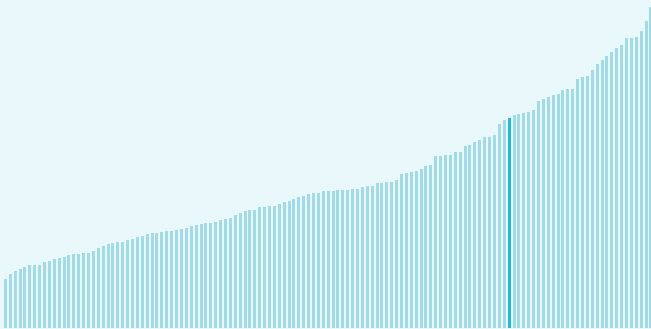




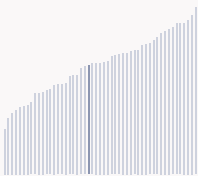
## Czech Republic ranking in the Global Innovation Index 2024

Czech Republic ranks **30th** among the 133 economies featured in the GII 2024.

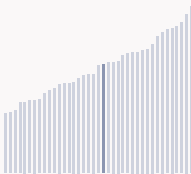
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Czech Republic ranks **29th** among the 51 high-income group economies.



Czech Republic ranks **19th** among the 39 economies in Europe.



### > Czech Republic GII Ranking (2020-2024)

The table shows the rankings of Czech Republic 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 Czech Republic in the GII 2024 is between ranks 23 and 31.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	24th	28th	17th
2021	24th	30th	15th
2022	30th	33rd	27th
2023	31st	34th	27th
2024	30th	32nd	24th

Czech Republic performs better in innovation outputs than innovation inputs in 2024.

This year Czech Republic ranks 32nd in innovation inputs. This position is higher than last year.

Czech Republic ranks 24th in innovation outputs. This position is higher than last year.

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



For Czech Republic, 7 indicators have improved in the short-term and 5 indicators have worsened.

### Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -4.1% 2022 - 2023	▲ 0.7% 2021 - 2022	▲ 3.1% 2022 - 2023	▼ -81.6% 2022 - 2023	▼ -26.1% 2022 - 2023
▲ 3.6% 2013 - 2023	▲ 3.2% 2012 - 2022	▲ 32.4% 2013 - 2023	▲ 78% 2013 - 2023	▼ -0.7% 2013 - 2023

### Technology adoption

Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 0.4% 2021 - 2022	▲ 2.1% 2021 - 2022	▲ 28.2% 2021 - 2022	▲ 10.6% 2021 - 2022	n/a
▲ 0.4% 2012 - 2022	▲ 4.3% 2012 - 2022		▲ 13.9% 2012 - 2022	n/a
89.7 per 100 inhabitants in 2022	38.4 per 100 inhabitants in 2022	85.4 per 100 inhabitants in 2022		n/a

### Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▼ -0.6% 2022 - 2023	▲ 2.3% 2021 - 2022	▲ 2.5°C 2023
▲ 1.3% 2013 - 2023	▲ 0.1% 2012 - 2022	n/a
97,844 USD in 2023	79 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.

