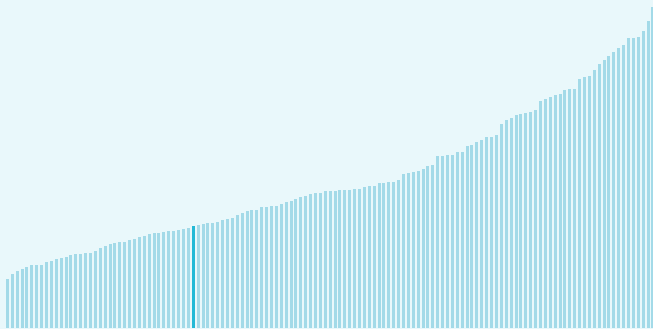




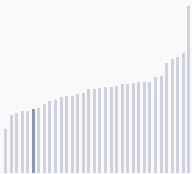
Azerbaijan ranking in the Global Innovation Index 2024

Azerbaijan ranks **95th** among the 133 economies featured in the GII 2024.

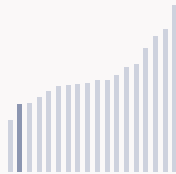
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Azerbaijan ranks **29th** among the 34 upper-middle-income group economies.



Azerbaijan ranks **17th** among the 18 economies in Northern Africa and Western Asia.



> Azerbaijan GII Ranking (2020-2024)

The table shows the rankings of Azerbaijan 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 Azerbaijan in the GII 2024 is between ranks 87 and 98.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	82nd	76th	86th
2021	80th	74th	91st
2022	93rd	79th	110th
2023	89th	76th	104th
2024	95th	82nd	101st

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

This year Azerbaijan ranks 82nd in innovation inputs. This position is lower than last year.

Azerbaijan ranks 101st in innovation outputs. This position is higher than last year.

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



For Azerbaijan, 6 indicators have improved in the short-term and 2 indicators have worsened.

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▲ 18% 2022 - 2023	▼ -23.9% 2021 - 2022	n/a	n/a	▲ 120% 2022 - 2023
▲ 7.3% 2013 - 2023	▼ -1.8% 2012 - 2022	n/a	n/a	▲ 6.2% 2013 - 2023

Technology adoption

Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 0.4% 2018 - 2019	▲ 1.6% 2021 - 2022	n/a	n/a	n/a
▲ 1.8% 2009 - 2019	▲ 3.4% 2012 - 2022		n/a	n/a
69 per 100 inhabitants in 2019	20.2 per 100 inhabitants in 2022	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 1.3% 2022 - 2023	▲ 5.9% 2021 - 2022	▲ 2.2°C 2023
▲ 0.4% 2013 - 2023	▲ 0.4% 2012 - 2022	n/a
38,852 USD in 2023	73.5 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, Azerbaijan's performance is below expectations for its level of development.

