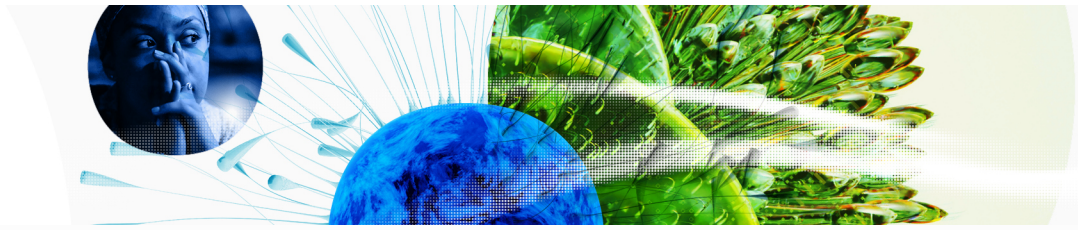
Global Innovation Index 2023



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**.

Trinidad and Tobago ranking in the Global Innovation Index 2023

> Trinidad and Tobago ranks 102nd among the 132 economies featured in the GII 2023.

> Trinidad and Tobago ranks 50th among the 50 high-income group economies.

> Trinidad and Tobago ranks 15th among the 19 economies in Latin America and the Caribbean.

> Trinidad and Tobago GII Ranking (2020-2023)

The table shows the rankings of Trinidad and Tobago 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 Trinidad and Tobago in the GII 2023 is between ranks 95 and 106.

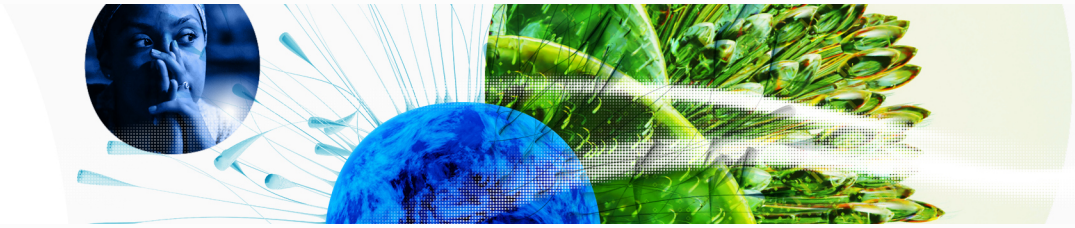
	GII Position	Innovation Inputs	Innovation Outputs
2020	98th	87th	111st
2021	97th	97th	95th
2022	101st	95th	103rd
2023	102nd	92nd	108th

Trinidad and Tobago performs worse in innovation outputs than innovation inputs in 2023.

This year Trinidad and Tobago ranks 92nd in innovation inputs. This position is higher than last year.

Trinidad and Tobago ranks 108th in innovation outputs. This position is lower than last year.

