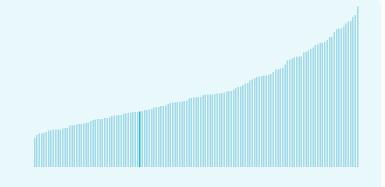


Azerbaijan ranking in the Global Innovation Index 2025

Azerbaijan ranks 94th 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.



Azerbaijan ranks 30th among the 36 Upper middleincome group economies.



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



> Azerbaijan GII Ranking (2020-2025)

The table shows the rankings of Azerbaijan 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 Azerbaijan in the GII 2025 is between ranks 86 and 103.

| 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 |
| 2025 | 94th | 76th | 112nd |

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

This year Azerbaijan ranks 76th in innovation inputs. This position is higher than last year.

Azerbaijan ranks 112nd in innovation outputs. This position is lower than last year.

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



> Global Innovation Tracker

The Global Innovation Tracker 2025 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 deal numbers | International patent filings |
|------------------------------|--------------------------------|-----------------------------|---------------------------------|-------------------------------|
| Short term | ▲ 103.9 % 2023 - 2024 | ▲ 21.5 % 2022 - 2023 | 0 % 2023 - 2024 | ▼ -20 % 2023 - 2024 |
| Long term (annual growth) | ▲ 15.2 % 2014 - 2024 | ▼ -0.3 % 2013 - 2023 | n/a | 23.1 % 2014 - 2024 |

Technology adoption

| | Safe sanitation | Connectivity | | Robots | Electric vehicles |
|------------------------------|---------------------------------------|--|-----|--------|-------------------|
| | | Fixed broadband | 5G | | |
| Short term | ▲ 1.7% 2023 - 2024 | ▲ 2.8% 2022 - 2023 | n/a | n/a | n/a |
| Long term (annual growth) | 2.1% 2014 - 2024 | ▲ 2.3% 2013 - 2023 | n/a | n/a | n/a |
| Penetration | 68 per 100 inhabitants in 2024 | 20.9 per 100 inhabitants in 2023 | n/a | n/a | n/a |

Socioeconomic impact

| _ | | | |
|------------------------------|--------------------------------|-------------------------------|----------------------|
| | Labor productivity | Life expectancy | Temperature change |
| Short term | 2.4 % 2023 - 2024 | ▲ 0.4 % 2022 - 2023 | + 2.2 °C |
| Long term (annual growth) | ▲ 0.5 % 2014 - 2024 | ▲ 0.4 % 2013 - 2023 | + 1.2 °C 2014 |
| Level | 40,541.2 USD in 2024 | 74.4 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.

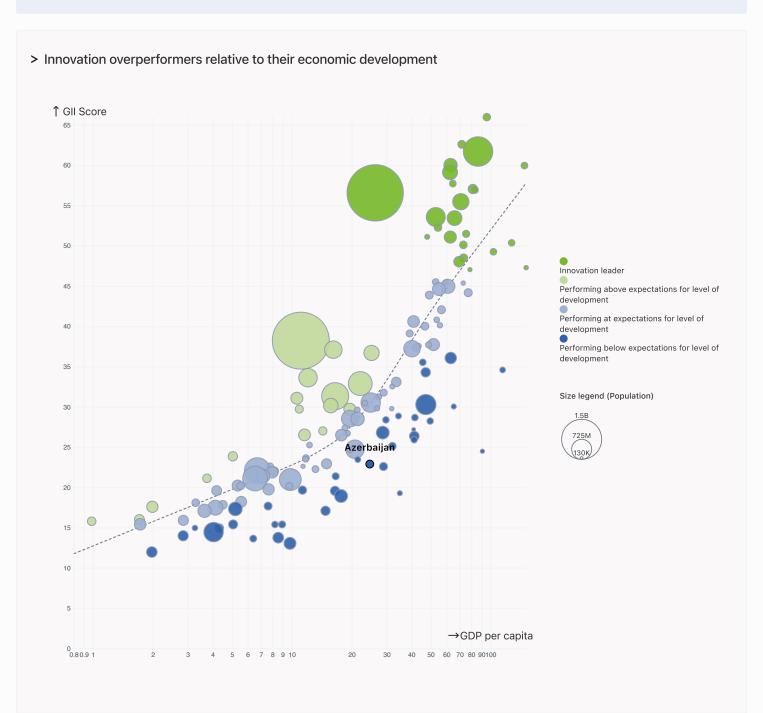


Expected vs. Observed Innovation Performance

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 Azerbaijan performs below expectations for its level of development.



