GLOBAL INNOVATION INDEX 2020

GEORGIA

63rd Georgia ranks 63rd among the 131 economies featured in the GII 2020.

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.

The following table shows the rankings of Georgia over the past three years, noting that 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 2020 is between ranks 59 and 67.

Rankings of Georgia (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	63	54	71
2019	48	44	60
2018	59	53	62

- Georgia performs better in innovation inputs than innovation outputs in 2020.
- This year Georgia ranks 54th in innovation inputs, lower than last year and lower compared to 2018.
- As for innovation outputs, Georgia ranks 71st. This position is lower than last year and lower compared to 2018.

17th Georgia ranks 17th among the 37 upper middle-income group economies.

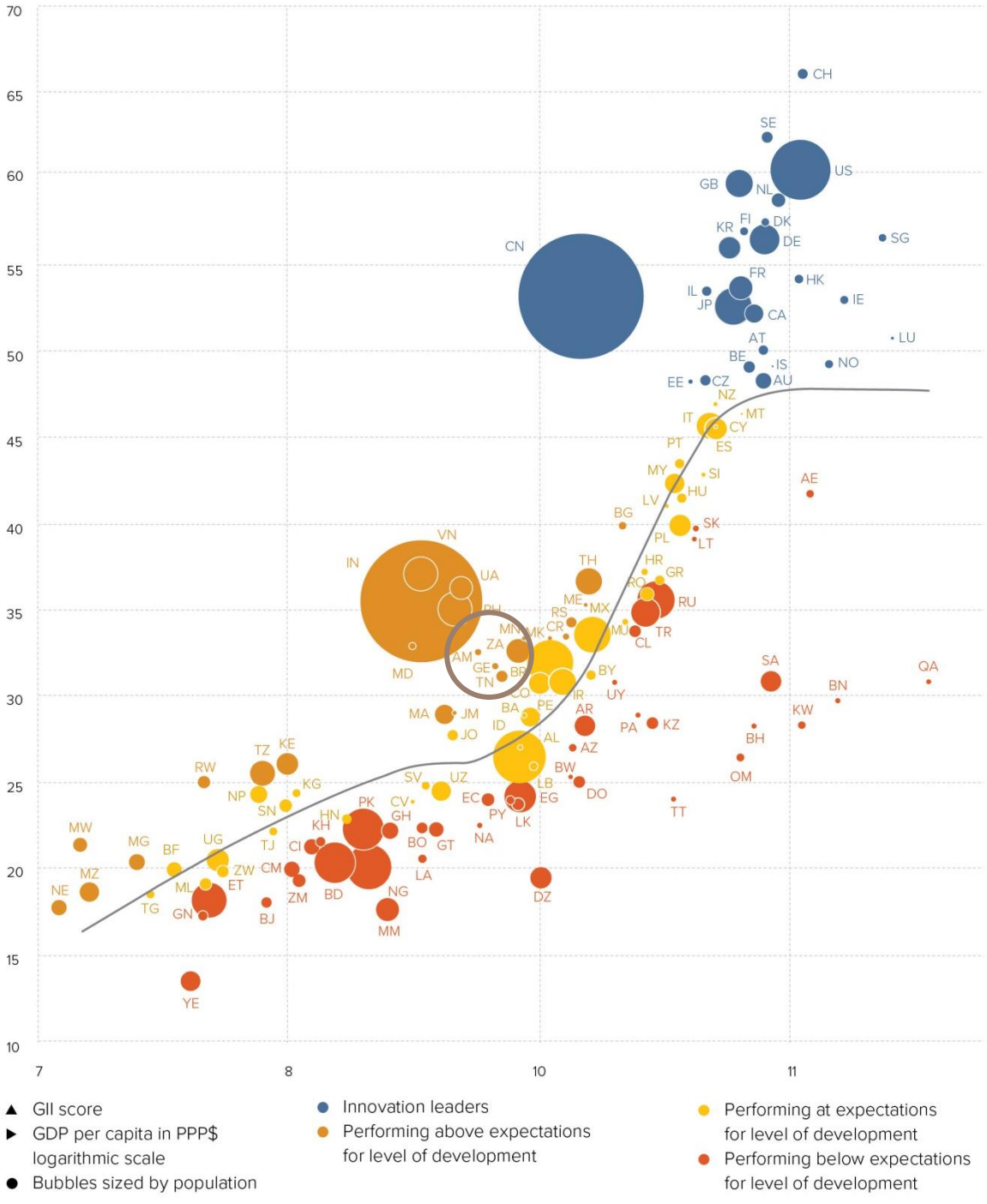
6th Georgia ranks 6th among the 19 economies in Northern Africa and Western Asia.