Global Innovation Index 2023

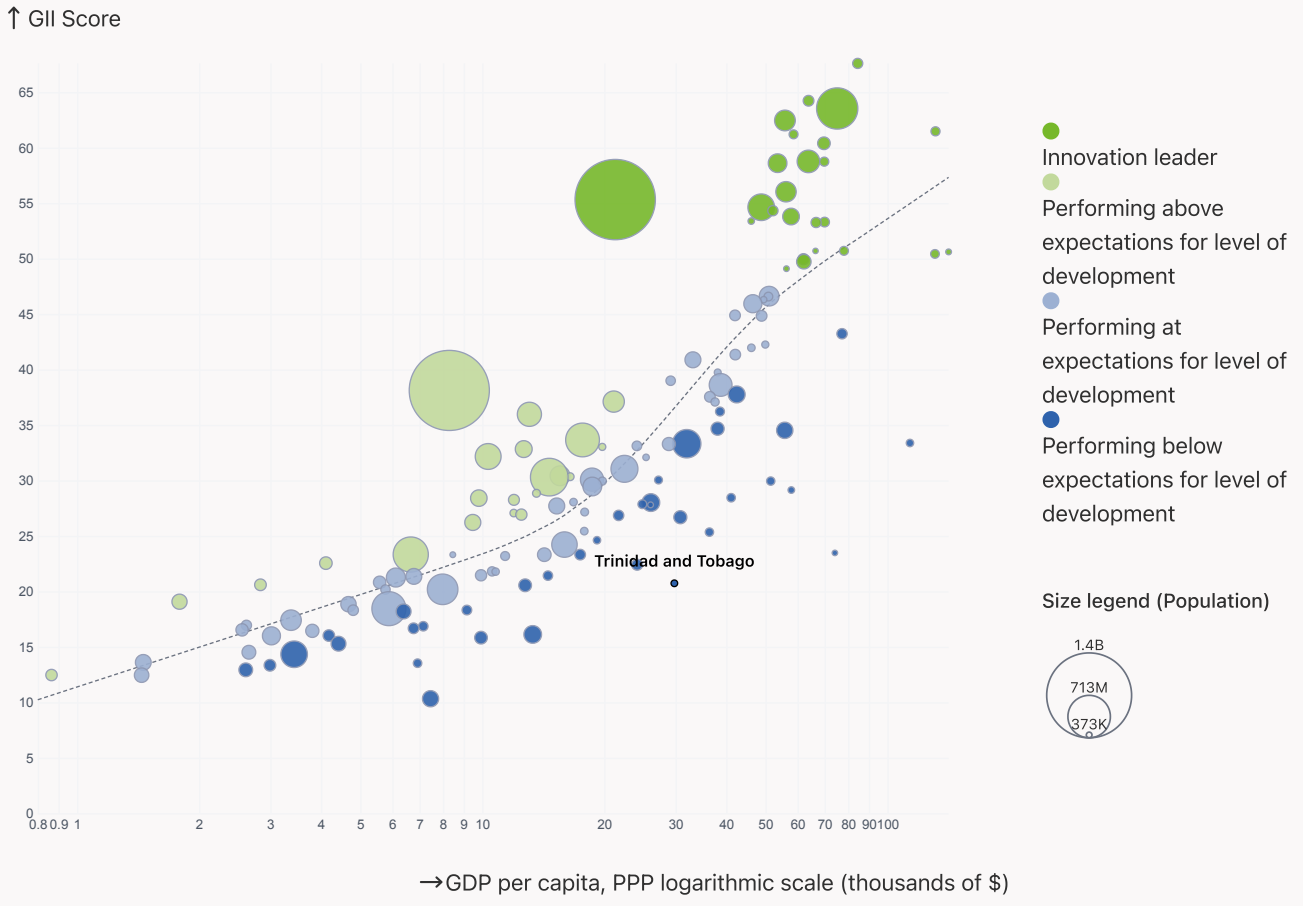


→ Expected vs. observed innovation performance

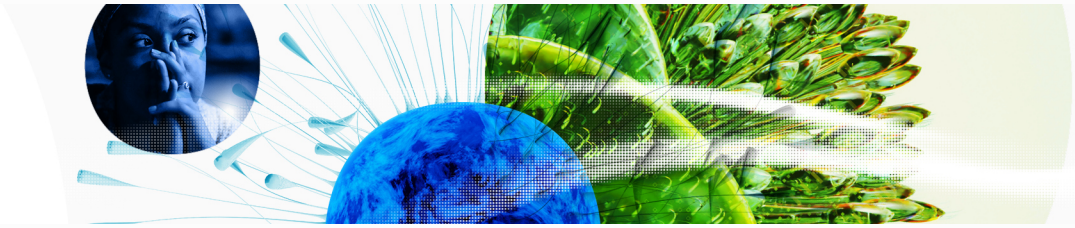
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.

> Relative to GDP, Trinidad and Tobago's performance is below expectations for its level of development.

> Innovation overperformers relative to their economic development



Global Innovation Index 2023

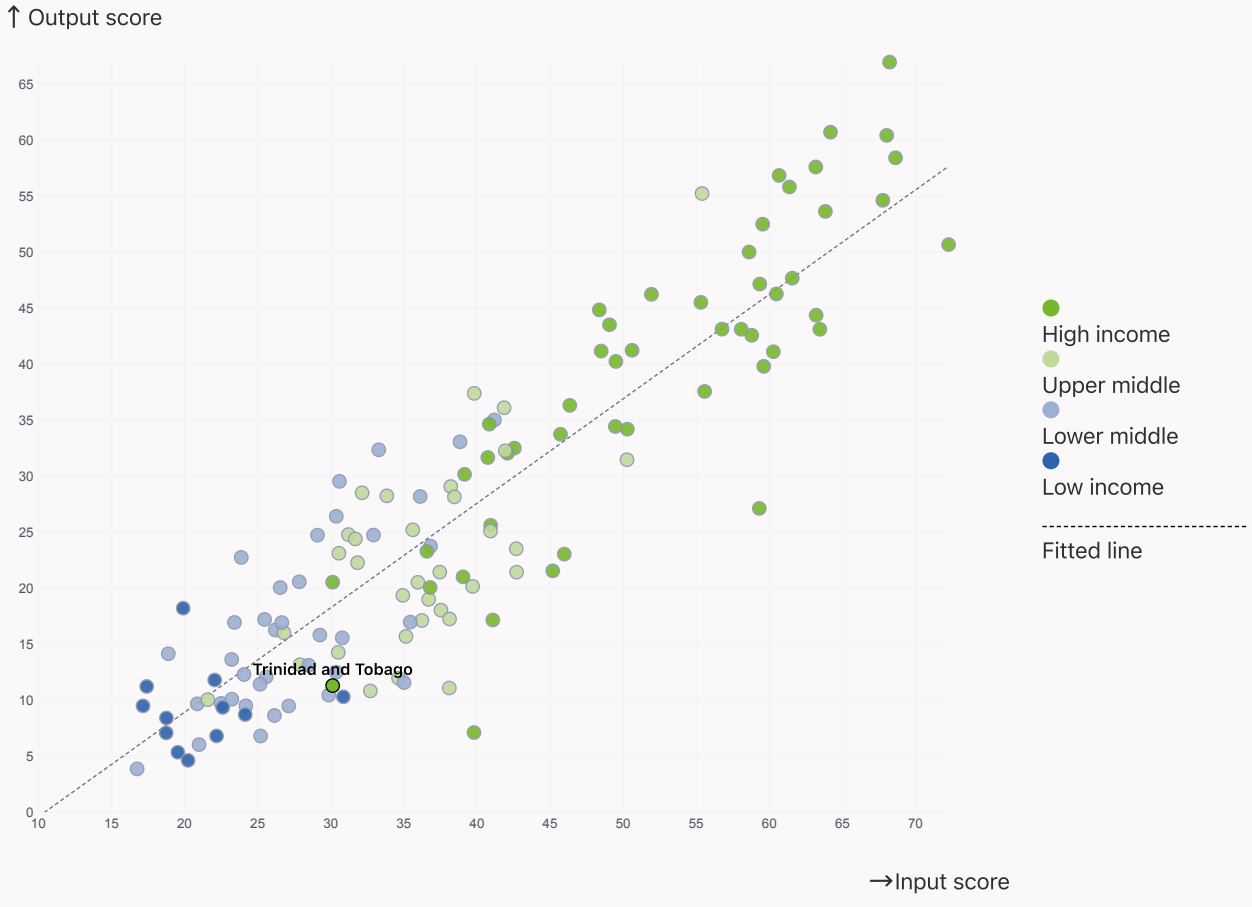


→ Effectively translating innovation investments into innovation outputs

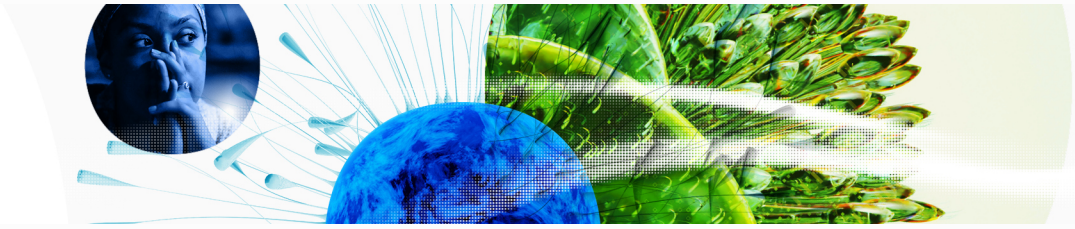
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

