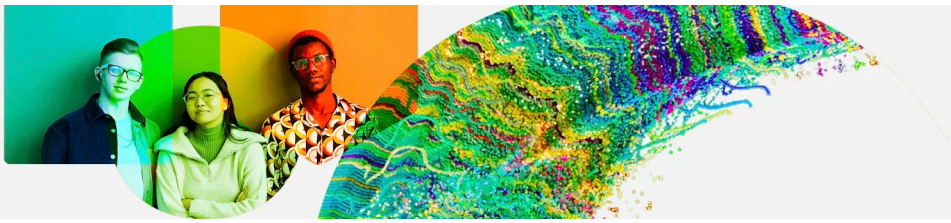
Global Innovation Index 2024



Brunei Darussalam ranking in the Global Innovation Index 2024

Brunei Darussalam ranks 88th 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.

Brunei Darussalam ranks 50th among the 51 high-income group economies.

Brunei Darussalam ranks 14th among the 17 economies in South East Asia, East Asia, and Oceania.

Brunei Darussalam GII Ranking (2020-2024)

The table shows the rankings of Brunei Darussalam 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 Brunei Darussalam in the GII 2024 is between ranks 76 and 111.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	71st	39th	113rd
2021	82nd	51st	115th
2022	92nd	53rd	129th
2023	87th	53rd	125th
2024	88th	55th	123rd

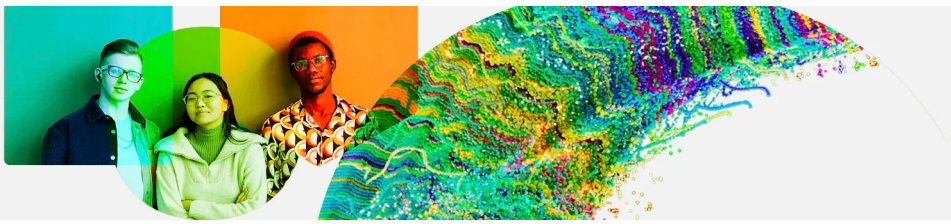
Brunei Darussalam performs worse in innovation outputs than innovation inputs in 2024.

This year **Brunei Darussalam ranks 55th in innovation inputs.** This position is lower than last year.

Brunei Darussalam ranks 123rd in innovation outputs. This position is higher than last year.

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

For Brunei Darussalam, 1 indicator has 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	
▼ -10.5% 2022 - 2023	n/a	n/a	n/a	n/a
▲ 18% 2013 - 2023	▲ 15.6% 2004 - 2018	n/a	n/a	n/a

Technology adoption

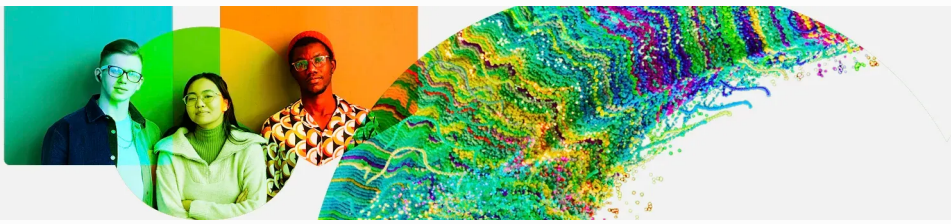
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
n/a	▲ 12.6% 2021 - 2022	n/a	n/a	n/a
n/a	▲ 15.2% 2012 - 2022		n/a	n/a
n/a	20.1 per 100 inhabitants in 2022	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
n/a	▼ -0.1% 2021 - 2022	▲ 1.1°C 2023
n/a	0% 2012 - 2022	n/a
	74.6 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