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 is performing above expectations for its level of development.

The positive relationship between innovation and development

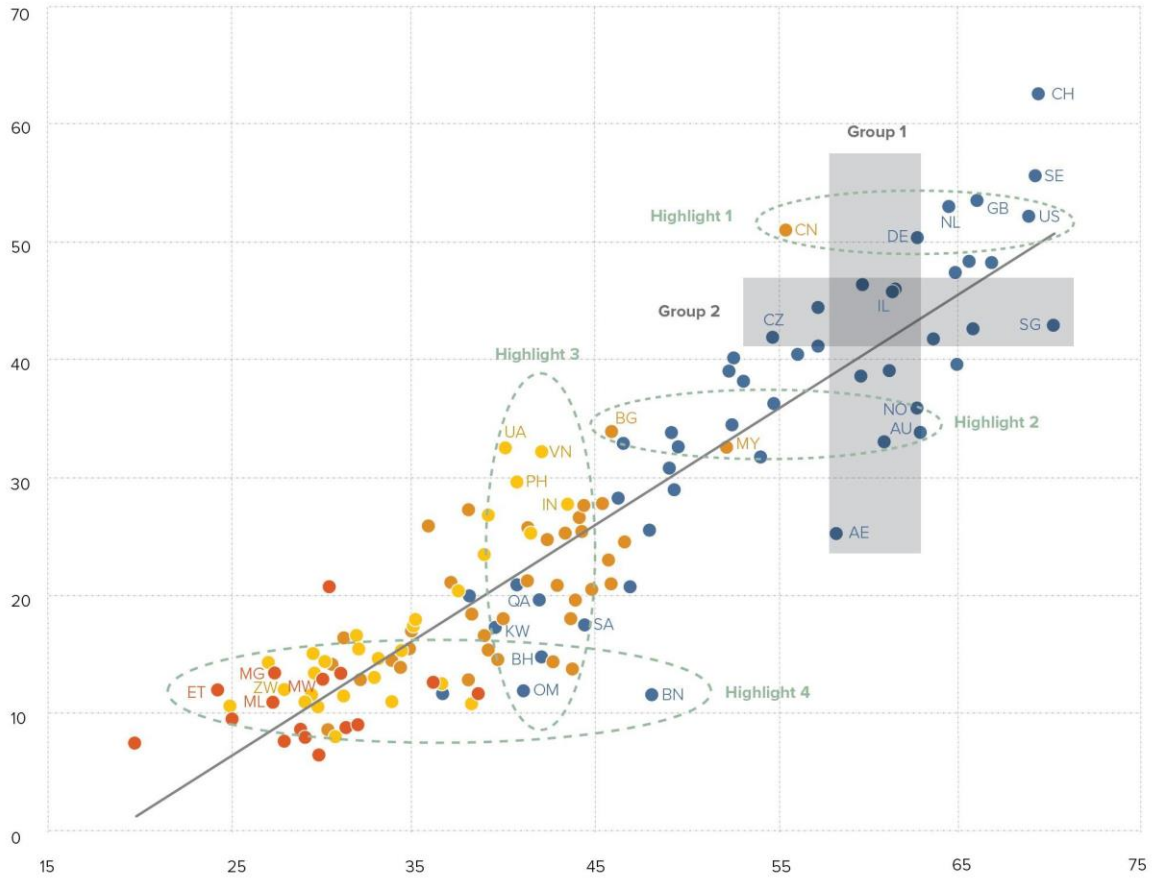


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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

