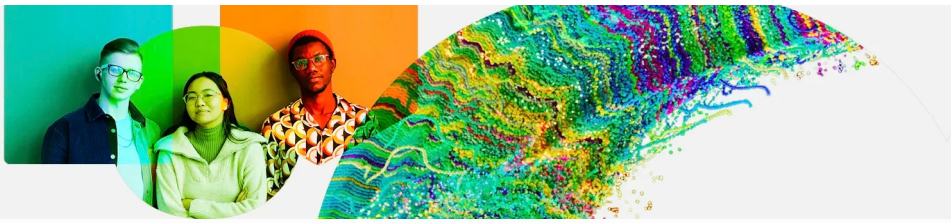
Global Innovation Index 2024



Armenia ranking in the Global Innovation Index 2024

Armenia ranks 63rd 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.

Armenia ranks 15th among the 34 upper-middle-income group economies.

Armenia ranks 8th among the 18 economies in Northern Africa and Western Asia.

Armenia GII Ranking (2020-2024)

The table shows the rankings of Armenia 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 Armenia in the GII 2024 is between ranks 56 and 67.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	61st	83rd	47th
2021	69th	85th	56th
2022	80th	82nd	73rd
2023	72nd	83rd	62nd
2024	63rd	79th	55th

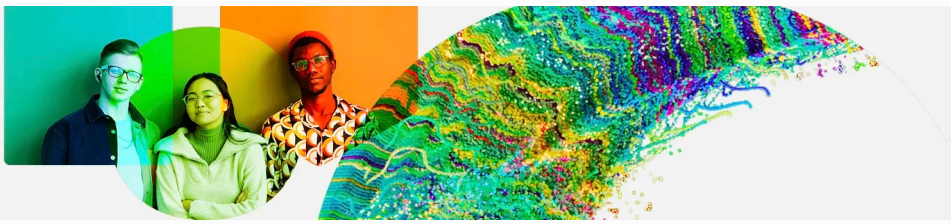
Armenia performs better in innovation outputs than innovation inputs in 2024.

This year Armenia ranks 79th in innovation inputs. This position is higher than last year.

Armenia ranks 55th in innovation outputs. This position is higher than last year.

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

For Armenia, 6 indicators have improved in the short-term and 4 indicators have worsened.

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▲ 8.9% 2022 - 2023	▲ 14.7% 2021 - 2022	▲ 150% 2022 - 2023	▼ -60.3% 2022 - 2023	▼ -55.6% 2022 - 2023
▲ 1.8% 2013 - 2023	▲ 2.7% 2012 - 2022	▲ 17.5% 2013 - 2023	▼ -12.9% 2013 - 2023	▼ -6.7% 2013 - 2023

Technology adoption

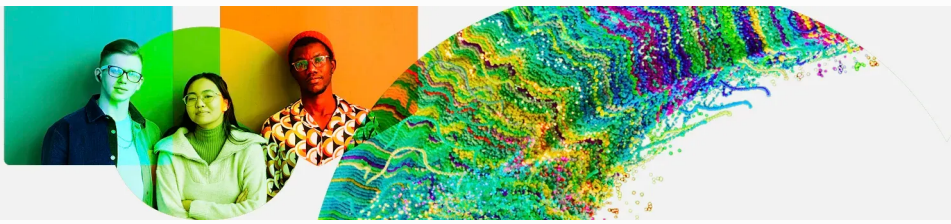
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▼ -0.4% 2021 - 2022	▲ 9.9% 2021 - 2022	n/a	n/a	n/a
▼ -1.5% 2012 - 2022	▲ 9.7% 2012 - 2022		n/a	n/a
10.8 per 100 inhabitants in 2022	18.4 per 100 inhabitants in 2022	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 7.9% 2022 - 2023	▲ 1.8% 2021 - 2022	▲ 2.3°C 2023
▲ 4.9% 2013 - 2023	0% 2012 - 2022	n/a
51,823 USD in 2023	73.4 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



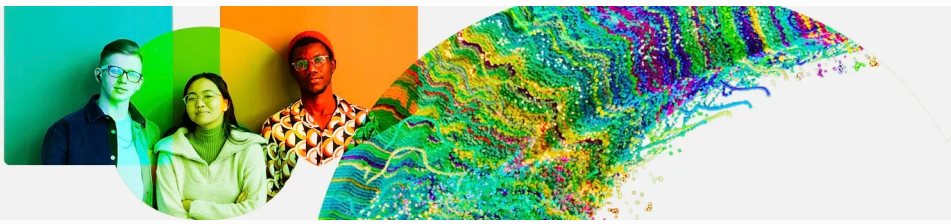
Expected vs. observed innovation performance

