Global Innovation Index 2025

Kazakhstan ranking in the Global Innovation Index 2025

Kazakhstan ranks 81st 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.

Kazakhstan ranks 24th among the 36 Upper middle-income group economies.

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

Kazakhstan GII Ranking (2020-2025)

The table shows the rankings of Kazakhstan 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 Kazakhstan in the GII 2025 is between ranks 78 and 82.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	77th	60th	94th
2021	79th	61st	101st
2022	83rd	65th	97th
2023	81st	68th	87th
2024	78th	72nd	83rd
2025	81st	75th	84th

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

This year **Kazakhstan ranks 75th in innovation inputs.** This position is lower than last year.

Kazakhstan ranks 84th in innovation outputs. This position is lower than last year.

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

Global Innovation Index 2025

> Global Innovation Tracker

The Global Innovation Tracker 2025 shows what is the current state of innovation in Kazakhstan, how rapidly is technology being embraced and what are the resulting societal impacts.

For Kazakhstan, 7 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	▲ 21.3 % 2023 - 2024	▲ 29.8 % 2022 - 2023	▼ -45.8 % 2023 - 2024	▲ 100 % 2023 - 2024
Long term (annual growth)	▲ 15 % 2014 - 2024	▲ 1.2 % 2013 - 2023	▼ -3.5 % 2020 - 2024	▲ 7.7 % 2014 - 2024

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	n/a	▲ 0.6% 2022 - 2023	▲ 664% 2022 - 2023	n/a	n/a
Long term (annual growth)	n/a	▲ 4.1% 2013 - 2023	n/a	n/a	n/a
Penetration	n/a	14.3 per 100 inhabitants in 2023	38.2 per 100 inhabitants in 2023	n/a	n/a

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▲ 2.1 % 2023 - 2024	▲ 1.2 % 2022 - 2023	+ 2.1 °C 2024
Long term (annual growth)	▲ 2.2 % 2014 - 2024	▲ 0.5 % 2013 - 2023	+ 0.7 °C 2014
Level	75,440.5 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.