> Trinidad and Tobago produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

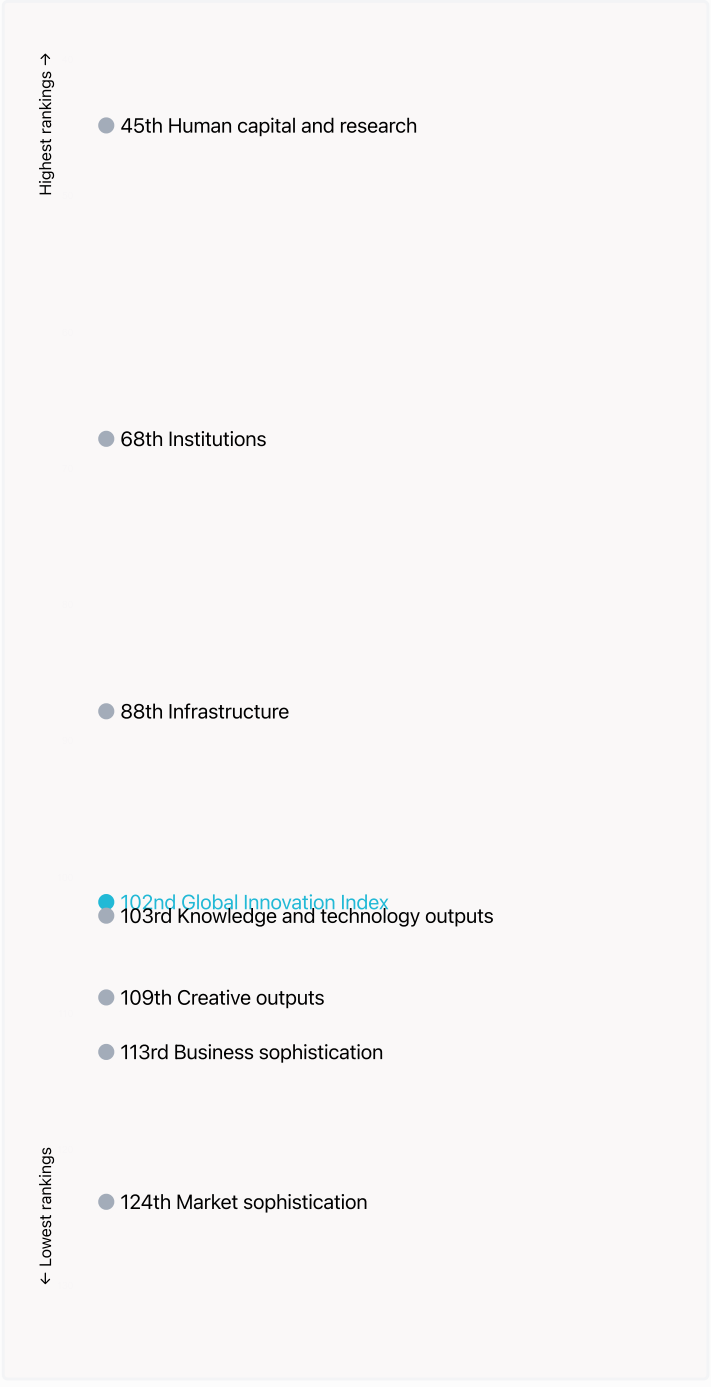


Global Innovation Index 2023



→ Overview of Trinidad and Tobago's rankings in the seven areas of the GII in 2023

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



> Highest rankings

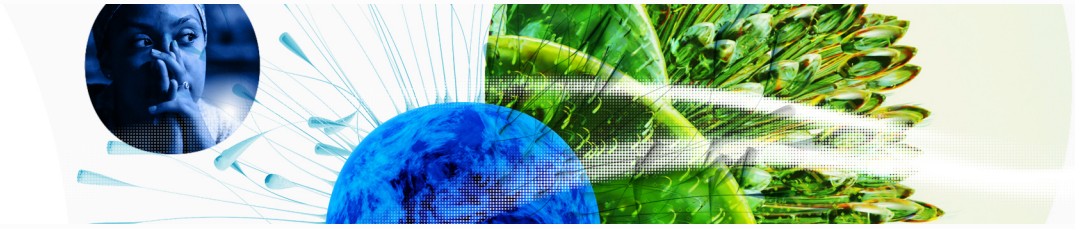
Trinidad and Tobago ranks highest in Human capital and research (45th), Institutions (68th) and Infrastructure (88th).

> Lowest rankings

Trinidad and Tobago ranks lowest in Market sophistication (124th), Business sophistication (113rd) and Creative outputs (109th).

The full WIPO Intellectual Property Statistics profile for Trinidad and Tobago can be found on this link.

Global Innovation Index 2023



→ Benchmark of Trinidad and Tobago against other country groupings for each of the seven areas of the GII Index

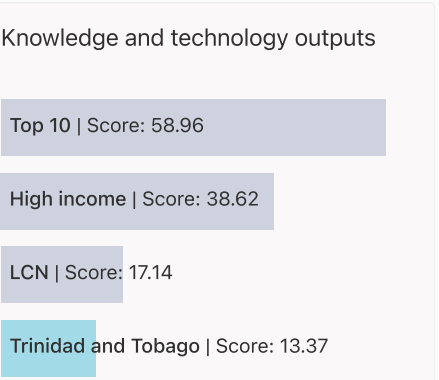
The charts shows the relative position of Trinidad and Tobago (blue bar) against other country groupings (grey bars), for each of the seven areas of the GII Index.

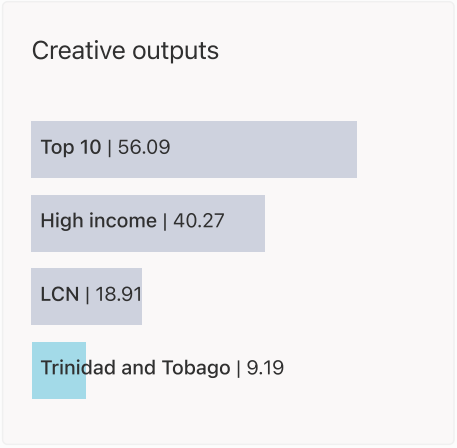
> High-Income economies

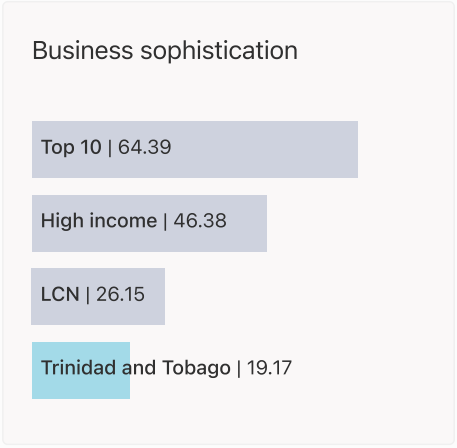
Trinidad and Tobago performs below the high-income group average in all the pillars.

