sophistication, Business sophistication.

Sub-Saharan Africa

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

Institutions

- Top 10 | Score: 78.63
- Botswana | Score: 60.27
- Upper middle-income | Score: 44.7
- Sub-Saharan Africa | Score: 40.29

Human capital and research

- Top 10 | Score: 59.30
- Upper middle-income | Score: 29.7
- Botswana | Score: 28.85
- Sub-Saharan Africa | Score: 18.06

Infrastructure

- Top 10 | Score: 61.36
- Upper middle-income | Score: 41.1
- Botswana | Score: 35.16
- Sub-Saharan Africa | Score: 27.58

Market sophistication

- Top 10 | Score: 61.82
- Botswana | Score: 42.15
- Upper middle-income | Score: 34.8
- Sub-Saharan Africa | Score: 22.67

Business sophistication

- Top 10 | Score: 59.10
- Botswana | Score: 29.87
- Upper middle-income | Score: 27.7
- Sub-Saharan Africa | Score: 25.36

Knowledge and technology outputs

- Top 10 | Score: 54.93
- Upper middle-income | Score: 20.0
- Botswana | Score: 11.74
- Sub-Saharan Africa | Score: 11.53

Creative outputs

- Top 10 | Score: 55.98
- Upper middle-income | Score: 22.6
- Sub-Saharan Africa | Score: 10.61
- Botswana | Score: 8.26

Global Innovation Index 2025

Innovation strengths and weaknesses in Botswana

The table below gives an overview of the indicator strengths and weaknesses of Botswana in the GII 2025.

Botswana's best-ranked innovation strengths are **Expenditure on education, % GDP** (rank 3), **Applied tariff rate, weighted avg., %** (rank 9) and **Loans from microfinance institutions, % GDP** (rank 15).

Strengths

Rank	Code	Indicator name
3	2.1.1	Expenditure on education, % GDP
9	4.3.1	Applied tariff rate, weighted avg., %
15	4.1.3	Loans from microfinance institutions, % GDP
23	3.2.3	Gross capital formation, % GDP
30	5.3.1	Intellectual property payments, % total trade
31	5.1.3	Youth demographic dividend, %
35	5.3.3	ICT services imports, % total trade
37	1.3.1	Policy stability for doing business†
37	1.1.1	Operational stability for businesses*
38	3.3.1	GDP/unit of energy use

Weaknesses

Rank	Code	Indicator name
136	3.3.2	Low-carbon energy use, %
133	5.2.2	University–industry R&D collaboration†
130	7.3.3	Mobile app creation/bn PPP$ GDP
127	6.3.5	ISO 9001 quality/bn PPP$ GDP
109	6.1.2	PCT patents by inventor origin/bn PPP$ GDP
100	5.2.5	Patent families/bn PPP$ GDP
81	7.1.3	Global brand value, top 5,000, % GDP
80	2.3.4	QS university ranking, top 3*
53	6.2.2	Unicorn valuation, % GDP
44	2.3.3	Global corporate R&D investors, top 3, mn USD

Global Innovation Index 2025

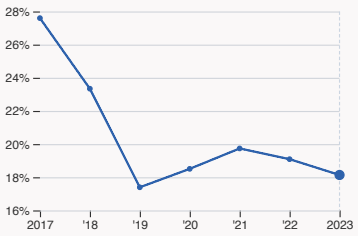
Botswana's innovation system

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

Innovation inputs in Botswana

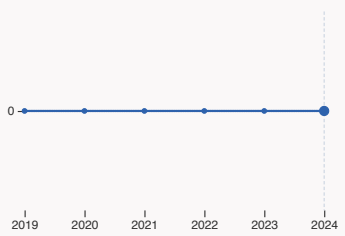
2.1.1 Expenditure on education

was equal to 8.06 % GDP in 2020, down by 0.34 percentage points from the year prior – and equivalent to an indicator rank of 3.



2.2.2 Graduates in science and engineering

was equal to 18.14 % of total graduates in 2023, down by 0.95 percentage points from the year prior – and equivalent to an indicator rank of 93.

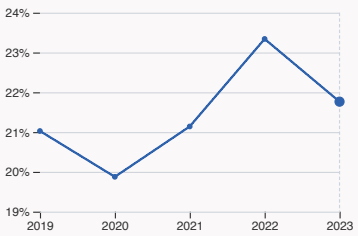


2.3.4 QS university ranking

The country does not have any universities in the QS world universities ranking in 2024.

4.3.2 Domestic industry diversification

was equal to an index score of 0.155 in 2022, up by 0.64% from the year prior – and equivalent to an indicator rank of 62.