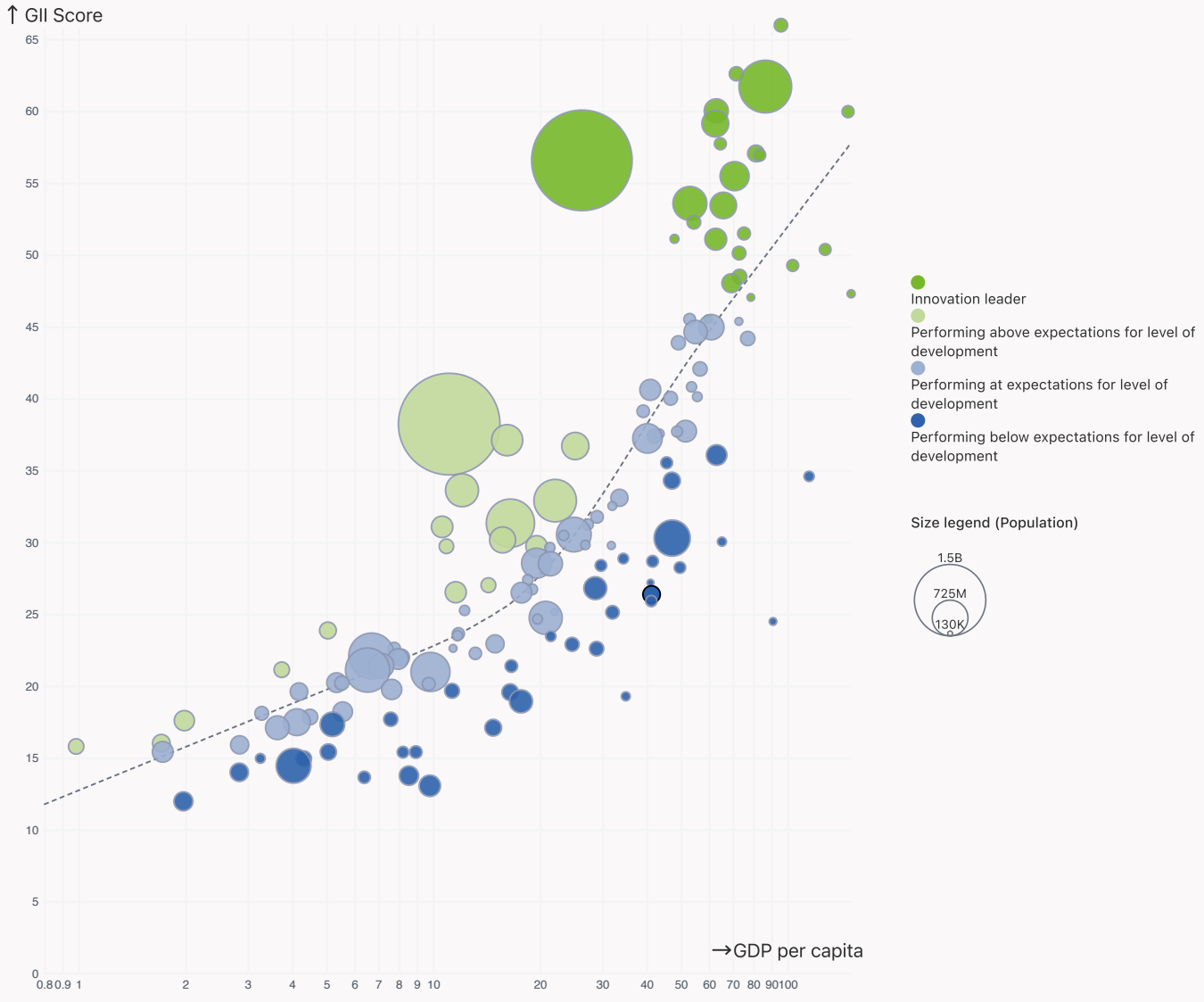
Global Innovation Index 2025

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 Kazakhstan performs below expectations for its level of development.

> Innovation overperformers relative to their economic development



Global Innovation Index 2025

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.

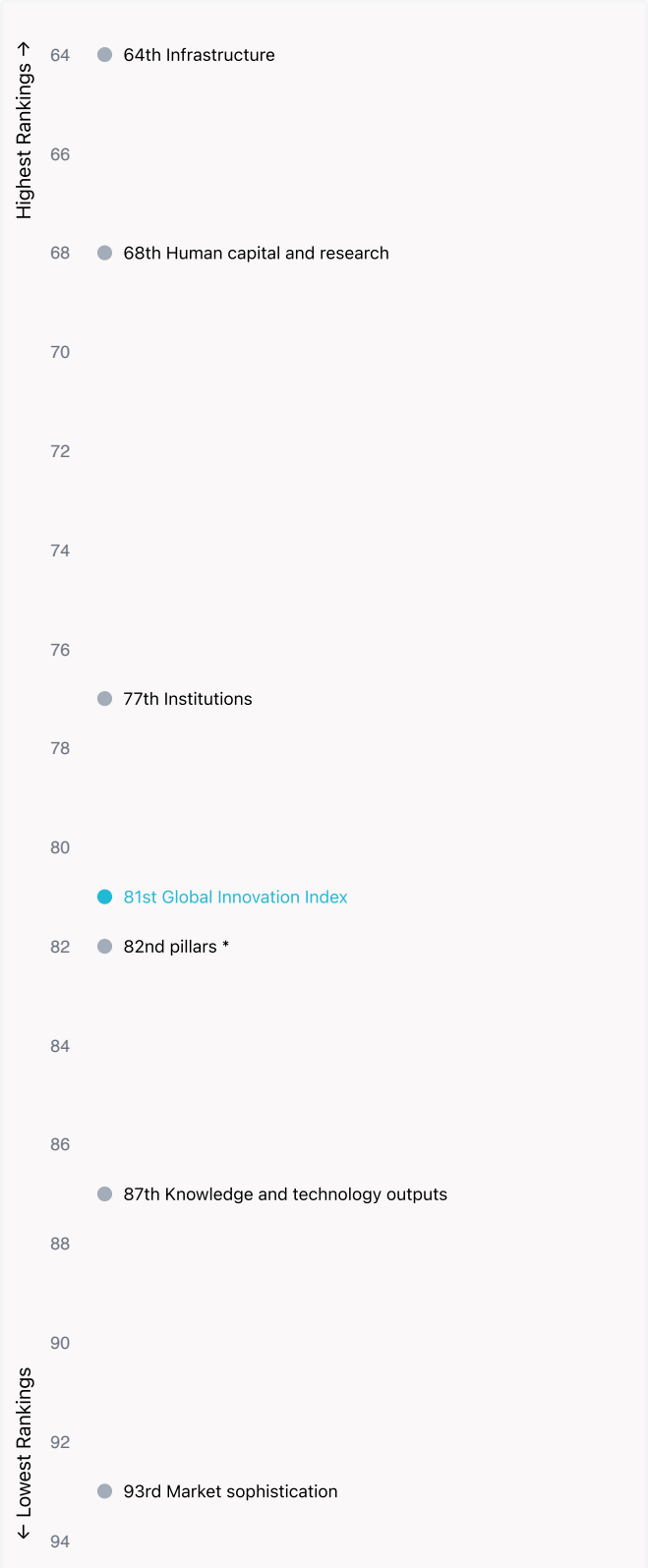
Kazakhstan produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

