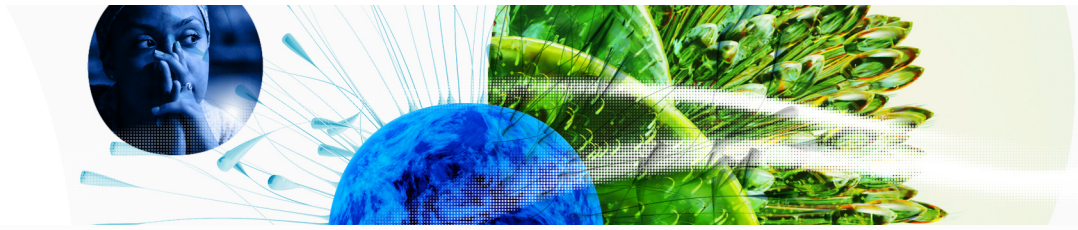
Global Innovation Index 2023



The Global Innovation Index (GII) **ranks world economies according to their innovation capabilities.**

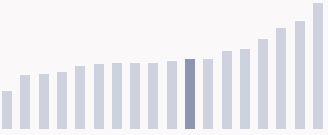
Consisting of **roughly 80 indicators**, grouped into innovation inputs and outputs, the GII **aims to capture the multi-dimensional facets of innovation**.

Georgia ranking in the Global Innovation Index 2023

> Georgia ranks 65th among the 132 economies featured in the GII 2023.

> Georgia ranks 14th among the 33 upper-middle-income group economies.

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



> Georgia GII Ranking (2020-2023)

The table shows the rankings of Georgia 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 Georgia in the GII 2023 is between ranks 56 and 70.

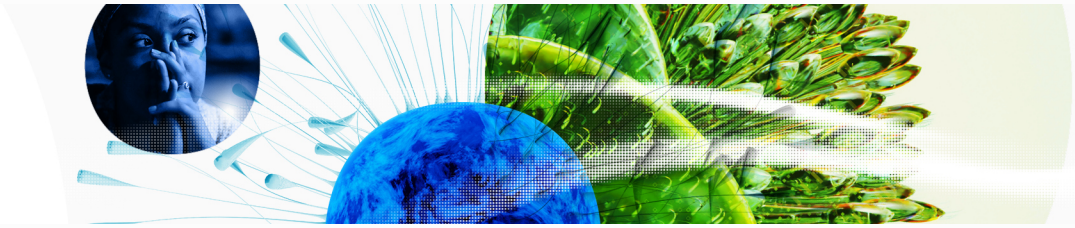
	GII Position	Innovation Inputs	Innovation Outputs
2020	63rd	54th	71st
2021	63rd	49th	74th
2022	74th	61st	82nd
2023	65th	54th	77th

Georgia performs worse in innovation outputs than innovation inputs in 2023.

This year Georgia ranks 54th in innovation inputs. This position is higher than last year.

Georgia ranks 77th in innovation outputs. This position is higher than last year.

Global Innovation Index 2023



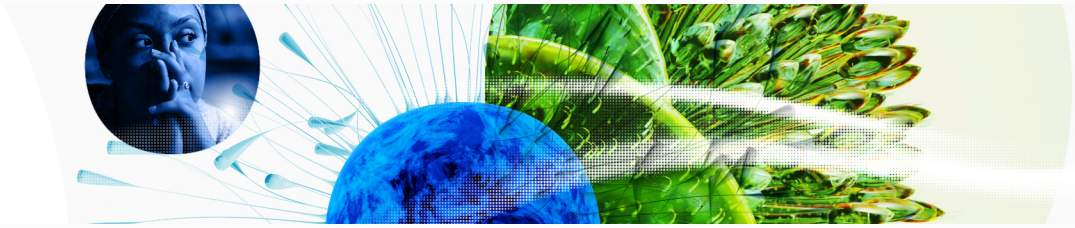
→ Expected vs. observed innovation performance

