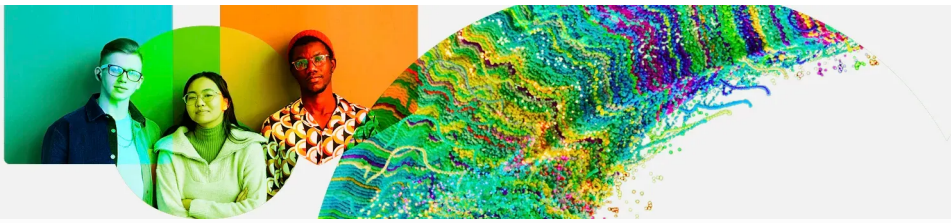
Global Innovation Index 2024



Kyrgyzstan ranking in the Global Innovation Index 2024

Kyrgyzstan ranks 99th 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.

Kyrgyzstan ranks 18th among the 38 lower-middle-income group economies.

Kyrgyzstan ranks 7th among the 10 economies in Central and Southern Asia.

Kyrgyzstan GII Ranking (2020-2024)

The table shows the rankings of Kyrgyzstan 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 Kyrgyzstan in the GII 2024 is between ranks 94 and 104.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	94th	88th	107th
2021	98th	81st	119th
2022	94th	85th	108th
2023	106th	94th	112nd
2024	99th	86th	105th

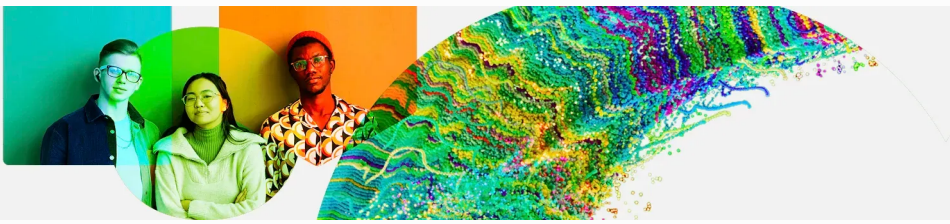
Kyrgyzstan performs worse in innovation outputs than innovation inputs in 2024.

This year Kyrgyzstan ranks 86th in innovation inputs. This position is higher than last year.

Kyrgyzstan ranks 105th in innovation outputs. This position is higher than last year.

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

For Kyrgyzstan, 5 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	
▼ -23.8% 2022 - 2023	▲ 8.7% 2021 - 2022	n/a	n/a	n/a
▲ 9.7% 2013 - 2023	▼ -3.7% 2012 - 2022	n/a	n/a	n/a

Technology adoption

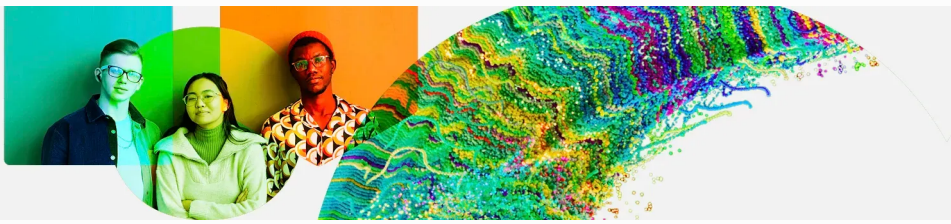
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 0.1% 2021 - 2022	▲ 27% 2021 - 2022	n/a	n/a	n/a
▲ 0.3% 2012 - 2022	▲ 19.7% 2012 - 2022		n/a	n/a
92.6 per 100 inhabitants in 2022	5.9 per 100 inhabitants in 2022	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 1.6% 2022 - 2023	▲ 0.2% 2021 - 2022	▲ 2°C 2023
▲ 0.7% 2013 - 2023	▲ 0.3% 2012 - 2022	n/a
16,756 USD in 2023	72 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



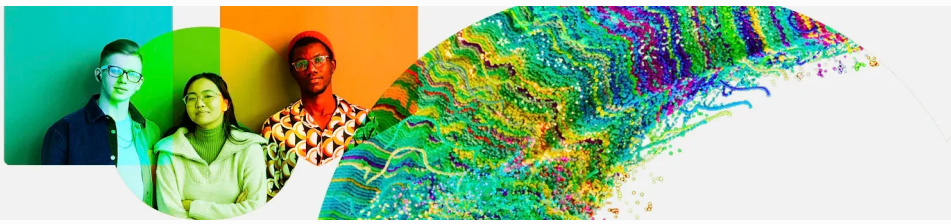
Expected vs. observed innovation performance