5.1.1 Knowledge-intensive employment

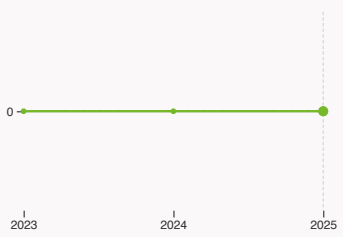
was equal to 21.76 % of total workforce in 2023, down by 1.58 percentage points from the year prior – and equivalent to an indicator rank of 70.

Global Innovation Index 2025

Innovation outputs in Botswana

6.1.1 Patents by origin

was equal to 11 patents in 2023, down by 21.43% from the year prior – and equivalent to an indicator rank of 97.

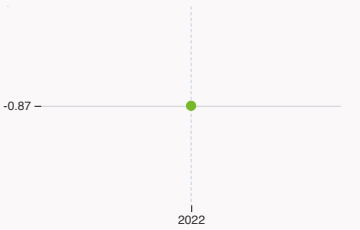


6.2.2 Unicorn valuation

The country does not have unicorns in 2025.

6.2.4 High-tech manufacturing

was equal to 652.16 high-tech manufacturing output in million USD in 2022, up by 0.5% from the year prior – and equivalent to an indicator rank of 65.

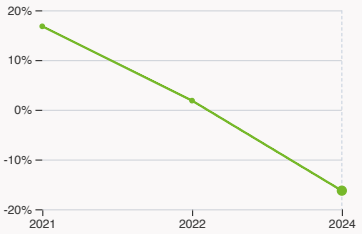


6.3.2 Production and export complexity

was equal to a score of -0.87 in 2022 – and equivalent to an indicator rank of 111.

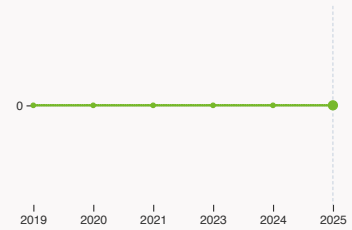
6.3.3 High-tech exports

was equal to 27.1 million USD in 2023, down by 34.21% from the year prior – and equivalent to an indicator rank of 99.



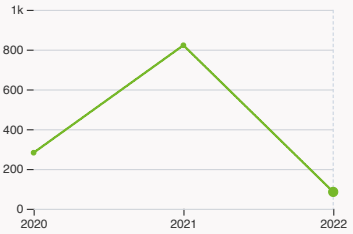
7.1.1 Intangible asset intensity, top 15

was equal to -16.26 % for the top 15 companies in 2024, down by 18.1 percentage points from the year prior – and equivalent to an indicator rank of 73.



7.1.3 Global brand value, top 5,000

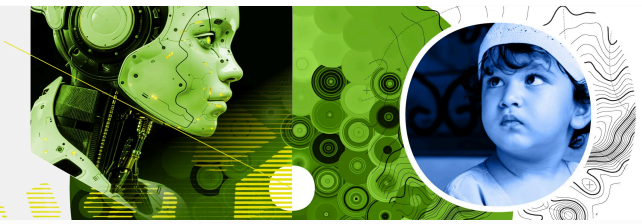
The country does not have any brands that make the top 5,000 ranking in 2025.



7.3.3 Mobile app creation

was equal to 85 global downloads of mobile apps in 2022, down by 89.66% from the year prior – and equivalent to an indicator rank of 130.

Global Innovation Index 2025



Botswana's innovation top performers

Data not available for 2.3.3 Global corporate R&D investors, 2.3.4 QS university ranking of top universities, 6.2.2 Top Unicorn Companies and 7.1.3 Global brand value, top 5,000.

Disclaimer: This section contains only the top performers per country. For the complete list, please visit the GII Innovation Ecosystems and Data Explorer website.

5.2.3 University industry and international engagement, top 5 universities

Rank	University	Score
1	BOTSWANA INTERNATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY (BIUST)	46.70
2	UNIVERSITY OF BOTSWANA	41.05

Source: Times Higher Education (THE), World University Rankings 2025.
Note: Rank corresponds to within economy ranks. The score is calculated as the average of the International Outlook score (encompassing international staff, students, and co-authorship) and the industry score (reflecting industry income and patent citations). The 2025 ranking corresponds to data from the academic year that ended in 2022.

7.1.1 Top 15 intangible-asset intensive companies in Botswana

Rank	Firm	Intensity, %
1	SECHABA BREWERY HOLDINGS LIMITED	60.65
2	CHOBE HOLDINGS LIMITED	77.13
3	CHOPPIES ENTERPRISES LIMITED	38.91

Source: Brand Finance (https://brandirectory.com/reports/gift-2024).
Note: Brand Finance only provides within economy ranks.