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

> Innovation overperformers relative to their economic development

Global Innovation Index 2023

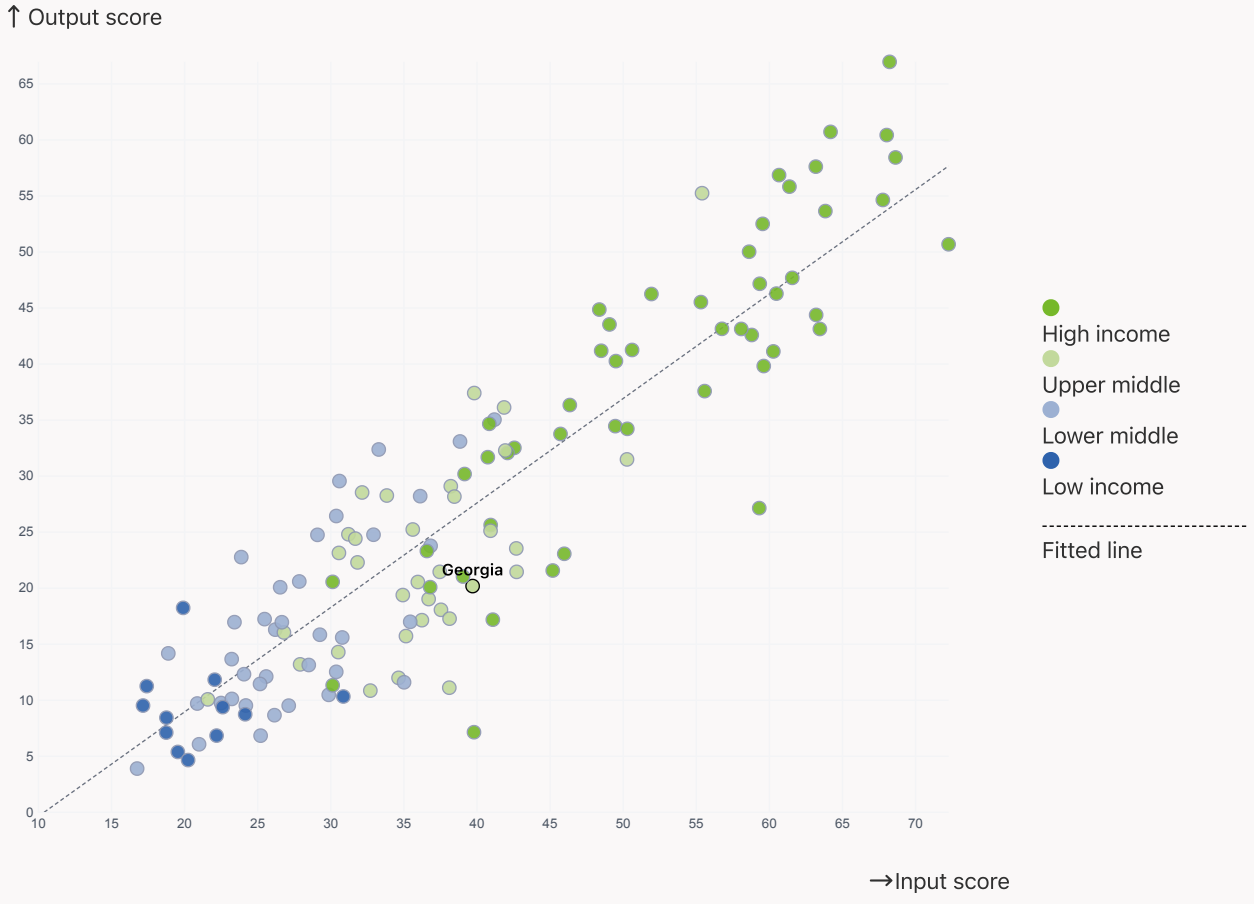


→ Effectively translating innovation investments into innovation outputs

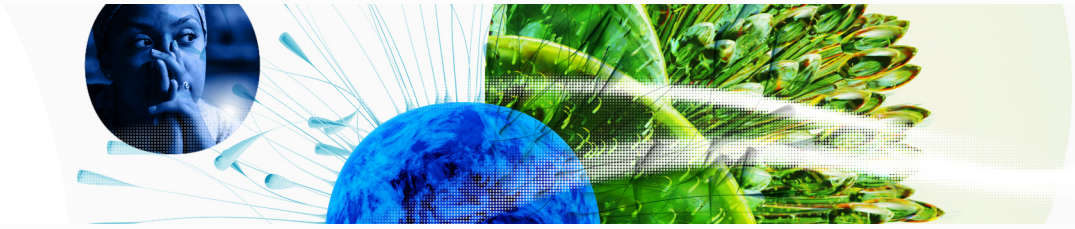
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

> Georgia produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

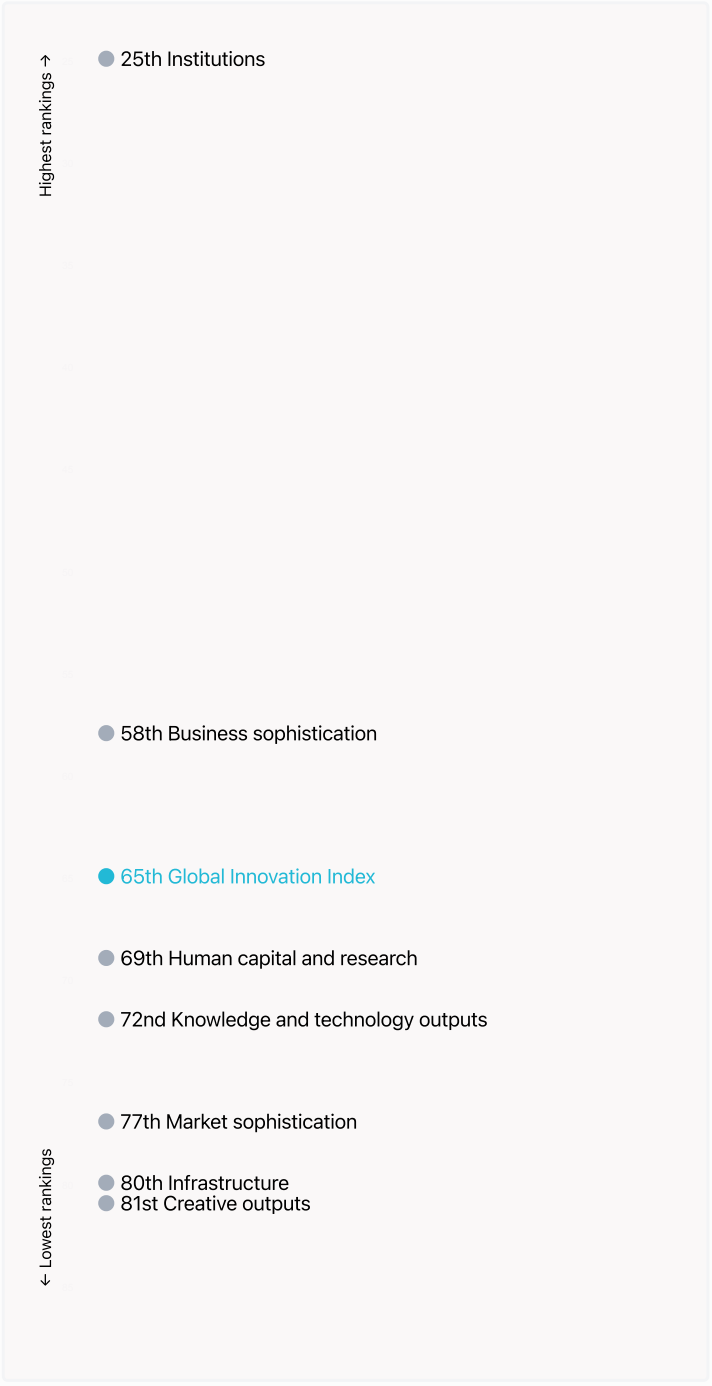


Global Innovation Index 2023



→ Overview of Georgia's rankings in the seven areas of the GII in 2023

The chart shows the ranking for each of the seven areas that the GII comprises. The strongest areas for Georgia are those that rank above the GII (shown in blue) and the weakest are those that rank below.



> Highest rankings

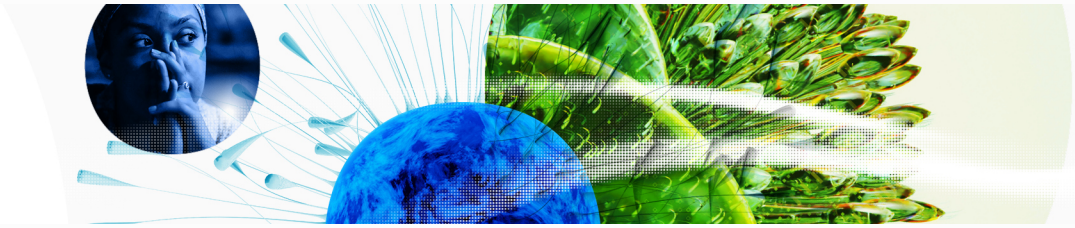
Georgia ranks highest in Institutions (25th) and Business sophistication (58th).

