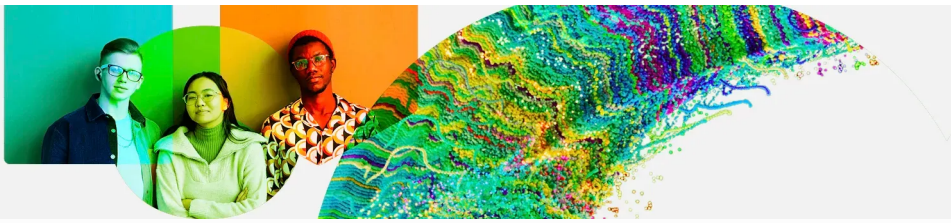
Global Innovation Index 2024



Uzbekistan ranking in the Global Innovation Index 2024

Uzbekistan ranks 83rd 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.

Uzbekistan ranks 10th among the 38 lower-middle-income group economies.

Uzbekistan ranks 4th among the 10 economies in Central and Southern Asia.

Uzbekistan GII Ranking (2020-2024)

The table shows the rankings of Uzbekistan 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 Uzbekistan in the GII 2024 is between ranks 73 and 86.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	93rd	81st	118th
2021	86th	75th	100th
2022	82nd	68th	91st
2023	82nd	72nd	88th
2024	83rd	71st	91st

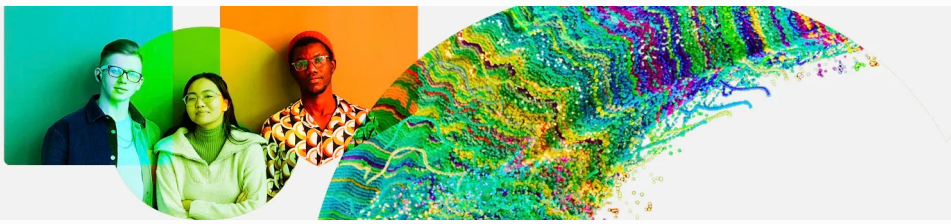
Uzbekistan performs worse in innovation outputs than innovation inputs in 2024.

This year **Uzbekistan ranks 71st in innovation inputs.** This position is higher than last year.

Uzbekistan ranks 91st in innovation outputs. This position is lower than last year.

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

For Uzbekistan, 9 indicators have 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	
▲ 21.3% 2022 - 2023	▲ 28.6% 2021 - 2022	▼ -25% 2022 - 2023	▼ -93.9% 2022 - 2023	▲ 100% 2022 - 2023
▲ 14.3% 2013 - 2023	▲ 6.2% 2012 - 2022	▲ 19.6% 2013 - 2023	▼ -13.4% 2013 - 2023	0% 2013 - 2023

Technology adoption

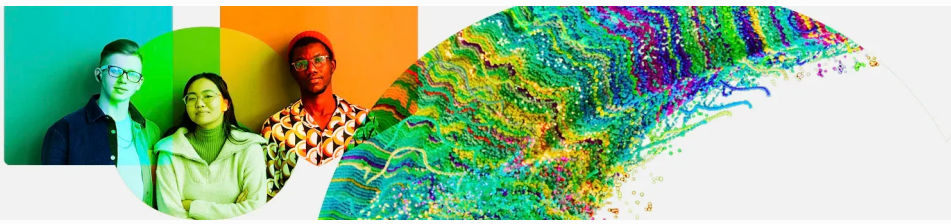
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 0.1% 2021 - 2022	▲ 18.3% 2021 - 2022	▲ 20% 2021 - 2022	▲ 4.1% 2021 - 2022	n/a
▲ 0.1% 2012 - 2022	▲ 42.6% 2012 - 2022		▲ 51.6% 2012 - 2022	n/a
74.5 per 100 inhabitants in 2022	26 per 100 inhabitants in 2022	12 per 100 inhabitants in 2022		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 3.9% 2022 - 2023	▲ 1.1% 2021 - 2022	▲ 2.3°C 2023
▲ 4.2% 2013 - 2023	▲ 0.3% 2012 - 2022	n/a
26,156 USD in 2023	71.7 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