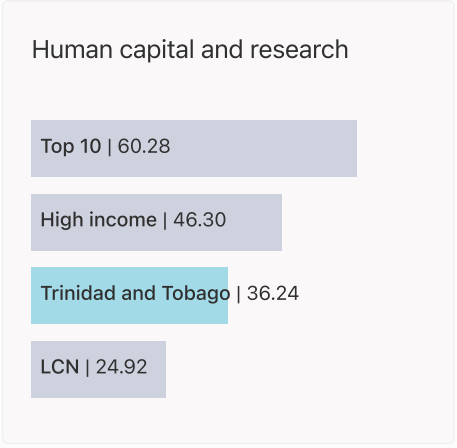
> Latin America And The Caribbean

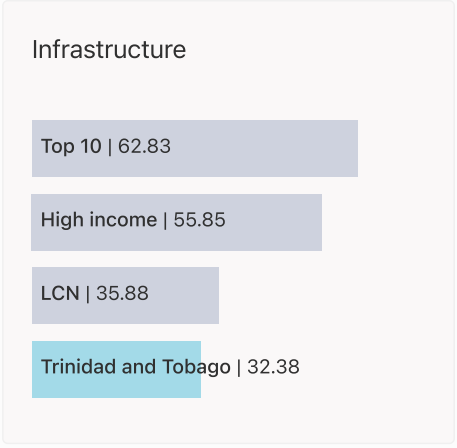
Trinidad and Tobago performs below the regional average in Knowledge and technology outputs, Creative outputs, Business sophistication, Market sophistication, Infrastructure.

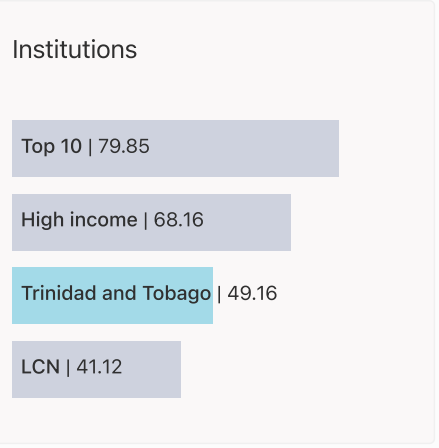




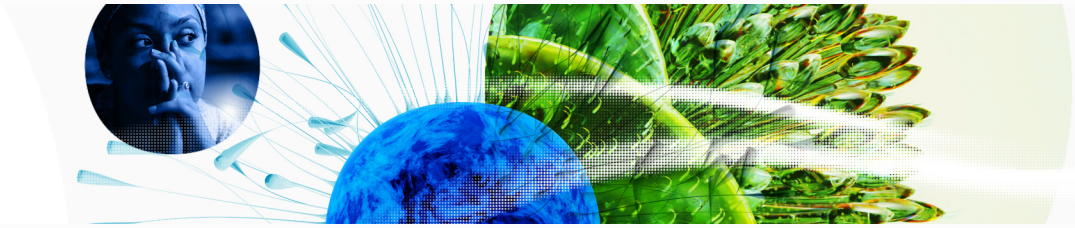








Global Innovation Index 2023



→ Innovation strengths and weaknesses in Trinidad and Tobago

The table below gives an overview of the indicator strengths and weaknesses of Trinidad and Tobago in the GII 2023.

> Trinidad and Tobago's main innovation strengths are **Graduates in science and engineering, %** (rank 14), **Electricity output, GWh/mn pop.** (rank 30) and **Joint venture/strategic alliance deals/bn PPP$ GDP** (rank 33).

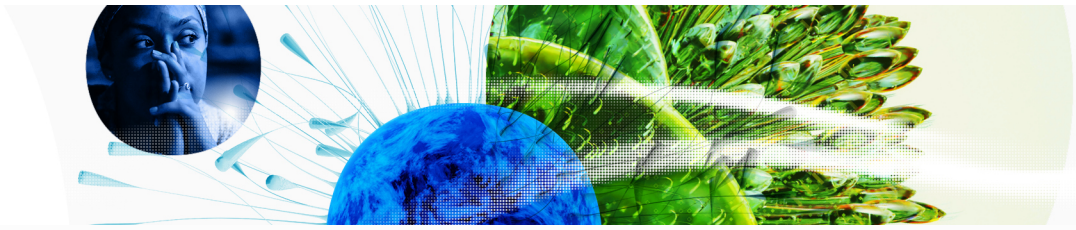
Strengths

Rank	Code	Indicator name
14	2.2.2	Graduates in science and engineering, %
30	3.2.1	Electricity output, GWh/mn pop.
33	5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP
47	3.3.2	Environmental performance
47	5.1.1	Knowledge-intensive employment, %
52	7.1.4	Industrial designs by origin/bn PPP$ GDP
53	2.1.5	Pupil-teacher ratio, secondary
55	3.1.1	ICT access
56	1.1.1	Operational stability for businesses
59	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69
60	1.1.2	Government effectiveness

Weaknesses

Rank	Code	Indicator name
126	3.3.1	GDP/unit of energy use
124	6.3.4	ICT services exports, % total trade
118	7.3.4	Mobile app creation/bn PPP$ GDP
108	2.3.2	Gross expenditure on R&D, % GDP
95	5.2.5	Patent families/bn PPP$ GDP
78	5.3.5	Research talent, % in businesses
74	7.1.3	Global brand value, top 5,000
71	2.3.4	QS university ranking, top 3
48	6.2.2	Unicorn valuation, % GDP
40	2.3.3	Global corporate R&D investors, top 3, mn US$

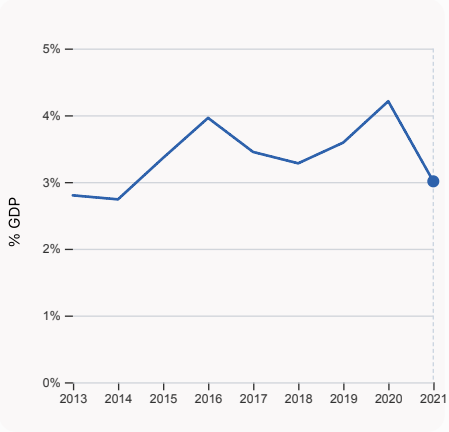
Global Innovation Index 2023



→ Trinidad and Tobago's innovation system

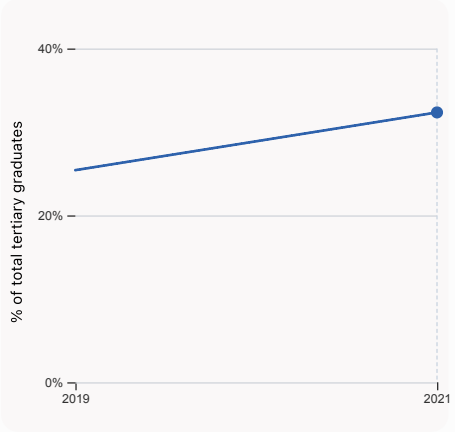
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Trinidad and Tobago



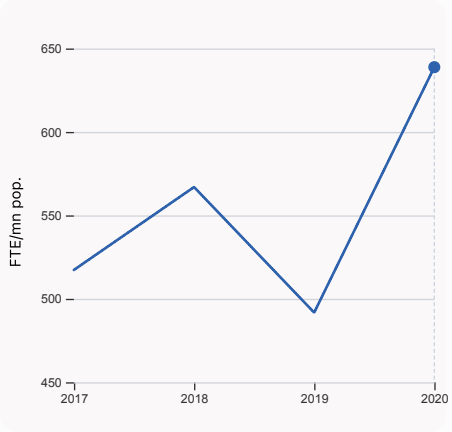
2.1.1 Expenditure on education, % GDP

was equal to 3.01% GDP in 2021, down by 1.2 percentage points from the year prior – and equivalent to an indicator rank of 106.