Botswana

GII 2025 rank **87**

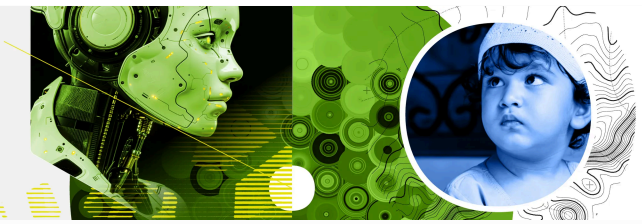
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
115	58	Upper middle	Sub-Saharan Africa	2.5	53.6	19,723.4

	Score / Value	Rank	
Institutions	**60.3**	**42**	◆
1.1 Institutional environment	**64.2**	**41**	◆
1.1.1 Operational stability for businesses*	74.7	37	●◆
1.1.2 Government effectiveness*	53.6	48	◆
1.2 Regulatory environment	**60**	**50**	◆
1.2.1 Regulatory quality*	58.2	50	
1.2.2 Rule of law*	61.7	51	◆
1.3 Business environment	**56.7**	**43**	
1.3.1 Policy stability for doing business†	64.4	37	●◆
1.3.2 Entrepreneurship policies and culture†	48.9	35	
Human capital and research	**28.9**	**[76]**	
2.1 Education	**70.4**	**[6]**	
2.1.1 Expenditure on education, % GDP	8.1	3	●◆
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3 School life expectancy, years	12.2	96	◇
2.1.4 PISA scales in reading, maths and science	n/a	n/a	
2.1.5 Pupil–teacher ratio, secondary	11.7	53	
2.2 Tertiary education	**16.2**	**107**	◇
2.2.1 Tertiary enrolment, % gross	20.6	103	◇
2.2.2 Graduates in science and engineering, %	18.1	93	
2.2.3 Tertiary inbound mobility, %	4.2	59	
2.3 Research and development (R&D)	**0**	**[124]**	
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	44	○◇
2.3.4 QS university ranking, top 3*	0	80	○◇
Infrastructure	**35.2**	**94**	
3.1 Information and communication technologies (ICTs)	**59.4**	**101**	
3.1.1 ICT access*	79.8	86	
3.1.2 ICT use*	70.9	87	
3.1.3 Government's online service*	27.6	123	◇
3.2 General infrastructure	**35.3**	**58**	
3.2.1 Electricity output, GWh/mn pop.	969.6	98	◇
3.2.2 Logistics performance*	45.5	56	
3.2.3 Gross capital formation, % GDP	30.2	23	●
3.3 Ecological sustainability	**10.8**	**111**	
3.3.1 GDP/unit of energy use	14.1	38	●
3.3.2 Low-carbon energy use, %	0.06	136	○◇
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.2	116	
Market sophistication	**42.1**	**39**	
4.1 Credit	**33.4**	**55**	
4.1.1 Finance for startups and scaleups†	59.6	33	
4.1.2 Domestic credit to private sector, % GDP	30.1	96	
4.1.3 Loans from microfinance institutions, % GDP	3	15	●
4.2 Investment	**21.9**	**[29]**	
4.2.1 Market capitalization, % GDP	63.8	31	
4.2.2 Venture capital (VC) received, deal count/bn PPP$ GDP	n/a	n/a	
4.2.3 Late-stage VC deal count, % global VC	n/a	n/a	
4.2.4 VC investors, deal count/bn PPP$ GDP	n/a	n/a	
4.2.5 VC investor co-participation/bn PPP$ GDP	n/a	n/a	
4.3 Trade, diversification and market scale	**71.2**	**60**	
4.3.1 Applied tariff rate, weighted avg., %	0.7	9	●
4.3.2 Domestic industry diversification	81.7	62	
4.3.3 Domestic market scale, bn PPP$	53.6	119	◇

