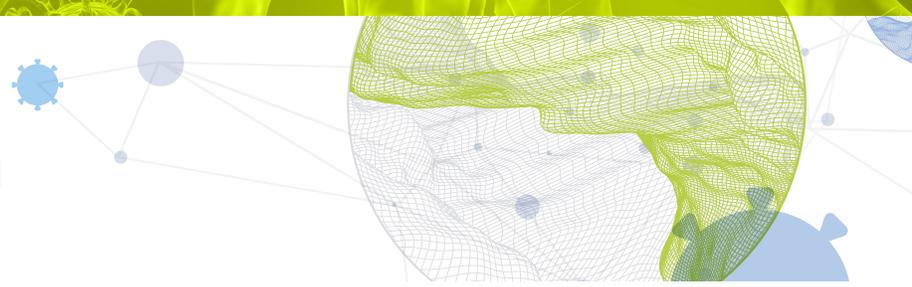




Global Innovation Index 2021



RUSSIAN FEDERATION

45th

Russia ranks 45th among the 132 economies featured in the GII 2021.

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 Russia 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 Russia in the GII 2021 is between ranks 43 and 47.

Rankings for Russia (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	45	43	52
2020	47	42	58
2019	46	41	59

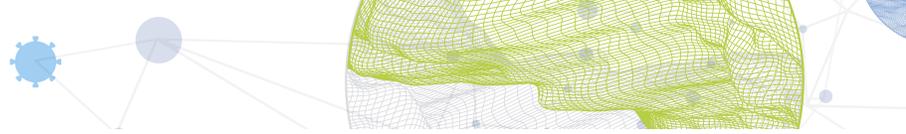
- Russia performs better in innovation inputs than innovation outputs in 2021.
- This year Russia ranks 43rd in innovation inputs, lower than both 2020 and 2019.
- As for innovation outputs, Russia ranks 52nd. This position is higher than both 2020 and 2019.

6th

Russia ranks 6th among the 34 upper middle-income group economies.

29th

Russia ranks 29th among the 39 economies in Europe.