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

> Innovation overperformers relative to their economic development

Global Innovation Index 2024

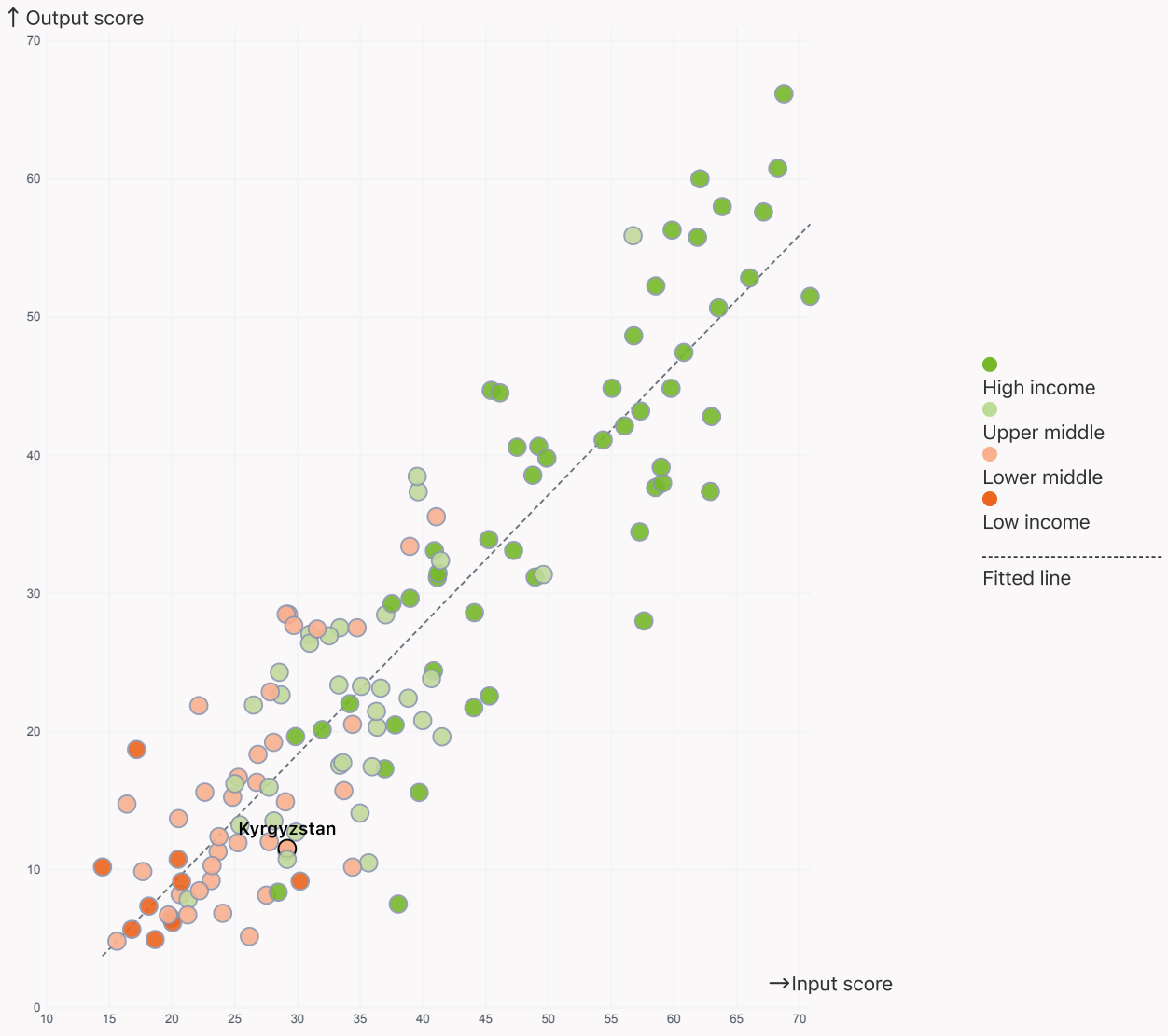


Effectively translating innovation investments into innovation outputs

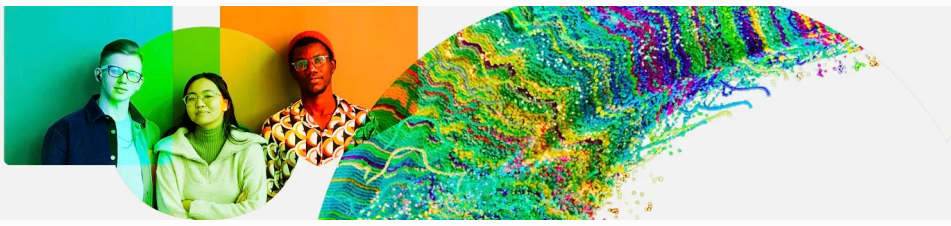
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