↑ GII Score





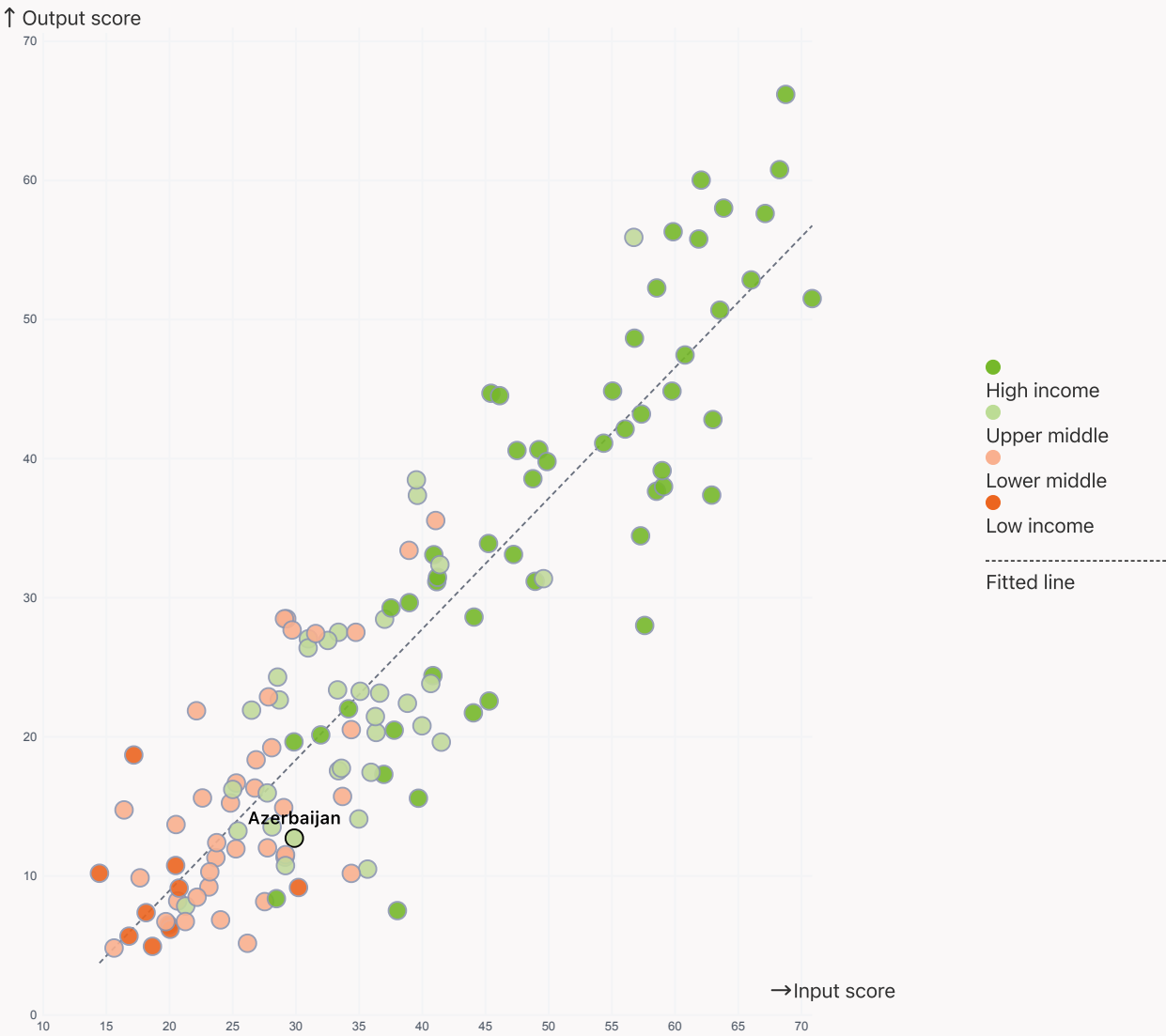
Effectively translating innovation investments into innovation outputs

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.