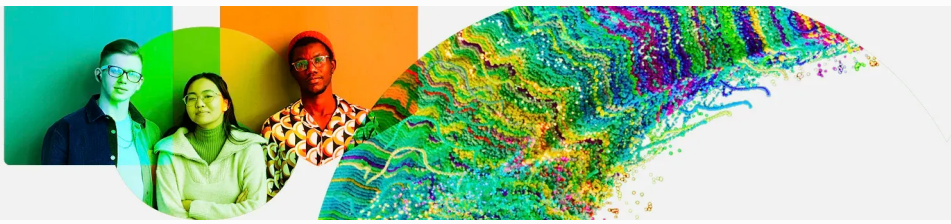


Expected vs. observed innovation performance

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, Uzbekistan is performing above expectations for its level of development.

> Innovation overperformers relative to their economic development



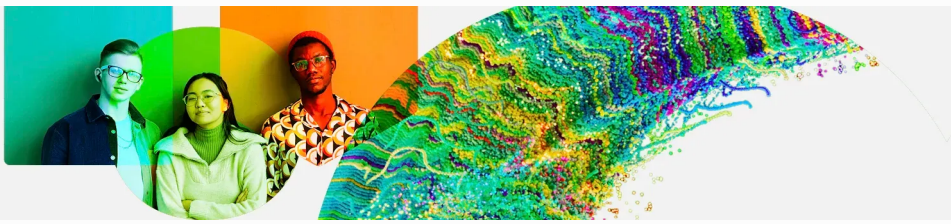
Effectively translating innovation investments into innovation outputs

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.

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

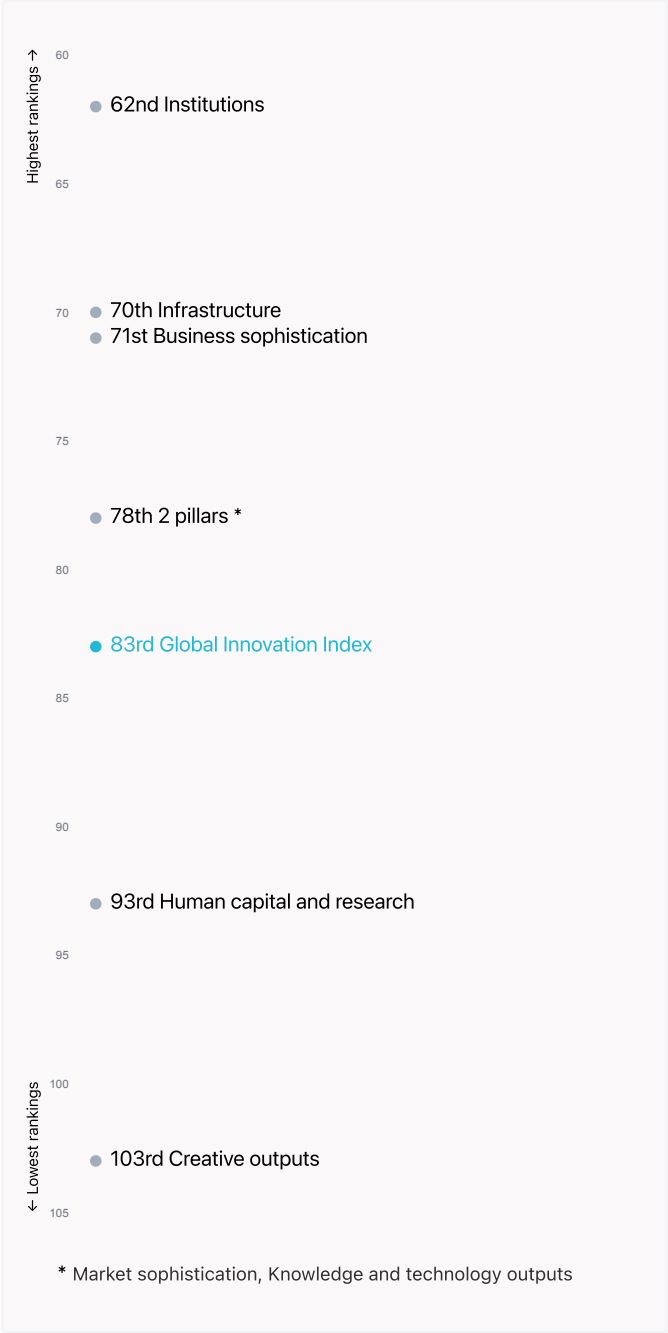
> Relationship between innovation inputs and outputs