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

↑ GII Score





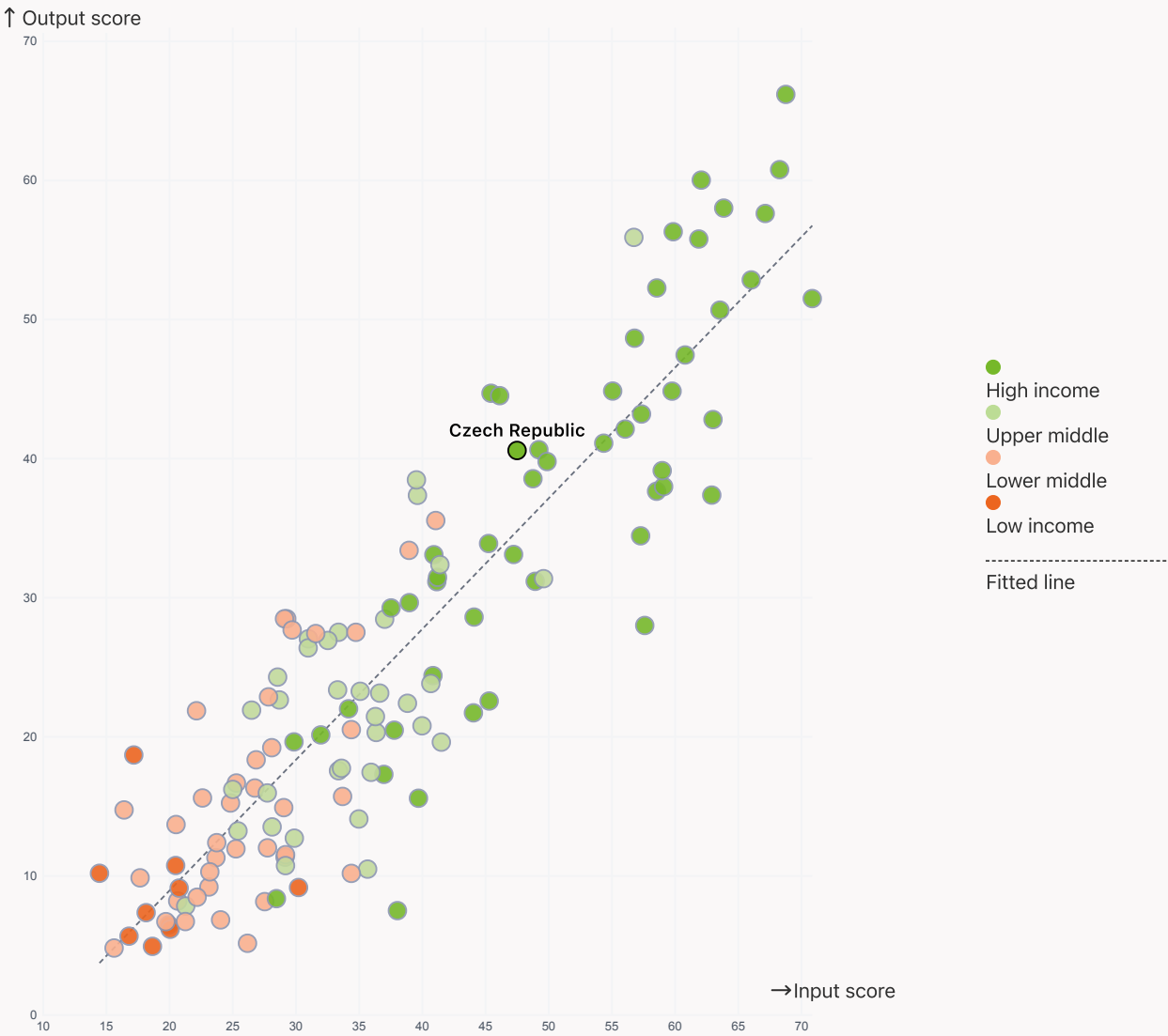
## Effectively translating innovation investments into innovation outputs

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.



Czech Republic produces more innovation outputs relative to its level of innovation investments.