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

Innovation input to output performance, 2020



▲ Output score
► Input score

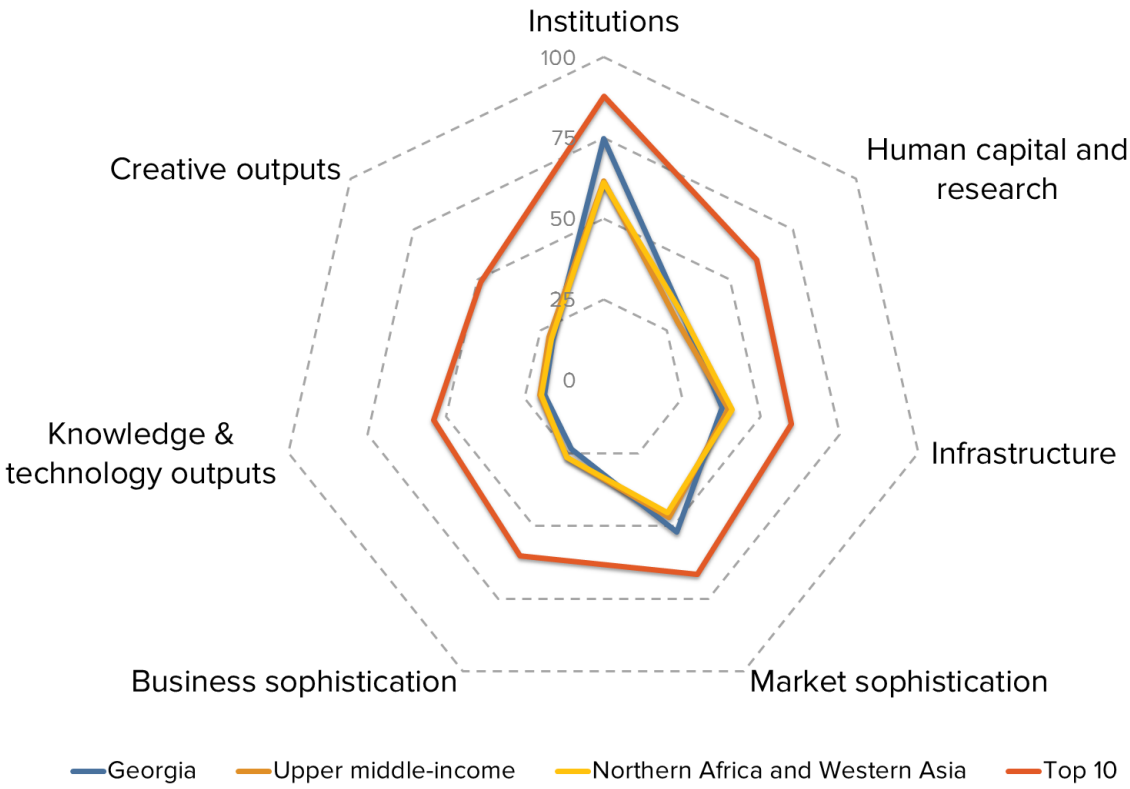
● High income group
● Upper middle-income group
● Lower middle-income group
● Low income group

— Fitted values

AU	Australia	IN	India	NL	Netherlands	CH	Switzerland
BH	Bahrain	IL	Israel	NO	Norway	UA	Ukraine
BN	Brunei Darussalam	KW	Kuwait	OM	Oman	AE	United Arab Emirates
BG	Bulgaria	MG	Madagascar	PH	Philippines	GB	United Kingdom
CN	China	MW	Malawi	QA	Qatar	US	United States of America
CZ	Czech Republic	ML	Mali	SA	Saudi Arabia	VN	Viet Nam
ET	Ethiopia	MY	Malaysia	SG	Singapore	ZW	Zimbabwe
DE	Germany			SE	Sweden		

BENCHMARKING GEORGIA AGAINST OTHER UPPER MIDDLE-INCOME GROUP ECONOMIES AND NORTHERN AFRICA AND WESTERN ASIA

Georgia's scores in the seven GII pillars



Upper middle-income group economies

Georgia has high scores in three out of the seven GII pillars: Institutions, Human capital & research and Market sophistication, which are above average for the upper middle-income group.