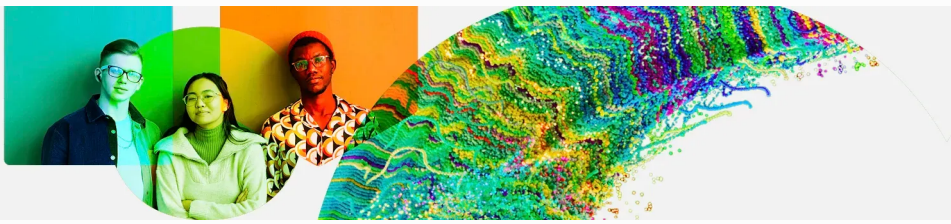


Expected vs. observed innovation performance

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

> Innovation overperformers relative to their economic development

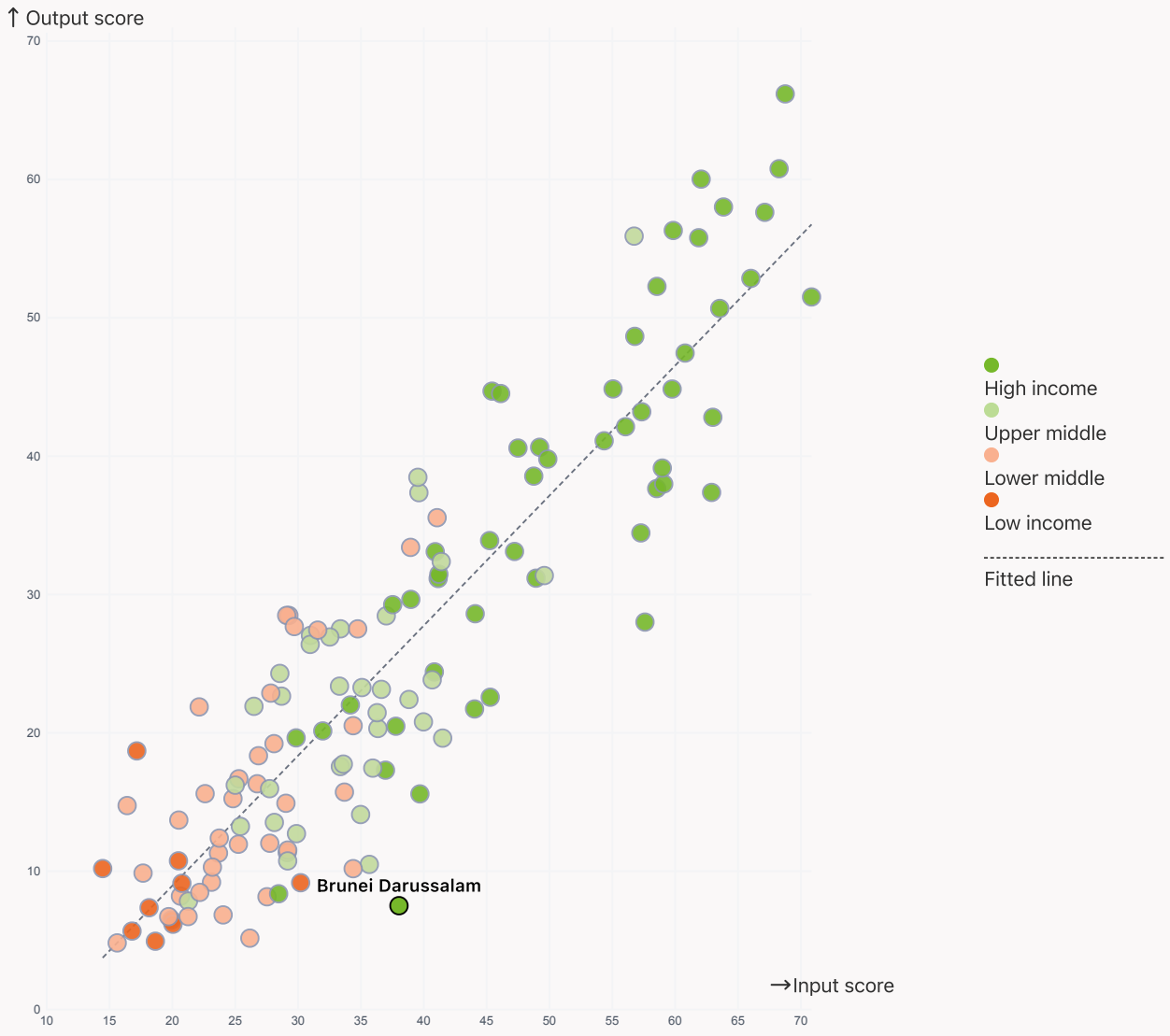


Effectively translating innovation investments into innovation outputs

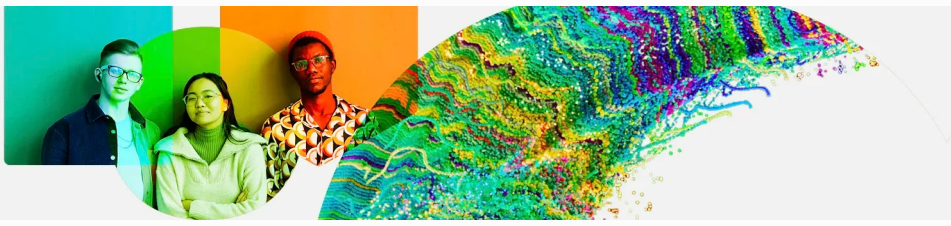
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

Brunei Darussalam produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs



Global Innovation Index 2024



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

Highest rankings

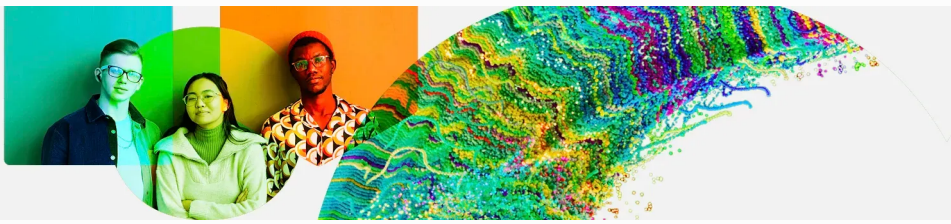
Brunei Darussalam ranks highest in Institutions (25th), Human capital and research (56th), Infrastructure (65th) and Business sophistication (82nd).

Lowest rankings

Brunei Darussalam ranks lowest in Creative outputs (124th), Knowledge and technology outputs (115th) and Market sophistication (105th).

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

Global Innovation Index 2024



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

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

High-Income economies

Brunei Darussalam performs above the high-income group average in Institutions.

South East Asia, East Asia, And Oceania

Brunei Darussalam performs above the regional average in Institutions.

Institutions

- Top 10 | Score: 80.81
- Brunei Darussalam | Score: 69.98
- High income | Score: 67.41
- SEAO | Score: 59.26

Human capital and research

- Top 10 | Score: 61.30
- High income | Score: 46.99
- SEAO | Score: 39.09
- Brunei Darussalam | Score: 33.94

Infrastructure

- Top 10 | Score: 58.57
- High income | Score: 51.96
- SEAO | Score: 45.67
- Brunei Darussalam | Score: 41.82

Market sophistication

- Top 10 | Score: 62.12
- SEAO | Score: 45.28
- High income | Score: 44.90
- Brunei Darussalam | Score: 21.25

Business sophistication

- Top 10 | Score: 63.64
- High income | Score: 44.71
- SEAO | Score: 39.01
- Brunei Darussalam | Score: 23.49