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

> Relationship between innovation inputs and outputs

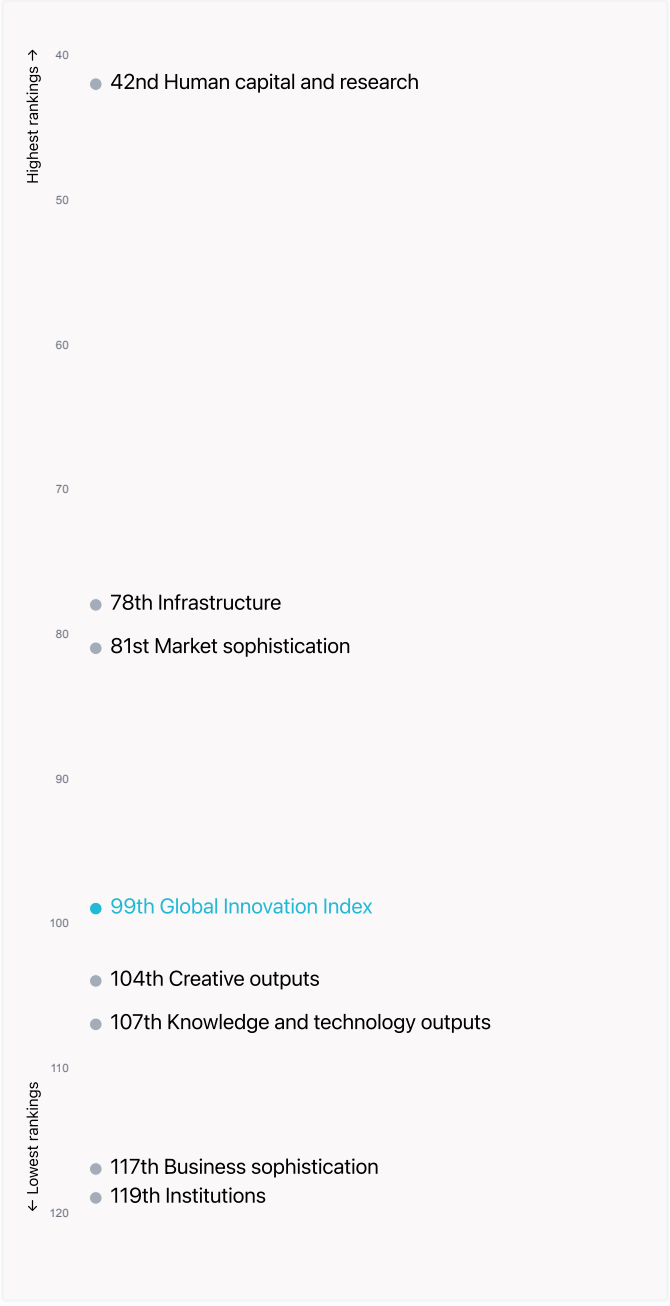


Global Innovation Index 2024



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



Highest rankings

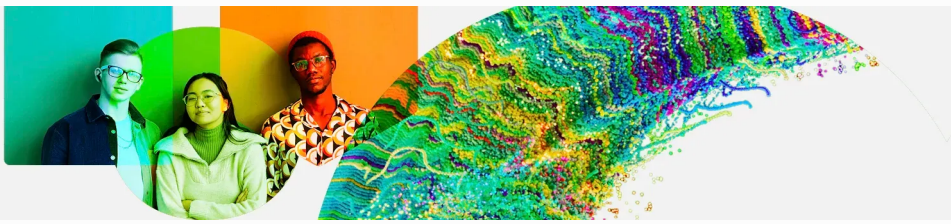
Kyrgyzstan ranks highest in Human capital and research (42nd), Infrastructure (78th) and Market sophistication (81st).

Lowest rankings

Kyrgyzstan ranks lowest in Institutions (119th), Business sophistication (117th) and Knowledge and technology outputs (107th).

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

Global Innovation Index 2024



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

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

Lower-Middle-Income economies

Kyrgyzstan performs above the lower-middle-income group average in Human capital and research, Infrastructure, Market sophistication.

Central And Southern Asia

Kyrgyzstan performs above the regional average in Human capital and research, Infrastructure.