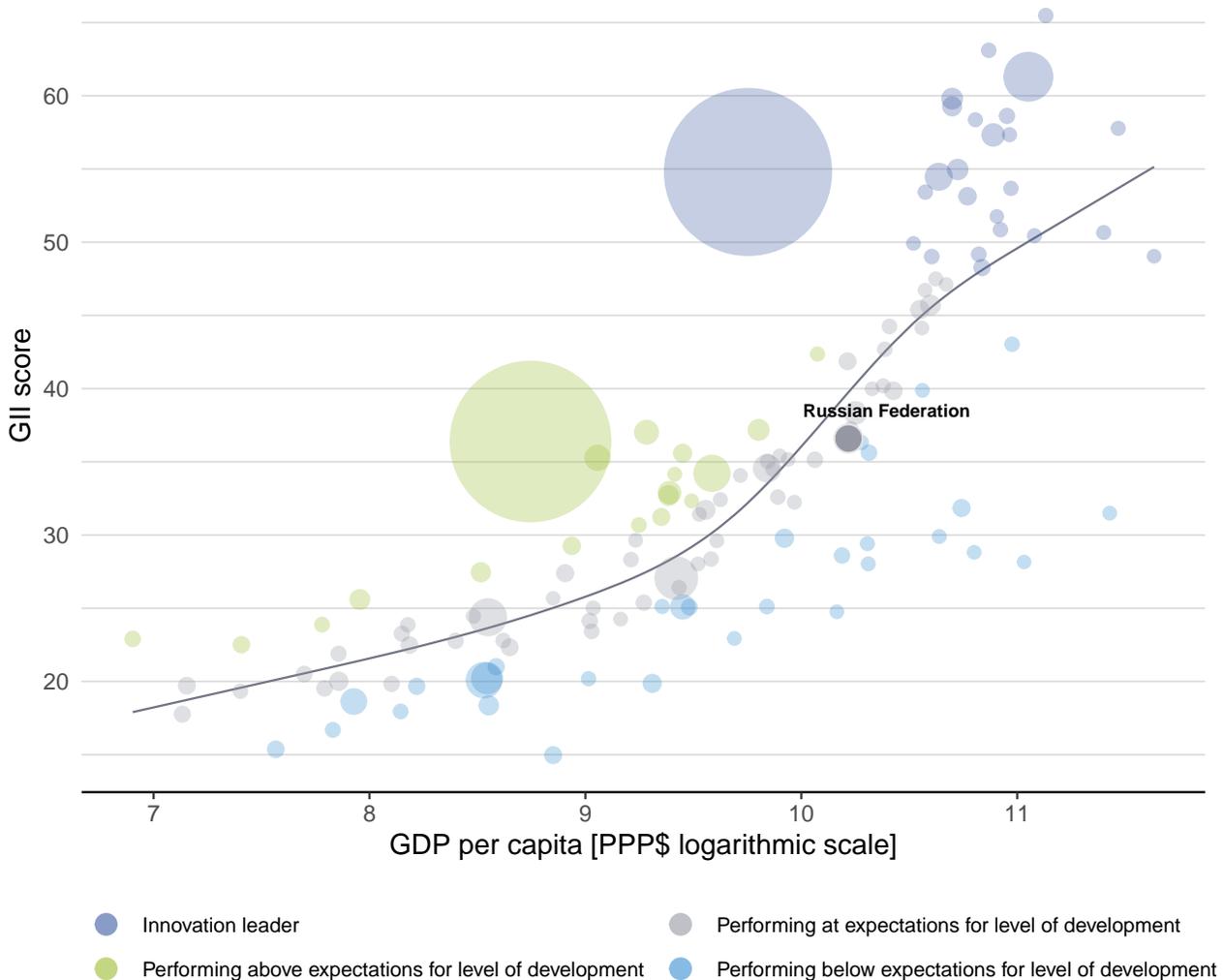


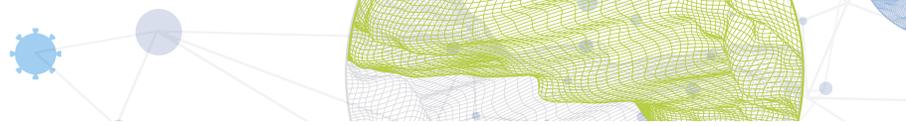
EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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