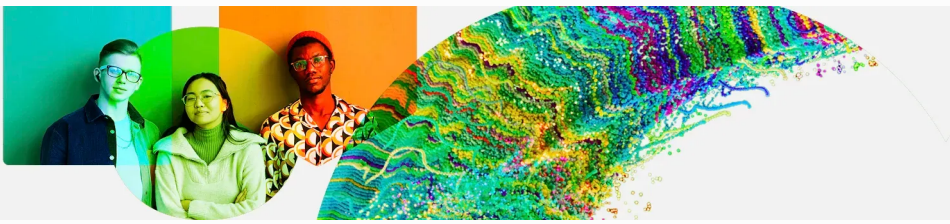
Knowledge and technology outputs

- Top 10 | Score: 57.29
- High income | Score: 35.79
- SEAO | Score: 29.72
- Brunei Darussalam | Score: 9.82

Creative outputs

- Top 10 | Score: 56.54
- High income | Score: 39.44
- SEAO | Score: 33.06
- Brunei Darussalam | Score: 5.07

Global Innovation Index 2024



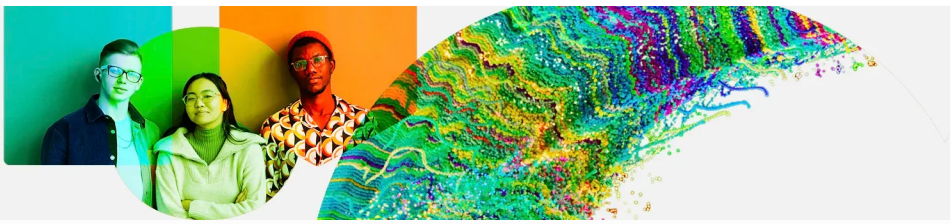
Innovation strengths and weaknesses in Brunei Darussalam

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

Brunei Darussalam's main innovation strengths are **Operational stability for businesses*** (rank 2), **Applied tariff rate, weighted avg., %** (rank 3) and **Pupil–teacher ratio, secondary** (rank 3).

Strengths			Weaknesses		
Rank	Code	Indicator name	Rank	Code	Indicator name
2	1.1.1	Operational stability for businesses*	133	6.3.4	ICT services exports, % total trade
3	4.3.1	Applied tariff rate, weighted avg., %	132	3.3.2	Low-carbon energy use, %
3	2.1.5	Pupil–teacher ratio, secondary	128	6.1.1	Patents by origin/bn PPP$ GDP
3	2.2.2	Graduates in science and engineering, %	126	7.1.4	Industrial designs by origin/bn PPP$ GDP
6	3.1.2	ICT use*	116	6.3.1	Intellectual property receipts, % total trade
11	3.2.1	Electricity output, GWh/mn pop.	102	5.2.5	Patent families/bn PPP$ GDP
16	1.1.2	Government effectiveness*	99	6.1.2	PCT patents by origin/bn PPP$ GDP
29	1.2.1	Regulatory quality*	98	5.1.4	GERD financed by business, %
29	1.2.2	Rule of law*	49	6.2.2	Unicorn valuation, % GDP
30	3.2.3	Gross capital formation, % GDP	41	2.3.3	Global corporate R&D investors, top 3, mn USD

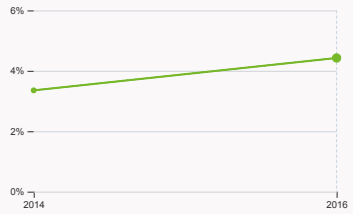
Global Innovation Index 2024



Brunei Darussalam's innovation system

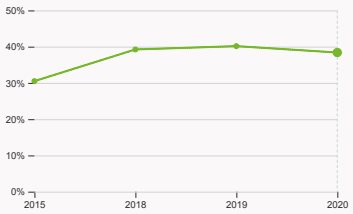
As far as practicable, the plots below present unscaled indicator data.

Innovation inputs in Brunei Darussalam



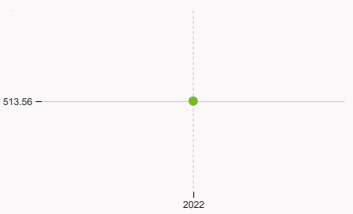
2.1.1 **Expenditure on education**

was equal to 4.43 % GDP in 2016, up by 1.07 percentage points from the year prior – and equivalent to an indicator rank of 58.