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

> Innovation overperformers relative to their economic development

Global Innovation Index 2024

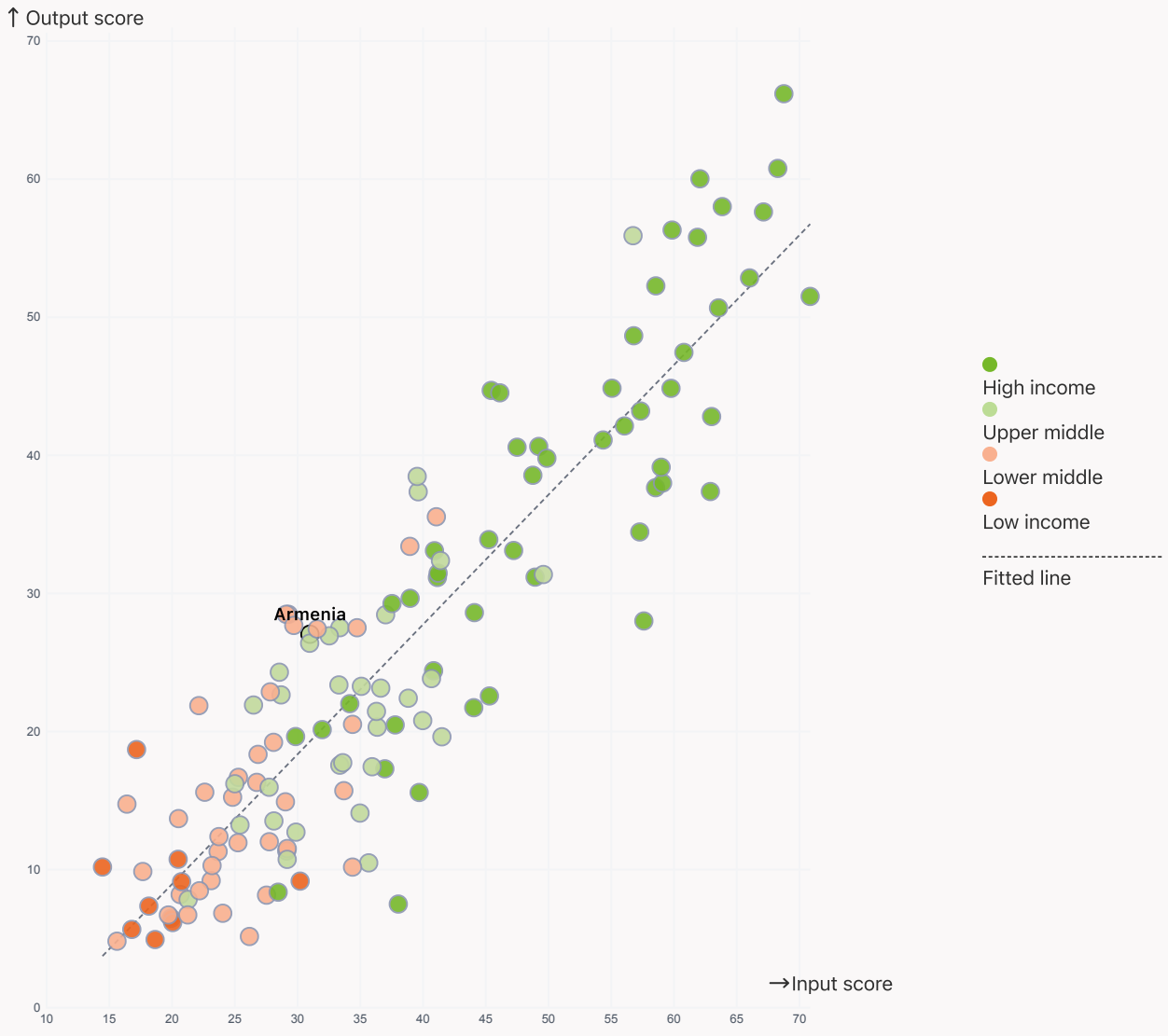


Effectively translating innovation investments into innovation outputs

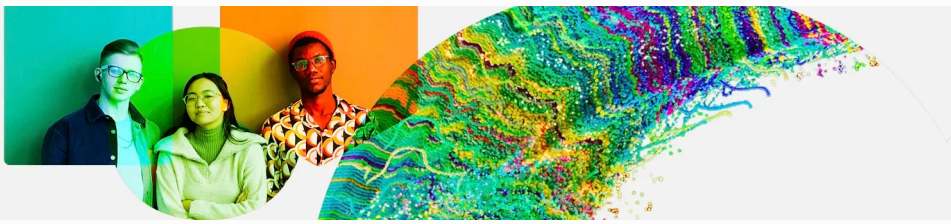
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