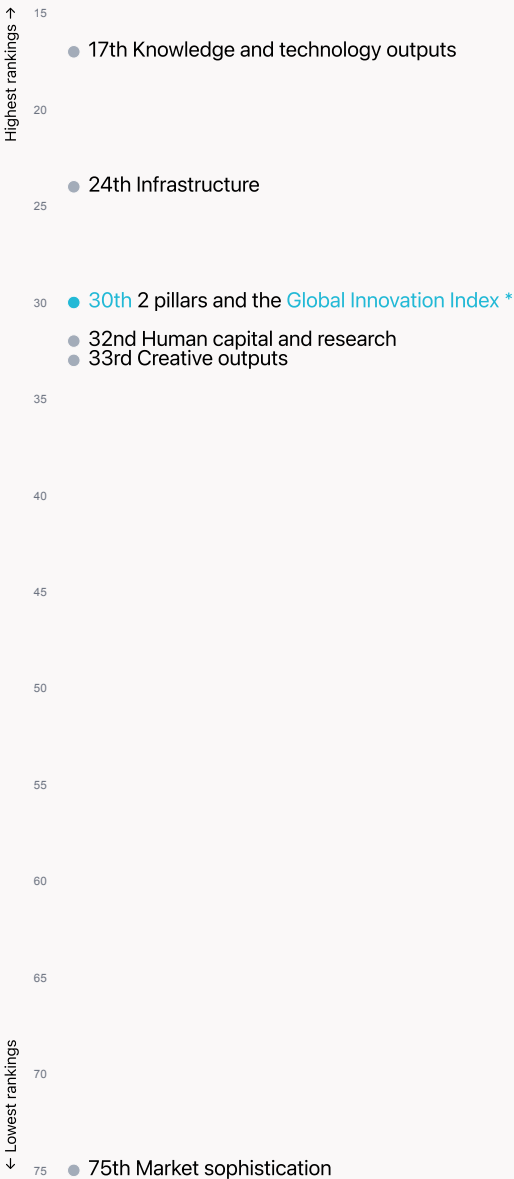
### > Relationship between innovation inputs and outputs





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



\* Institutions, Business sophistication

### Highest rankings



Czech Republic ranks highest in Knowledge and technology outputs (17th), Infrastructure (24th) and Institutions, Business sophistication (30th).

### Lowest rankings



Czech Republic ranks lowest in Market sophistication (75th), Creative outputs (33rd) and Human capital and research (32nd).

The full WIPO Intellectual Property  
Statistics profile for Czech Republic can  
be found on [this link](#).



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

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



High-Income economies

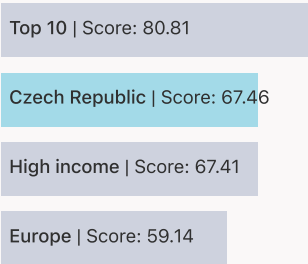
Czech Republic performs above the high-income group average in Institutions, Infrastructure, Knowledge and technology outputs.



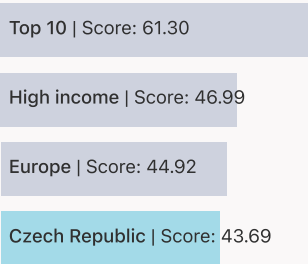
Europe

Czech Republic performs above the regional average in Institutions, Infrastructure, Knowledge and technology outputs.

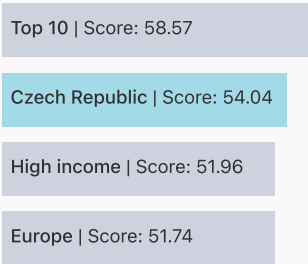
Institutions



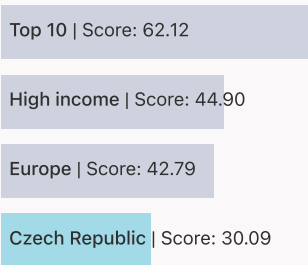
Human capital and research



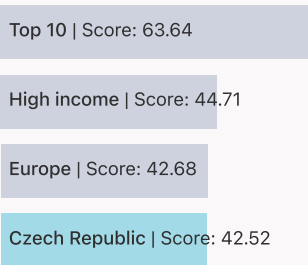
Infrastructure



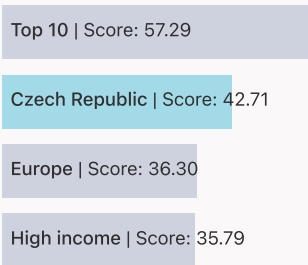
Market sophistication



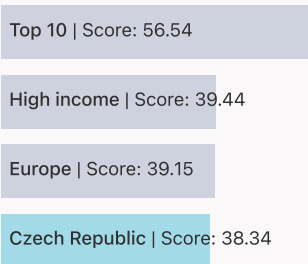
Business sophistication



Knowledge and technology outputs



Creative outputs







Innovation strengths and weaknesses in Czech Republic

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



Czech Republic’s main innovation strengths are **Creative goods exports, % total trade (rank 1)**, **National feature films/mn pop. 15–69 (rank 4)** and **ISO 9001 quality/bn PPP\$ GDP (rank 4)**.