Institutions

- Top 10 | Score: 80.81
- Lower middle income | Score: 34.0
- Central and Southern Asia | Score:
- Kyrgyzstan | Score: 25.09

Human capital and research

- Top 10 | Score: 61.30
- Kyrgyzstan | Score: 39.56
- Central and Southern Asia | Score:
- Lower middle income | Score: 22.1

Infrastructure

- Top 10 | Score: 58.57
- Kyrgyzstan | Score: 36.34
- Central and Southern Asia | Score:
- Lower middle income | Score: 29.8

Market sophistication

- Top 10 | Score: 62.12
- Central and Southern Asia | Score:
- Kyrgyzstan | Score: 27.73
- Lower middle income | Score: 25.9

Business sophistication

- Top 10 | Score: 63.64
- Central and Southern Asia | Score:
- Lower middle income | Score: 20.8
- Kyrgyzstan | Score: 17.50

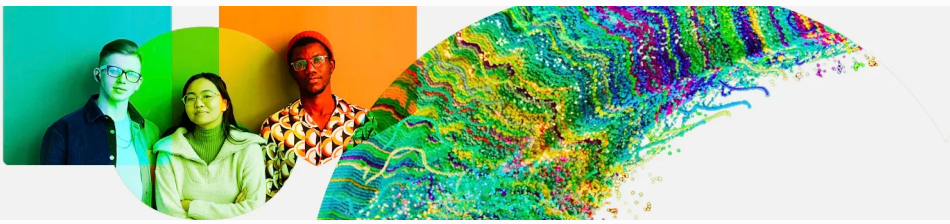
Knowledge and technology outputs

- Top 10 | Score: 57.29
- Central and Southern Asia | Score:
- Lower middle income | Score: 15.6
- Kyrgyzstan | Score: 10.79

Creative outputs

- Top 10 | Score: 56.54
- Central and Southern Asia | Score:
- Lower middle income | Score: 15.7
- Kyrgyzstan | Score: 12.13

Global Innovation Index 2024



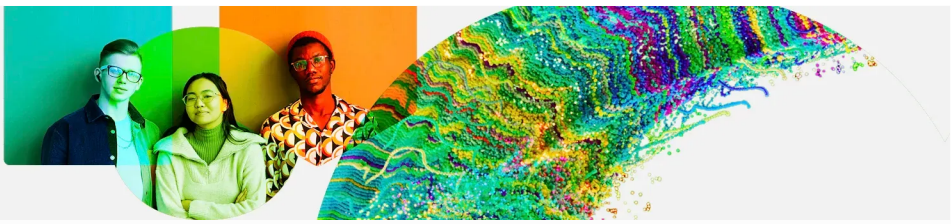
Innovation strengths and weaknesses in Kyrgyzstan

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

Kyrgyzstan's main innovation strengths are **Expenditure on education, % GDP** (rank 3), **Tertiary inbound mobility, %** (rank 4) and **Loans from microfinance institutions, % GDP** (rank 10).

Strengths			Weaknesses		
Rank	Code	Indicator name	Rank	Code	Indicator name
3	2.1.1	Expenditure on education, % GDP	130	3.3.3	ISO 14001 environment/bn PPP$ GDP
4	2.2.3	Tertiary inbound mobility, %	130	6.3.5	ISO 9001 quality/bn PPP$ GDP
10	4.1.3	Loans from microfinance institutions, % GDP	107	6.2.4	High-tech manufacturing, %
13	3.3.2	Low-carbon energy use, %	106	4.3.2	Domestic industry diversification
29	5.3.2	High-tech imports, % total trade	105	3.2.2	Logistics performance*
32	6.1.1	Patents by origin/bn PPP$ GDP	99	6.1.2	PCT patents by origin/bn PPP$ GDP
41	7.2.4	Creative goods exports, % total trade	75	7.1.3	Global brand value, top 5,000, % GDP
46	3.1.1	ICT access*	75	2.3.4	QS university ranking, top 3*
54	5.2.5	Patent families/bn PPP$ GDP	49	6.2.2	Unicorn valuation, % GDP
61	7.3.2	GitHub commits/mn pop. 15–69	41	2.3.3	Global corporate R&D investors, top 3, mn USD

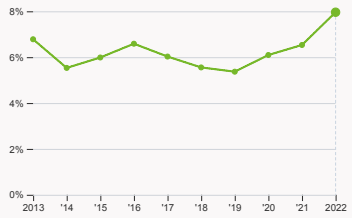
Global Innovation Index 2024



Kyrgyzstan's innovation system

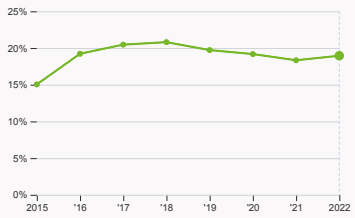
As far as practicable, the plots below present unscaled indicator data.