Armenia produces more innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

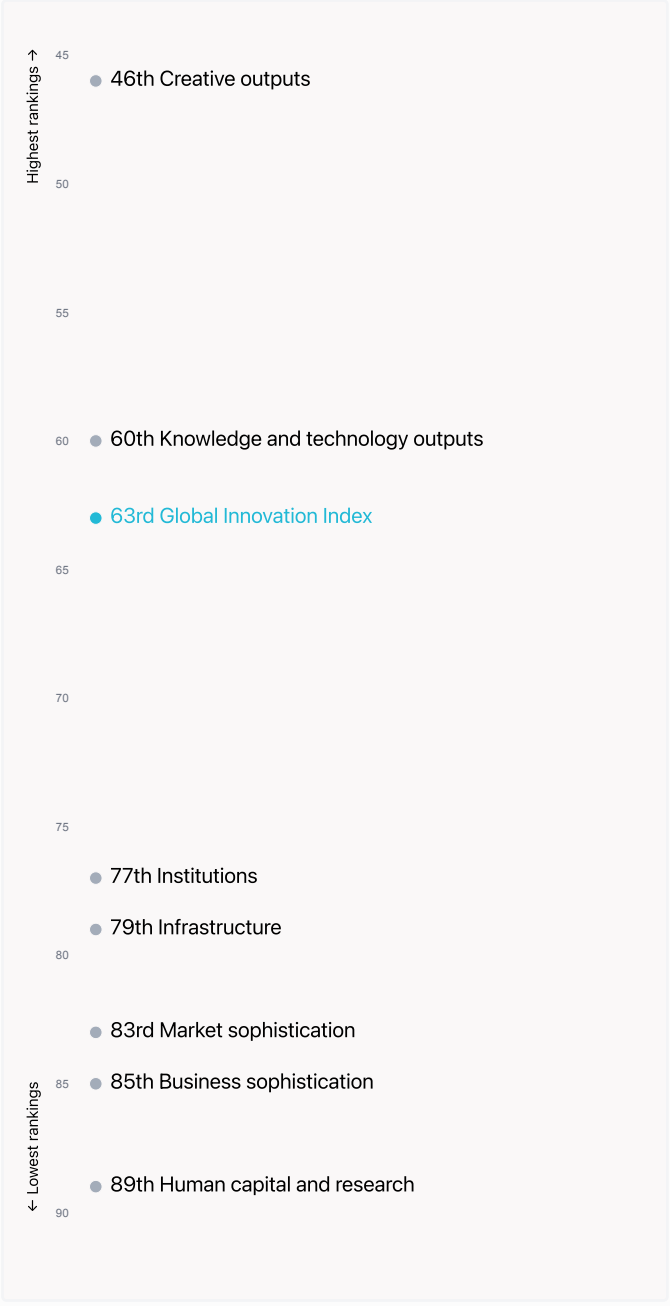


Global Innovation Index 2024



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



Highest rankings

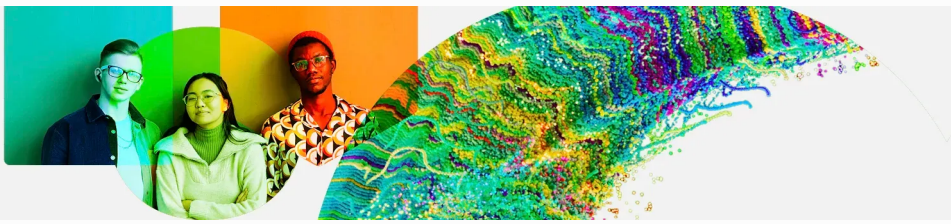
Armenia ranks highest in Creative outputs (46th) and Knowledge and technology outputs (60th).

Lowest rankings

Armenia ranks lowest in Human capital and research (89th), Business sophistication (85th) and Market sophistication (83rd).

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

Global Innovation Index 2024



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

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

Upper-Middle-Income economies

Armenia performs above the upper-middle-income group average in Institutions, Knowledge and technology outputs, Creative outputs.

Northern Africa And Western Asia

Armenia performs above the regional average in Creative outputs.