Conversely, Georgia scores below average for its income group in four pillars: Infrastructure, Business sophistication, Knowledge & technology outputs and Creative outputs.

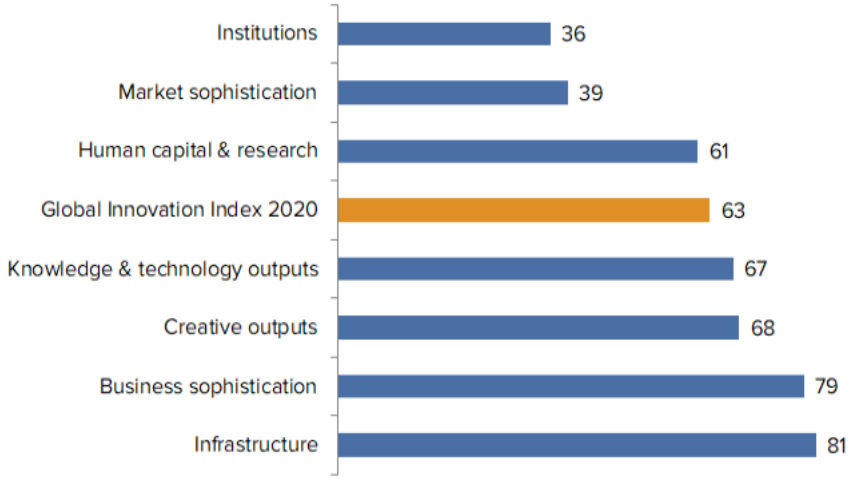
Northern Africa and Western Asia

Compared to other economies in Northern Africa and Western Asia, Georgia performs:

- above average in two out of the seven GII pillars: Institutions and Market sophistication; and
- below average in five out of the seven GII pillars: Human capital & research, Infrastructure, Business sophistication, Knowledge & technology outputs and Creative outputs.

OVERVIEW OF GEORGIA RANKINGS IN THE SEVEN GII AREAS

Georgia performs best in Institutions and its weakest performance is in Infrastructure.



*The highest possible ranking in each pillar is 1.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Georgia in the GII 2020.

Strengths

Code	Indicator name	Rank
1.2.3	Cost of redundancy dismissal, salary weeks	16
1.3.1	Ease of starting a business*	2
2.1.5	Pupil-teacher ratio, secondary	4
3.2.3	Gross capital formation, % GDP	18
4.1.1	Ease of getting credit*	14
4.2.1	Ease of protecting minority investors*	7
4.3.1	Applied tariff rate, weighted avg., %	6
5.3.4	FDI net inflows, % GDP	10
6.2.1	Growth rate of PPP$ GDP/worker, %	7
6.2.2	New businesses/th pop. 15–64	11

Weaknesses

Code	Indicator name	Rank
2.1.4	PISA scales in reading, maths & science	70
2.3.3	Global R&D companies, top 3, mn US$	42
2.3.4	QS university ranking, average score top 3*	77
3.2.2	Logistics performance*	111
5.1.4	GERD financed by business, %	92
5.2.1	University/industry research collaboration†	104
5.2.2	State of cluster development†	113
6.2.5	High- & medium-high-tech manufacturing, %	90
6.3.1	Intellectual property receipts, % total trade	93
7.1.4	ICTs & organizational model creation†	101

STRENGTHS

GII strengths for Georgia are found in six of the seven GII pillars.

- Institutions (36): exhibits strengths in the indicators Cost of redundancy dismissal (16) and Ease of starting a business (2).
- Human capital & research (61): the indicator Pupil–teacher ratio (4) is a strength.
- Infrastructure (81): the indicator Gross capital formation (18) is a strength.
- Market sophistication (39): has strengths in the indicators Ease of getting credit (14), Ease of protecting minority investors (7) and Applied tariff rate (6).
- Business sophistication (79): the indicator FDI net inflows (10) is a strength.
- Knowledge & technology outputs (67): reveals strengths in the indicators Growth rate of GDP per worker (7) and New businesses (11).