> Lowest rankings

Georgia ranks lowest in Creative outputs (81st), Infrastructure (80th) and Market sophistication (77th).

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

Global Innovation Index 2023



→ Benchmark of Georgia against other country groupings for each of the seven areas of the GII Index

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

> Upper-Middle-Income economies

Georgia performs above the upper-middle-income group average in Business sophistication, Human capital and research, Institutions.

> Northern Africa And Western Asia

Georgia performs below the regional average in Knowledge and technology outputs, Creative outputs, Business sophistication, Market sophistication, Human capital and research, Infrastructure.

Knowledge and technology outputs

- Top 10 | Score: 58.96
- NAWA | Score: 24.01
- Upper middle income | Score: 22.36
- Georgia | Score: 21.44

Creative outputs

- Top 10 | 56.09
- NAWA | 24.51
- Upper middle income | 23.16
- Georgia | 18.82

Business sophistication

- Top 10 | 64.39
- NAWA | 29.44
- Georgia | 29.36
- Upper middle income | 29.27

Market sophistication

- Top 10 | 61.93
- NAWA | 36.12
- Upper middle income | 35.45
- Georgia | 32.27

Human capital and research

- Top 10 | 60.28
- NAWA | 32.72
- Georgia | 30.24
- Upper middle income | 29.68

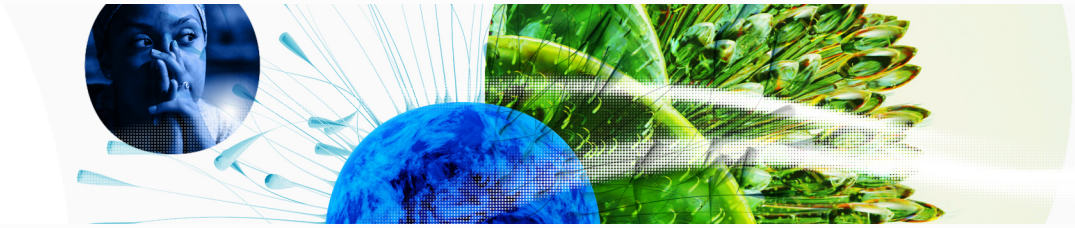
Infrastructure

- Top 10 | 62.83
- NAWA | 41.60
- Upper middle income | 40.40
- Georgia | 36.24

Institutions

- Top 10 | 79.85
- Georgia | 70.61
- NAWA | 53.39
- Upper middle income | 47.71

Global Innovation Index 2023



→ Innovation strengths and weaknesses in Georgia

The table below gives an overview of the indicator strengths and weaknesses of Georgia in the GII 2023.

> Georgia's main innovation strengths are **Labor productivity growth, %** (rank 3), **Applied tariff rate, weighted avg., %** (rank 4) and **Pupil-teacher ratio, secondary** (rank 9).

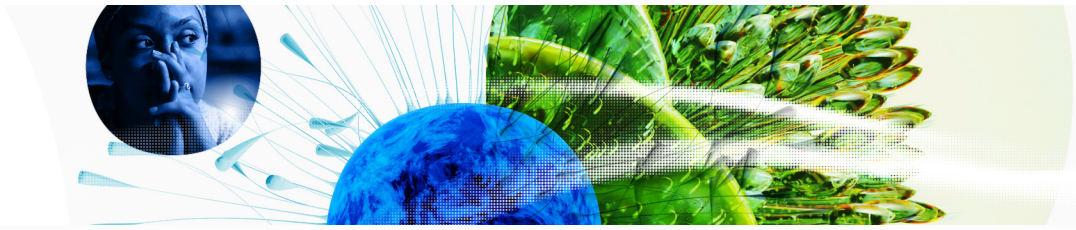
Strengths

Rank	Code	Indicator name
3	6.2.1	Labor productivity growth, %
4	4.3.1	Applied tariff rate, weighted avg., %
9	2.1.5	Pupil-teacher ratio, secondary
16	1.2.3	Cost of redundancy dismissal
16	5.3.4	FDI net inflows, % GDP
25	3.1.1	ICT access
25	1.3.1	Policies for doing business
29	1.2.1	Regulatory quality
30	2.2.1	Tertiary enrolment, % gross

Weaknesses

Rank	Code	Indicator name
104	3.3.3	ISO 14001 environment/bn PPP$ GDP
100	3.2.3	Gross capital formation, % GDP
89	5.1.4	GERD financed by business, %
88	6.2.4	High-tech manufacturing, %
83	4.3.2	Domestic industry diversification
80	4.2.2	Venture capital (VC) investors, deals/bn PPP$ GDP
71	2.3.4	QS university ranking, top 3
70	2.1.4	PISA scales in reading, maths and science
48	6.2.2	Unicorn valuation, % GDP
40	2.3.3	Global corporate R&D investors, top 3, mn US$

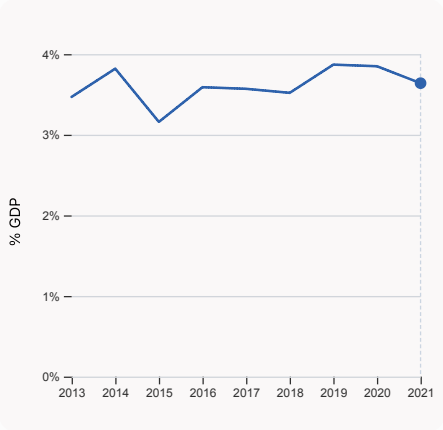
Global Innovation Index 2023



→ Georgia's innovation system

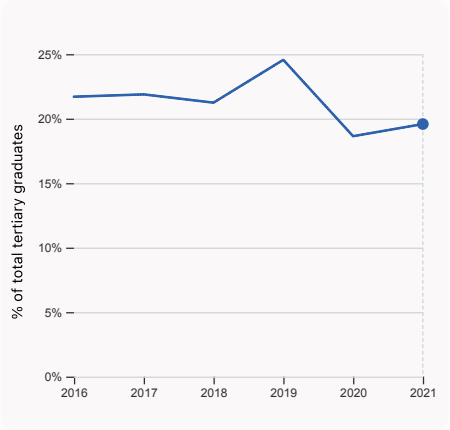
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Georgia