Institutions

- Top 10 | Score: 80.81
- NAWA | Score: 51.34
- Armenia | Score: 44.14
- Upper middle income | Score: 43.0

Human capital and research

- Top 10 | Score: 61.30
- NAWA | Score: 34.27
- Upper middle income | Score: 29.5
- Armenia | Score: 25.22

Infrastructure

- Top 10 | Score: 58.57
- NAWA | Score: 39.94
- Upper middle income | Score: 39.8
- Armenia | Score: 36.25

Market sophistication

- Top 10 | Score: 62.12
- NAWA | Score: 33.58
- Upper middle income | Score: 32.9
- Armenia | Score: 26.96

Business sophistication

- Top 10 | Score: 63.64
- Upper middle income | Score: 27.6
- NAWA | Score: 27.20
- Armenia | Score: 22.70

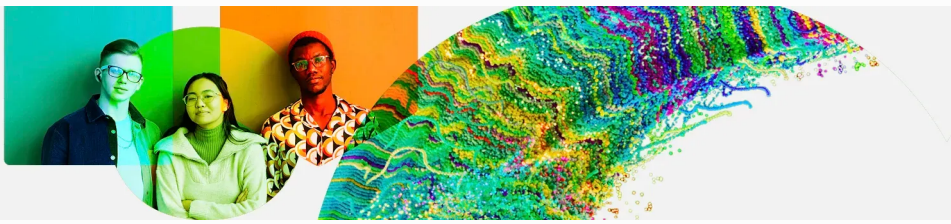
Knowledge and technology outputs

- Top 10 | Score: 57.29
- NAWA | Score: 22.11
- Armenia | Score: 21.92
- Upper middle income | Score: 20.6

Creative outputs

- Top 10 | Score: 56.54
- Armenia | Score: 32.05
- NAWA | Score: 26.23
- Upper middle income | Score: 24.3

Global Innovation Index 2024



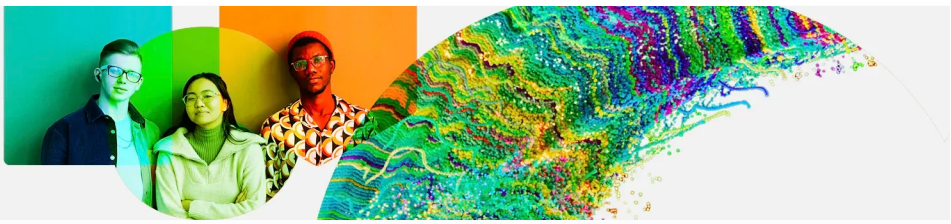
Innovation strengths and weaknesses in Armenia

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

Armenia's main innovation strengths are **Trademarks by origin/bn PPP$ GDP** (rank 7), **Labor productivity growth, %** (rank 8) and **ICT services exports, % total trade** (rank 8).

Strengths			Weaknesses		
Rank	Code	Indicator name	Rank	Code	Indicator name
7	7.1.2	Trademarks by origin/bn PPP$ GDP	126	3.3.3	ISO 14001 environment/bn PPP$ GDP
8	6.2.1	Labor productivity growth, %	121	5.3.1	Intellectual property payments, % total trade
8	6.3.4	ICT services exports, % total trade	121	6.3.5	ISO 9001 quality/bn PPP$ GDP
11	6.1.3	Utility models by origin/bn PPP$ GDP	116	6.3.1	Intellectual property receipts, % total trade
13	4.1.3	Loans from microfinance institutions, % GDP	89	3.2.2	Logistics performance*
16	7.2.4	Creative goods exports, % total trade	84	4.2.1	Market capitalization, % GDP
36	7.3.3	Mobile app creation/bn PPP$ GDP	75	7.1.3	Global brand value, top 5,000, % GDP
36	7.3.2	GitHub commits/mn pop. 15–69	75	2.3.4	QS university ranking, top 3*
38	6.3.3	High-tech exports, % total trade	49	6.2.2	Unicorn valuation, % GDP
41	5.3.2	High-tech imports, % total trade	41	2.3.3	Global corporate R&D investors, top 3, mn USD

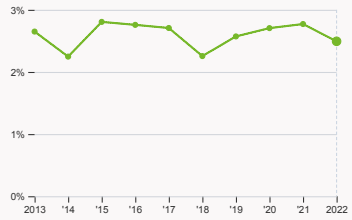
Global Innovation Index 2024



Armenia's innovation system

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

Innovation inputs in Armenia

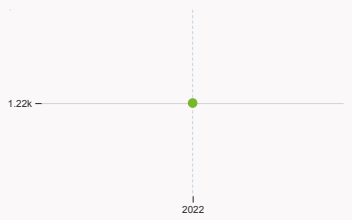


2.1.1 **Expenditure on education**

was equal to 2.49 % GDP in 2022, down by 0.28 percentage points from the year prior – and equivalent to an indicator rank of 114.