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

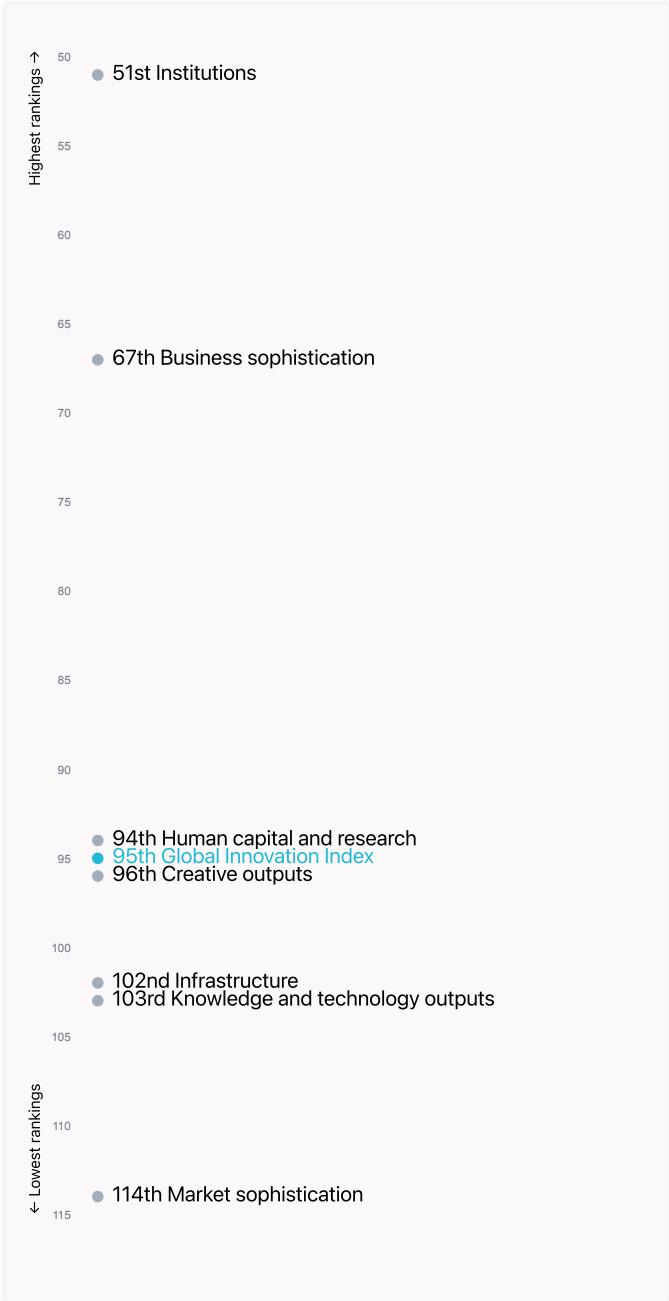
> Relationship between innovation inputs and outputs





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



Highest rankings



Azerbaijan ranks highest in Institutions (51st), Business sophistication (67th) and Human capital and research (94th).

Lowest rankings



Azerbaijan ranks lowest in Market sophistication (114th), Knowledge and technology outputs (103rd) and Infrastructure (102nd).

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



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

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



Upper-Middle-Income economies

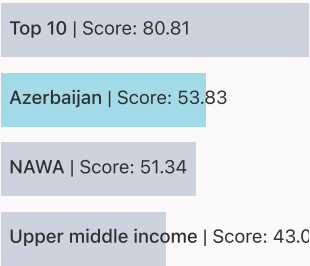
Azerbaijan performs above the upper-middle-income group average in Institutions.



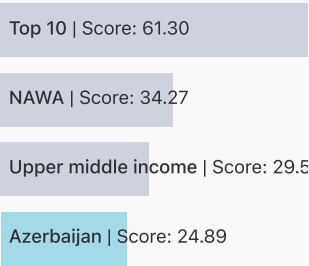
Northern Africa And Western Asia

Azerbaijan performs above the regional average in Institutions.