Innovation inputs in Kyrgyzstan



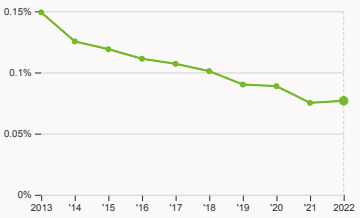
2.1.1 **Expenditure on education**

was equal to 7.96 % GDP in 2022, up by 1.43 percentage points from the year prior – and equivalent to an indicator rank of 3.



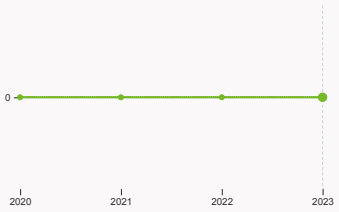
2.2.2 **Graduates in science and engineering**

was equal to 18.94 % of total graduates in 2022, up by 0.62 percentage points from the year prior – and equivalent to an indicator rank of 85.



2.3.2 **Gross expenditure on R&D**

was equal to 0.08 % GDP in 2022, up by 0.002 percentage points from the year prior – and equivalent to an indicator rank of 106.



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.

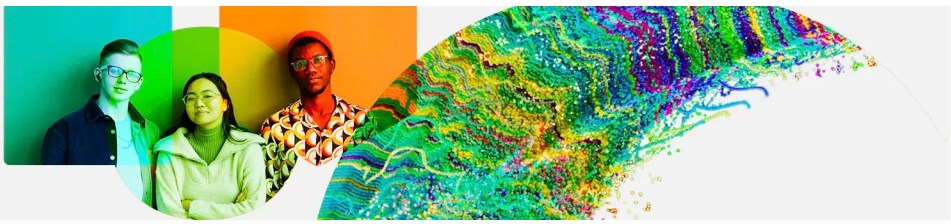
4.3.2 **Domestic industry diversification**

was equal to an index score of 0.42 in 2021, down by 19.97% from the year prior – and equivalent to an indicator rank of 106.

5.1.1 **Knowledge-intensive employment**

was equal to 18.06 % in 2021, up by 0.21 percentage points from the year prior – and equivalent to an indicator rank of 85.

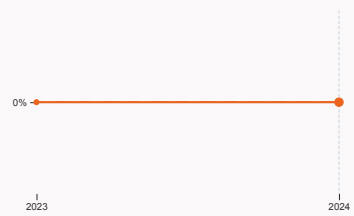
Global Innovation Index 2024



Innovation outputs in Kyrgyzstan

6.1.1 Patents by origin

was equal to 75 patents in 2022, down by 12.79% from the year prior – and equivalent to an indicator rank of 32.

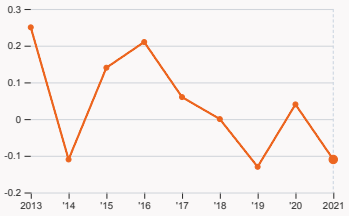


6.2.2 Unicorn valuation

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

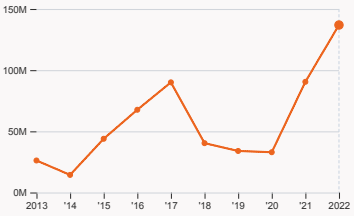
6.2.4 High-tech manufacturing

was equal to 2.05 % of total manufacturing output in 2021, up by 0.28 percentage points from the year prior – and equivalent to an indicator rank of 107.



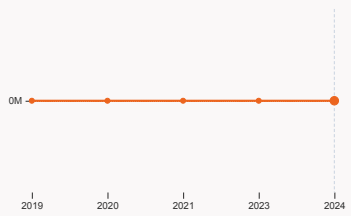
6.3.2 Production and export complexity

was equal to a score of -0.11 in 2021, down by 375% from the year prior – and equivalent to an indicator rank of 64.



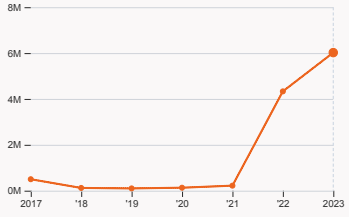
6.3.3 High-tech exports

was equal to 136.9 million USD in 2022, up by 51.32% from the year prior – and equivalent to an indicator rank of 64.