The positive relationship between innovation and development



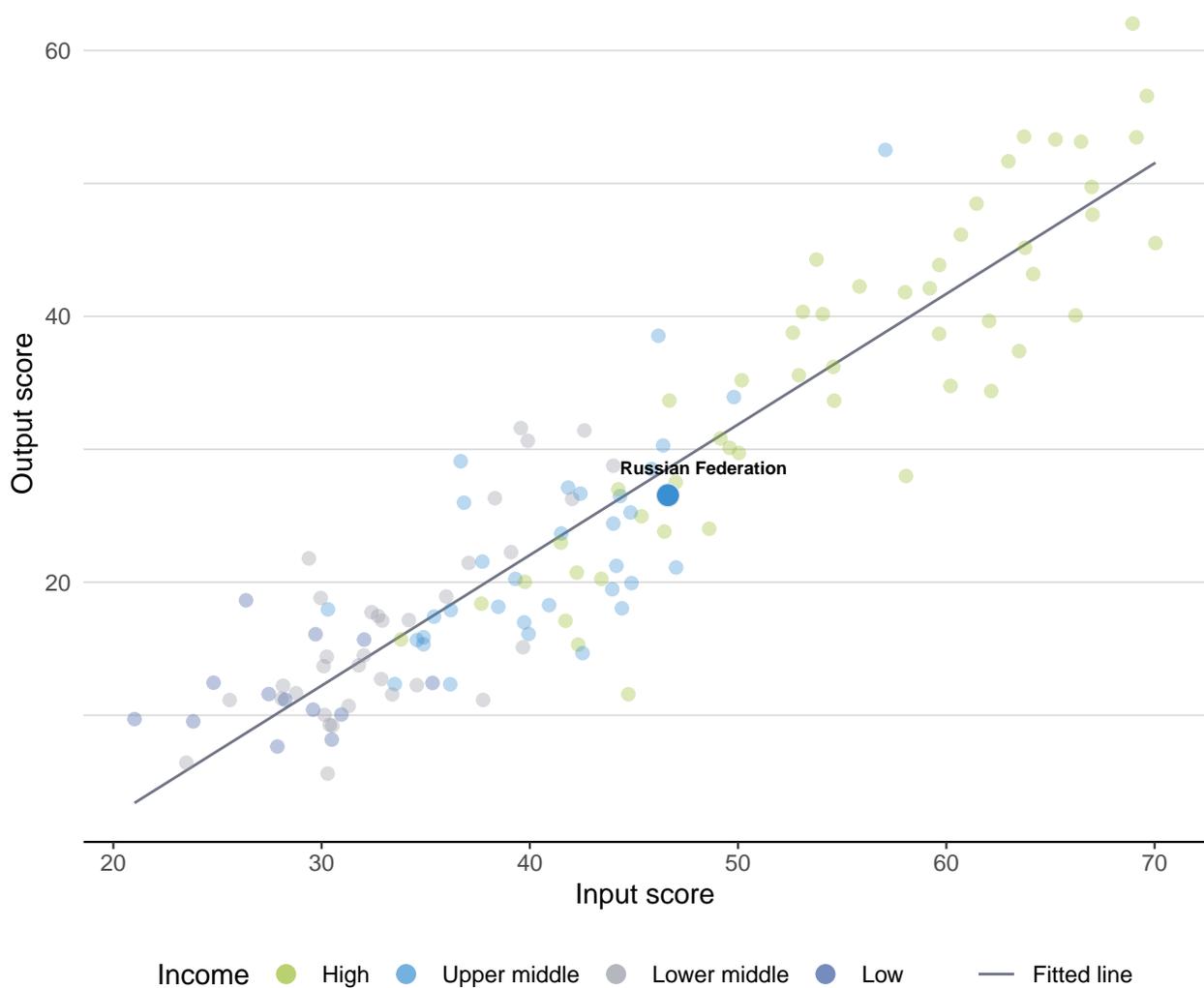


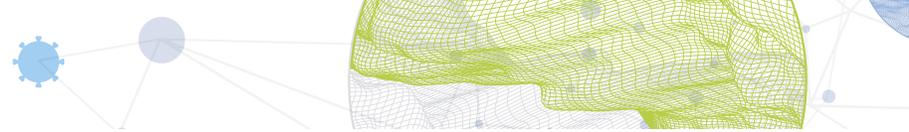
EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