Global Innovation Index 2024



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



Highest rankings

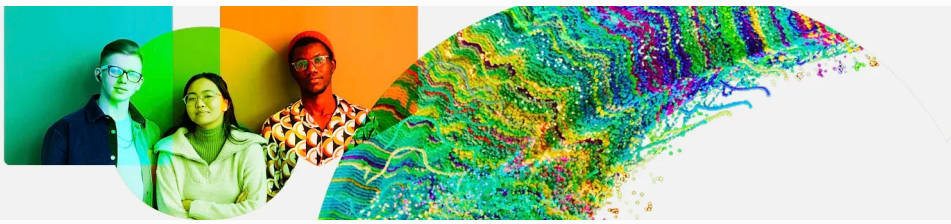
Uzbekistan ranks highest in Institutions (62nd), Infrastructure (70th) and Business sophistication (71st).

Lowest rankings

Uzbekistan ranks lowest in Creative outputs (103rd), Human capital and research (93rd) and Market sophistication, Knowledge and technology outputs (78th).

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

Global Innovation Index 2024



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

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

Lower-Middle-Income economies

Uzbekistan performs above the lower-middle-income group average in Institutions, Human capital and research, Infrastructure, Market sophistication, Business sophistication, Knowledge and technology outputs.

Central And Southern Asia

Uzbekistan performs above the regional average in Institutions, Human capital and research, Infrastructure, Business sophistication.

Institutions

- Top 10 | Score: 80.81
- Uzbekistan | Score: 49.16
- Lower middle income | Score: 34.0
- Central and Southern Asia | Score:

Human capital and research

- Top 10 | Score: 61.30
- Uzbekistan | Score: 25.11
- Central and Southern Asia | Score:
- Lower middle income | Score: 22.1

Infrastructure

- Top 10 | Score: 58.57
- Uzbekistan | Score: 40.43
- Central and Southern Asia | Score:
- Lower middle income | Score: 29.8

Market sophistication

- Top 10 | Score: 62.12
- Central and Southern Asia | Score:
- Uzbekistan | Score: 28.92
- Lower middle income | Score: 25.9

Business sophistication

- Top 10 | Score: 63.64
- Uzbekistan | Score: 25.16
- Central and Southern Asia | Score:
- Lower middle income | Score: 20.8

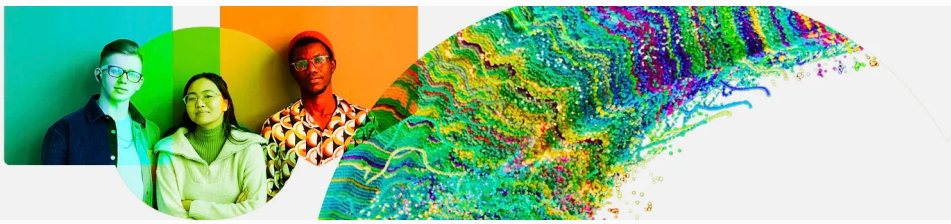
Knowledge and technology outputs

- Top 10 | Score: 57.29
- Central and Southern Asia | Score:
- Uzbekistan | Score: 18.43
- Lower middle income | Score: 15.6