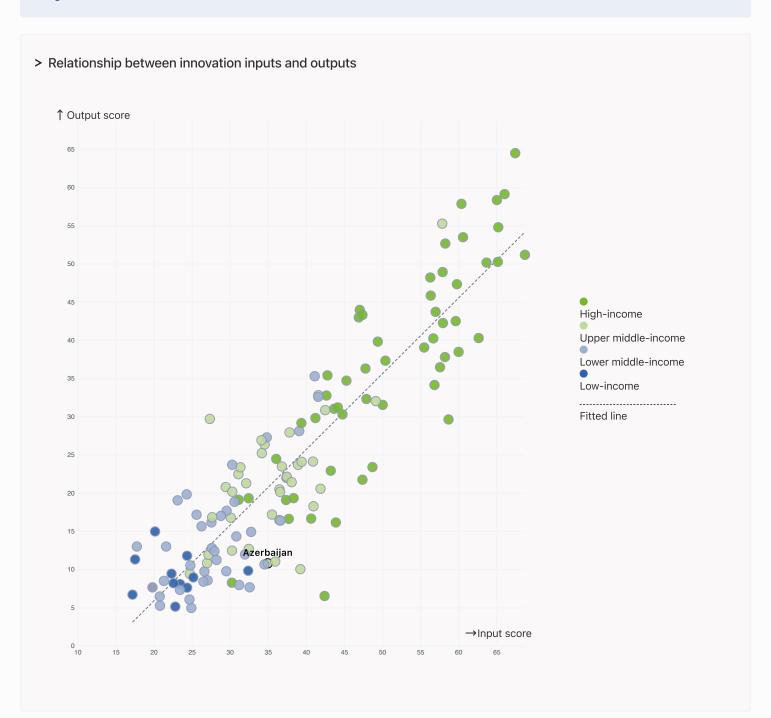


Effectively translating innovation investments into innovation outputs

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.



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





Overview of Azerbaijan'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 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 (41st), Market sophistication (72nd) and Human capital and research (88th).



Lowest Rankings

Azerbaijan ranks lowest in Business sophistication (111st), Knowledge and technology outputs (110th) and Creative outputs (108th).



The full WIPO Intellectual Property Statistics profile for Azerbaijan can be found on

https://www.wipo.int/edocs/statistics-country-profile/en/az.pdf



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)



Upper middle-income economies

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



Northern Africa and Western Asia

Azerbaijan performs above the regional average in Institutions.

Institutions

Top 10 | Score: 78.63

Azerbaijan | Score: 60.91

NAWA | Score: 54.35

Upper middle-income | Score: 44.7

Human capital and research

Top 10 | Score: 59.30

NAWA | Score: 33.89

Upper middle-income | Score: 29.7

Azerbaijan | Score: 25.25

Infrastructure

Top 10 | Score: 61.36

NAWA | Score: 43.93

Upper middle-income | Score: 41.1

Azerbaijan | Score: 31.16

Market sophistication

Top 10 | Score: 61.82

NAWA | Score: 38.18

Azerbaijan | Score: 35.21

Upper middle-income | Score: 34.8

Business sophistication

Top 10 | Score: 59.10

NAWA | Score: 30.52

Upper middle-income | Score: 27.7

Azerbaijan | Score: 22.36

Knowledge and technology outputs

Top 10 | Score: 54.93

NAWA | Score: 22.17

Upper middle-income | Score: 20.0

Azerbaijan | Score: 11.15

Creative outputs

Top 10 | Score: 55.98

NAWA | Score: 25.50

Upper middle-income | Score: 22.6

Azerbaijan | Score: 10.38



Innovation strengths and weaknesses in Azerbaijan

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



Azerbaijan's best-ranked innovation strengths are **Entrepreneurship policies and culture**[†] (rank 2), **Finance for startups and scaleups**[†] (rank 12) and **Policy stability for doing business**[†] (rank 20).