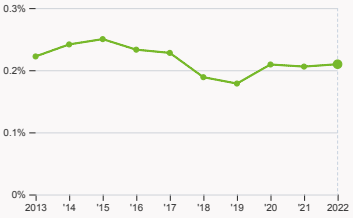
2.2.2 **Graduates in science and engineering**

was equal to 18.39 % of total graduates in 2022, up by 0.67 percentage points from the year prior – and equivalent to an indicator rank of 89.



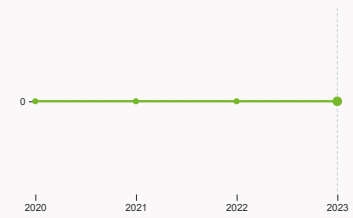
2.3.1 **Researchers**

was equal to 1219.93 FTE per million population in 2022 – and equivalent to an indicator rank of 50.



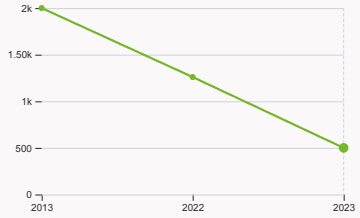
2.3.2 **Gross expenditure on R&D**

was equal to 0.21 % GDP in 2022, up by 0.004 percentage points from the year prior – and equivalent to an indicator rank of 85.



2.3.4 **QS university ranking**

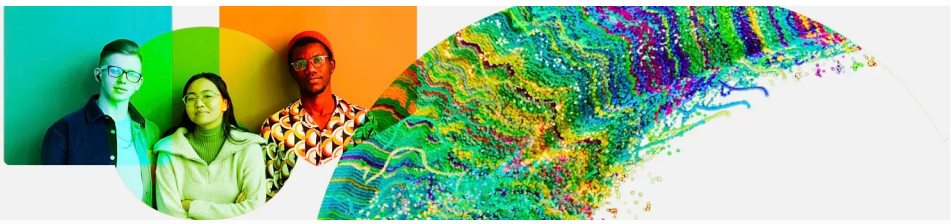
was equal to an average score of 0 for the top three universities in 2023 with no change from the year prior – and equivalent to an indicator rank of 75.

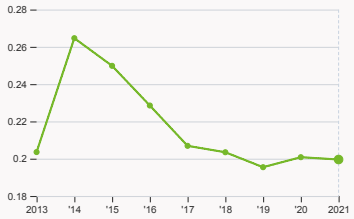


4.2.4 **VC received, value**

was equal to 500 USD in 2023, down by 60.32% from the year prior – and equivalent to an indicator rank of 91.

Global Innovation Index 2024





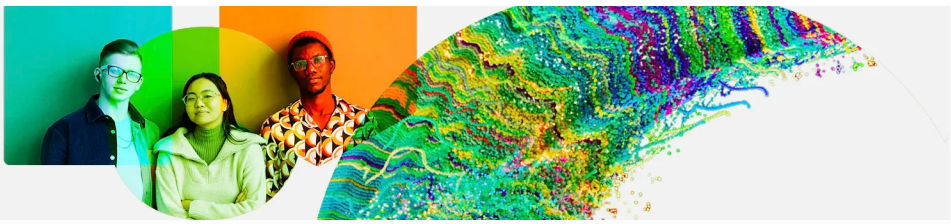
4.3.2 Domestic industry diversification

was equal to an index score of 0.2 in 2021, down by 0.62% from the year prior – and equivalent to an indicator rank of 76.

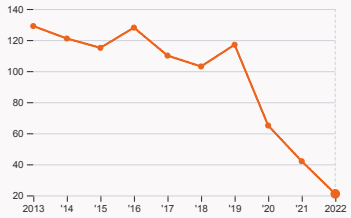
5.1.1 Knowledge-intensive employment

was equal to 18.68 % in 2021, down by 0.52 percentage points from the year prior – and equivalent to an indicator rank of 81.

Global Innovation Index 2024

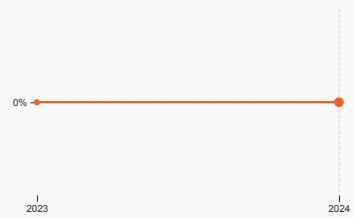


Innovation outputs in Armenia



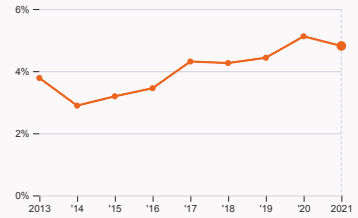
6.1.1 Patents by origin

was equal to 21 patents in 2022, down by 50% from the year prior – and equivalent to an indicator rank of 81.



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.

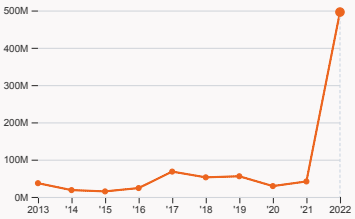


6.2.4 High-tech manufacturing

was equal to 4.81 % of total manufacturing output in 2021, down by 0.31 percentage points from the year prior – and equivalent to an indicator rank of 98.