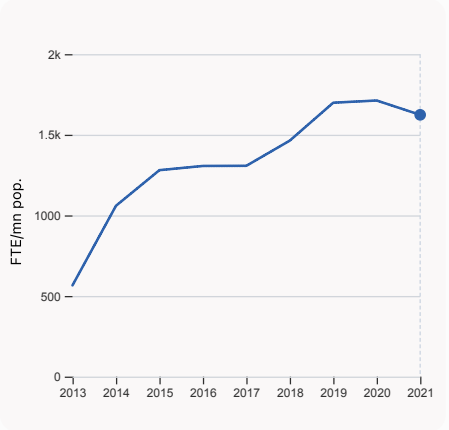
2.1.1 Expenditure on education, % GDP

was equal to 3.64% GDP in 2021, down by 0.21 percentage points from the year prior – and equivalent to an indicator rank of 84.



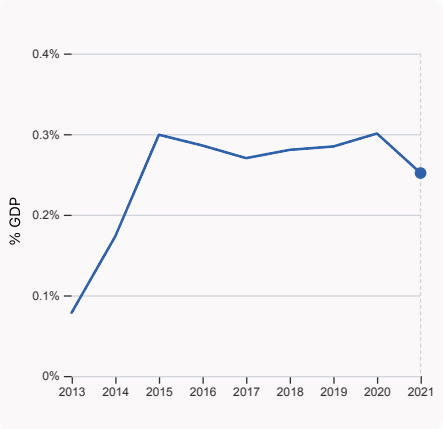
2.2.2 Graduates in science and engineering, %

was equal to 19.58% of total tertiary graduates in 2021, up by 0.94 percentage points from the year prior – and equivalent to an indicator rank of 75.



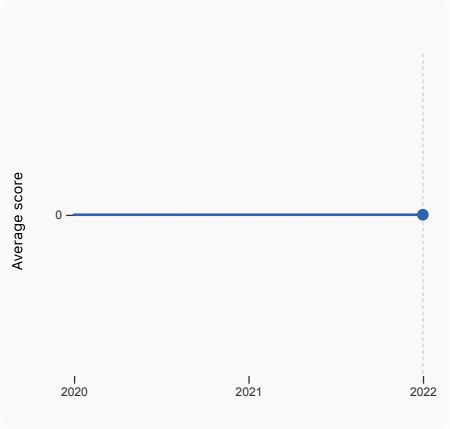
2.3.1 Researchers, FTE/mn pop.

was equal to 1,623.68 FTE/mn pop. in 2021, down by 5.18% from the year prior – and equivalent to an indicator rank of 46.



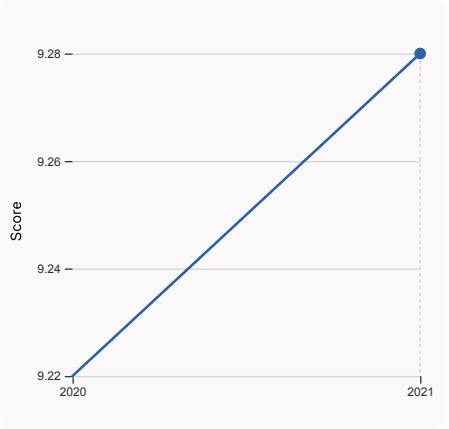
2.3.2 Gross expenditure on R&D, % GDP

was equal to 0.252% GDP in 2021, down by 0.049 percentage points from the year prior – and equivalent to an indicator rank of 83.



2.3.4 QS university ranking, top 3

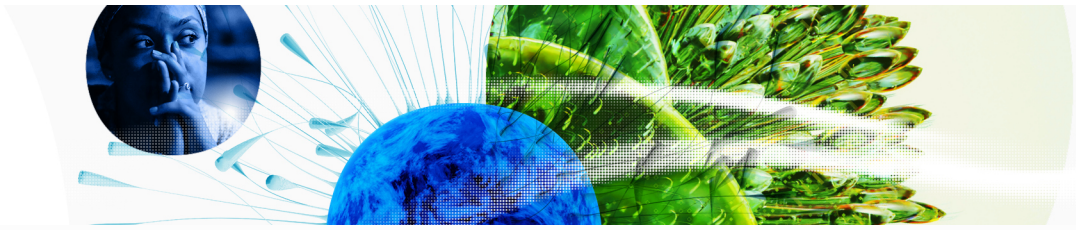
was equal to an average score of 0 for the top 3 universities in 2022, equivalent to an indicator rank of 71.

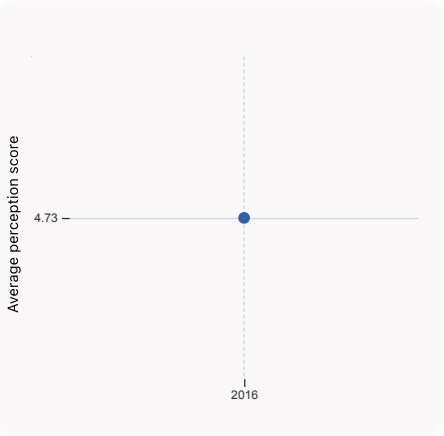


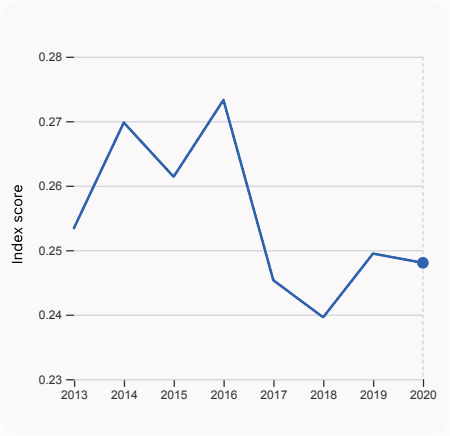
3.1.1 ICT access

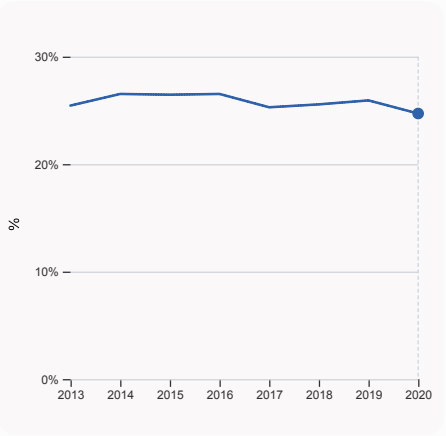
was equal to a score of 9.28 in 2021, up by 0.65% from the year prior – and equivalent to an indicator rank of 25.