Creative outputs

- Top 10 | Score: 56.54
- Central and Southern Asia | Score:
- Lower middle income | Score: 15.7
- Uzbekistan | Score: 12.88

Global Innovation Index 2024



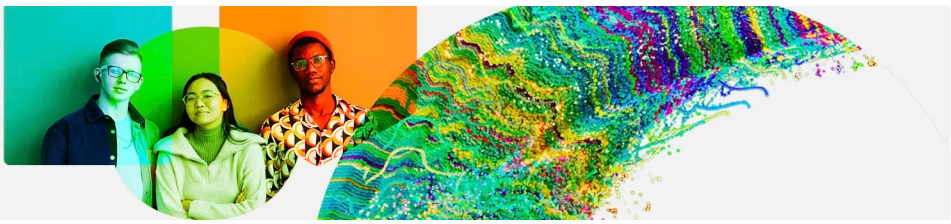
Innovation strengths and weaknesses in Uzbekistan

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

Uzbekistan's main innovation strengths are **Entrepreneurship policies and culture†** (rank 4), **Gross capital formation, % GDP** (rank 7) and **Labor productivity growth, %** (rank 7).

Strengths			Weaknesses		
Rank	**Code**	**Indicator name**	**Rank**	**Code**	**Indicator name**
4	1.3.2	Entrepreneurship policies and culture†	116	3.3.2	Low-carbon energy use, %
7	3.2.3	Gross capital formation, % GDP	116	6.1.4	Scientific and technical articles/bn PPP$ GDP
7	6.2.1	Labor productivity growth, %	112	3.3.1	GDP/unit of energy use
12	2.2.2	Graduates in science and engineering, %	102	5.2.5	Patent families/bn PPP$ GDP
14	6.1.3	Utility models by origin/bn PPP$ GDP	87	5.1.2	Firms offering formal training, %
19	4.1.1	Finance for startups and scaleups†	84	2.1.4	PISA scales in reading, maths and science
20	1.3.1	Policy stability for doing business†	78	4.2.1	Market capitalization, % GDP
30	5.2.3	State of cluster development†	75	2.3.4	QS university ranking, top 3*
32	3.3.3	ISO 14001 environment/bn PPP$ GDP	49	6.2.2	Unicorn valuation, % GDP
34	2.1.1	Expenditure on education, % GDP	41	2.3.3	Global corporate R&D investors, top 3, mn USD

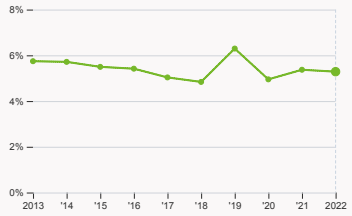
Global Innovation Index 2024



Uzbekistan's innovation system

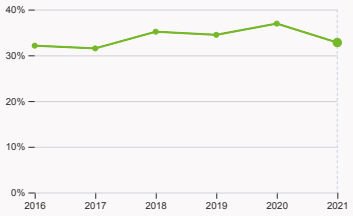
As far as practicable, the plots below present unscaled indicator data.

Innovation inputs in Uzbekistan



2.1.1 **Expenditure on education**

was equal to 5.28 % GDP in 2022, down by 0.08 percentage points from the year prior – and equivalent to an indicator rank of 34.



2.2.2 **Graduates in science and engineering**

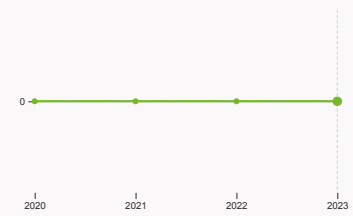
was equal to 32.79 % of total graduates in 2021, down by 4.14 percentage points from the year prior – and equivalent to an indicator rank of 12.

2.3.1 **Researchers**

was equal to 547.49 FTE per million population in 2022, up by 4.22% from the year prior – and equivalent to an indicator rank of 69.