Global Innovation Index 2025

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



Highest Rankings

Kazakhstan ranks highest in Infrastructure (64th), Human capital and research (68th) and Institutions (77th).

Lowest Rankings

Kazakhstan ranks lowest in Market sophistication (93rd), Knowledge and technology outputs (87th) and Business sophistication, Creative outputs (82nd).

* Business sophistication, Creative outputs

The full WIPO Intellectual Property Statistics profile for Kazakhstan can be found on https://www.wipo.int/edocs/statistics-country-profile/en/kz.pdf

Global Innovation Index 2025

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

Upper middle-income economies

Kazakhstan performs above the Upper middle-income group average in Institutions, Human capital and research, Infrastructure.

Central and Southern Asia

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

Institutions

Top 10 | Score: 78.63

Kazakhstan | Score: 47.09

Upper middle-income | Score: 44.7

Central and Southern Asia | Score:

Human capital and research

Top 10 | Score: 59.30

Kazakhstan | Score: 31.07

Upper middle-income | Score: 29.7

Central and Southern Asia | Score:

Infrastructure

Top 10 | Score: 61.36

Kazakhstan | Score: 43.00

Upper middle-income | Score: 41.1

Central and Southern Asia | Score:

Market sophistication

Top 10 | Score: 61.82

Upper middle-income | Score: 34.8

Central and Southern Asia | Score:

Kazakhstan | Score: 29.90

Business sophistication

Top 10 | Score: 59.10

Upper middle-income | Score: 27.7

Kazakhstan | Score: 26.62

Central and Southern Asia | Score:

Knowledge and technology outputs

Top 10 | Score: 54.93

Upper middle-income | Score: 20.0

Central and Southern Asia | Score:

Kazakhstan | Score: 16.02

Creative outputs

Top 10 | Score: 55.98

Upper middle-income | Score: 22.6

Central and Southern Asia | Score:

Kazakhstan | Score: 18.27

Global Innovation Index 2025

Innovation strengths and weaknesses in Kazakhstan

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

Kazakhstan's best-ranked innovation strengths are **Utility models by origin/bn PPP$ GDP** (rank 8), **Government's online service*** (rank 10) and **National feature films/mn pop. 15–69** (rank 29).