7.1.3 Global brand value

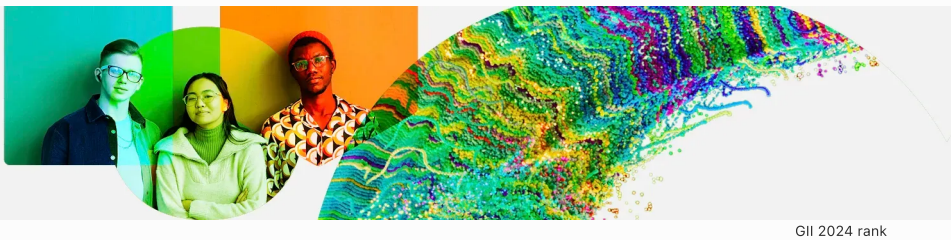
was equal to 0 million USD for the brands in the top 5,000 in 2024 with no change from the year prior – and equivalent to an indicator rank of 75.



7.3.3 Mobile app creation

was equal to 6.02 million global downloads of mobile apps in 2023, up by 39.03% from the year prior – and equivalent to an indicator rank of 72.

Global Innovation Index 2024



Kyrgyzstan

GII 2024 rank **99**

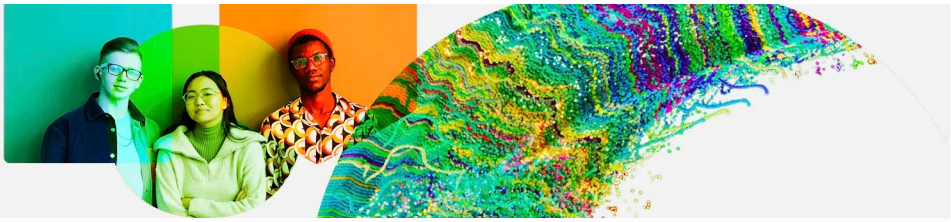
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
105	86	Lower middle	CSA	7.1	44.6	6,438.1

	Score / Value	Rank	
Institutions	**25.1**	**119**	
1.1 Institutional environment	**24.7**	**124**	
1.1.1 Operational stability for businesses*	28.7	120	
1.1.2 Government effectiveness*	20.8	121	
1.2 Regulatory environment	**18.1**	**120**	
1.2.1 Regulatory quality*	25.2	106	
1.2.2 Rule of law*	10.9	125	◇
1.3 Business environment	**32.5**	**[95]**	
1.3.1 Policy stability for doing business†	32.5	100	
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	**39.6**	**42**	●◆
2.1 Education	**71.1**	**[3]**	
2.1.1 Expenditure on education, % GDP	8	3	●◆
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3 School life expectancy, years	13	81	
2.1.4 PISA scales in reading, maths and science	n/a	n/a	
2.1.5 Pupil–teacher ratio, secondary	12.8	59	
2.2 Tertiary education	**47.2**	**19**	●◆
2.2.1 Tertiary enrolment, % gross	56	64	◆
2.2.2 Graduates in science and engineering, %	18.9	85	
2.2.3 Tertiary inbound mobility, %	28.5	4	●◆
2.3 Research and development (R&D)	**0.4**	**111**	
2.3.1 Researchers, FTE/mn pop.	n/a	n/a	
2.3.2 Gross expenditure on R&D, % GDP	0.08	106	
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	**36.3**	**78**	
3.1 Information and communication technologies (ICTs)	**69**	**75**	◆
3.1.1 ICT access*	95.2	46	●◆
3.1.2 ICT use*	74.2	78	
3.1.3 Government's online service*	57.7	80	
3.1.4 E-participation*	48.8	78	
3.2 General infrastructure	**15.2**	**114**	
3.2.1 Electricity output, GWh/mn pop.	2,035.9	79	
3.2.2 Logistics performance*	9.1	105	○
3.2.3 Gross capital formation, % GDP	23.2	72	
3.3 Ecological sustainability	**24.9**	**49**	●◆
3.3.1 GDP/unit of energy use	7.6	97	
3.3.2 Low-carbon energy use, %	50.6	13	●◆
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.1	130	○
Market sophistication	**27.7**	**81**	
4.1 Credit	**20.7**	**84**	
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	21.9	112	
4.1.3 Loans from microfinance institutions, % GDP	3.3	10	●◆
4.2 Investment	**n/a**	**[n/a]**	
4.2.1 Market capitalization, % GDP	n/a	n/a	
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	n/a	n/a	
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	**34.8**	**110**	
4.3.1 Applied tariff rate, weighted avg., %	2.9	78	
4.3.2 Domestic industry diversification	26.1	106	○◇
4.3.3 Domestic market scale, bn PPP$	44.6	115	