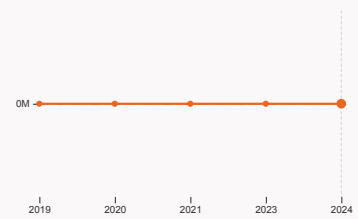
6.3.2 Production and export complexity

was equal to a score of -0.52 in 2021, down by 52.94% from the year prior – and equivalent to an indicator rank of 89.



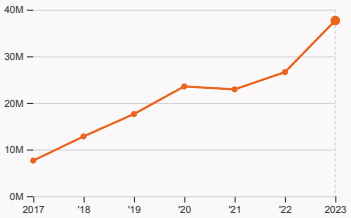
6.3.3 High-tech exports

was equal to 495.87 million USD in 2022, up by 1093.14% from the year prior – and equivalent to an indicator rank of 38.



7.1.3 Global brand value

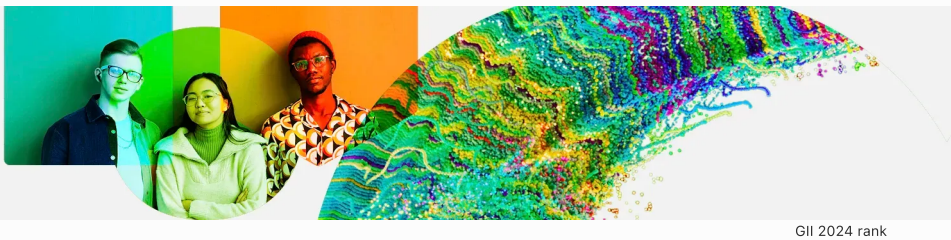
was equal to 0 million USD for the brands in the top 5,000 in 2024 with no change from the year prior – and equivalent to an indicator rank of 75.



7.3.3 Mobile app creation

was equal to 37.68 million global downloads of mobile apps in 2023, up by 41.6% from the year prior – and equivalent to an indicator rank of 36.

Global Innovation Index 2024



Armenia

GII 2024 rank **63**

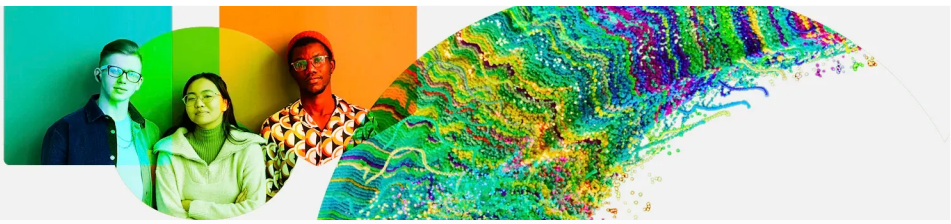
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
55	79	Upper middle	NAWA	2.9	58.5	19,744.7

	Score / Value	Rank	
Institutions	**44.1**	**77**	
1.1 Institutional environment	**45.9**	**81**	
1.1.1 Operational stability for businesses*	56	83	
1.1.2 Government effectiveness*	35.8	89	
1.2 Regulatory environment	**40.2**	**70**	
1.2.1 Regulatory quality*	41.3	74	
1.2.2 Rule of law*	39	75	
1.3 Business environment	**46.4**	**65**	
1.3.1 Policy stability for doing business†	44.4	76	
1.3.2 Entrepreneurship policies and culture†	48.3	31	
Human capital and research	**25.2**	**89**	
2.1 Education	**42.8**	**87**	
2.1.1 Expenditure on education, % GDP	2.5	114	◇
2.1.2 Government funding/pupil, secondary, % GDP/cap	12.2	81	
2.1.3 School life expectancy, years	14.4	63	
2.1.4 PISA scales in reading, maths and science	n/a	n/a	
2.1.5 Pupil–teacher ratio, secondary	11.6	47	
2.2 Tertiary education	**29**	**75**	
2.2.1 Tertiary enrolment, % gross	59.8	56	
2.2.2 Graduates in science and engineering, %	18.4	89	
2.2.3 Tertiary inbound mobility, %	7.3	39	◆
2.3 Research and development (R&D)	**3.9**	**81**	
2.3.1 Researchers, FTE/mn pop.	1,219.9	50	
2.3.2 Gross expenditure on R&D, % GDP	0.2	85	
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	**36.2**	**79**	
3.1 Information and communication technologies (ICTs)	**73.8**	**61**	
3.1.1 ICT access*	88.3	71	
3.1.2 ICT use*	80.7	50	
3.1.3 Government's online service*	69.3	63	
3.1.4 E-participation*	57	64	
3.2 General infrastructure	**17.8**	**104**	
3.2.1 Electricity output, GWh/mn pop.	2,823.4	67	
3.2.2 Logistics performance*	18.2	89	○ ◇
3.2.3 Gross capital formation, % GDP	21.9	87	
3.3 Ecological sustainability	**17.2**	**82**	
3.3.1 GDP/unit of energy use	9.4	80	
3.3.2 Low-carbon energy use, %	27.1	45	
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.1	126	○
Market sophistication	**27**	**83**	
4.1 Credit	**27.8**	**64**	
4.1.1 Finance for startups and scaleups†	32.9	61	
4.1.2 Domestic credit to private sector, % GDP	52.6	63	
4.1.3 Loans from microfinance institutions, % GDP	3	13	● ◆
4.2 Investment	**5.1**	**78**	
4.2.1 Market capitalization, % GDP	0.6	84	○
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.05	70	
4.2.3 VC recipients, deals/bn PPP$ GDP	0.06	46	
4.2.4 VC received, value, % GDP	0.00004	91	
4.3 Trade, diversification and market scale	**48.1**	**83**	
4.3.1 Applied tariff rate, weighted avg., %	3.7	87	
4.3.2 Domestic industry diversification	72	76	◇
4.3.3 Domestic market scale, bn PPP$	58.5	106	