Global Innovation Index 2023









4.1.1 **Finance for startups and scaleups**

was equal to an average perception score of 4.73 in 2016, equivalent to an indicator rank of 41.

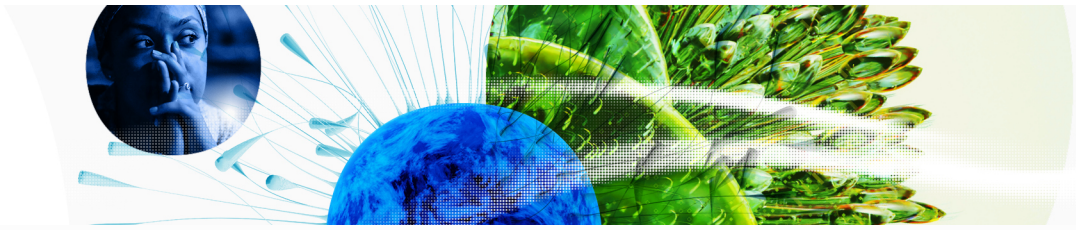
4.3.2 **Domestic industry diversification**

was equal to an index score of 0.248 in 2020, down by 0.57% from the year prior – and equivalent to an indicator rank of 83.

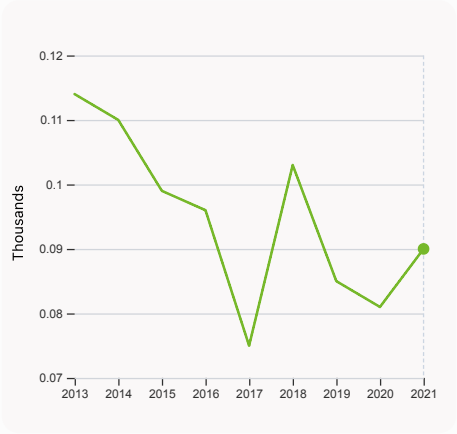
5.1.1 **Knowledge-intensive employment, %**

was equal to 24.71% in 2020, down by 1.22 percentage points from the year prior – and equivalent to an indicator rank of 57.

Global Innovation Index 2023

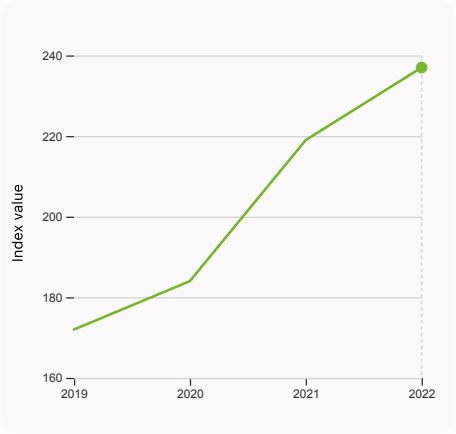


> Innovation outputs in Georgia



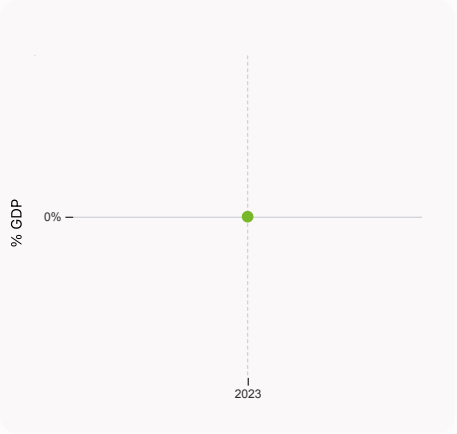
6.1.1 Patents by origin

was equal to 0.09 Thousands in 2021, up by 11.11% from the year prior – and equivalent to an indicator rank of 46.



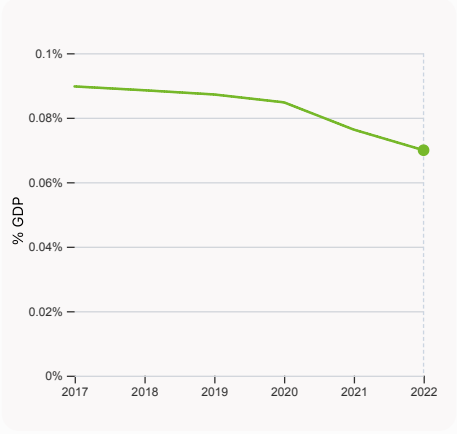
6.1.5 Citable documents H-index

was equal to an index value of 237 in 2022, up by 8.22% from the year prior – and equivalent to an indicator rank of 72.



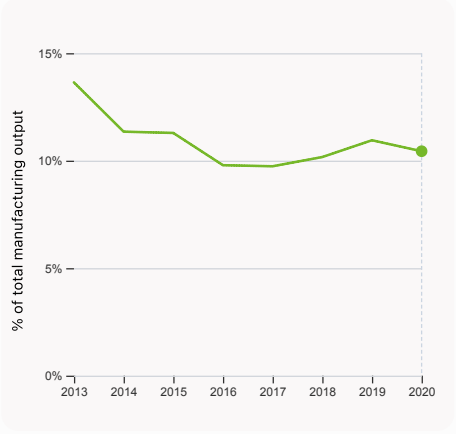
6.2.2 Unicorn valuation, % GDP

was equal to 0 % GDP in 2023 – and equivalent to an indicator rank of 48.



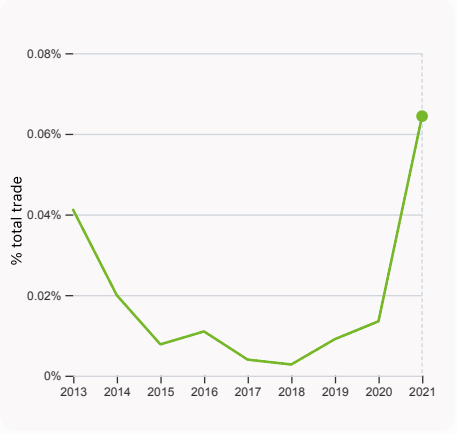
6.2.3 Software spending, % GDP

was equal to 0.07% GDP in 2022, down by 0.0064 percentage points from the year prior – and equivalent to an indicator rank of 97.