WEAKNESSES

GII weaknesses for Georgia are found in five of the seven GII pillars.

- Human capital & research (61): has weaknesses in the indicators PISA scales in reading, maths & science (70), Global R&D companies (42) and QS university ranking (77).
- Infrastructure (81): the indicator Logistics performance (111) is a weakness.
- Business sophistication (79): demonstrates weaknesses in the indicators GERD financed by business (92), University/industry research collaboration (104) and State of cluster development (113).
- Knowledge & technology outputs (67): displays weaknesses in the indicators High- & medium-high-tech manufacturing (90) and Intellectual property receipts (93).
- Creative outputs (68): the indicator ICTs & organizational model creation (101) is a weakness.

GEORGIA

GII 2020 rank

63

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$	GDP per capita, PPP$	GII 2019 rank
71	54	Upper middle	NAWA	4.0	45.4	10,674.9	48

		Score/Value	Rank	
INSTITUTIONS		**75.1**	**36**	◆
1.1	**Political environment**	**66.4**	**44**	◆
1.1.1	Political and operational stability*	71.4	59	
1.1.2	Government effectiveness*	63.9	41	◆
1.2	**Regulatory environment**	**81.0**	**26**	◆
1.2.1	Regulatory quality*	71.4	28	◆
1.2.2	Rule of law*	55.2	48	◆
1.2.3	Cost of redundancy dismissal, salary weeks	8.6	16	●
1.3	**Business environment**	**77.9**	**40**	
1.3.1	Ease of starting a business*	99.6	2	● ◆
1.3.2	Ease of resolving insolvency*	56.2	59	
HUMAN CAPITAL & RESEARCH		**31.6**	**61**	
2.1	**Education**	**47.0**	**62**	
2.1.1	Expenditure on education, % GDP	3.8	78	
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3	School life expectancy, years	15.3	44	
2.1.4	PISA scales in reading, maths, & science	386.7	70	○
2.1.5	Pupil-teacher ratio, secondary	7.6	4	● ◆
2.2	**Tertiary education**	**42.0**	**38**	
2.2.1	Tertiary enrolment, % gross	63.9	41	
2.2.2	Graduates in science & engineering, %	24.6	40	
2.2.3	Tertiary inbound mobility, %	8.1	29	◆
2.3	**Research & development (R&D)**	**5.8**	**75**	
2.3.1	Researchers, FTE/mn pop	1,463.8	45	
2.3.2	Gross expenditure on R&D, % GDP	0.3	80	
2.3.3	Global R&D companies, avg. exp. top 3, mn $US	0.0	42	○ ◇
2.3.4	QS university ranking, average score top 3*	0.0	77	○ ◇
INFRASTRUCTURE		**37.4**	**81**	
3.1	**Information & communication technologies (ICTs)**	**64.8**	**71**	
3.1.1	ICT access*	70.4	60	
3.1.2	ICT use*	57.1	62	
3.1.3	Government's online service*	69.4	71	
3.1.4	E-participation*	62.4	85	
3.2	**General infrastructure**	**26.3**	**71**	
3.2.1	Electricity output, kWh/mn pop	3,099.8	63	
3.2.2	Logistics performance*	17.5	111	○ ◇
3.2.3	Gross capital formation, % GDP	34.3	18	● ◆
3.3	**Ecological sustainability**	**21.2**	**93**	◇
3.3.1	GDP/unit of energy use	7.4	86	
3.3.2	Environmental performance*	41.3	86	◇
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.4	90	
MARKET SOPHISTICATION		**51.8**	**39**	
4.1	**Credit**	**50.9**	**30**	◆
4.1.1	Ease of getting credit*	85.0	14	●
4.1.2	Domestic credit to private sector, % GDP	68.0	48	
4.1.3	Microfinance gross loans, % GDP	1.8	17	
4.2	**Investment**	**45.7**	**32**	
4.2.1	Ease of protecting minority investors*	84.0	7	● ◆
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital deals/bn PPP$ GDP	0.0	38	
4.3	**Trade, competition, and market scale**	**58.8**	**81**	
4.3.1	Applied tariff rate, weighted avg., %	0.7	6	●
4.3.2	Intensity of local competition+	62.7	95	
4.3.3	Domestic market scale, bn PPP$	45.4	105	