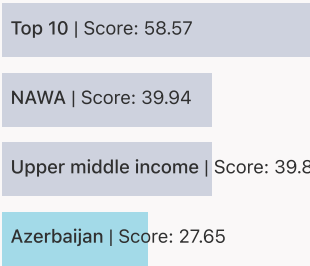
Institutions



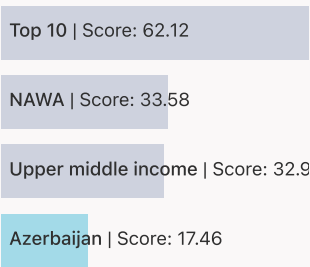
Human capital and research



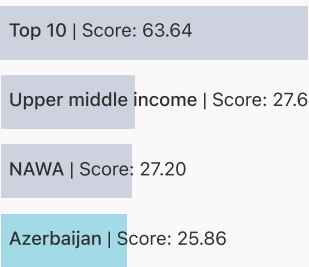
Infrastructure



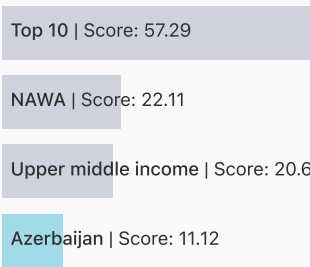
Market sophistication



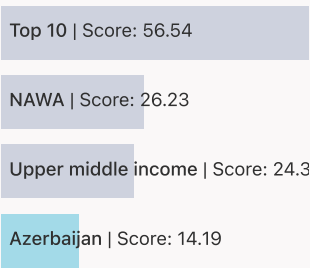
Business sophistication



Knowledge and technology outputs



Creative outputs





Innovation strengths and weaknesses in Azerbaijan

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

Azerbaijan’s main innovation strengths are **Policy stability for doing business[†]** (rank 19), **Pupil–teacher ratio, secondary** (rank 20) and **Labor productivity growth, %** (rank 28).

Strengths

Rank	Code	Indicator name
19	1.3.1	Policy stability for doing business [†]
20	2.1.5	Pupil–teacher ratio, secondary
28	6.2.1	Labor productivity growth, %
29	5.2.3	State of cluster development [†]
30	5.2.2	University–industry R&D collaboration [†]
45	2.2.2	Graduates in science and engineering, %
46	5.2.1	Public Research–Industry co-publications, %
48	1.1.1	Operational stability for businesses [*]
49	7.1.2	Trademarks by origin/bn PPP\$ GDP
50	6.1.1	Patents by origin/bn PPP\$ GDP

Weaknesses

Rank	Code	Indicator name
128	5.3.4	FDI net inflows, % GDP
126	5.3.2	High-tech imports, % total trade
125	5.3.3	ICT services imports, % total trade
111	6.3.2	Production and export complexity
106	4.2.4	VC received, value, % GDP
90	5.1.3	GERD performed by business, % GDP
85	7.2.2	National feature films/mn pop. 15–69
83	4.2.1	Market capitalization, % GDP
49	6.2.2	Unicorn valuation, % GDP
41	2.3.3	Global corporate R&D investors, top 3, mn USD



Azerbaijan's innovation system

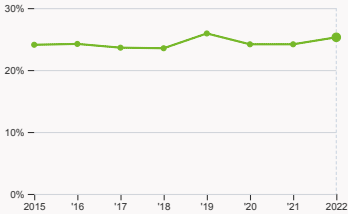
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Azerbaijan



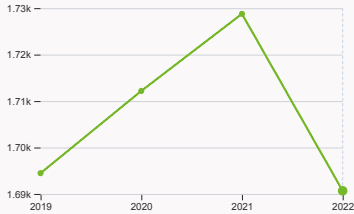
2.1.1 Expenditure on education

was equal to 2.9 % GDP in 2022, down by 0.8 percentage points from the year prior – and equivalent to an indicator rank of 105.



2.2.2 Graduates in science and engineering

was equal to 25.29 % of total graduates in 2022, up by 1.13 percentage points from the year prior – and equivalent to an indicator rank of 45.



2.3.1 Researchers

was equal to 1690.67 FTE per million population in 2022, down by 2.2% from the year prior – and equivalent to an indicator rank of 45.



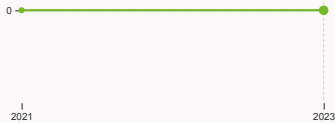
2.3.2 Gross expenditure on R&D

was equal to 0.15 % GDP in 2022, down by 0.06 percentage points from the year prior – and equivalent to an indicator rank of 95.



2.3.4 QS university ranking

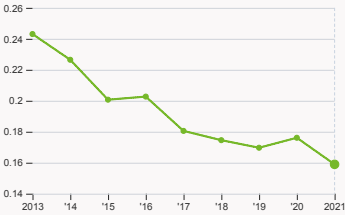
was equal to an average score of 2.5 for the top three universities in 2023, up by 250% from the year prior – and equivalent to an indicator rank of 74.



4.2.4 VC received, value

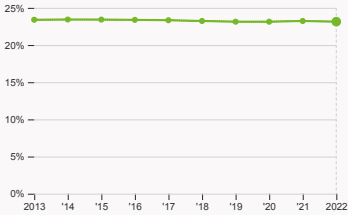
was equal to 0 USD in 2023 with no change from the year prior – and equivalent to an indicator rank of 106.