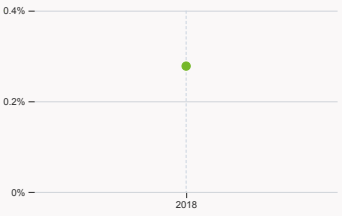
2.2.2 **Graduates in science and engineering**

was equal to 38.39 % of total graduates in 2020, down by 1.76 percentage points from the year prior – and equivalent to an indicator rank of 3.



2.3.1 **Researchers**

was equal to 513.56 FTE per million population in 2022 – and equivalent to an indicator rank of 73.



2.3.2 **Gross expenditure on R&D**

was equal to 0.28 % GDP in 2018 – and equivalent to an indicator rank of 76.

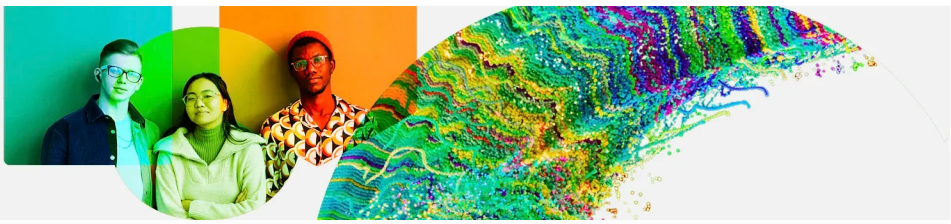
2.3.4 **QS university ranking**

was equal to an average score of 16.9 for the top three universities in 2023, down by 27.25% from the year prior – and equivalent to an indicator rank of 54.

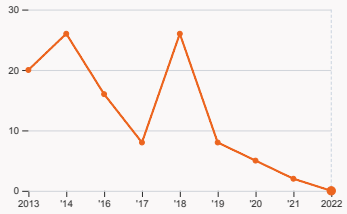
5.1.1 **Knowledge-intensive employment**

was equal to 35.46 % in 2022, up by 1.97 percentage points from the year prior – and equivalent to an indicator rank of 41.

Global Innovation Index 2024

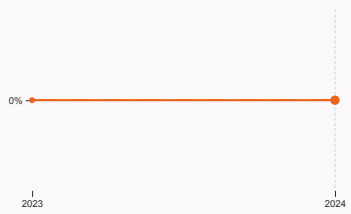


Innovation outputs in Brunei Darussalam



6.1.1 Patents by origin

was equal to 0 patents in 2022, down by 100% from the year prior – and equivalent to an indicator rank of 128.



6.2.2 Unicorn valuation

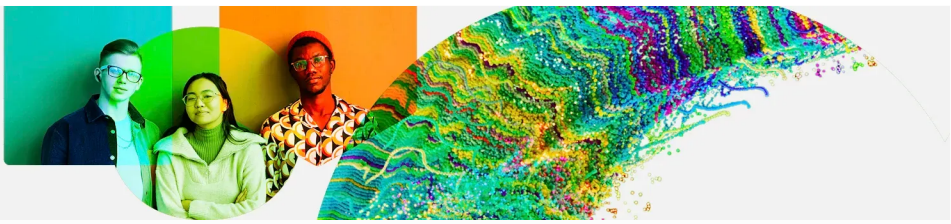
was equal to 0 % GDP in 2024 with no change from the year prior – and equivalent to an indicator rank of 49.

6.3.3 High-tech exports

was equal to 29.64 million USD in 2022, down by 9.16% from the year prior – and equivalent to an indicator rank of 103.

7.3.3 Mobile app creation

was equal to 73.92 thousand global downloads of mobile apps in 2023, down by 36.76% from the year prior – and equivalent to an indicator rank of 113.