Strengths

Rank	Code	Indicator name
8	6.1.3	Utility models by origin/bn PPP$ GDP
10	3.1.3	Government's online service*
29	7.2.2	National feature films/mn pop. 15–69
32	2.1.5	Pupil–teacher ratio, secondary
35	3.2.3	Gross capital formation, % GDP
36	6.3.3	High-tech exports, % total trade
36	2.3.4	QS university ranking, top 3*
38	4.3.3	Domestic market scale, bn PPP$
39	3.2.1	Electricity output, GWh/mn pop.
40	6.2.1	Labor productivity growth, %

Weaknesses

Rank	Code	Indicator name
136	6.2.3	Software spending, % GDP
125	6.3.5	ISO 9001 quality/bn PPP$ GDP
119	6.1.4	Scientific and technical articles/bn PPP$ GDP
115	5.2.2	University–industry R&D collaboration†
112	5.2.4	State of cluster development†
112	4.2.2	Venture capital (VC) received, deal count/bn PPP$ GDP
95	2.3.2	Gross expenditure on R&D, % GDP
69	7.1.1	Intangible asset intensity, top 15, %
53	6.2.2	Unicorn valuation, % GDP
44	2.3.3	Global corporate R&D investors, top 3, mn USD

Global Innovation Index 2025

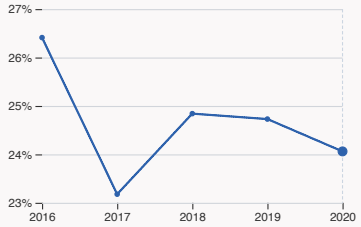
Kazakhstan's innovation system

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

Innovation inputs in Kazakhstan

2.1.1 Expenditure on education

was equal to 4.87 % GDP in 2023, up by 0.51 percentage points from the year prior – and equivalent to an indicator rank of 43.



2.2.2 Graduates in science and engineering

was equal to 24.06 % of total graduates in 2020, down by 0.67 percentage points from the year prior – and equivalent to an indicator rank of 51.

2.3.1 Researchers

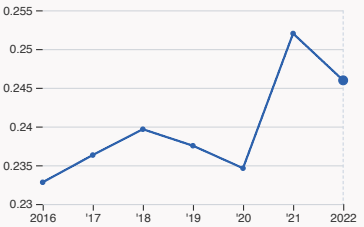
was equal to 693.06 FTE per million population in 2023, up by 4.74% from the year prior – and equivalent to an indicator rank of 65.

2.3.2 Gross expenditure on R&D

was equal to 0.14 % GDP in 2023, up by 0.03 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 38.17 for the top three universities in 2024, up by 18.8% from the year prior – and equivalent to an indicator rank of 36.

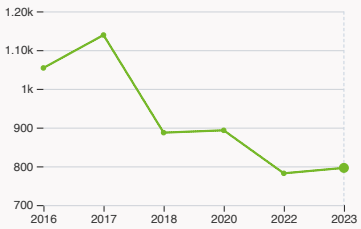


4.3.2 Domestic industry diversification

was equal to an index score of 0.246 in 2022, down by 2.4% from the year prior – and equivalent to an indicator rank of 91.

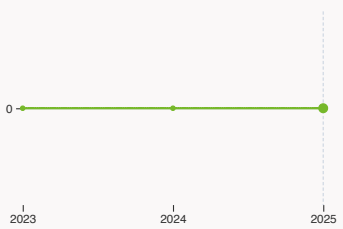
Global Innovation Index 2025

Innovation outputs in Kazakhstan



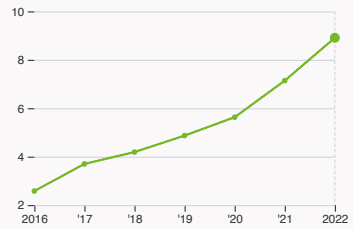
6.1.1 Patents by origin

was equal to 796 patents in 2023, up by 1.79% from the year prior – and equivalent to an indicator rank of 55.