	Score / Value	Rank	
Business sophistication	**22.7**	**85**	
5.1 Knowledge workers	**33.4**	**61**	
5.1.1 Knowledge-intensive employment, %	18.7	81	
5.1.2 Firms offering formal training, %	27.5	59	
5.1.3 GERD performed by business, % GDP	n/a	n/a	
5.1.4 GERD financed by business, %	16.7	73	
5.1.5 Females employed w/advanced degrees, %	16.4	44	
5.2 Innovation linkages	**15.4**	**106**	
5.2.1 Public Research-Industry co-publications, %	1.5	63	
5.2.2 University-industry R&D collaboration†	25.7	104	
5.2.3 State of cluster development†	31.8	101	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.008	92	
5.2.5 Patent families/bn PPP$ GDP	0.03	81	
5.3 Knowledge absorption	**19.3**	**97**	◇
5.3.1 Intellectual property payments, % total trade	0	121	○ ◇
5.3.2 High-tech imports, % total trade	9.8	41	● ◆
5.3.3 ICT services imports, % total trade	0.5	108	
5.3.4 FDI net inflows, % GDP	2.7	54	
5.3.5 Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs	**21.9**	**60**	
6.1 Knowledge creation	**19.4**	**57**	
6.1.1 Patents by origin/bn PPP$ GDP	0.4	81	
6.1.2 PCT patents by origin/bn PPP$ GDP	0.07	68	
6.1.3 Utility models by origin/bn PPP$ GDP	1.5	11	● ◆
6.1.4 Scientific and technical articles/bn PPP$ GDP	14.7	45	
6.1.5 Citable documents H-index	9.9	76	
6.2 Knowledge impact	**24.1**	**69**	
6.2.1 Labor productivity growth, %	3.5	8	● ◆
6.2.2 Unicorn valuation, % GDP	0	49	○ ◇
6.2.3 Software spending, % GDP	0.2	75	
6.2.4 High-tech manufacturing, %	4.8	98	◇
6.3 Knowledge diffusion	**22.2**	**53**	
6.3.1 Intellectual property receipts, % total trade	0	116	○ ◇
6.3.2 Production and export complexity	30	89	
6.3.3 High-tech exports, % total trade	5	38	● ◆
6.3.4 ICT services exports, % total trade	7.2	8	● ◆
6.3.5 ISO 9001 quality/bn PPP$ GDP	0.7	121	○
Creative outputs	**32.1**	**46**	
7.1 Intangible assets	**33.5**	**52**	
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	108	7	● ◆
7.1.3 Global brand value, top 5,000, % GDP	0	75	○ ◇
7.1.4 Industrial designs by origin/bn PPP$ GDP	2.1	40	
7.2 Creative goods and services	**25.5**	**[45]**	
7.2.1 Cultural and creative services exports, % total trade	0.4	61	
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	3.2	16	● ◆
7.3 Online creativity	**35.8**	**41**	● ◆
7.3.1 Top-level domains (TLDs)/th pop. 15–69	4.2	59	
7.3.2 GitHub commits/mn pop. 15–69	30.9	36	● ◆
7.3.3 Mobile app creation/bn PPP$ GDP	72.4	36	● ◆

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 Armenia.