Strengths

| Rank | Code | Indicator name |
|------|-------|--|
| 2 | 1.3.2 | Entrepreneurship policies and culture† |
| 12 | 4.1.1 | Finance for startups and scaleups [†] |
| 20 | 1.3.1 | Policy stability for doing business [†] |
| 20 | 2.1.5 | Pupil-teacher ratio, secondary |
| 30 | 5.2.4 | State of cluster development [†] |
| 36 | 2.2.2 | Graduates in science and engineering, % |
| 36 | 5.2.2 | University-industry R&D collaboration [†] |
| 45 | 1.1.1 | Operational stability for businesses* |
| 55 | 6.2.1 | Labor productivity growth, % |
| 57 | 6.1.1 | Patents by origin/bn PPP\$ GDP |

Weaknesses

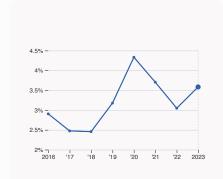
| Rank | Code | Indicator name |
|------|-------|---|
| 131 | 5.3.4 | FDI net inflows, % GDP |
| 127 | 3.2.3 | Gross capital formation, % GDP |
| 120 | 4.2.2 | Venture capital (VC) received, deal count/bn PPP\$ GDP |
| 111 | 4.2.5 | VC investor co-participation/bn PPP\$ GDP |
| 104 | 5.2.3 | University industry & international engagement, top 5* |
| 93 | 7.2.2 | National feature films/mn pop. 15–69 |
| 85 | 5.1.4 | GERD performed by business, % GDP |
| 82 | 4.2.1 | Market capitalization, % GDP |
| 53 | 6.2.2 | Unicorn valuation, % GDP |
| 44 | 2.3.3 | Global corporate R&D investors, top 3, mn USD |



Azerbaijan's innovation system

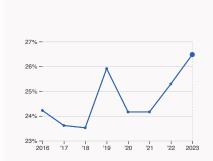
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Azerbaijan



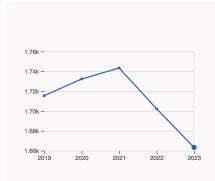
2.1.1 Expenditure on education

was equal to 3.58 % GDP in 2023, up by 0.54 percentage points from the year prior – and equivalent to an indicator rank of 94.



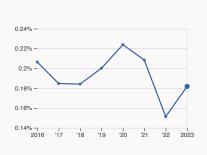
2.2.2 Graduates in science and engineering

was equal to 26.48 % of total graduates in 2023, up by 1.19 percentage points from the year prior – and equivalent to an indicator rank of 36.



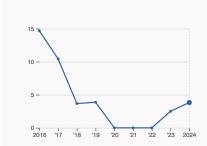
2.3.1 Researchers

was equal to 1663.34 FTE per million population in 2023, down by 2.29% from the year prior – and equivalent to an indicator rank of 47.



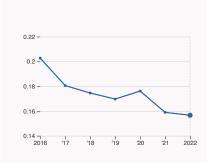
2.3.2 Gross expenditure on R&D

was equal to 0.18 % GDP in 2023, up by 0.03 percentage points from the year prior – and equivalent to an indicator rank of 89.



2.3.4 QS university ranking

was equal to an average score of 3.83 for the top three universities in 2024, up by 53.2% from the year prior – and equivalent to an indicator rank of 79.

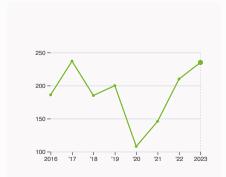


4.3.2 Domestic industry diversification

was equal to an index score of 0.16 in 2022, down by 1.46% from the year prior – and equivalent to an indicator rank of 63.

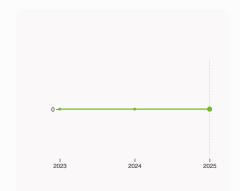


> Innovation outputs in Azerbaijan



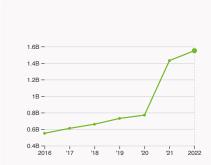
6.1.1 Patents by origin

was equal to 235 patents in 2023, up by 11.9% from the year prior – and equivalent to an indicator rank of 57.