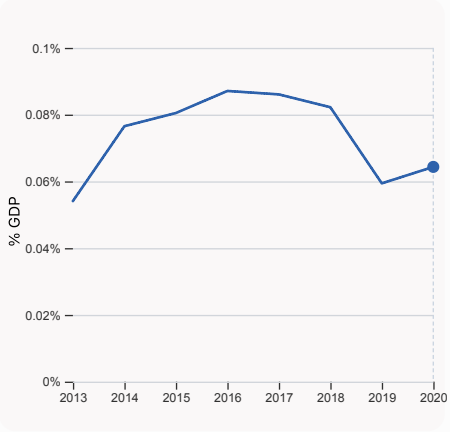
2.2.2 Graduates in science and engineering, %

was equal to 32.34% of total tertiary graduates in 2021, up by 6.92 percentage points from the year prior – and equivalent to an indicator rank of 14.



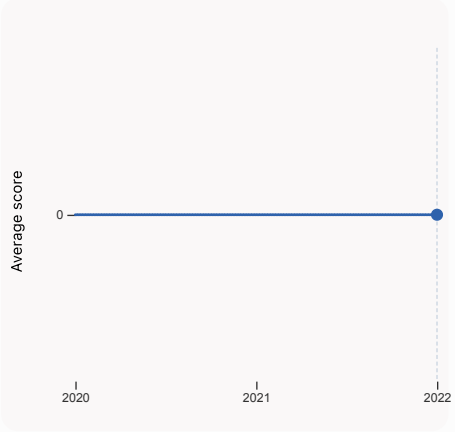
2.3.1 Researchers, FTE/mn pop.

was equal to 638.81 FTE/mn pop. in 2020, up by 29.9% from the year prior – and equivalent to an indicator rank of 63.



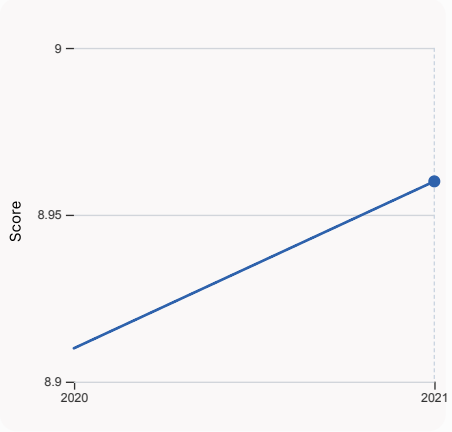
2.3.2 Gross expenditure on R&D, % GDP

was equal to 0.064% GDP in 2020, up by 0.0049 percentage points from the year prior – and equivalent to an indicator rank of 108.



2.3.4 QS university ranking, top 3

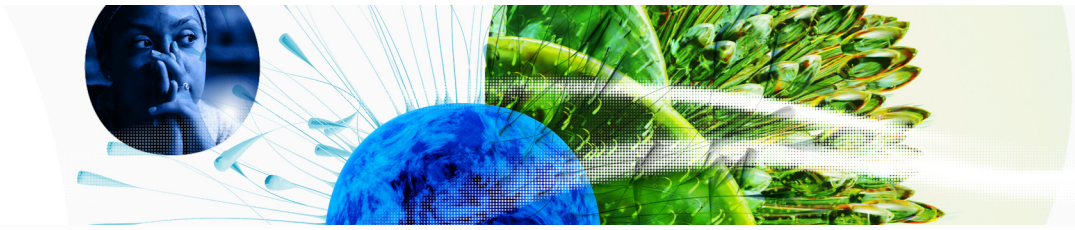
was equal to an average score of 0 for the top 3 universities in 2022, equivalent to an indicator rank of 71.

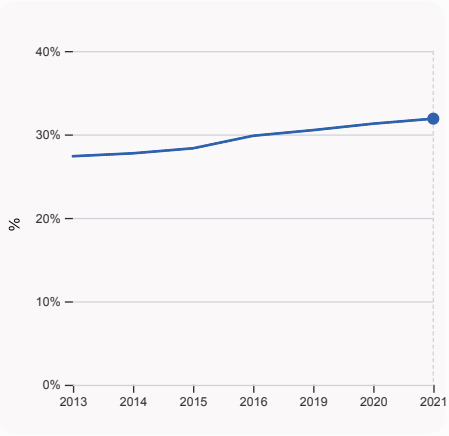


3.1.1 ICT access

was equal to a score of 8.96 in 2021, up by 0.56% from the year prior – and equivalent to an indicator rank of 55.

Global Innovation Index 2023

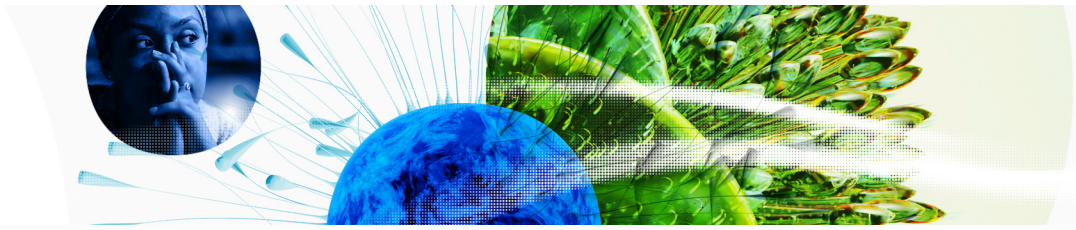




5.1.1 **Knowledge-intensive employment, %**

was equal to 31.89% in 2021, up by 0.6 percentage points from the year prior – and equivalent to an indicator rank of 47.