Strengths

Rank	Code	Indicator name
1	7.2.4	Creative goods exports, % total trade
4	7.2.2	National feature films/mn pop. 15–69
4	6.3.5	ISO 9001 quality/bn PPP\$ GDP
5	3.3.3	ISO 14001 environment/bn PPP\$ GDP
6	6.3.2	Production and export complexity
6	5.3.2	High-tech imports, % total trade
6	6.1.3	Utility models by origin/bn PPP\$ GDP
7	6.3.3	High-tech exports, % total trade
8	6.2.4	High-tech manufacturing, %
12	7.3.2	GitHub commits/mn pop. 15–69

Weaknesses

Rank	Code	Indicator name
78	5.2.4	Joint venture/strategic alliance deals/bn PPP\$ GDP
77	6.2.1	Labor productivity growth, %
73	4.2.1	Market capitalization, % GDP
72	3.3.1	GDP/unit of energy use
72	3.1.3	Government's online service*
67	4.1.2	Domestic credit to private sector, % GDP
63	1.3.1	Policy stability for doing business†
53	4.2.3	VC recipients, deals/bn PPP\$ GDP
52	5.1.4	GERD financed by business, %
41	2.3.3	Global corporate R&D investors, top 3, mn USD



## Czech Republic's innovation system

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

### > Innovation inputs in Czech Republic



#### 2.1.1 Expenditure on education

was equal to 5.05 % GDP in 2021, up by 0.33 percentage points from the year prior – and equivalent to an indicator rank of 41.



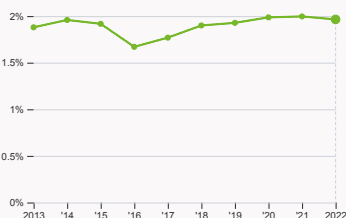
#### 2.2.2 Graduates in science and engineering

was equal to 25.47 % of total graduates in 2021, down by 0.41 percentage points from the year prior – and equivalent to an indicator rank of 42.



#### 2.3.1 Researchers

was equal to 4697.51 FTE per million population in 2022, up by 2.54% from the year prior – and equivalent to an indicator rank of 26.



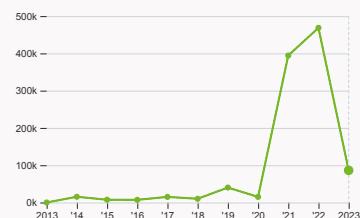
#### 2.3.2 Gross expenditure on R&D

was equal to 1.96 % GDP in 2022, down by 0.03 percentage points from the year prior – and equivalent to an indicator rank of 19.



#### 2.3.4 QS university ranking

was equal to an average score of 30.9 for the top three universities in 2023, down by 3.74% from the year prior – and equivalent to an indicator rank of 41.



#### 4.2.4 VC received, value

was equal to 86.24 thousand USD in 2023, down by 81.59% from the year prior – and equivalent to an indicator rank of 49.

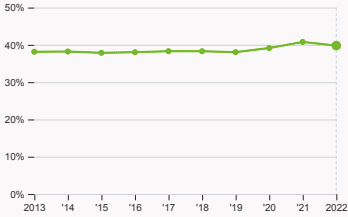


# Global Innovation Index 2024



### 4.3.2 Domestic industry diversification

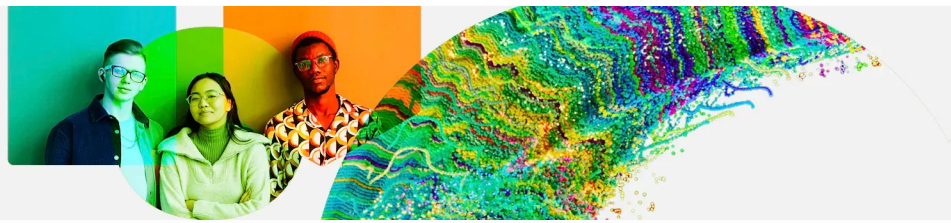
was equal to an index score of 0.11 in 2021, down by 5.79% from the year prior – and equivalent to an indicator rank of 36.