Armenia has missing data for six indicators and outdated data for eight indicators.

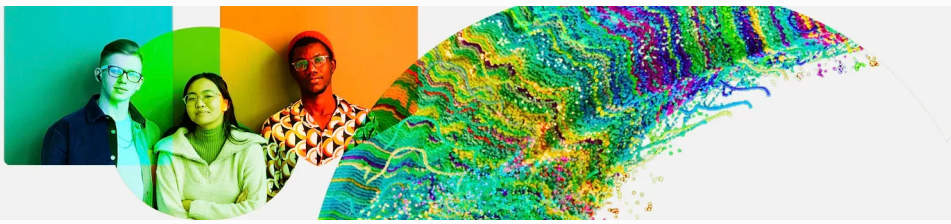
Missing data for Armenia

Code	Indicator name	Economy Year	Model Year	Source
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
5.1.3	GERD performed by business, % GDP	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
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
7.2.2	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

Outdated data for Armenia

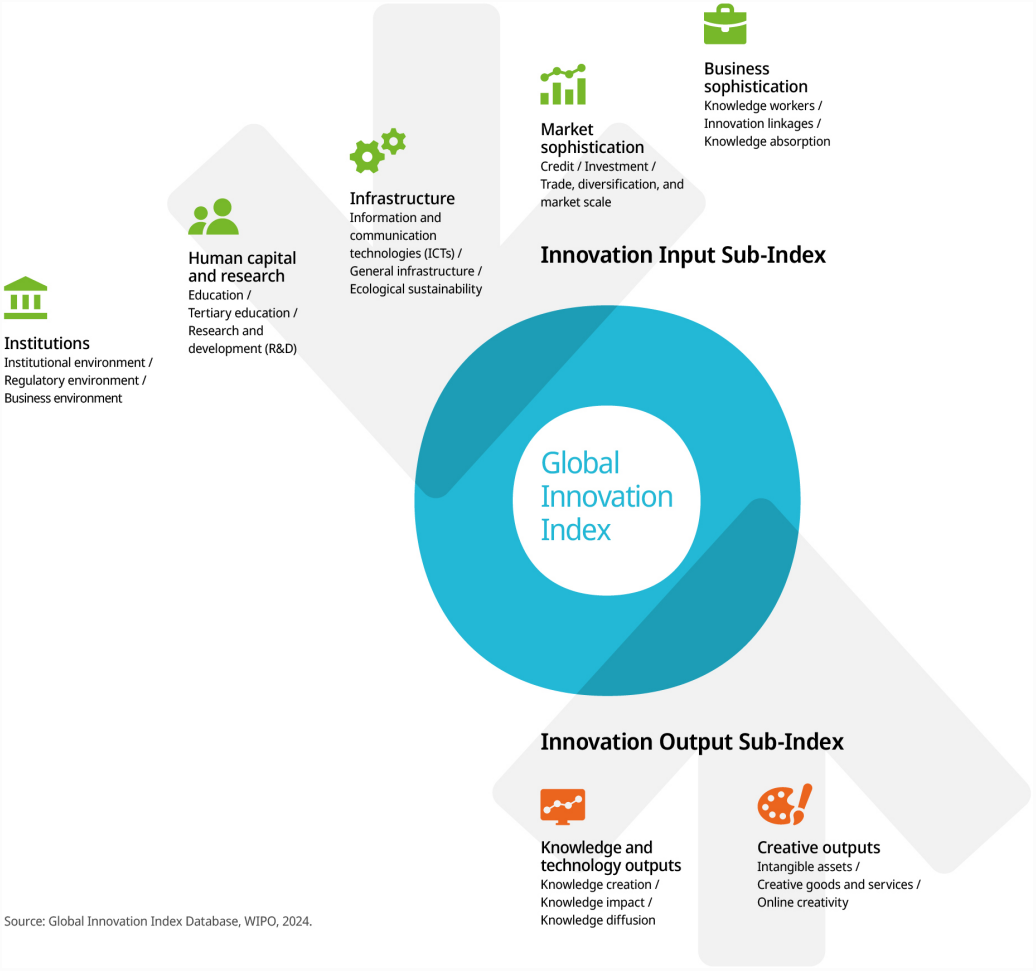
Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture†	2019	2023	Global Entrepreneurship Monitor
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency
4.1.1	Finance for startups and scaleups†	2019	2023	Global Entrepreneurship Monitor
5.1.1	Knowledge-intensive employment, %	2021	2022	International Labour Organization
5.1.2	Firms offering formal training, %	2020	2023	World Bank Enterprise Surveys
5.1.4	GERD financed by business, %	2018	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2021	2023	International Labour Organization
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	2021	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.