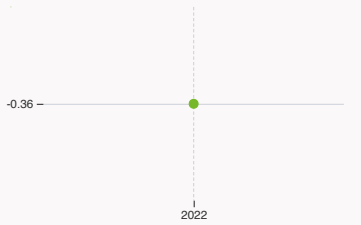
6.2.2 Unicorn valuation

The country does not have unicorns in 2025.



6.2.4 High-tech manufacturing

was equal to 8.91 high-tech manufacturing output in billion USD in 2022, up by 24.79% from the year prior – and equivalent to an indicator rank of 73.

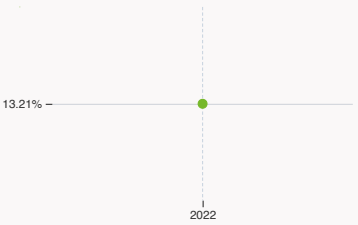


6.3.2 Production and export complexity

was equal to a score of -0.36 in 2022 – and equivalent to an indicator rank of 83.

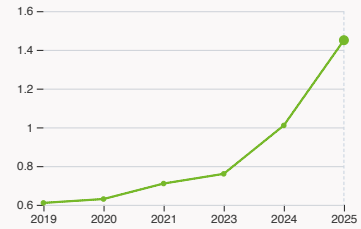
6.3.3 High-tech exports

was equal to 5.18 billion USD in 2023, up by 37.04% from the year prior – and equivalent to an indicator rank of 36.



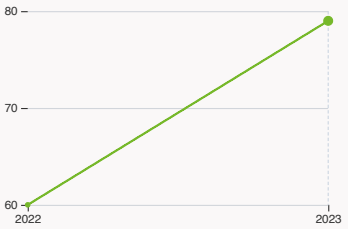
7.1.1 Intangible asset intensity, top 15

was equal to 13.21 % for the top 15 companies in 2022 – and equivalent to an indicator rank of 69.



7.1.3 Global brand value, top 5,000

was equal to 1.45 billion USD in 2025, up by 43.56% from the year prior – and equivalent to an indicator rank of 68.



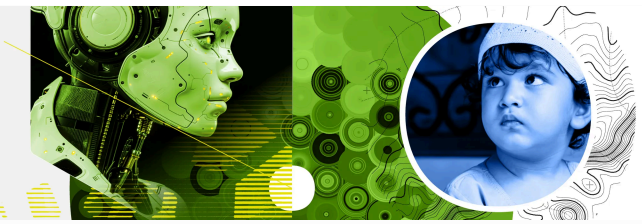
7.2.2 National feature films

was equal to 79 films in 2023, up by 31.67% from the year prior – and equivalent to an indicator rank of 29.

7.3.3 Mobile app creation

was equal to 117.9 million global downloads of mobile apps in 2024, up by 9.81% from the year prior – and equivalent to an indicator rank of 70.

Global Innovation Index 2025



Kazakhstan's innovation top performers

Data not available for 2.3.3 Global corporate R&D investors and 6.2.2 Top Unicorn Companies.

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 Kazakhstan's top universities

Rank	University	Score
163	AL-FARABI KAZAKH NATIONAL UNIVERSITY	51.00
321	L.N. GUMILYOV EURASIAN NATIONAL UNIVERSITY (ENU)	34.20
405	SATBAYEV UNIVERSITY	29.30

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	NAZARBAYEV UNIVERSITY	59.40
2	SATBAYEV UNIVERSITY	53.35
3	AL-FARABI KAZAKH NATIONAL UNIVERSITY	52.30

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.

7.1.1 Top 15 intangible-asset intensive companies in Kazakhstan

Rank	Firm	Intensity, %
1	AKER BP ASA	94.39
2	KASPI.KZ JSC	82.39
3	NAC KAZATOMPROM JSC	80.23

Source: Brand Finance (https://brandirectory.com/reports/gift-2024).
Note: Brand Finance only provides within economy ranks.