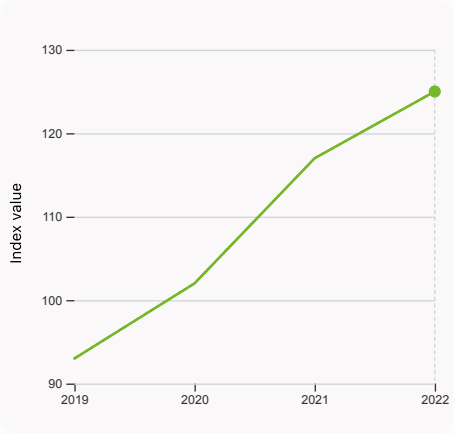
Global Innovation Index 2023



> Innovation outputs in Trinidad and Tobago

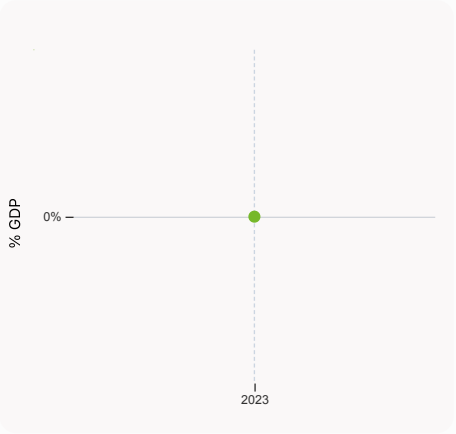
6.1.1 Patents by origin

was equal to 0.002 Thousands in 2021, up by 100% from the year prior – and equivalent to an indicator rank of 122.



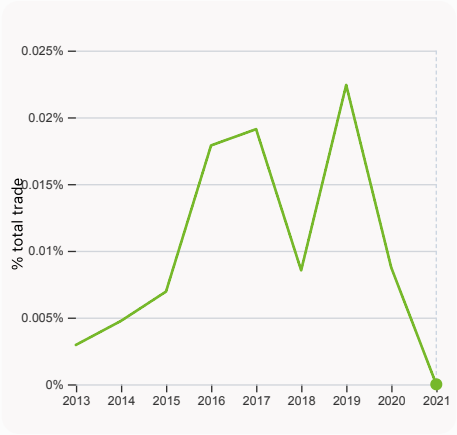
6.1.5 Citable documents H-index

was equal to an index value of 125 in 2022, up by 6.84% from the year prior – and equivalent to an indicator rank of 108.



6.2.2 Unicorn valuation, % GDP

was equal to 0 % GDP in 2023 – and equivalent to an indicator rank of 48.

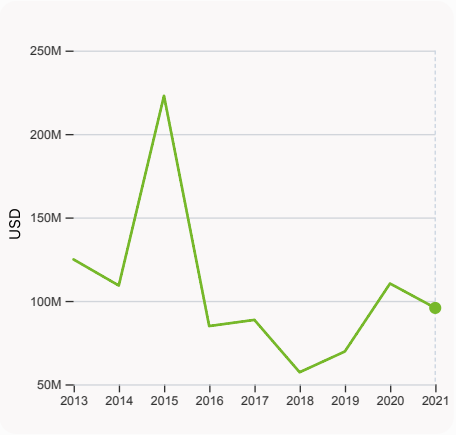


6.3.1 Intellectual property receipts, % total trade

was equal to 0% total trade in 2021, down by 0.0087 percentage points from the year prior – and equivalent to an indicator rank of 94.

6.3.2 Production and export complexity

was equal to a score of 0.132 in 2020, up by 260.8% from the year prior – and equivalent to an indicator rank of 55.



6.3.3 High-tech exports

was equal to 95,766,325 USD in 2021, down by 13.25% from the year prior – and equivalent to an indicator rank of 73.

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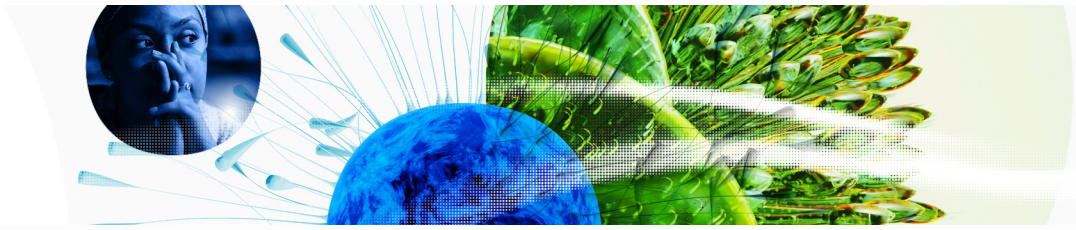
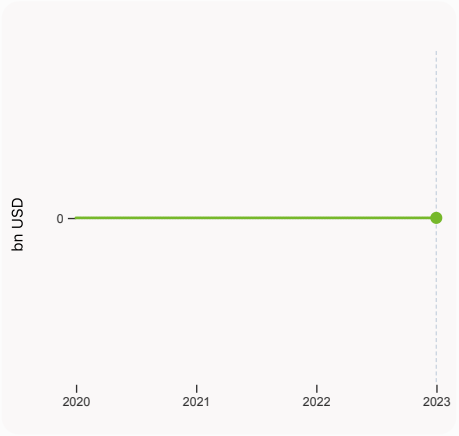
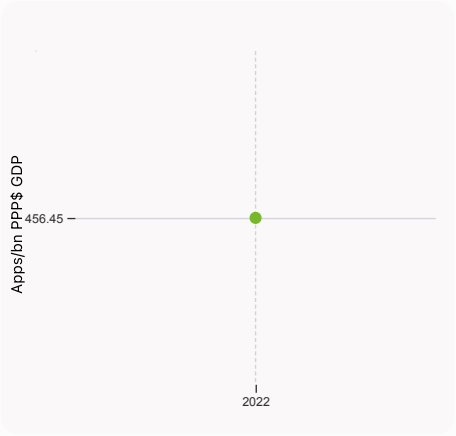




7.1.3 Global brand value, top 5,000

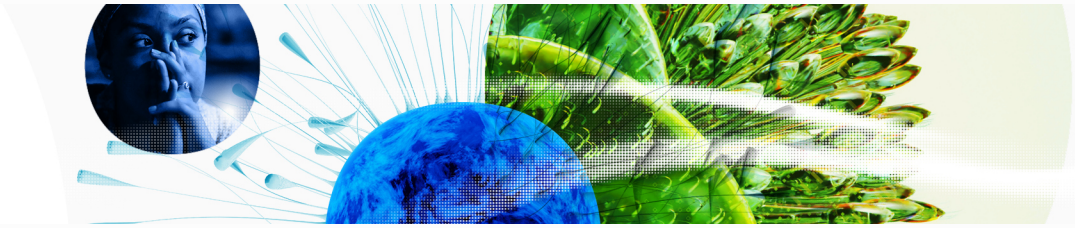
was equal to 0 bn USD in 2023 – and equivalent to an indicator rank of 74.