### 5.1.1 Knowledge-intensive employment

was equal to 39.8 % in 2022, down by 0.97 percentage points from the year prior – and equivalent to an indicator rank of 31.

# Global Innovation Index 2024

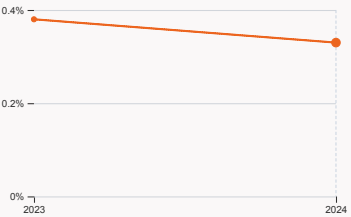


## > Innovation outputs in Czech Republic



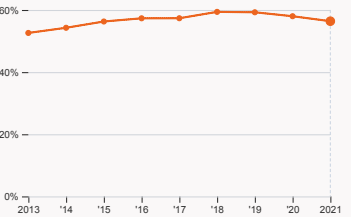
### 6.1.1 Patents by origin

was equal to 725 patents in 2022, down by 2.68% from the year prior – and equivalent to an indicator rank of 40.



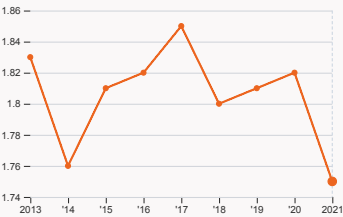
### 6.2.2 Unicorn valuation

was equal to 0.33 % GDP in 2024, down by 0.05 percentage points from the year prior – and equivalent to an indicator rank of 43.



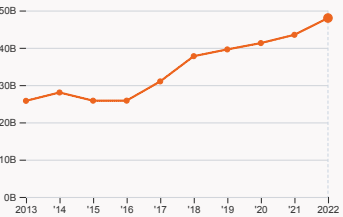
### 6.2.4 High-tech manufacturing

was equal to 56.39 % of total manufacturing output in 2021, down by 1.6 percentage points from the year prior – and equivalent to an indicator rank of 8.



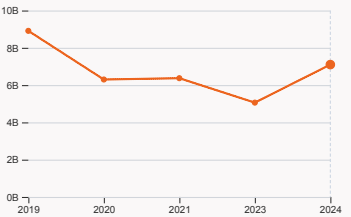
### 6.3.2 Production and export complexity

was equal to a score of 1.75 in 2021, down by 3.85% from the year prior – and equivalent to an indicator rank of 6.



### 6.3.3 High-tech exports

was equal to 47.99 billion USD in 2022, up by 10.35% from the year prior – and equivalent to an indicator rank of 7.



### 7.1.3 Global brand value

was equal to 7.1 billion USD for the brands in the top 5,000 in 2024, up by 40.32% from the year prior – and equivalent to an indicator rank of 46.



### 7.2.2 National feature films

was equal to 82 films in 2022, up by 30.16% from the year prior – and equivalent to an indicator rank of 4.



### 7.3.3 Mobile app creation

was equal to 471.65 million global downloads of mobile apps in 2023, up by 5.82% from the year prior – and equivalent to an indicator rank of 25.



Czech Republic's innovation top performers

2.3.4 QS university ranking of Czech Republic’s top universities

Rank	University	Score
248	CHARLES UNIVERSITY	39.60
400	MASARYK UNIVERSITY	27.90
454	CZECH TECHNICAL UNIVERSITY IN PRAGUE	25.20

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".

6.2.2 Top Unicorn Companies in Czech Republic

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	ROHLIK GROUP	Consumer & Retail	Prague	1

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

7.1.1 Top 15 intangible-asset intensive companies in Czech Republic

Rank	Firm	Intensity, %
1	CEZ, A. S.	50.21
2	MONETA MONEY BANK, A.S.	25.49
3	PRIMOCO UAV SE	93.11

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

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

Rank	Brand	Industry	Brand Value, mn USD
1	SKODA	Automobiles	2,257.7
2	CEZ	Utilities	1,673.3
3	KOMERCNI BANKA	Banking	1,056.9

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

# Czech Republic

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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 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 Czech Republic.



Czech Republic has missing data for five indicators and outdated data for five indicators.