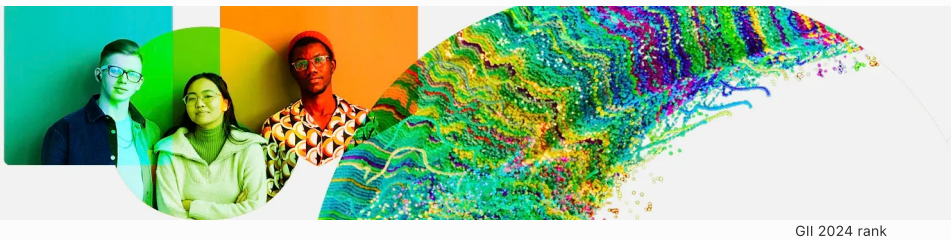
Brunei Darussalam's innovation top performers

2.3.4 QS university ranking of Brunei Darussalam's top universities

Rank	University	Score
387	UNIVERSITI BRUNEI DARUSSALAM (UBD)	28.30
525	UNIVERSITI TEKNOLOGI BRUNEI	22.40

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2023).
Note: QS Quacquarelli Symonds Ltd annually assesses over 1,200 universities across the globe and scores them between [0,100].
Ranks can represent a single value "x", a tie "x=" or a range "x-y".

Global Innovation Index 2024



Brunei Darussalam

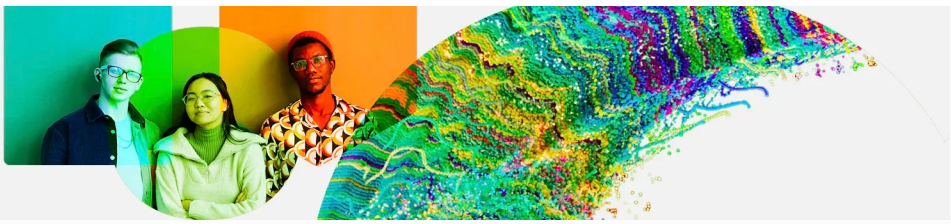
GII 2024 rank **88**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
123	55	High	SEAO	0.5	32	72,609.6

	Score / Value	Rank	
Institutions	70	25	●◆
1.1 Institutional environment	89.6	5	●◆
1.1.1 Operational stability for businesses*	98	2	●◆
1.1.2 Government effectiveness*	81.1	16	●◆
1.2 Regulatory environment	70.2	28	●◆
1.2.1 Regulatory quality*	69.9	29	●◆
1.2.2 Rule of law*	70.6	29	●◆
1.3 Business environment	50.1	[57]	
1.3.1 Policy stability for doing business†	50.1	61	
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	33.9	56	◇
2.1 Education	54.1	61	
2.1.1 Expenditure on education, % GDP	4.4	58	
2.1.2 Government funding/pupil, secondary, % GDP/cap	24	28	
2.1.3 School life expectancy, years	13.7	72	◇
2.1.4 PISA scales in reading, maths and science	439.1	44	
2.1.5 Pupil–teacher ratio, secondary	7.2	3	●◆
2.2 Tertiary education	41	36	
2.2.1 Tertiary enrolment, % gross	32.7	89	◇
2.2.2 Graduates in science and engineering, %	38.4	3	●◆
2.2.3 Tertiary inbound mobility, %	3.7	58	
2.3 Research and development (R&D)	6.6	71	◇
2.3.1 Researchers, FTE/mn pop.	513.6	73	◇
2.3.2 Gross expenditure on R&D, % GDP	0.3	76	◇
2.3.3 Global corporate R&D investors, top 3, mn USD	0	41	○◇
2.3.4 QS university ranking, top 3*	17.1	54	
Infrastructure	41.8	65	◇
3.1 Information and communication technologies (ICTs)	72.6	65	◇
3.1.1 ICT access*	96.9	34	
3.1.2 ICT use*	92.7	6	●◆
3.1.3 Government's online service*	54.4	86	◇
3.1.4 E-participation*	46.5	80	◇
3.2 General infrastructure	47.4	23	●◆
3.2.1 Electricity output, GWh/mn pop.	12,809	11	●◆
3.2.2 Logistics performance*	n/a	n/a	
3.2.3 Gross capital formation, % GDP	29.1	30	●◆
3.3 Ecological sustainability	5.4	129	◇
3.3.1 GDP/unit of energy use	6.6	104	
3.3.2 Low-carbon energy use, %	0.02	132	○◇
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.7	85	◇
Market sophistication	21.2	[105]	
4.1 Credit	9.1	[113]	
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	31.6	92	◇
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
4.2 Investment	4.5	[86]	
4.2.1 Market capitalization, % GDP	n/a	n/a	
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.08	49	
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	50.2	80	
4.3.1 Applied tariff rate, weighted avg., %	0.02	3	●◆
4.3.2 Domestic industry diversification	n/a	n/a	
4.3.3 Domestic market scale, bn PPP$	32	126	