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

Rank	Brand	Industry	Brand Value, mn USD
1	HALYK BANK	Banking	773.2
2	KAZAKHTELECOM	Telecoms	402.1
3	KCEL	Telecoms	271.7

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

Kazakhstan

GII 2025 rank **81**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
84	75	Upper middle	Central and Southern Asia	20.6	830.6	41,366.3

	Score / Value	Rank	
Institutions	**47.1**	**77**	
1.1 Institutional environment	**52**	**75**	
1.1.1 Operational stability for businesses*	57.3	79	
1.1.2 Government effectiveness*	46.7	64	
1.2 Regulatory environment	**44.8**	**81**	
1.2.1 Regulatory quality*	48.3	73	
1.2.2 Rule of law*	41.4	92	
1.3 Business environment	**44.4**	**69**	
1.3.1 Policy stability for doing business†	39.4	83	
1.3.2 Entrepreneurship policies and culture†	49.5	30	
Human capital and research	**31.1**	**68**	
2.1 Education	**51.1**	**68**	
2.1.1 Expenditure on education, % GDP	4.9	43	
2.1.2 Government funding/pupil, secondary, % GDP/cap	21.2	40	
2.1.3 School life expectancy, years	13.7	73	
2.1.4 PISA scales in reading, maths and science	411.6	54	
2.1.5 Pupil–teacher ratio, secondary	9.9	32	●
2.2 Tertiary education	**30.2**	**67**	
2.2.1 Tertiary enrolment, % gross	53.5	68	
2.2.2 Graduates in science and engineering, %	24.1	51	
2.2.3 Tertiary inbound mobility, %	5.5	48	
2.3 Research and development (R&D)	**12**	**59**	
2.3.1 Researchers, FTE/mn pop.	693.1	65	
2.3.2 Gross expenditure on R&D, % GDP	0.1	95	○
2.3.3 Global corporate R&D investors, top 3, mn USD	0	44	○ ◇
2.3.4 QS university ranking, top 3*	39.1	36	● ◆
Infrastructure	**43**	**64**	
3.1 Information and communication technologies (ICTs)	**89**	**27**	◆
3.1.1 ICT access*	90.8	53	
3.1.2 ICT use*	83.6	42	
3.1.3 Government's online service*	92.7	10	● ◆
3.2 General infrastructure	**33.2**	**69**	
3.2.1 Electricity output, GWh/mn pop.	5,753.5	39	● ◆
3.2.2 Logistics performance*	27.3	76	
3.2.3 Gross capital formation, % GDP	27.7	35	●
3.3 Ecological sustainability	**6.7**	**127**	◇
3.3.1 GDP/unit of energy use	7.2	99	
3.3.2 Low-carbon energy use, %	4.5	113	
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.3	111	
Market sophistication	**29.9**	**93**	
4.1 Credit	**19.3**	**96**	
4.1.1 Finance for startups and scaleups†	38.5	62	
4.1.2 Domestic credit to private sector, % GDP	26	105	
4.1.3 Loans from microfinance institutions, % GDP	1.1	30	
4.2 Investment	**2.6**	**90**	
4.2.1 Market capitalization, % GDP	25.3	56	
4.2.2 Venture capital (VC) received, deal count/bn PPP$ GDP	0.02	112	○
4.2.3 Late-stage VC deal count, % global VC	0.008	74	
4.2.4 VC investors, deal count/bn PPP$ GDP	0.03	92	
4.2.5 VC investor co-participation/bn PPP$ GDP	0.02	85	
4.3 Trade, diversification and market scale	**67.8**	**73**	
4.3.1 Applied tariff rate, weighted avg., %	3	77	
4.3.2 Domestic industry diversification	63	91	◇
4.3.3 Domestic market scale, bn PPP$	830.6	38	●