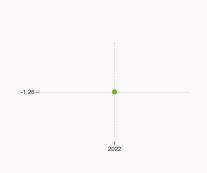
6.2.2 Unicorn valuation

The country does not have unicorns in 2025.



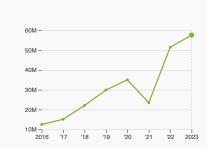
6.2.4 High-tech manufacturing

was equal to 1.55 high-tech manufacturing output in billion USD in 2022, up by 8.39% from the year prior – and equivalent to an indicator rank of 76.



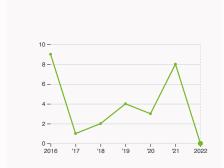
6.3.2 Production and export complexity

was equal to a score of -1.26 in 2022 – and equivalent to an indicator rank of 122.



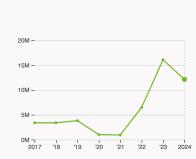
6.3.3 High-tech exports

was equal to 57.61 million USD in 2023, up by 11.95% from the year prior – and equivalent to an indicator rank of 116.



7.2.2 National feature films

films.



7.3.3 Mobile app creation

was equal to 12.14 million global downloads of mobile apps in 2024, down by 24.64% from the year prior – and equivalent to an indicator rank of 86.



Azerbaijan's innovation top performers

Data not available for 2.3.3 Global corporate R&D investors, 6.2.2 Top Unicorn Companies, 7.1.1 Top 15 intangible-asset intensive 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.

2.3.4 QS university ranking of Azerbaijan's top universities

| Rank | University | Score |
|-----------|--|-------|
| 951-1000 | BAKU STATE UNIVERSITY | 11.50 |
| 1001-1200 | AZERBAIJAN STATE UNIVERSITY OF ECONOMICS | 10.70 |
| 1001-1200 | AZERBAIJAN STATE OIL AND INDUSTRY UNIVERSITY | 7.70 |

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2024). 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'.

5.2.3 University industry and international engagement, top 5 universities

| Rank | University | Score |
|------|--|-------|
| 1 | BAKU STATE UNIVERSITY | 28.50 |
| 2 | AZERBAIJAN STATE OIL AND INDUSTRY UNIVERSITY | 24.85 |

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.