6.2.4 High-tech manufacturing, %

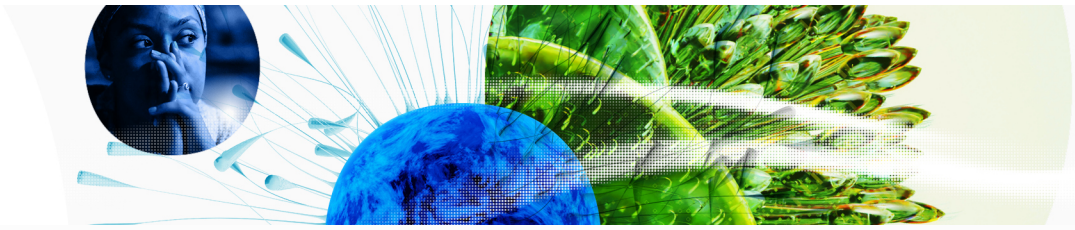
was equal to 10.44% of total manufacturing output in 2020, down by 0.51 percentage points from the year prior – and equivalent to an indicator rank of 88.

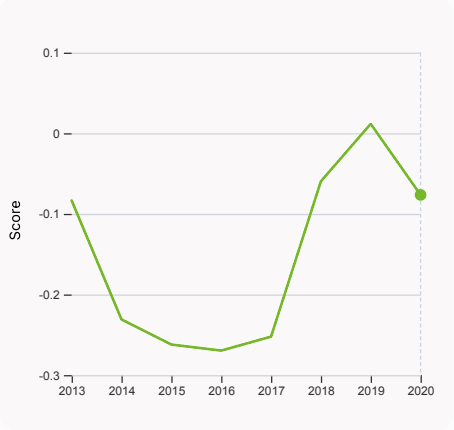


6.3.1 Intellectual property receipts, % total trade

was equal to 0.064% total trade in 2021, up by 0.051 percentage points from the year prior – and equivalent to an indicator rank of 81.

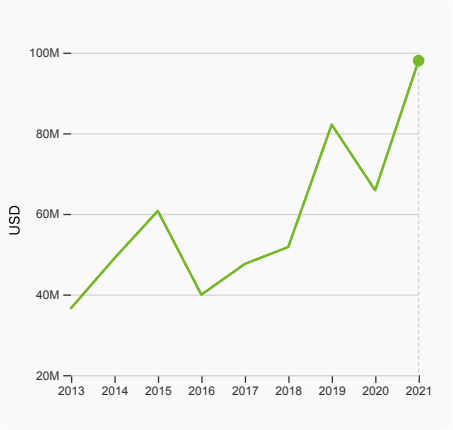
Global Innovation Index 2023





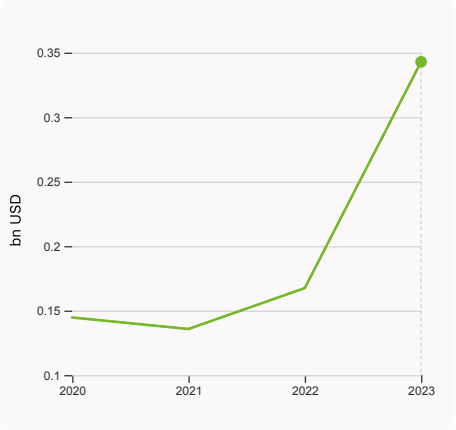
6.3.2 Production and export complexity

was equal to a score of -0.076 in 2020, down by 755.38% from the year prior – and equivalent to an indicator rank of 67.



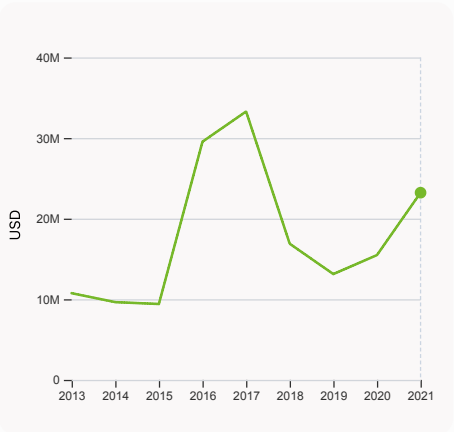
6.3.3 High-tech exports

was equal to 98,027,900 USD in 2021, up by 48.91% from the year prior – and equivalent to an indicator rank of 72.



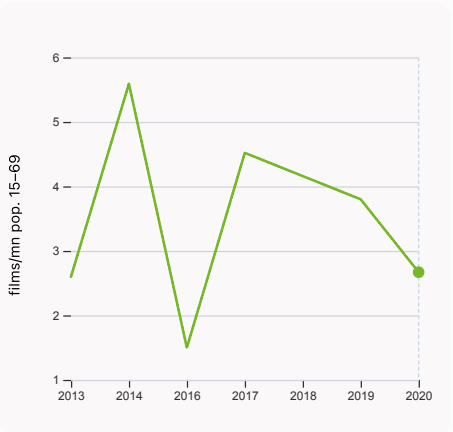
7.1.3 Global brand value, top 5,000

was equal to 0.343 bn USD in 2023, up by 104.77% from the year prior – and equivalent to an indicator rank of 52.



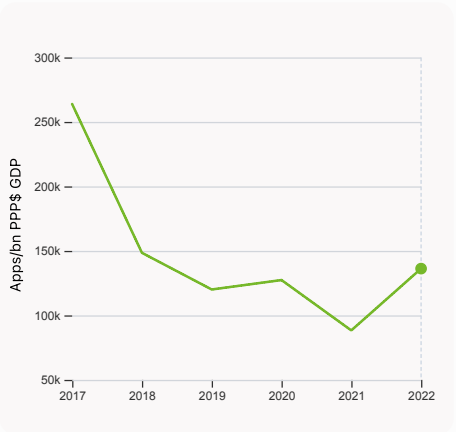
7.2.1 Cultural and creative services exports

was equal to 23,220,000 USD in 2021, up by 50% from the year prior – and equivalent to an indicator rank of 68.