	Score / Value	Rank	
Business sophistication	**29.9**	**62**	
5.1 Knowledge workers	**51.3**	**[26]**	
5.1.1 Knowledge-intensive employment, %	21.8	70	
5.1.2 Females employed w/advanced degrees, %	17.5	45	
5.1.3 Youth demographic dividend, %	51	31	●◆
5.1.4 GERD performed by business, % GDP	n/a	n/a	
5.1.5 GERD financed by business, %	n/a	n/a	
5.2 Innovation linkages	**12.1**	**122**	
5.2.1 Public research–industry co-publications, %	0.6	113	
5.2.2 University–industry R&D collaboration†	0.8	133	○◇
5.2.3 University industry & international engagement, top 5*	24.4	62	
5.2.4 State of cluster development†	30.7	108	
5.2.5 Patent families/bn PPP$ GDP	0	100	○◇
5.3 Knowledge absorption	**26.2**	**74**	
5.3.1 Intellectual property payments, % total trade	1.2	30	●
5.3.2 High-tech imports, % total trade	4.7	122	◇
5.3.3 ICT services imports, % total trade	2.1	35	●
5.3.4 FDI net inflows, % GDP	1.7	96	
5.3.5 Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs	**11.7**	**107**	
6.1 Knowledge creation	**6.7**	**101**	
6.1.1 Patents by origin/bn PPP$ GDP	0.2	97	
6.1.2 PCT patents by inventor origin/bn PPP$ GDP	0	109	○◇
6.1.3 Utility models by origin/bn PPP$ GDP	0.2	40	
6.1.4 Scientific and technical articles/bn PPP$ GDP	8.6	78	
6.1.5 Citable documents H-index	5.4	98	
6.2 Knowledge impact	**21.4**	**87**	
6.2.1 Labor productivity growth, %	1	63	
6.2.2 Unicorn valuation, % GDP	0	53	○◇
6.2.3 Software spending, % GDP	0.1	87	
6.2.4 High-tech manufacturing, %	20.1	65	
6.3 Knowledge diffusion	**7.1**	**125**	◇
6.3.1 Intellectual property receipts, % total trade	0.007	110	
6.3.2 Production and export complexity	29.3	111	◇
6.3.3 High-tech exports, % total trade	0.4	99	
6.3.4 ICT services exports, % total trade	0.4	111	
6.3.5 ISO 9001 quality/bn PPP$ GDP	0.5	127	○
Creative outputs	**8.3**	**116**	◇
7.1 Intangible assets	**11.7**	**99**	
7.1.1 Intangible asset intensity, top 15, %	-16.3	73	◇
7.1.2 Trademarks by origin/bn PPP$ GDP	29	67	
7.1.3 Global brand value, top 5,000, % GDP	0	81	○◇
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.3	99	
7.2 Creative goods and services	**4**	**[104]**	
7.2.1 Cultural and creative services exports, % total trade	0.2	80	
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	0.3	76	
7.3 Online creativity	**5.7**	**130**	◇
7.3.1 Top-level domains (TLDs)/th pop. 15–69	1.8	89	
7.3.2 GitHub commits/mn pop. 15–69	2	110	
7.3.3 Mobile app creation/bn PPP$ GDP	13.2	130	○◇

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.

Global Innovation Index 2025



Data Availability

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

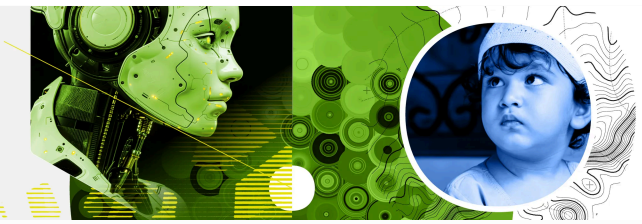
Botswana has missing data for thirteen indicators and outdated data for nine indicators.

Missing data for Botswana

Code	Indicator name	Economy year	Model year*	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2021	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
2.3.1	Researchers, FTE/mn pop.	n/a	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	n/a	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.2.2	Venture capital (VC) received, deal count/bn PPP$ GDP	n/a	2024	PitchBook Data, Inc.; International Monetary Fund
4.2.3	Late-stage VC deal count, % global VC	n/a	2024	PitchBook Data, Inc.
4.2.4	VC investors, deal count/bn PPP$ GDP	n/a	2024	PitchBook Data, Inc.; International Monetary Fund
4.2.5	VC investor co-participation/bn PPP$ GDP	n/a	2024	PitchBook Data, Inc.; International Monetary Fund
5.1.4	GERD performed by business, % GDP	n/a	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	GERD financed by business, %	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.3.5	Research talent, % in businesses	n/a	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
7.2.2	National feature films/mn pop. 15–69	n/a	2023	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2024	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

Global Innovation Index 2025



Outdated data for Botswana

Code	Indicator name	Economy year	Model year*	Source
1.3.2	Entrepreneurship policies and culture†	2015	2024	Global Entrepreneurship Monitor
2.1.1	Expenditure on education, % GDP	2020	2023	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2021	2023	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2022	2023	UNESCO Institute for Statistics
3.2.1	Electricity output, GWh/mn pop.	2022	2023	International Energy Agency
4.1.1	Finance for startups and scaleups†	2015	2024	Global Entrepreneurship Monitor
5.1.1	Knowledge-intensive employment, %	2023	2024	International Labour Organization
5.1.2	Females employed w/advanced degrees, %	2023	2024	International Labour Organization
7.3.3	Mobile app creation/bn PPP$ GDP	2022	2024	data.ia (a Sensor Tower Company); International Monetary Fund

*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

Global Innovation Index 2025

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 140 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.