7.3.4 Mobile app creation/bn PPP$ GDP

was equal to 456.45 Apps/bn PPP$ GDP in 2022 – and equivalent to an indicator rank of 118.

Global Innovation Index 2023



Trinidad and Tobago

GII 2023 rank **102**

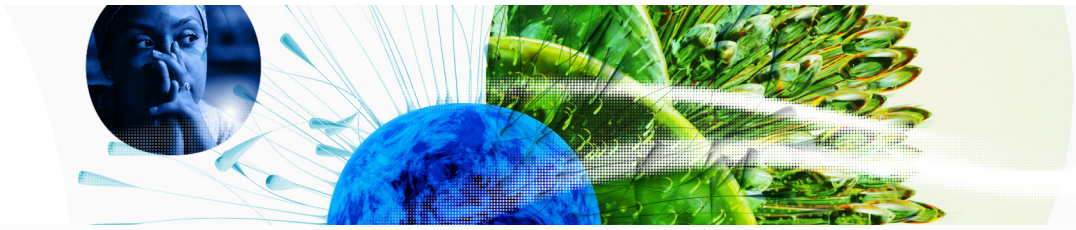
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
108	92	High	LCN	1.5	42.1	29,797.3

	Score / Value	Rank	
Institutions	**49.2**	**68**	◇
1.1 Institutional environment	**48.8**	**56**	◇
1.1.1 Operational stability for businesses*	55.6	56	●
1.1.2 Government effectiveness*	42.1	60	●
1.2 Regulatory environment	**56.5**	**83**	◇
1.2.1 Regulatory quality*	39.9	78	◇
1.2.2 Rule of law*	35.7	71	◇
1.2.3 Cost of redundancy dismissal	20.5	89	
1.3 Business environment	**42.2**	**78**	
1.3.1 Policies for doing business†	42.2	80	◇
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	**36.2**	**45**	
2.1 Education	**39.2**	**101**	◇
2.1.1 Expenditure on education, % GDP	3.0	106	◇
2.1.2 Government funding/pupil, secondary, % GDP/cap	13.9	78	◇
2.1.3 School life expectancy, years	n/a	n/a	
2.1.4 PISA scales in reading, maths and science	423.0	54	◇
2.1.5 Pupil-teacher ratio, secondary	12.1	53	●
2.2 Tertiary education	**67.7**	**3**	
2.2.1 Tertiary enrolment, % gross	n/a	n/a	
2.2.2 Graduates in science and engineering, %	32.3	14	●
2.2.3 Tertiary inbound mobility, %	n/a	n/a	
2.3 Research and development (R&D)	**1.9**	**93**	◇
2.3.1 Researchers, FTE/mn pop.	638.8	63	◇
2.3.2 Gross expenditure on R&D, % GDP	0.1	108	○ ◇
2.3.3 Global corporate R&D investors, top 3, mn US$	0.0	40	○ ◇
2.3.4 QS university ranking, top 3*	0.0	71	○ ◇
Infrastructure	**32.4**	**88**	◇
3.1 Information and communication technologies (ICTs)	**53.9**	**91**	◇
3.1.1 ICT access*	84.4	55	●
3.1.2 ICT use*	65.5	84	◇
3.1.3 Government's online service*	43.5	103	◇
3.1.4 E-participation*	22.1	120	◇
3.2 General infrastructure	**25.9**	**68**	◇
3.2.1 Electricity output, GWh/mn pop.	6,590.4	30	●
3.2.2 Logistics performance*	18.2	89	◇
3.2.3 Gross capital formation, % GDP	n/a	n/a	
3.3 Ecological sustainability	**17.4**	**95**	◇
3.3.1 GDP/unit of energy use	2.2	126	○ ◇
3.3.2 Environmental performance*	49.0	47	●
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.5	86	◇
Market sophistication	**13.9**	**124**	
4.1 Credit	**16.0**	**100**	
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	46.1	77	◇
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
4.2 Investment	**3.2**	**91**	
4.2.1 Market capitalization, % GDP	n/a	n/a	
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.1	54	
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	**22.5**	**125**	◇
4.3.1 Applied tariff rate, weighted avg., %	8.6	109	
4.3.2 Domestic industry diversification	n/a	n/a	
4.3.3 Domestic market scale, bn PPP$	42.1	115	

	Score / Value	Rank	
Business sophistication	**19.2**	**113**	◇
5.1 Knowledge workers	**23.7**	**83**	◇
◇ 5.1.1 Knowledge-intensive employment, %	31.9	47	●
◇ 5.1.2 Firms offering formal training, %	n/a	n/a	
5.1.3 GERD performed by business, % GDP	0.0	84	◇
5.1.4 GERD financed by business, %	4.6	81	◇
5.1.5 Females employed w/advanced degrees, %	12.8	60	
5.2 Innovation linkages	**13.8**	**104**	◇
5.2.1 University-industry R&D collaboration†	22.8	111	◇
5.2.2 State of cluster development†	31.6	89	◇
5.2.3 GERD financed by abroad, % GDP	0.0	77	◇
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	33	●
5.2.5 Patent families/bn PPP$ GDP	0.0	95	○ ◇
5.3 Knowledge absorption	**20.0**	**130**	◇
5.3.1 Intellectual property payments, % total trade	0.5	67	
5.3.2 High-tech imports, % total trade	5.5	108	
5.3.3 ICT services imports, % total trade	0.6	103	◇
5.3.4 FDI net inflows, % GDP	0.4	116	
5.3.5 Research talent, % in businesses	1.4	78	○ ◇
Knowledge and technology outputs	**13.4**	**103**	◇
6.1 Knowledge creation	**3.8**	**118**	◇
6.1.1 Patents by origin/bn PPP$ GDP	0.1	122	◇
6.1.2 PCT patents by origin/bn PPP$ GDP	0.1	63	
6.1.3 Utility models by origin/bn PPP$ GDP	0.0	67	◇
6.1.4 Scientific and technical articles/bn PPP$ GDP	n/a	n/a	
6.1.5 Citable documents H-index	4.6	108	◇
6.2 Knowledge impact	**20.4**	**102**	
6.2.1 Labor productivity growth, %	-0.4	106	◇
6.2.2 Unicorn valuation, % GDP	0.0	48	○ ◇
6.2.3 Software spending, % GDP	n/a	n/a	
6.2.4 High-tech manufacturing, %	n/a	n/a	
6.3 Knowledge diffusion	**15.9**	**91**	◇
6.3.1 Intellectual property receipts, % total trade	0.0	94	
6.3.2 Production and export complexity	55.3	55	◇
6.3.3 High-tech exports, % total trade	1.0	73	◇
6.3.4 ICT services exports, % total trade	0.1	124	○ ◇
6.3.5 ISO 9001 quality/bn PPP$ GDP	2.1	86	◇
Creative outputs	**9.2**	**109**	◇
7.1 Intangible assets	**12.3**	**104**	◇
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	17.5	97	◇
7.1.3 Global brand value, top 5,000	0.0	74	○ ◇
7.1.4 Industrial designs by origin/bn PPP$ GDP	1.5	52	●
7.2 Creative goods and services	**1.2**	**114**	
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	n/a	n/a	
7.2.4 Creative goods exports, % total trade	0.1	94	
7.3 Online creativity	**10.8**	**113**	◇
7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	4.4	59	● ◇
7.3.2 Country-code TLDs/th pop. 15-69	1.0	90	◇
7.3.3 GitHub commits/mn pop. 15-69	4.2	75	◇
7.3.4 Mobile app creation/bn PPP$ GDP	33.7	118	○ ◇