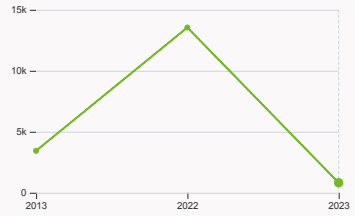
2.3.2 **Gross expenditure on R&D**

was equal to 0.16 % GDP in 2022, up by 0.03 percentage points from the year prior – and equivalent to an indicator rank of 94.



2.3.4 **QS university ranking**

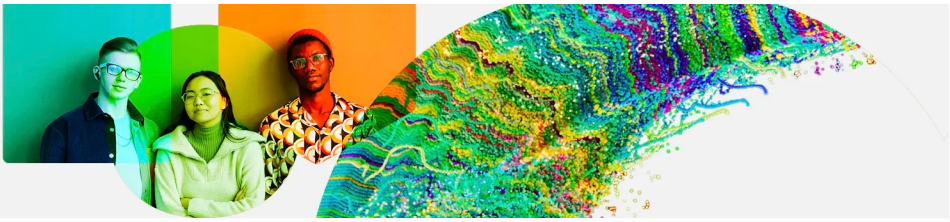
was equal to an average score of 0 for the top three universities in 2023 with no change from the year prior – and equivalent to an indicator rank of 75.



4.2.4 **VC received, value**

was equal to 820 USD in 2023, down by 93.95% from the year prior – and equivalent to an indicator rank of 85.

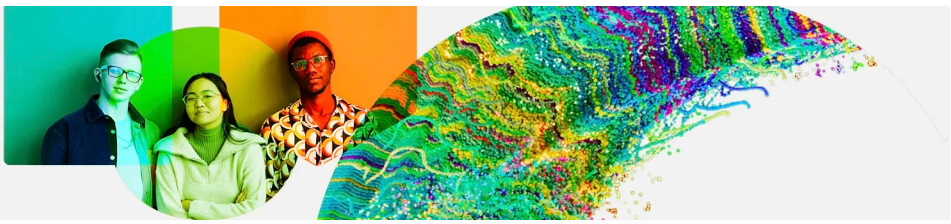
Global Innovation Index 2024



4.3.2 **Domestic industry diversification**

was equal to an index score of 0.12 in 2021, down by 2.61% from the year prior – and equivalent to an indicator rank of 44.

Global Innovation Index 2024



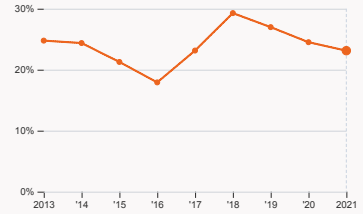
Innovation outputs in Uzbekistan

6.1.1 Patents by origin

was equal to 458 patents in 2022, up by 10.9% from the year prior – and equivalent to an indicator rank of 42.

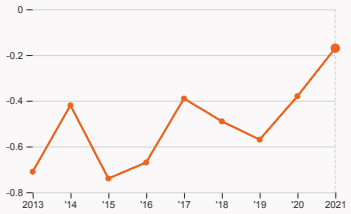
6.2.2 Unicorn valuation

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



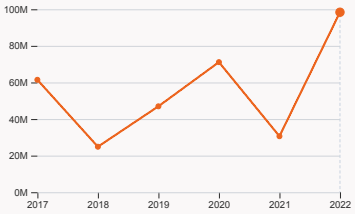
6.2.4 High-tech manufacturing

was equal to 23.12 % of total manufacturing output in 2021, down by 1.39 percentage points from the year prior – and equivalent to an indicator rank of 52.



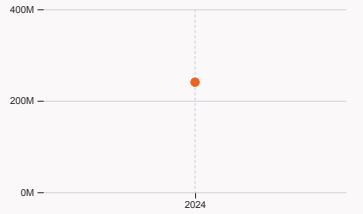
6.3.2 Production and export complexity

was equal to a score of -0.17 in 2021, up by 55.26% from the year prior – and equivalent to an indicator rank of 71.