	Score / Value	Rank	
Business sophistication	23.5	82	◇
5.1 Knowledge workers	31.9	[66]	
5.1.1 Knowledge-intensive employment, %	35.5	41	
5.1.2 Firms offering formal training, %	n/a	n/a	
5.1.3 GERD performed by business, % GDP	n/a	n/a	
5.1.4 GERD financed by business, %	0	98	○◇
5.1.5 Females employed w/advanced degrees, %	13	61	◇
5.2 Innovation linkages	26.1	56	
5.2.1 Public Research-Industry co-publications, %	2.3	36	
5.2.2 University-industry R&D collaboration†	51.7	51	
5.2.3 State of cluster development†	46.3	66	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.02	59	
5.2.5 Patent families/bn PPP$ GDP	0	102	○◇
5.3 Knowledge absorption	12.5	132	○◇
5.3.1 Intellectual property payments, % total trade	0.1	103	
5.3.2 High-tech imports, % total trade	3	129	◇
5.3.3 ICT services imports, % total trade	0.3	121	◇
5.3.4 FDI net inflows, % GDP	1.5	87	
5.3.5 Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs	9.8	115	◇
6.1 Knowledge creation	8.2	91	◇
6.1.1 Patents by origin/bn PPP$ GDP	0	128	○◇
6.1.2 PCT patents by origin/bn PPP$ GDP	0	99	○◇
6.1.3 Utility models by origin/bn PPP$ GDP	-	-	
6.1.4 Scientific and technical articles/bn PPP$ GDP	13.8	49	
6.1.5 Citable documents H-index	4.3	108	◇
6.2 Knowledge impact	19	107	◇
6.2.1 Labor productivity growth, %	-1.1	120	◇
6.2.2 Unicorn valuation, % GDP	0	49	○◇
6.2.3 Software spending, % GDP	0.2	67	
6.2.4 High-tech manufacturing, %	n/a	n/a	
6.3 Knowledge diffusion	2.3	129	◇
6.3.1 Intellectual property receipts, % total trade	0	116	○◇
6.3.2 Production and export complexity	n/a	n/a	
6.3.3 High-tech exports, % total trade	0.2	103	◇
6.3.4 ICT services exports, % total trade	0.05	133	○◇
6.3.5 ISO 9001 quality/bn PPP$ GDP	3	78	
Creative outputs	5.1	[124]	
7.1 Intangible assets	1.7	[122]	
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	5.7	115	◇
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	0.3	[128]	
7.2.1 Cultural and creative services exports, % total trade	0.01	106	◇
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	0.04	114	
7.3 Online creativity	16.5	109	◇
7.3.1 Top-level domains (TLDs)/th pop. 15–69	3.2	66	◇
7.3.2 GitHub commits/mn pop. 15–69	2.5	99	◇
7.3.3 Mobile app creation/bn PPP$ GDP	43.8	113	◇