		Score/Value	Rank	
BUSINESS SOPHISTICATION		**23.5**	**79**	
5.1	**Knowledge workers**	**30.0**	**65**	
5.1.1	Knowledge-intensive employment, %	25.6	56	
5.1.2	Firms offering formal training, %	32.0	44	
5.1.3	GERD performed by business, % GDP	n/a	n/a	
5.1.4	GERD financed by business, %	1.7	92	○ ◇
5.1.5	Females employed w/advanced degrees, %	18.5	33	
5.2	**Innovation linkages**	**16.2**	**102**	
5.2.1	University/industry research collaboration+	32.0	104	○
5.2.2	State of cluster development+	34.8	113	○ ◇
5.2.3	GERD financed by abroad, % GDP	0.0	61	
5.2.4	JV-strategic alliance deals/bn PPP$ GDP	0.1	39	◆
5.2.5	Patent families 2+ offices/bn PPP$ GDP	0.1	59	
5.3	**Knowledge absorption**	**24.3**	**82**	
5.3.1	Intellectual property payments, % total trade	0.3	84	
5.3.2	High-tech imports, % total trade	7.6	67	
5.3.3	ICT services imports, % total trade	0.9	84	
5.3.4	FDI net inflows, % GDP	9.9	10	● ◆
5.3.5	Research talent, % in business enterprise	n/a	n/a	
KNOWLEDGE & TECHNOLOGY OUTPUTS		**19.0**	**67**	
6.1	**Knowledge creation**	**19.5**	**52**	
6.1.1	Patents by origin/bn PPP$ GDP	2.4	34	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.1	56	
6.1.3	Utility models by origin/bn PPP$ GDP	1.2	19	
6.1.4	Scientific & technical articles/bn PPP$ GDP	13.3	42	
6.1.5	Citable documents H-index	10.8	72	
6.2	**Knowledge impact**	**25.0**	**63**	
6.2.1	Growth rate of PPP$ GDP/worker, %	5.2	7	● ◆
6.2.2	New businesses/th pop. 15-64	10.4	11	● ◆
6.2.3	Computer software spending, % GDP	0.0	88	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	4.1	60	
6.2.5	High- and medium-high-tech manufacturing, %	7.6	90	○
6.3	**Knowledge diffusion**	**12.5**	**105**	
6.3.1	Intellectual property receipts, % total trade	0.0	93	○
6.3.2	High-tech net exports, % total trade	0.3	93	
6.3.3	ICT services exports, % total trade	0.9	85	
6.3.4	FDI net outflows, % GDP	1.9	38	
CREATIVE OUTPUTS		**20.3**	**68**	
7.1	**Intangible assets**	**25.1**	**73**	
7.1.1	Trademarks by origin/bn PPP$ GDP	65.1	31	
7.1.2	Global brand value, top 5,000, % GDP	9.1	62	
7.1.3	Industrial designs by origin/bn PPP$ GDP	4.8	25	
7.1.4	ICTs & organizational model creation+	43.6	101	○ ◇
7.2	**Creative goods and services**	**11.7**	**72**	
7.2.1	Cultural & creative services exports, % total trade	0.2	70	
7.2.2	National feature films/mn pop. 15-69	6.7	34	
7.2.3	Entertainment & Media market/th pop. 15-69	n/a	n/a	
7.2.4	Printing and other media, % manufacturing	1.5	28	
7.2.5	Creative goods exports, % total trade	0.1	98	
7.3	**Online creativity**	**19.4**	**54**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	1.7	86	
7.3.2	Country-code TLDs/th pop. 15-69	3.9	58	
7.3.3	Wikipedia edits/mn pop. 15-69	70.7	37	◆
7.3.4	Mobile app creation/bn PPP$ GDP	3.0	62	