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question, 🕓 indicates that the economy's data are older than the base year; see appendices for details, including the year of the data, at https://www.wipo.int/gii-ranking. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

Global Innovation Index 2023



→ Data availability

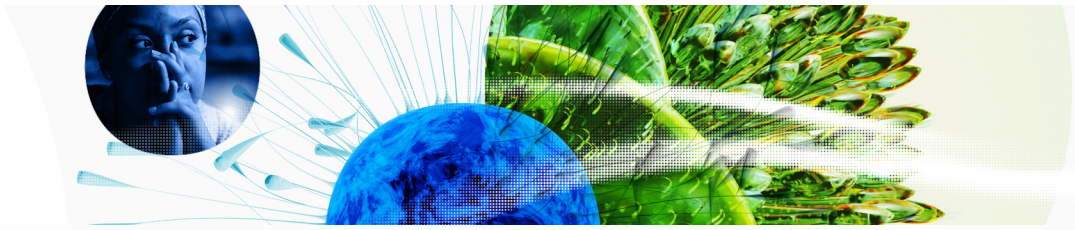
The following tables list indicators that are either missing or outdated for Trinidad and Tobago.

> Trinidad and Tobago has missing data for eighteen indicators and outdated data for nine indicators.

> Missing data for Trinidad and Tobago

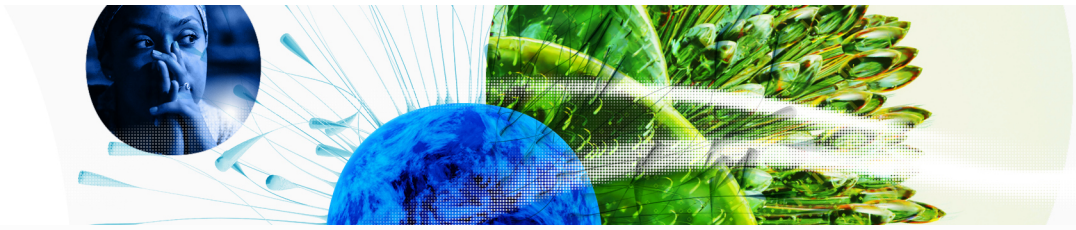
Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture	n/a	2022	Global Entrepreneurship Monitor
2.1.3	School life expectancy, years	n/a	2020	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	n/a	2020	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	n/a	2020	UNESCO Institute for Statistics
3.2.3	Gross capital formation, % GDP	n/a	2022	International Monetary Fund
4.1.1	Finance for startups and scaleups	n/a	2022	Global Entrepreneurship Monitor
4.1.3	Loans from microfinance institutions, % GDP	n/a	2021	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges; World Bank
4.2.3	VC recipients, deals/bn PPP$ GDP	n/a	2022	Refinitiv; International Monetary Fund
4.2.4	VC received, value, % GDP	n/a	2022	Refinitiv; International Monetary Fund
4.3.2	Domestic industry diversification	n/a	2020	United Nations Industrial Development Organization
5.1.2	Firms offering formal training, %	n/a	2019	World Bank Enterprise Surveys
6.2.3	Software spending, % GDP	n/a	2022	S&P Global, Market Intelligence
6.2.4	High-tech manufacturing, %	n/a	2020	United Nations Industrial Development Organization
7.1.1	Intangible asset intensity, top 15, %	n/a	2022	Brand Finance
7.2.1	Cultural and creative services exports, % total trade	n/a	2021	World Trade Organization and United Nations Conference on Trade and Development
7.2.2	National feature films/mn pop. 15-69	n/a	2021	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15-69	n/a	2022	PwC, GEMO; United Nations, World Population Prospects; International Monetary

Global Innovation Index 2023



Code	Indicator name	Economy Year	Model Year	Source
				Fund

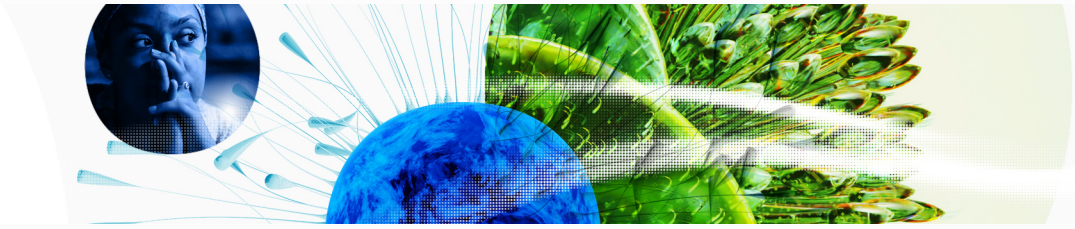
Global Innovation Index 2023



> Outdated data for Trinidad and Tobago

Code	Indicator name	Economy Year	Model Year	Source
2.1.4	PISA scales in reading, maths and science	2015	2018	OECD, PISA
2.3.1	Researchers, FTE/mn pop.	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	2020	2021	International Energy Agency
4.3.1	Applied tariff rate, weighted avg., %	2013	2020	World Bank
5.1.1	Knowledge-intensive employment, %	2021	2022	International Labour Organization
5.1.3	GERD performed by business, % GDP	2018	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2016	2022	International Labour Organization
5.3.5	Research talent, % in businesses	2018	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

Global Innovation Index 2023



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, 2023.

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.