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

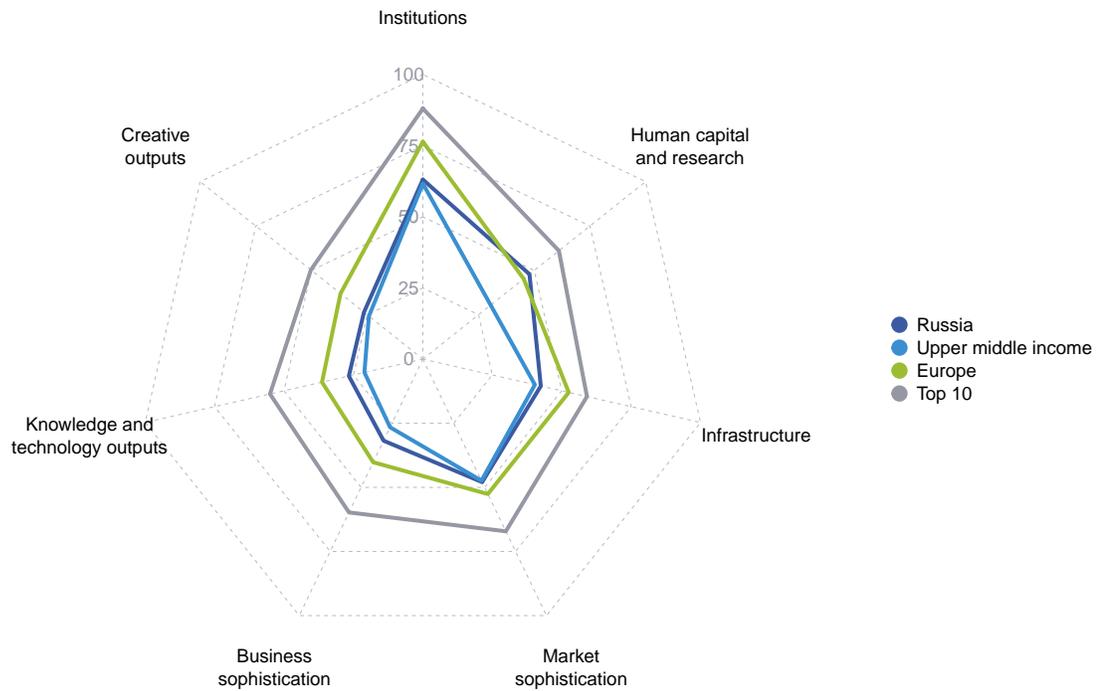
Innovation input to output performance





BENCHMARKING AGAINST OTHER UPPER MIDDLE-INCOME GROUP ECONOMIES AND EUROPE

The seven GII pillar scores for Russia

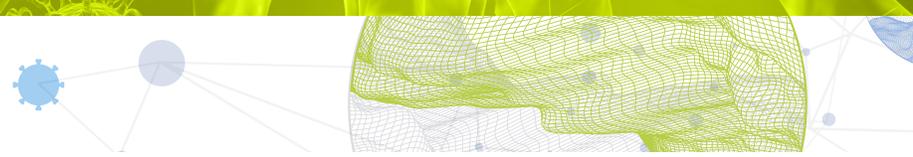


Upper middle-income group economies

Russia performs above the upper middle-income group average in all GII pillars.

Europe

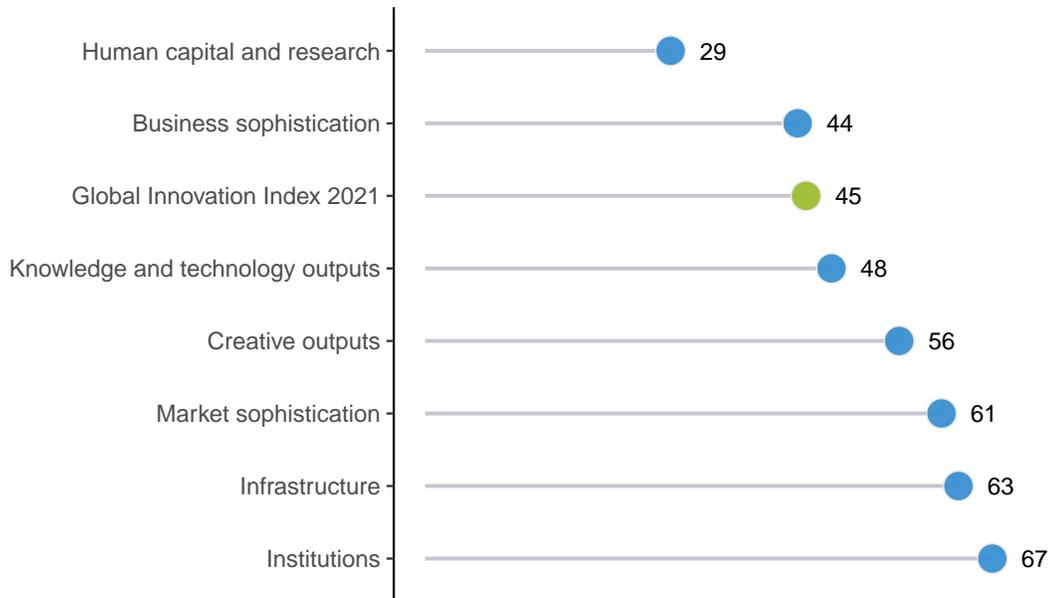
Russia performs above the regional average in Human capital and research.



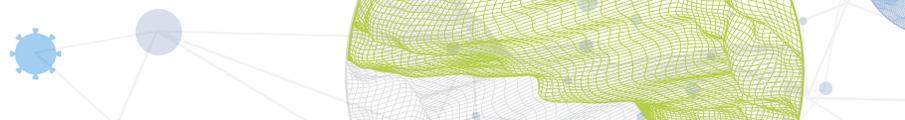
OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Russia performs best in Human capital and research and its weakest performance is in Institutions.

The seven GII pillar ranks for Russia



Note: The highest possible ranking in each pillar is one.



INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Russia in the GII 2021.