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4.3.2 Domestic industry diversification

was equal to an index score of 0.16 in 2021, down by 9.75% from the year prior – and equivalent to an indicator rank of 63.



5.1.1 Knowledge-intensive employment

was equal to 23.14 % in 2022, down by 0.09 percentage points from the year prior – and equivalent to an indicator rank of 64.

Global Innovation Index 2024

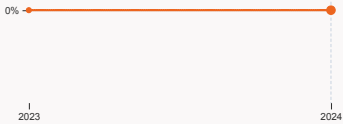


> Innovation outputs in Azerbaijan



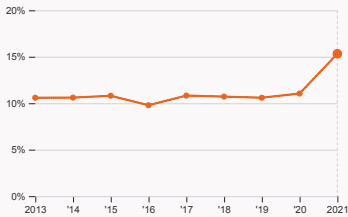
6.1.1 Patents by origin

was equal to 210 patents in 2022, up by 43.84% from the year prior – and equivalent to an indicator rank of 50.



6.2.2 Unicorn valuation

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



6.2.4 High-tech manufacturing

was equal to 15.32 % of total manufacturing output in 2021, up by 4.28 percentage points from the year prior – and equivalent to an indicator rank of 74.



6.3.2 Production and export complexity

was equal to a score of -1.03 in 2021, up by 20.77% from the year prior – and equivalent to an indicator rank of 111.



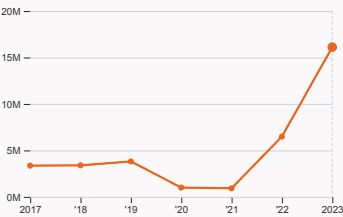
6.3.3 High-tech exports

was equal to 51.47 million USD in 2022, up by 119.11% from the year prior – and equivalent to an indicator rank of 114.



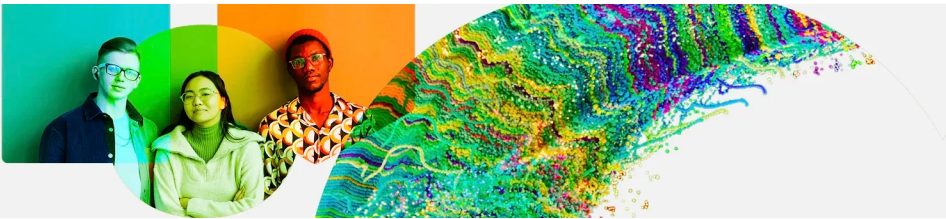
7.2.2 National feature films

was equal to 0 films in 2022, down by 100% from the year prior – and equivalent to an indicator rank of 85.



7.3.3 Mobile app creation

was equal to 16.11 million global downloads of mobile apps in 2023, up by 148.23% from the year prior – and equivalent to an indicator rank of 85.



Azerbaijan's innovation top performers

2.3.4 QS university ranking of Azerbaijan's top universities

Rank	University	Score
1001-1200	AZERBAIJAN STATE UNIVERSITY OF ECONOMICS	7.70
1000-1200	BAKU STATE UNIVERSITY	7.50
1201-1400	AZERBAIJAN STATE OIL AND INDUSTRY UNIVERSITY	6.80

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".

Azerbaijan

95

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 Azerbaijan.



Azerbaijan has missing data for seven indicators and outdated data for seven indicators.