Azerbaijan

Input rank

Income

Output rank

94

GDP per capita, PPP\$

| 112 | 76 Upper middle | Northern A | _ | gion and W | estern Asia | 10.3 | 253.1 | GDP per c 24, 6 | apita, 698.1 | |
|----------------------|---|---------------|------|---------------|------------------|------------------------------------|--------------------|---------------------------|------------------------|-----|
| | | Score / Value | Ranl | k | | | | Score / Value | Rank | |
| | | 60.9 | 41 | | Business | sophistication | | 22.4 | 111 | |
| 1.1 Institutiona | ll environment | 55.8 | 65 | | 5.1 Knowled | ge workers | | 24.6 | [119 |)] |
| 1.1.1 Operations | al stability for businesses* | 69.3 | 45 | • | 5.1.1 Knowled | dge-intensive employment, | % | n/a | n/a | |
| | nt effectiveness* | 42.3 | 74 | | 5.1.2 Females | s employed w/advanced deg | grees, % | n/a | n/a | |
| 1.2 Regulatory | | 41.4 | 91 | | 5.1.3 Youth d | emographic dividend, % | | 35.2 | 73 | |
| 1.2.1 Regulatory | | 44.2 | 78 | | 5.1.4 GERD p | erformed by business, % G | DP | • 0.004 | 85 | 0 |
| 1.2.2 Rule of lav | | 38.5 | 104 | | 5.1.5 GERD fi | nanced by business, % | | 3 0.8 | 58 | |
| 1.3 Business e | | 85.6 | 3 | | 5.2 Innovati | on linkages | | 27.4 | 60 | |
| | pility for doing business [†] | 3 72.5 | 20 | • | 5.2.1 Public r | esearch-industry co-public | ations, % | 1.3 | 70 | |
| | eurship policies and culture [†] | 98.6 | 2 | • | 5.2.2 Univers | sity–industry R&D collabora | tion [†] | ⑤ 51.8 | 36 | • |
| | oital and research | 25.2 | 88 | | 5.2.3 Univers | sity industry & international | engagement, top 5* | 0 | 104 | 0 < |
| 2.1 Education | | 42.3 | | | | f cluster development [†] | | • 72.2 | | • |
| 2.1.1 Expenditu | re on education, % GDP | 3.6 | 94 | | | families/bn PPP\$ GDP | | 0.02 | | |
| · | ent funding/pupil, secondary, % GDP/cap | 15.1 | 67 | | | lge absorption | | | 134 | . < |
| | e expectancy, years | 12.9 | 88 | | | tual property payments, % t | otal trade | | 69 | |
| | es in reading, maths and science | 380.7 | 70 | | | ech imports, % total trade | | | 120 | |
| | cher ratio, secondary | 9.2 | 20 | • | | vices imports, % total trade | ! | | 124 | |
| 2.2 Tertiary ed | · · · · · | 27.8 | | | | inflows, % GDP | | | | 0 < |
| • | nrolment, % gross | 41.4 | 82 | | 5.3.5 Researc | ch talent, % in businesses | | n/a | n/a | |
| | s in science and engineering, % | 26.5 | 36 | • | ∢ Knowled | ge and technology outputs | | 11.1 | 110 | |
| | abound mobility, % | 2.5 | 72 | | 6.1 Knowled | ge creation | | 8.9 | 89 | |
| | and development (R&D) | 5.7 | 76 | | 6.1.1 Patents | by origin/bn PPP\$ GDP | | 1 | 57 | • |
| | ers, FTE/mn pop. | 1,663.3 | 47 | | 6.1.2 PCT par | tents by inventor origin/bn F | PPP\$ GDP | 0.03 | 80 | |
| | penditure on R&D, % GDP | 0.2 | 89 | | 6.1.3 Utility n | nodels by origin/bn PPP\$ GI | OP | 0.2 | 38 | |
| | rporate R&D investors, top 3, mn USD | 0 | 44 | 0 \$ | 6.1.4 Scientif | ic and technical articles/bn | PPP\$ GDP | 7.1 | 89 | |
| | sity ranking, top 3* | 3.9 | | | | documents H-index | | 5.7 | 97 | |
| | | 04.0 | 405 | ^ | 6.2 Knowled | lge impact | | 18.6 | 102 | : |
| ⇔ Infrastruct | ure | 31.2 | | ○ | 6.2.1 Labor p | roductivity growth, % | | 1.1 | 55 | • |
| 3.1 Information | n and communication technologies (ICTs) | 75.7 | | | 6.2.2 Unicorr | n valuation, % GDP | | 0 | 53 | 0 < |
| 3.1.1 ICT access | 5* | 83.2 | | | 6.2.3 Softwar | re spending, % GDP | | 0.06 | 103 | |
| 3.1.2 ICT use* | | 75.3 | | | 6.2.4 High-te | ech manufacturing | | 14.5 | 76 | |
| | ent's online service* | 68.6 | 66 | | 6.3 Knowled | lge diffusion | | 6 | 129 | (|
| 3.2 General in | | 10.8 | 130 | \Diamond | 6.3.1 Intellec | tual property receipts, % to | tal trade | 0.02 | 100 | |
| | output, GWh/mn pop. | 2,865.1 | | | 6.3.2 Produc | tion and export complexity | | 20.5 | 122 | < |
| 3.2.2 Logistics | • | | n/a | | | ech exports, % total trade | | 0.2 | 116 | |
| | oital formation, % GDP | | | 0 \$ | 6.3.4 ICT ser | vices exports, % total trade | | 0.5 | 108 | |
| 3.3 Ecological | | | 126 | \diamond | 6.3.5 ISO 900 | 01 quality/bn PPP\$ GDP | | 1.4 | 99 | |
| 3.3.1 GDP/unit | • | 7.5 | 98 | | Creative | outputs | | 10.4 | 108 | |
| | on energy use, % | 2.3 | 119 | | 7.1 Intangibl | | | | [107 | |
| 3.3.3 ISO 1400 | 1 environment/bn PPP\$ GDP | 0.6 | 85 | | | le asset intensity, top 15, % | | | n/a | . 1 |
| ш Market sop | histication | 35.2 | 72 | | | arks by origin/bn PPP\$ GDP | | 28.7 | | |
| 4.1 Credit | | 42.2 | 37 | | | orand value, top 5,000, % G | | | n/a | |
| 4.1.1 Finance fo | r startups and scaleups [†] | 78.2 | 12 | • | | al designs by origin/bn PPP | | | 112 | |
| 4.1.2 Domestic | credit to private sector, % GDP | 23.2 | 111 | | | goods and services | , | | 115 | |
| 4.1.3 Loans from | m microfinance institutions, % GDP | n/a | n/a | | | and creative services expo | rts. % total trade | | 97 | |
| 4.2 Investmen | t | 0.4 | 124 | | | Il feature films/mn pop. 15–6 | | 0 0 | | 0 (|
| 4.2.1 Market ca | pitalization, % GDP | 2.7 | 82 | 0 | | inment and media market/th | | | 47 | |
| 4.2.2 Venture c | apital (VC) received, deal count/bn PPP\$ GDP | 0.01 | 120 | 0 | | e goods exports, % total tra | | | 107 | |
| 4.2.3 Late-stag | e VC deal count, % global VC | 0.002 | 98 | | 7.3 Online ci | | | | 89 | |
| 4.2.4 VC invest | ors, deal count/bn PPP\$ GDP | 0.01 | 110 | | | el domains (TLDs)/th pop. 1 | 5–69 | | 95 | |
| 4.2.5 VC invest | or co-participation/bn PPP\$ GDP | 0.006 | 111 | 0 | | commits/mn pop. 15-69 | | 4.9 | | |
| 4.3 Trade, dive | ersification and market scale | 63 | 82 | | | app creation/bn PPP\$ GDP | | 59.5 | | |
| 4.3.1 Applied ta | riff rate, weighted avg., % | 5.8 | 103 | | | | | 00.0 | | |
| 4.3.2 Domestic | industry diversification | 81.4 | 63 | | | | | | | |
| 4.3.3 Domestic | market scale, bn PPP\$ | 253.1 | 70 | | | | | | | |
| | | | | | | | | | | |