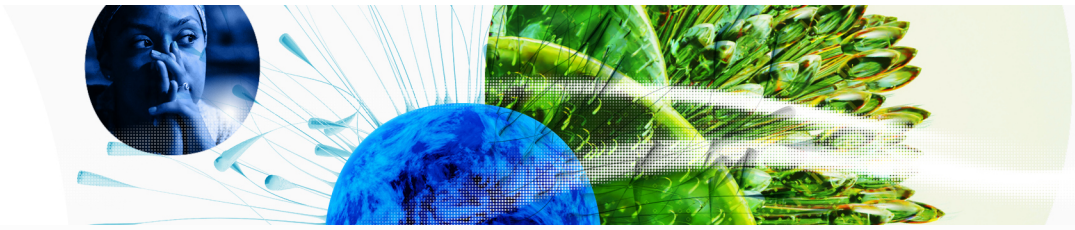
7.2.2 National feature films/mn pop. 15-69

was equal to 2.67 films/mn pop. 15–69 in 2020, down by 29.74% from the year prior – and equivalent to an indicator rank of 41.



7.3.4 Mobile app creation/bn PPP$ GDP

was equal to 136,268.13 Apps/bn PPP$ GDP in 2022, up by 54.21% from the year prior – and equivalent to an indicator rank of 70.



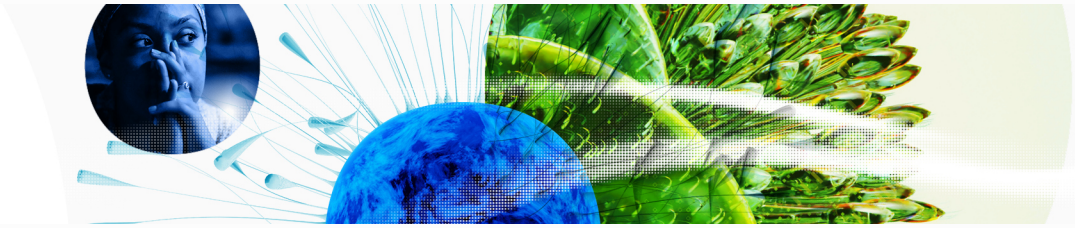
→ Georgia's innovation top performers

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

Rank	Brand	Industry	Brand Value, mn USD
1	BANK OF GEORGIA	Banking	174.7
2	TBC BANK	Banking	168.2

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

Global Innovation Index 2023



Georgia

GII 2023 rank **65**

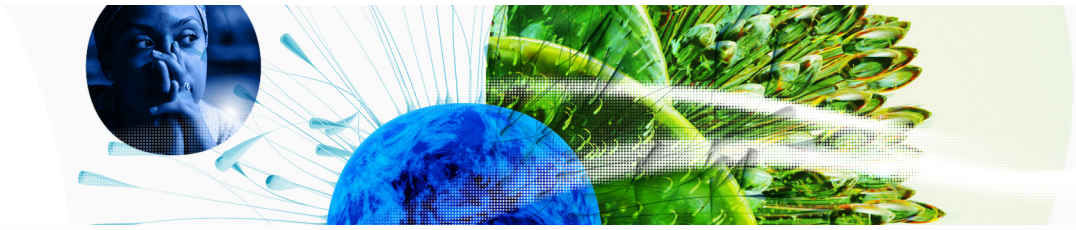
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
77	54	Upper middle	NAWA	3.7	73.6	19,788.5

	Score / Value	Rank
Institutions	**70.6**	**25**
1.1 Institutional environment	**52.4**	**51**
1.1.1 Operational stability for businesses*	50.0	71
1.1.2 Government effectiveness*	54.8	41
1.2 Regulatory environment	**78.0**	**30**
1.2.1 Regulatory quality*	69.6	29 ●
1.2.2 Rule of law*	44.7	57
1.2.3 Cost of redundancy dismissal	8.6	16 ●
1.3 Business environment	**81.5**	**4**
1.3.1 Policies for doing business†	70.5	25 ●
1.3.2 Entrepreneurship policies and culture†	92.4	2
Human capital and research	**30.2**	**69**
2.1 Education	**51.7**	**64**
2.1.1 Expenditure on education, % GDP	3.6	84
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a
2.1.3 School life expectancy, years	15.9	40
2.1.4 PISA scales in reading, maths and science	386.7	70 ○
2.1.5 Pupil-teacher ratio, secondary	8.0	9 ●
2.2 Tertiary education	**33.8**	**55**
2.2.1 Tertiary enrolment, % gross	72.5	30 ●
2.2.2 Graduates in science and engineering, %	19.6	75
2.2.3 Tertiary inbound mobility, %	9.1	29
2.3 Research and development (R&D)	**5.3**	**75**
2.3.1 Researchers, FTE/mn pop.	1,623.7	46
2.3.2 Gross expenditure on R&D, % GDP	0.3	83
2.3.3 Global corporate R&D investors, top 3, mn US$	0.0	40 ○ ◇
2.3.4 QS university ranking, top 3*	0.0	71 ○ ◇
Infrastructure	**36.2**	**80**
3.1 Information and communication technologies (ICTs)	**69.8**	**67**
3.1.1 ICT access*	89.3	25 ●
3.1.2 ICT use*	80.6	56
3.1.3 Government's online service*	57.0	82
3.1.4 E-participation*	52.3	71
3.2 General infrastructure	**19.2**	**94**
3.2.1 Electricity output, GWh/mn pop.	3,410.6	61
3.2.2 Logistics performance*	27.3	76
3.2.3 Gross capital formation, % GDP	19.8	100 ○
3.3 Ecological sustainability	**19.7**	**81**
3.3.1 GDP/unit of energy use	10.1	65
3.3.2 Environmental performance*	34.2	76
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.3	104 ○
Market sophistication	**32.3**	**77**
4.1 Credit	**36.7**	**46**
4.1.1 Finance for startups and scaleups†	53.6	41
4.1.2 Domestic credit to private sector, % GDP	79.9	43
4.1.3 Loans from microfinance institutions, % GDP	2.3	17
4.2 Investment	**1.2**	**106**
4.2.1 Market capitalization, % GDP	n/a	n/a
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.0	80 ○
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	**58.9**	**63**
4.3.1 Applied tariff rate, weighted avg., %	0.2	4 ●
4.3.2 Domestic industry diversification	76.6	83 ○ ◇
4.3.3 Domestic market scale, bn PPP$	73.6	94