Missing data for Czech Republic

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture <sup>†</sup>	n/a	2023	Global Entrepreneurship Monitor
2.1.5	Pupil–teacher ratio, secondary	n/a	2022	UNESCO Institute for Statistics
4.1.1	Finance for startups and scaleups <sup>†</sup>	n/a	2023	Global Entrepreneurship Monitor
4.1.3	Loans from microfinance institutions, % GDP	n/a	2022	International Monetary Fund, Financial Access Survey (FAS)
7.1.1	Intangible asset intensity, top 15, %	n/a	2023	Brand Finance

Outdated data for Czech Republic

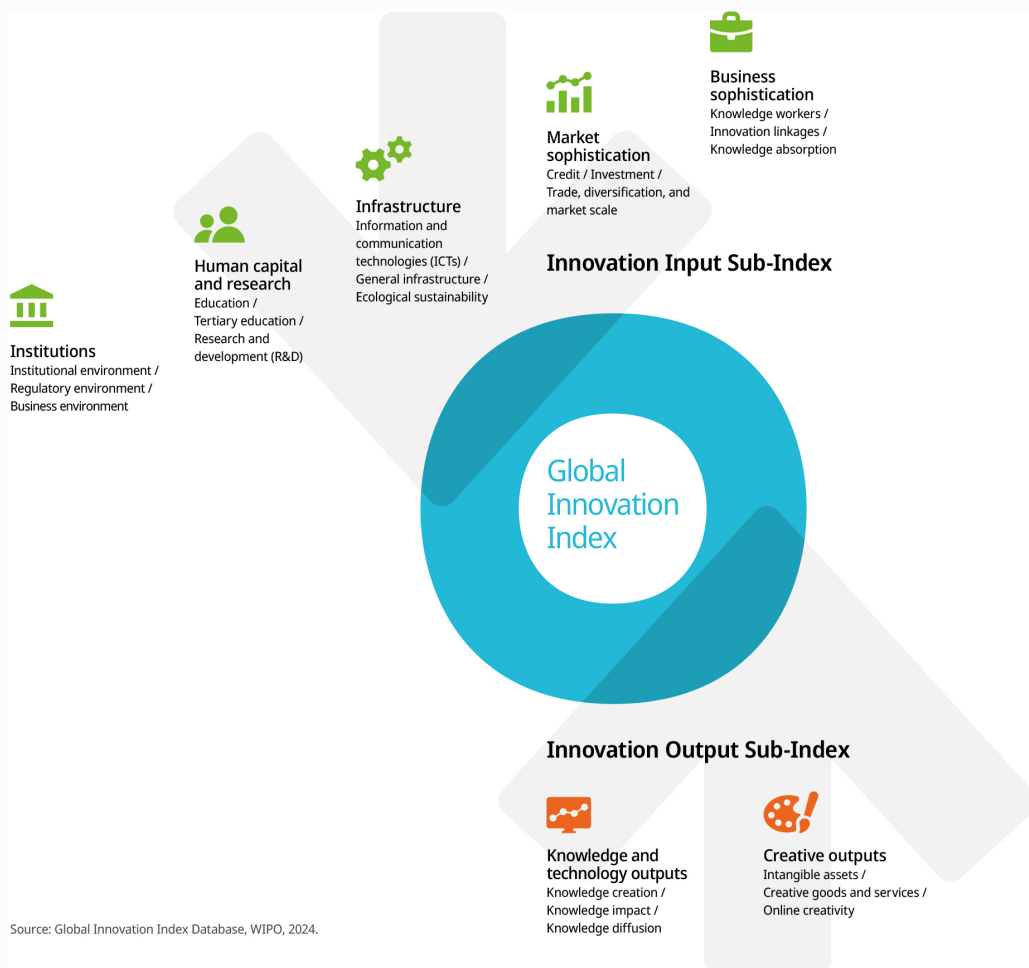
Code	Indicator name	Economy Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2021	2022	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2021	2022	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2021	2022	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2021	2022	UNESCO Institute for Statistics
5.1.2	Firms offering formal training, %	2019	2023	World Bank Enterprise Surveys

# 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.



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.