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 Appendix II for details, including the year of the data, at http://globalinnovationindex.org. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

DATA AVAILABILITY

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

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2016	UNESCO Institute for Statistics
4.2.2	Market capitalization, % GDP	n/a	2018	World Federation of Exchanges
5.1.3	GERD performed by business, % GDP	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.3.5	Research talent, % in business enterprise	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	2018	PwC

Outdated data

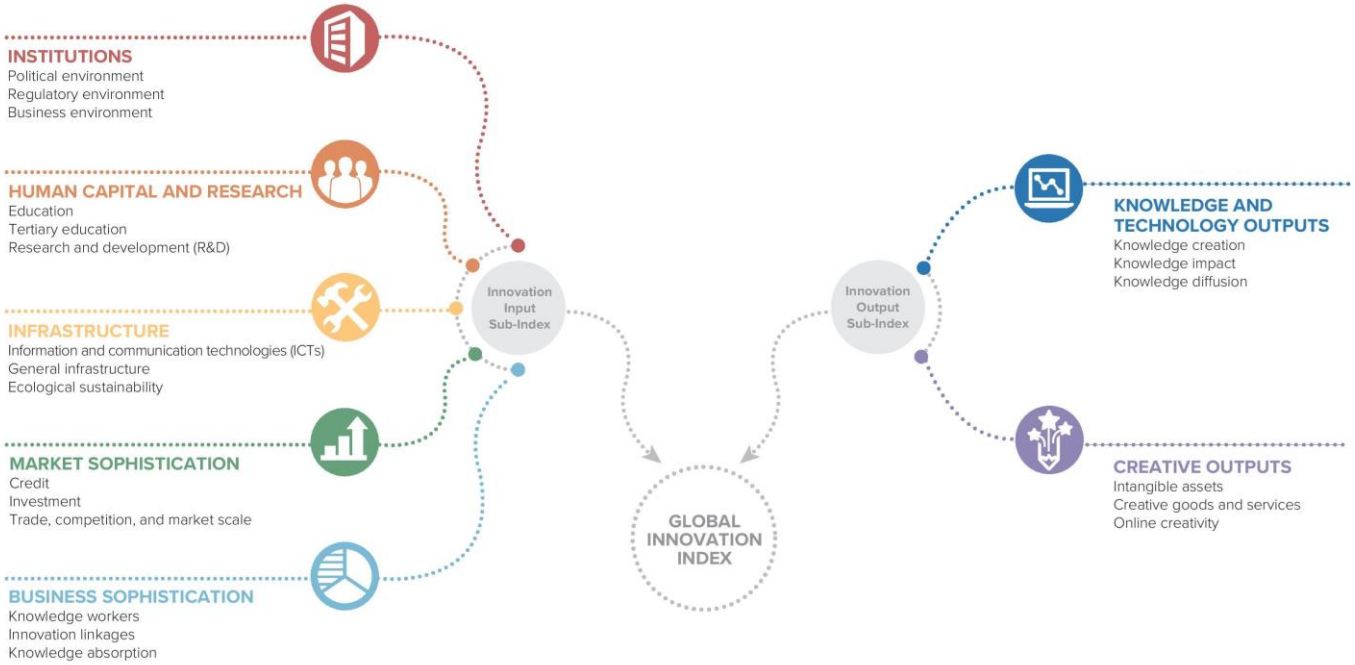
Code	Indicator name	Country year	Model year	Source
2.1.1	Expenditure on education, % GDP	2017	2018	UNESCO Institute for Statistics
4.3.1	Applied tariff rate, weighted avg., %	2016	2018	World Bank
5.2.1	University/industry research collaboration†	2018	2019	World Economic Forum
5.2.2	State of cluster development†	2018	2019	World Economic Forum

ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. In 2020, the GII presents its 13th edition devoted to the theme *Who Will Finance Innovation?*

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.

Framework of the Global Innovation Index 2020



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.