Region

Population (mn)

GDP, PPP\$ (bn)



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 six indicators.

Missing data for Azerbaijan

| Code | Indicator name | Economy year | Model year | Source |
|-------|---|-----------------|---------------|--|
| 3.2.2 | Logistics performance* | n/a | 2023 | World Bank, Logistics Performance Index 2023 |
| 4.1.3 | Loans from microfinance institutions, % GDP | n/a | 2023 | International Monetary Fund, Financial Access Survey (FAS) |
| 5.1.1 | Knowledge-intensive employment, % | n/a | 2024 | International Labour Organization |
| 5.1.2 | Females employed w/advanced degrees, % | n/a | 2024 | International Labour Organization |
| 5.3.5 | Research talent, % in businesses | n/a | 2023 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |
| 7.1.1 | Intangible asset intensity, top 15, % | n/a | 2024 | Brand Finance |
| 7.1.3 | Global brand value, top 5,000, % GDP | n/a | 2025 | 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 | 2024 | World Economic Forum, Executive Opinion Survey (EOS) |
| 5.1.4 | GERD performed by business, % GDP | 2018 | 2023 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |
| 5.1.5 | GERD financed by business, % | 2018 | 2022 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |
| 5.2.2 | University–industry R&D collaboration ⁺ | 2021 | 2024 | World Economic Forum, Executive Opinion Survey (EOS) |
| 5.2.4 | State of cluster development [†] | 2021 | 2024 | World Economic Forum, Executive Opinion Survey (EOS) |
| 7.2.2 | National feature films/mn pop. 15–69 | 2022 | 2023 | OMDIA; United Nations, World Population Prospects |



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.