Strengths and weaknesses for Russia

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.2	Tertiary education	14	1.2.1	Regulatory quality	100
2.2.1	Tertiary enrolment, % gross	15	1.2.2	Rule of law	109
2.2.2	Graduates in science and engineering, %	13	3.3	Ecological sustainability	101
2.3.4	QS university ranking, top 3	21	3.3.1	GDP/unit of energy use	117
4.3	Trade, diversification, and market scale	17	3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	107
4.3.3	Domestic market scale, bn PPP\$	6	4.1.3	Microfinance gross loans, % GDP	78
5.1.1	Knowledge-intensive employment, %	18	4.2	Investment	116
5.1.5	Females employed w/advanced degrees, %	10	4.2.4	Venture capital recipients, deals/bn PPP\$ GDP	92
5.3.1	Intellectual property payments, % total trade	23	5.1.2	Firms offering formal training, %	94
6.1.1	Patents by origin/bn PPP\$ GDP	15	5.3.4	FDI net inflows, % GDP	97
6.1.3	Utility models by origin/bn PPP\$ GDP	10	6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	105
6.1.5	Citable documents H-index	23	7.2.4	Printing and other media, % manufacturing	80

Russian Federation

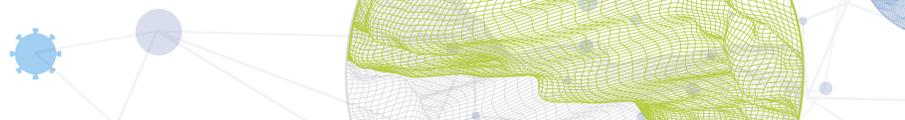
GII 2021 rank

45

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
52	43	Upper middle	EUR	145.9	4,021.7	27,394	47