	Score / Value	Rank	
Business sophistication	**17.5**	**117**	
5.1 Knowledge workers	**20.3**	**102**	
5.1.1 Knowledge-intensive employment, %	18.1	85	
5.1.2 Firms offering formal training, %	24.1	72	
5.1.3 GERD performed by business, % GDP	0.03	79	
5.1.4 GERD financed by business, %	6.9	81	
5.1.5 Females employed w/advanced degrees, %	11.7	67	
5.2 Innovation linkages	**11.4**	**124**	
5.2.1 Public Research-Industry co-publications, %	0.5	122	
5.2.2 University-industry R&D collaboration†	19.7	119	
5.2.3 State of cluster development†	27.6	110	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.009	88	
5.2.5 Patent families/bn PPP$ GDP	0.09	54	●◆
5.3 Knowledge absorption	**20.8**	**89**	
5.3.1 Intellectual property payments, % total trade	0.1	98	
5.3.2 High-tech imports, % total trade	11.2	29	●◆
5.3.3 ICT services imports, % total trade	0.7	103	
5.3.4 FDI net inflows, % GDP	0.04	118	
5.3.5 Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs	**10.8**	**107**	
6.1 Knowledge creation	**8.6**	**89**	
6.1.1 Patents by origin/bn PPP$ GDP	1.8	32	●◆
6.1.2 PCT patents by origin/bn PPP$ GDP	0	99	○◇
6.1.3 Utility models by origin/bn PPP$ GDP	0.2	42	
6.1.4 Scientific and technical articles/bn PPP$ GDP	5.5	101	
6.1.5 Citable documents H-index	3	121	
6.2 Knowledge impact	**13**	**125**	◇
6.2.1 Labor productivity growth, %	0.2	84	
6.2.2 Unicorn valuation, % GDP	0	49	○◇
6.2.3 Software spending, % GDP	0.05	107	
6.2.4 High-tech manufacturing, %	2.1	107	○◇
6.3 Knowledge diffusion	**10.8**	**91**	
6.3.1 Intellectual property receipts, % total trade	0.04	75	
6.3.2 Production and export complexity	40.4	64	
6.3.3 High-tech exports, % total trade	2	64	
6.3.4 ICT services exports, % total trade	0.6	97	
6.3.5 ISO 9001 quality/bn PPP$ GDP	0.3	130	○◇
Creative outputs	**12.1**	**104**	
7.1 Intangible assets	**4.9**	**114**	
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	17.5	94	
7.1.3 Global brand value, top 5,000, % GDP	0	75	○◇
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.2	97	
7.2 Creative goods and services	**14.6**	**[64]**	
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	1.2	41	●◆
7.3 Online creativity	**24.2**	**72**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	0.5	106	
7.3.2 GitHub commits/mn pop. 15–69	8.3	61	●◆
7.3.3 Mobile app creation/bn PPP$ GDP	63.8	72	

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

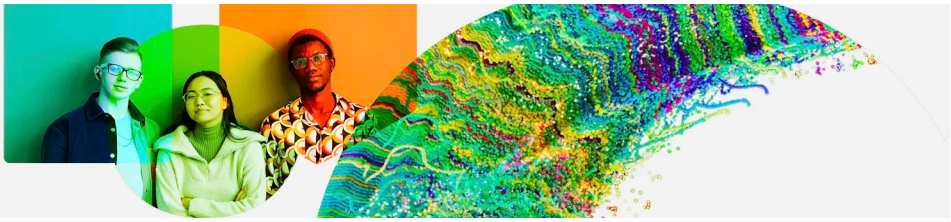
The following tables list indicators that are either missing or outdated for Kyrgyzstan.

Kyrgyzstan has missing data for fourteen indicators and outdated data for six indicators.

Missing data for Kyrgyzstan

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture†	n/a	2023	Global Entrepreneurship Monitor
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2020	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
2.3.1	Researchers, FTE/mn pop.	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.1.1	Finance for startups and scaleups†	n/a	2023	Global Entrepreneurship Monitor
4.2.1	Market capitalization, % GDP	n/a	2022	World Federation of Exchanges; World Bank
4.2.2	Venture capital (VC) investors, deals/bn PPP$ GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
4.2.3	VC recipients, deals/bn PPP$ GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
4.2.4	VC received, value, % GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
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
7.2.1	Cultural and creative services exports, % total trade	n/a	2022	World Trade Organization Global Services Trade Data Hub
7.2.2	National feature films/mn pop. 15–69	n/a	2022	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2023	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