	Score / Value	Rank
Business sophistication	**29.4**	**58**
5.1 Knowledge workers	**33.3**	**63**
5.1.1 Knowledge-intensive employment, %	24.7	57
5.1.2 Firms offering formal training, %	32.0	50
5.1.3 GERD performed by business, % GDP	n/a	n/a
5.1.4 GERD financed by business, %	1.7	89 ○ ◇
5.1.5 Females employed w/advanced degrees, %	18.1	39
5.2 Innovation linkages	**24.1**	**58**
5.2.1 University-industry R&D collaboration†	56.5	41
5.2.2 State of cluster development†	52.9	41
5.2.3 GERD financed by abroad, % GDP	0.0	56
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	69
5.2.5 Patent families/bn PPP$ GDP	0.0	83
5.3 Knowledge absorption	**30.7**	**78**
5.3.1 Intellectual property payments, % total trade	0.6	65
5.3.2 High-tech imports, % total trade	7.4	76
5.3.3 ICT services imports, % total trade	1.0	88
5.3.4 FDI net inflows, % GDP	6.1	16 ●
5.3.5 Research talent, % in businesses	n/a	n/a
Knowledge and technology outputs	**21.4**	**72**
6.1 Knowledge creation	**16.2**	**62**
6.1.1 Patents by origin/bn PPP$ GDP	1.4	46
6.1.2 PCT patents by origin/bn PPP$ GDP	0.1	59
6.1.3 Utility models by origin/bn PPP$ GDP	1.0	22
6.1.4 Scientific and technical articles/bn PPP$ GDP	n/a	n/a
6.1.5 Citable documents H-index	10.8	72
6.2 Knowledge impact	**28.8**	**59**
6.2.1 Labor productivity growth, %	5.8	3 ●
6.2.2 Unicorn valuation, % GDP	0.0	48 ○ ◇
6.2.3 Software spending, % GDP	0.1	97
6.2.4 High-tech manufacturing, %	10.4	88 ○
6.3 Knowledge diffusion	**19.3**	**78**
6.3.1 Intellectual property receipts, % total trade	0.0	81
6.3.2 Production and export complexity	50.9	67
6.3.3 High-tech exports, % total trade	1.0	72
6.3.4 ICT services exports, % total trade	2.3	53
6.3.5 ISO 9001 quality/bn PPP$ GDP	3.6	70
Creative outputs	**18.8**	**81**
7.1 Intangible assets	**20.6**	**84**
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a
7.1.2 Trademarks by origin/bn PPP$ GDP	45.6	51
7.1.3 Global brand value, top 5,000	1.3	52
7.1.4 Industrial designs by origin/bn PPP$ GDP	1.6	49
7.2 Creative goods and services	**8.4**	**73**
7.2.1 Cultural and creative services exports, % total trade	0.2	68
7.2.2 National feature films/mn pop. 15-69	2.7	41
7.2.3 Entertainment and media market/th pop. 15-69	n/a	n/a
7.2.4 Creative goods exports, % total trade	0.3	69
7.3 Online creativity	**25.7**	**50**
7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	2.2	79
7.3.2 Country-code TLDs/th pop. 15-69	6.4	50
7.3.3 GitHub commits/mn pop. 15-69	30.3	34
7.3.4 Mobile app creation/bn PPP$ GDP	64.0	70

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question, ◔ indicates that the economy's data are older than the base year; see appendices for details, including the year of the data, at https://www.wipo.int/gii-ranking. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

Global Innovation Index 2023



→ Data availability

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

> Georgia has missing data for eight indicators and outdated data for seven indicators.

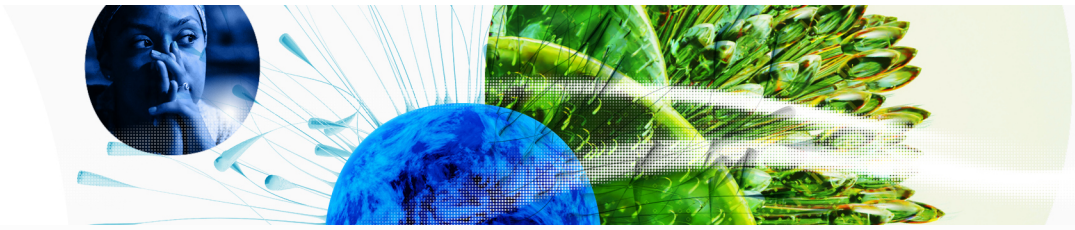
> Missing data for Georgia

Code	Indicator name	Economy Year	Model Year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2019	UNESCO Institute for Statistics
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges; World Bank
4.2.3	VC recipients, deals/bn PPP$ GDP	n/a	2022	Refinitiv; International Monetary Fund
4.2.4	VC received, value, % GDP	n/a	2022	Refinitiv; International Monetary Fund
5.1.3	GERD performed by business, % GDP	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.3.5	Research talent, % in businesses	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
7.1.1	Intangible asset intensity, top 15, %	n/a	2022	Brand Finance
7.2.3	Entertainment and media market/th pop. 15-69	n/a	2022	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

> Outdated data for Georgia

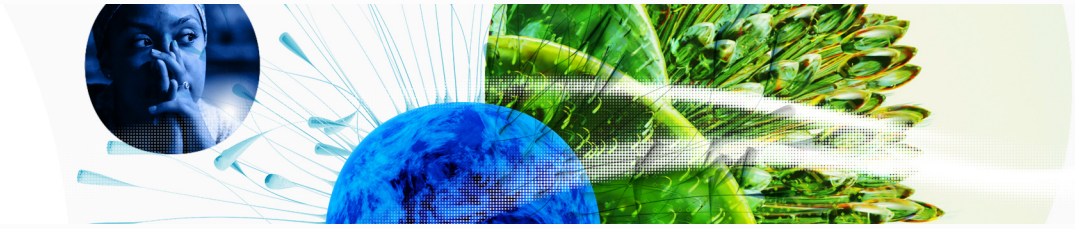
Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture	2016	2022	Global Entrepreneurship Monitor
4.1.1	Finance for startups and scaleups	2016	2022	Global Entrepreneurship Monitor
5.1.1	Knowledge-intensive employment, %	2020	2022	International Labour Organization
5.1.4	GERD financed by business, %	2018	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2020	2022	International Labour Organization
5.2.3	GERD financed by abroad, % GDP	2018	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

Global Innovation Index 2023



Code	Indicator name	Economy Year	Model Year	Source
7.2.2	National feature films/mn pop. 15-69	2020	2021	OMDIA; United Nations, World Population Prospects

Global Innovation Index 2023



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, 2023.

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.