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

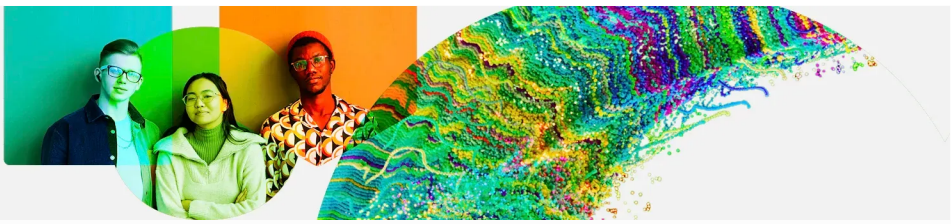
The following tables list indicators that are either missing or outdated for Brunei Darussalam.

Brunei Darussalam has missing data for eighteen indicators and outdated data for fourteen indicators.

Missing data for Brunei Darussalam

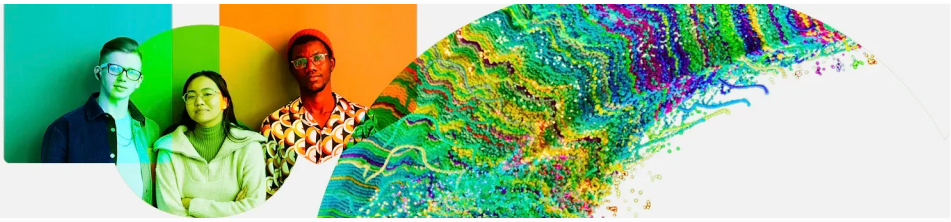
Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture†	n/a	2023	Global Entrepreneurship Monitor
3.2.2	Logistics performance*	n/a	2023	World Bank, Logistics Performance Index 2023 (https://lpi.worldbank.org/); and World Bank 2023, Connecting to Compete 2023: Trade 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
4.1.3	Loans from microfinance institutions, % GDP	n/a	2022	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2022	World Federation of Exchanges; World Bank
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
4.3.2	Domestic industry diversification	n/a	2021	United Nations Industrial Development Organization (UNIDO), Industrial Statistics Database (INDSTAT) Rev.3 and 4
5.1.2	Firms offering formal training, %	n/a	2023	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	n/a	2022	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
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

Global Innovation Index 2024



Code	Indicator name	Economy Year	Model Year	Source
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

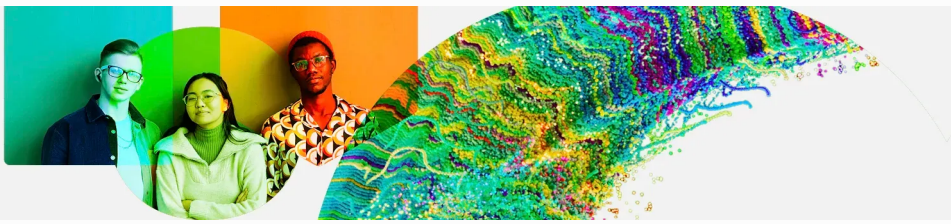
Global Innovation Index 2024



Outdated data for Brunei Darussalam

Code	Indicator name	Economy Year	Model Year	Source
1.3.1	Policy stability for doing business[+]	2021	2023	World Economic Forum, Executive Opinion Survey (EOS)
2.1.1	Expenditure on education, % GDP	2016	2022	UNESCO Institute for Statistics
2.1.2	Government funding/pupil, secondary, % GDP/cap	2016	2020	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2020	2022	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2020	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, %	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	2020	2022	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2018	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency
5.1.4	GERD financed by business, %	2018	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2022	2023	International Labour Organization
5.2.2	University-industry R&D collaboration[+]	2021	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.2.3	State of cluster development[+]	2021	2023	World Economic Forum, Executive Opinion Survey (EOS)

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.