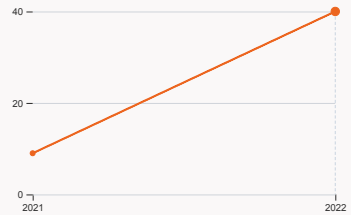
6.3.3 High-tech exports

was equal to 98.38 million USD in 2022, up by 221.5% from the year prior – and equivalent to an indicator rank of 99.



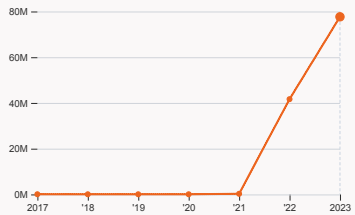
7.1.3 Global brand value

was equal to 240.55 million USD for the brands in the top 5,000 in 2024 – and equivalent to an indicator rank of 70.



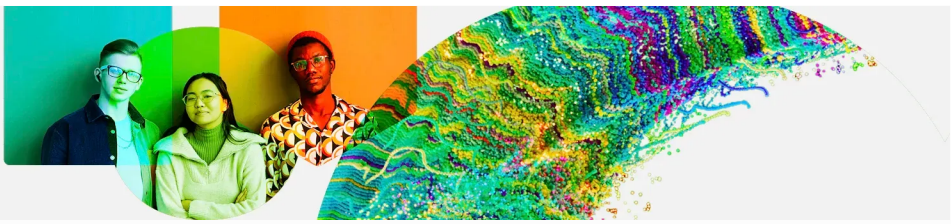
7.2.2 National feature films

was equal to 40 films in 2022, up by 344.44% from the year prior – and equivalent to an indicator rank of 60.



7.3.3 Mobile app creation

was equal to 77.66 million global downloads of mobile apps in 2023, up by 86.46% from the year prior – and equivalent to an indicator rank of 66.



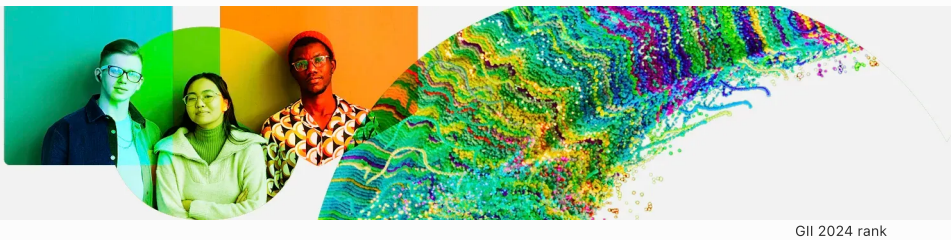
Uzbekistan's innovation top performers

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

Rank	Brand	Industry	Brand Value, mn USD
1	UZTELECOM	Telecoms	240.6

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

Global Innovation Index 2024



Uzbekistan

GII 2024 rank **83**

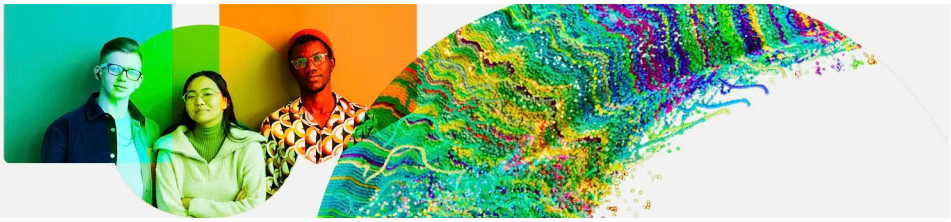
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
91	71	Lower middle	CSA	35.7	371.6	10,316.4