	Score / Value	Rank	
Business sophistication	**26.6**	**82**	
5.1 Knowledge workers	**37.3**	**[62]**	
5.1.1 Knowledge-intensive employment, %	n/a	n/a	
5.1.2 Females employed w/advanced degrees, %	n/a	n/a	
5.1.3 Youth demographic dividend, %	43.3	47	
5.1.4 GERD performed by business, % GDP	0.05	69	
5.1.5 GERD financed by business, %	47.4	31	
5.2 Innovation linkages	**18.3**	**95**	
5.2.1 Public research–industry co-publications, %	1.3	73	
5.2.2 University–industry R&D collaboration†	18.1	115	○
5.2.3 University industry & international engagement, top 5*	33	51	
5.2.4 State of cluster development†	27.7	112	○
5.2.5 Patent families/bn PPP$ GDP	0.01	83	
5.3 Knowledge absorption	**24.3**	**80**	
5.3.1 Intellectual property payments, % total trade	0.4	76	
5.3.2 High-tech imports, % total trade	9.8	46	
5.3.3 ICT services imports, % total trade	1	90	
5.3.4 FDI net inflows, % GDP	2.2	82	
5.3.5 Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs	**16**	**87**	
6.1 Knowledge creation	**14.8**	**67**	
6.1.1 Patents by origin/bn PPP$ GDP	1	55	
6.1.2 PCT patents by inventor origin/bn PPP$ GDP	0.03	79	
6.1.3 Utility models by origin/bn PPP$ GDP	1.5	8	●
6.1.4 Scientific and technical articles/bn PPP$ GDP	3.1	119	○
6.1.5 Citable documents H-index	6.5	93	
6.2 Knowledge impact	**19**	**100**	
6.2.1 Labor productivity growth, %	1.7	40	●
6.2.2 Unicorn valuation, % GDP	0	53	○ ◇
6.2.3 Software spending, % GDP	0.01	136	○ ◇
6.2.4 High-tech manufacturing, %	15.1	73	
6.3 Knowledge diffusion	**14.3**	**84**	
6.3.1 Intellectual property receipts, % total trade	0.02	101	
6.3.2 Production and export complexity	40.9	83	
6.3.3 High-tech exports, % total trade	6.4	36	●
6.3.4 ICT services exports, % total trade	0.9	90	
6.3.5 ISO 9001 quality/bn PPP$ GDP	0.5	125	○
Creative outputs	**18.3**	**82**	
7.1 Intangible assets	**17.1**	**84**	
7.1.1 Intangible asset intensity, top 15, %	13.2	69	○
7.1.2 Trademarks by origin/bn PPP$ GDP	30.3	62	
7.1.3 Global brand value, top 5,000, % GDP	0.5	68	
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.2	106	
7.2 Creative goods and services	**14.6**	**61**	
7.2.1 Cultural and creative services exports, % total trade	0.5	61	
7.2.2 National feature films/mn pop. 15–69	5.9	29	●
7.2.3 Entertainment and media market/th pop. 15–69	n/a	n/a	
7.2.4 Creative goods exports, % total trade	0.5	66	
7.3 Online creativity	**24.1**	**74**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	2.6	79	
7.3.2 GitHub commits/mn pop. 15–69	5.5	76	
7.3.3 Mobile app creation/bn PPP$ GDP	64.4	70	

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.

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Data Availability

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

Kazakhstan has missing data for four indicators and outdated data for seven indicators.

Missing data for Kazakhstan

Code	Indicator name	Economy year	Model year*	Source
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
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2024	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

Outdated data for Kazakhstan

Code	Indicator name	Economy year	Model year*	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	2016	2021	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2020	2022	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	2020	2023	UNESCO Institute for Statistics
4.1.3	Loans from microfinance institutions, % GDP	2022	2023	International Monetary Fund, Financial Access Survey (FAS)
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
7.1.1	Intangible asset intensity, top 15, %	2022	2024	Brand Finance

*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

Global Innovation Index 2025

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.