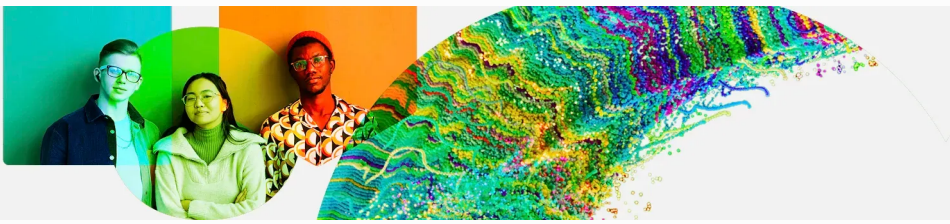
Global Innovation Index 2024



Outdated data for Kyrgyzstan

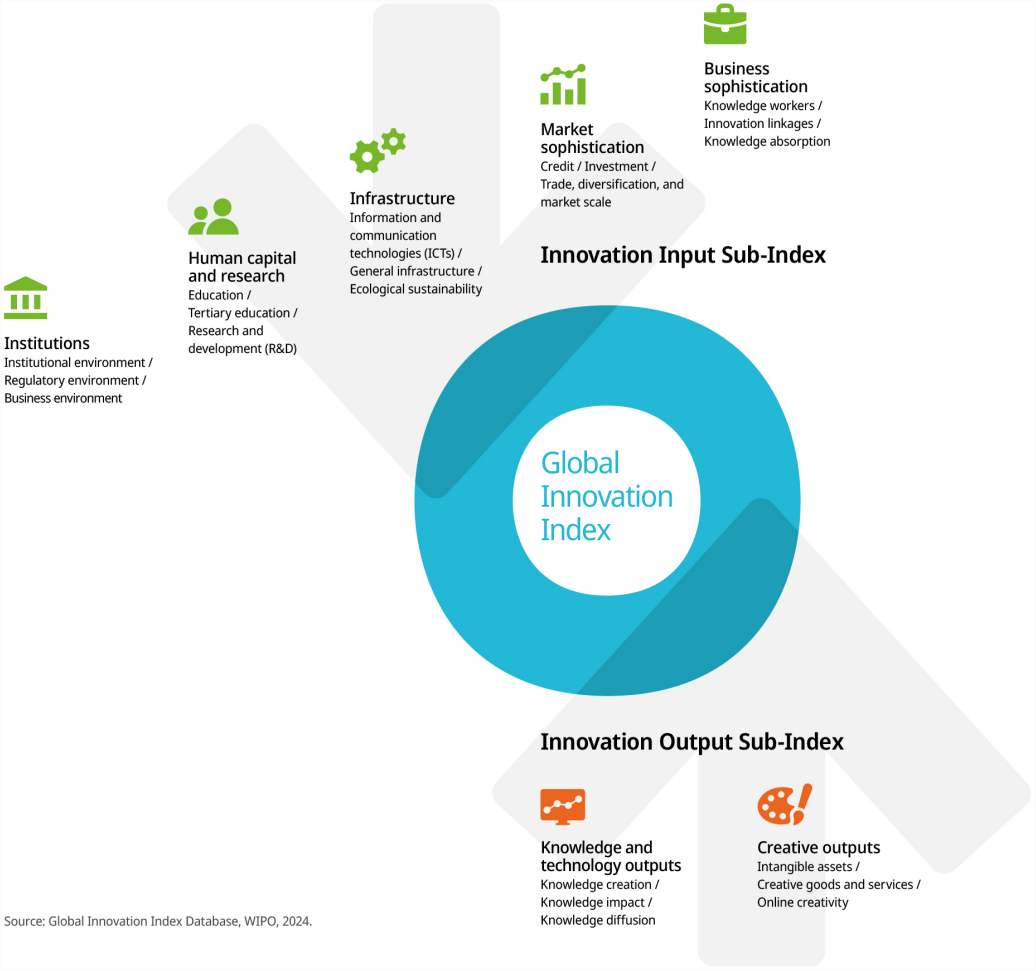
Code	Indicator name	Economy Year	Model Year	Source
2.1.3	School life expectancy, years	2021	2022	UNESCO Institute for Statistics
5.1.1	Knowledge-intensive employment, %	2021	2022	International Labour Organization
5.1.3	GERD performed by business, % GDP	2018	2022	UNESCO Institute for Statistics; Eurostat; 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, %	2018	2023	International Labour Organization
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	2022	2023	LSEG Data & Analytics; International Monetary Fund

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.