	Score / Value	Rank	
Institutions	**49.2**	**62**	◆
1.1 Institutional environment	**45**	**85**	
1.1.1 Operational stability for businesses*	54.7	85	
1.1.2 Government effectiveness*	35.4	91	
1.2 Regulatory environment	**23.4**	**107**	
1.2.1 Regulatory quality*	27.4	102	
1.2.2 Rule of law*	19.3	111	
1.3 Business environment	**79.1**	**7**	● ◆
1.3.1 Policy stability for doing business†	73.2	20	● ◆
1.3.2 Entrepreneurship policies and culture†	85	4	● ◆
Human capital and research	**25.1**	**93**	
2.1 Education	**38.9**	**104**	
2.1.1 Expenditure on education, % GDP	5.3	34	● ◆
2.1.2 Government funding/pupil, secondary, % GDP/cap	13.8	75	
2.1.3 School life expectancy, years	12	92	
2.1.4 PISA scales in reading, maths and science	351.4	84	○
2.1.5 Pupil–teacher ratio, secondary	13.1	62	
2.2 Tertiary education	**34.4**	**62**	
2.2.1 Tertiary enrolment, % gross	41.2	81	
2.2.2 Graduates in science and engineering, %	32.8	12	● ◆
2.2.3 Tertiary inbound mobility, %	0.7	95	
2.3 Research and development (R&D)	**2**	**91**	
2.3.1 Researchers, FTE/mn pop.	547.5	69	
2.3.2 Gross expenditure on R&D, % GDP	0.2	94	
2.3.3 Global corporate R&D investors, top 3, mn USD	0	41	○ ◇
2.3.4 QS university ranking, top 3*	0	75	○ ◇
Infrastructure	**40.4**	**70**	◆
3.1 Information and communication technologies (ICTs)	**73.4**	**63**	◆
3.1.1 ICT access*	87.2	76	◆
3.1.2 ICT use*	74.2	77	
3.1.3 Government's online service*	71.7	57	◆
3.1.4 E-participation*	60.5	55	◆
3.2 General infrastructure	**35.7**	**49**	
3.2.1 Electricity output, GWh/mn pop.	2,043.8	78	
3.2.2 Logistics performance*	22.7	82	
3.2.3 Gross capital formation, % GDP	38.7	7	● ◆
3.3 Ecological sustainability	**12.3**	**103**	
3.3.1 GDP/unit of energy use	5.8	112	○ ◇
3.3.2 Low-carbon energy use, %	2.4	116	○
3.3.3 ISO 14001 environment/bn PPP$ GDP	3.1	32	● ◆
Market sophistication	**28.9**	**78**	
4.1 Credit	**26.4**	**66**	
4.1.1 Finance for startups and scaleups†	65.8	19	● ◆
4.1.2 Domestic credit to private sector, % GDP	36.7	84	
4.1.3 Loans from microfinance institutions, % GDP	0.2	51	
4.2 Investment	**2.4**	**106**	○
4.2.1 Market capitalization, % GDP	8.1	78	○
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.02	87	
4.2.3 VC recipients, deals/bn PPP$ GDP	0.02	90	
4.2.4 VC received, value, % GDP	0.00009	85	
4.3 Trade, diversification and market scale	**57.9**	**61**	
4.3.1 Applied tariff rate, weighted avg., %	2.7	77	
4.3.2 Domestic industry diversification	87.8	44	
4.3.3 Domestic market scale, bn PPP$	371.6	56	