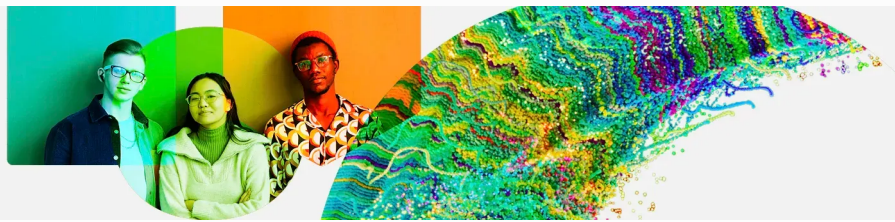
Missing data for Azerbaijan

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)
5.3.5	Research talent, % in businesses	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
7.1.1	Intangible asset intensity, top 15, %	n/a	2023	Brand Finance
7.1.3	Global brand value, top 5,000, % GDP	n/a	2024	Brand Finance; International Monetary Fund

Outdated data for Azerbaijan

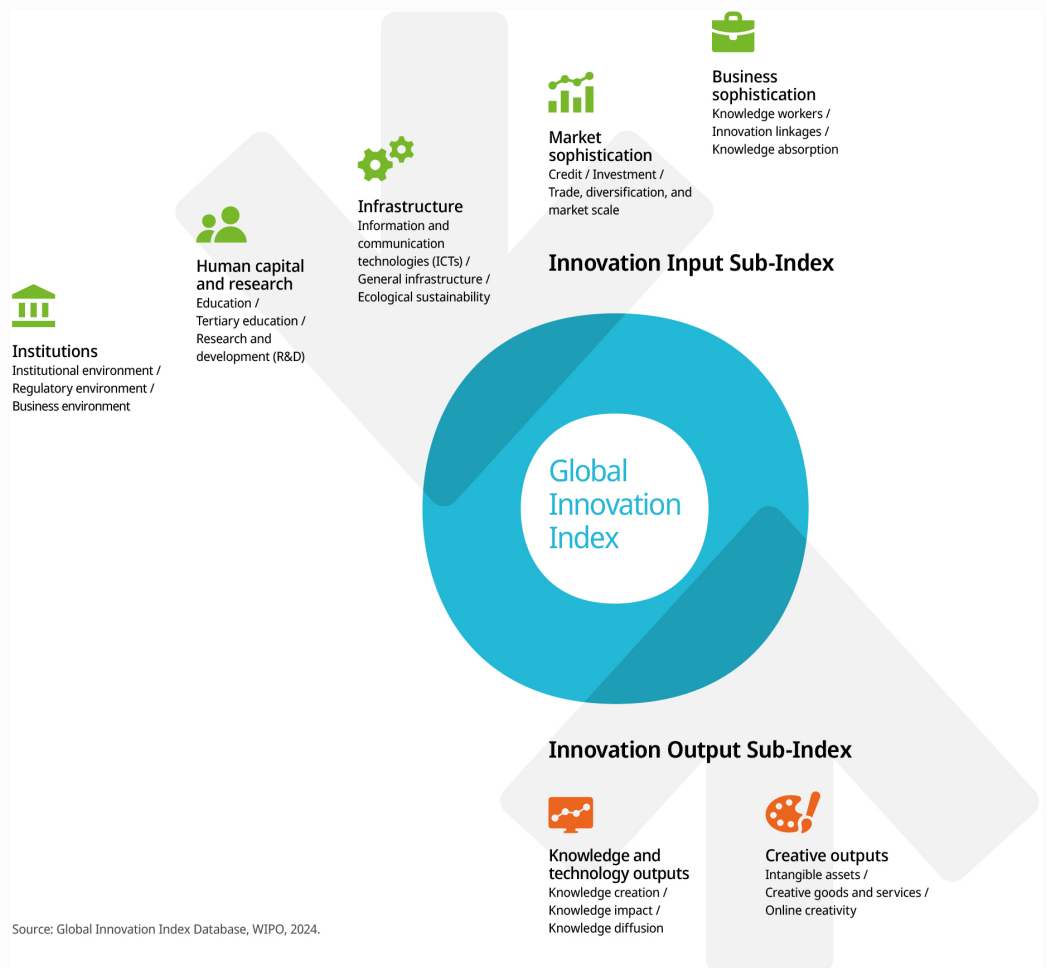
Code	Indicator name	Economy Year	Model Year	Source
1.3.1	Policy stability for doing business [†]	2021	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.1.2	Firms offering formal training, %	2019	2023	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2018	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
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.



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.