	Score / Value	Rank	
Business sophistication	**25.2**	**71**	
5.1 Knowledge workers	**24.6**	**89**	
5.1.1 Knowledge-intensive employment, %	n/a	n/a	
5.1.2 Firms offering formal training, %	16.9	87	○
5.1.3 GERD performed by business, % GDP	0.05	69	
5.1.4 GERD financed by business, %	42.4	42	◆
5.1.5 Females employed w/advanced degrees, %	8.1	84	
5.2 Innovation linkages	**29**	**51**	◆
5.2.1 Public Research-Industry co-publications, %	0.9	91	
5.2.2 University-industry R&D collaboration†	60.3	37	◆
5.2.3 State of cluster development†	72.7	30	● ◆
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.007	95	
5.2.5 Patent families/bn PPP$ GDP	0	102	○ ◇
5.3 Knowledge absorption	**21.9**	**84**	
5.3.1 Intellectual property payments, % total trade	0.5	74	
5.3.2 High-tech imports, % total trade	9.8	42	
5.3.3 ICT services imports, % total trade	0.8	92	
5.3.4 FDI net inflows, % GDP	3.1	47	
5.3.5 Research talent, % in businesses	12.9	58	
Knowledge and technology outputs	**18.4**	**78**	
6.1 Knowledge creation	**14.1**	**66**	
6.1.1 Patents by origin/bn PPP$ GDP	1.3	42	
6.1.2 PCT patents by origin/bn PPP$ GDP	0.005	95	
6.1.3 Utility models by origin/bn PPP$ GDP	1.3	14	● ◆
6.1.4 Scientific and technical articles/bn PPP$ GDP	3.2	116	○
6.1.5 Citable documents H-index	4.1	111	
6.2 Knowledge impact	**29.4**	**56**	
6.2.1 Labor productivity growth, %	3.9	7	● ◆
6.2.2 Unicorn valuation, % GDP	0	49	○ ◇
6.2.3 Software spending, % GDP	0.2	82	
6.2.4 High-tech manufacturing, %	23.1	52	
6.3 Knowledge diffusion	**11.8**	**87**	
6.3.1 Intellectual property receipts, % total trade	0.001	107	
6.3.2 Production and export complexity	38.6	71	
6.3.3 High-tech exports, % total trade	0.3	99	
6.3.4 ICT services exports, % total trade	0.9	85	
6.3.5 ISO 9001 quality/bn PPP$ GDP	4.2	69	
Creative outputs	**12.9**	**103**	
7.1 Intangible assets	**11.3**	**97**	
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	36.2	57	
7.1.3 Global brand value, top 5,000, % GDP	0.2	70	
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.7	69	
7.2 Creative goods and services	**5.8**	**94**	
7.2.1 Cultural and creative services exports, % total trade	0.1	91	
7.2.2 National feature films/mn pop. 15–69	1.7	60	
7.2.3 Entertainment and media market/th pop. 15–69	3.3	49	◆
7.2.4 Creative goods exports, % total trade	0.5	65	
7.3 Online creativity	**23.2**	**80**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	0.7	102	
7.3.2 GitHub commits/mn pop. 15–69	3.2	94	
7.3.3 Mobile app creation/bn PPP$ GDP	65.6	66	

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.

Global Innovation Index 2024



Data availability

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

Uzbekistan has missing data for two indicators and outdated data for twelve indicators.

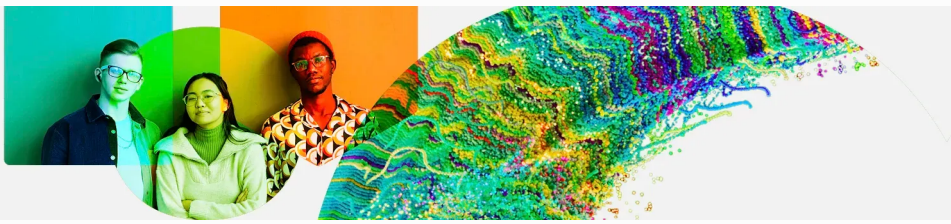
Missing data for Uzbekistan

Code	Indicator name	Economy Year	Model Year	Source
5.1.1	Knowledge-intensive employment, %	n/a	2022	International Labour Organization
7.1.1	Intangible asset intensity, top 15, %	n/a	2023	Brand Finance

Outdated data for Uzbekistan

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)
2.1.3	School life expectancy, years	2021	2022	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2021	2022	UNESCO Institute for Statistics
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency
4.2.1	Market capitalization, % GDP	2021	2022	World Federation of Exchanges; World Bank
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, %	2020	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)
5.3.5	Research talent, % in businesses	2018	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

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.