	Score/Value	Rank		Score/Value	Rank
 Institutions	63.1	67	 Business sophistication	31.8	44
1.1 Political environment	57.4	67	5.1 Knowledge workers	38.2	46
1.1.1 Political and operational stability*	64.3	80	5.1.1 Knowledge-intensive employment, %	44.9	18 ●◆
1.1.2 Government effectiveness*	54.0	62	5.1.2 Firms offering formal training, %	11.8	94 ○◇
1.2 Regulatory environment	55.7	92	5.1.3 GERD performed by business, % GDP	0.6	34
1.2.1 Regulatory quality*	32.2	100 ○	5.1.4 GERD financed by business, %	30.2	60
1.2.2 Rule of law*	27.7	109 ○◇	5.1.5 Females employed w/advanced degrees, %	26.2	10 ●◆
1.2.3 Cost of redundancy dismissal	17.3	69	5.2 Innovation linkages	17.7	88
1.3 Business environment	76.1	45	5.2.1 University-industry R&D collaboration†	44.0	58
1.3.1 Ease of starting a business*	93.1	38	5.2.2 State of cluster development and depth†	45.5	73
1.3.2 Ease of resolving insolvency*	59.1	52	5.2.3 GERD financed by abroad, % GDP	0.0	63
			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	72
			5.2.5 Patent families/bn PPP\$ GDP	0.2	50
 Human capital and research	47.9	29 ◆	5.3 Knowledge absorption	39.5	29 ◆
2.1 Education	57.6	[40]	5.3.1 Intellectual property payments, % total trade	1.6	23 ●
2.1.1 Expenditure on education, % GDP	4.7	52	5.3.2 High-tech imports, % total trade	9.1	43
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	5.3.3 ICT services imports, % total trade	1.3	60
2.1.3 School life expectancy, years	15.7	41	5.3.4 FDI net inflows, % GDP	1.4	97 ○
2.1.4 PISA scales in reading, maths and science	481.3	31 ◆	5.3.5 Research talent, % in businesses	48.0	28 ◆
2.1.5 Pupil-teacher ratio, secondary	n/a	n/a	 Knowledge and technology outputs	26.7	48
2.2 Tertiary education	50.8	14 ●◆	6.1 Knowledge creation	35.8	26 ◆
2.2.1 Tertiary enrolment, % gross	84.6	15 ●◆	6.1.1 Patents by origin/bn PPP\$ GDP	5.7	15 ●◆
2.2.2 Graduates in science and engineering, %	31.1	13 ●◆	6.1.2 PCT patents by origin/bn PPP\$ GDP	0.3	45
2.2.3 Tertiary inbound mobility, %	4.5	51	6.1.3 Utility models by origin/bn PPP\$ GDP	2.3	10 ●◆
2.3 Research and development (R&D)	35.2	32 ◆	6.1.4 Scientific and technical articles/bn PPP\$ GDP	10.6	80
2.3.1 Researchers, FTE/mn pop.	2,746.7	33 ◆	6.1.5 Citable documents H-index	37.7	23 ●◆
2.3.2 Gross expenditure on R&D, % GDP	1.0	38	6.2 Knowledge impact	28.6	68
2.3.3 Global corporate R&D investors, top 3, mn US\$	39.0	40 ◆	6.2.1 Labor productivity growth, %	1.1	44
2.3.4 QS university ranking, top 3*	48.4	21 ●◆	6.2.2 New businesses/th pop. 15–64	3.3	43
			6.2.3 Software spending, % GDP	0.3	43
			6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	1.1	105 ○
			6.2.5 High-tech manufacturing, %	25.7	48
 Infrastructure	42.5	63	6.3 Knowledge diffusion	15.6	68
3.1 Information and communication technologies (ICTs)	78.5	36 ◆	6.3.1 Intellectual property receipts, % total trade	0.2	38 ◆
3.1.1 ICT access*	72.8	54	6.3.2 Production and export complexity	43.0	64
3.1.2 ICT use*	72.5	39 ◆	6.3.3 High-tech exports, % total trade	2.6	52
3.1.3 Government's online service*	81.8	39	6.3.4 ICT services exports, % total trade	1.3	71
3.1.4 E-participation*	86.9	27	 Creative outputs	26.4	56
3.2 General infrastructure	29.0	64	7.1 Intangible assets	35.6	50
3.2.1 Electricity output, GWh/mn pop.	7,705.0	26 ◆	7.1.1 Trademarks by origin/bn PPP\$ GDP	59.7	35
3.2.2 Logistics performance*	33.0	74	7.1.2 Global brand value, top 5,000, % GDP	44.8	38
3.2.3 Gross capital formation, % GDP	22.9	59	7.1.3 Industrial designs by origin/bn PPP\$ GDP	1.1	67
3.3 Ecological sustainability	19.9	101 ○◇	7.1.4 ICTs and organizational model creation†	58.4	49
3.3.1 GDP/unit of energy use	4.8	117 ○◇	7.2 Creative goods and services	9.7	81
3.3.2 Environmental performance*	50.5	56	7.2.1 Cultural and creative services exports, % total trade	1.0	27
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	0.2	107 ○	7.2.2 National feature films/mn pop. 15–69	1.2	79
			7.2.3 Entertainment and media market/th pop. 15–69	7.0	45
			7.2.4 Printing and other media, % manufacturing	0.6	80 ○
			7.2.5 Creative goods exports, % total trade	0.4	68
 Market sophistication	48.0	61	7.3 Online creativity	24.8	47
4.1 Credit	40.1	70	7.3.1 Generic top-level domains (TLDs)/th pop. 15–69	3.4	61
4.1.1 Ease of getting credit*	80.0	23	7.3.2 Country-code TLDs/th pop. 15–69	14.1	35
4.1.2 Domestic credit to private sector, % GDP	52.4	63	7.3.3 Wikipedia edits/mn pop. 15–69	58.8	54
4.1.3 Microfinance gross loans, % GDP	0.0	78 ○	7.3.4 Mobile app creation/bn PPP\$ GDP	21.6	25
4.2 Investment	19.8	116 ○			
4.2.1 Ease of protecting minority investors*	60.0	71			
4.2.2 Market capitalization, % GDP	40.9	38			
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	0.0	55			
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	0.0	92 ○			
4.3 Trade, diversification, and market scale	83.9	17 ●◆			
4.3.1 Applied tariff rate, weighted avg., %	5.3	91			
4.3.2 Domestic industry diversification	92.5	44			
4.3.3 Domestic market scale, bn PPP\$	4,021.7	6 ●◆			

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 IV 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

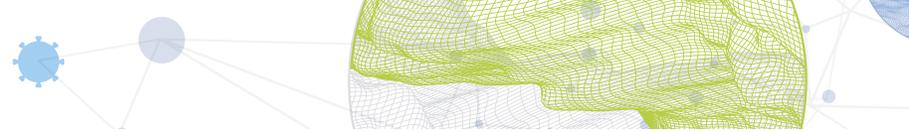
The following tables list data that are either missing or outdated for Russia.

Missing data for Russia

Code	Indicator name	Economy year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2017	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	n/a	2019	UNESCO Institute for Statistics

Outdated data for Russia

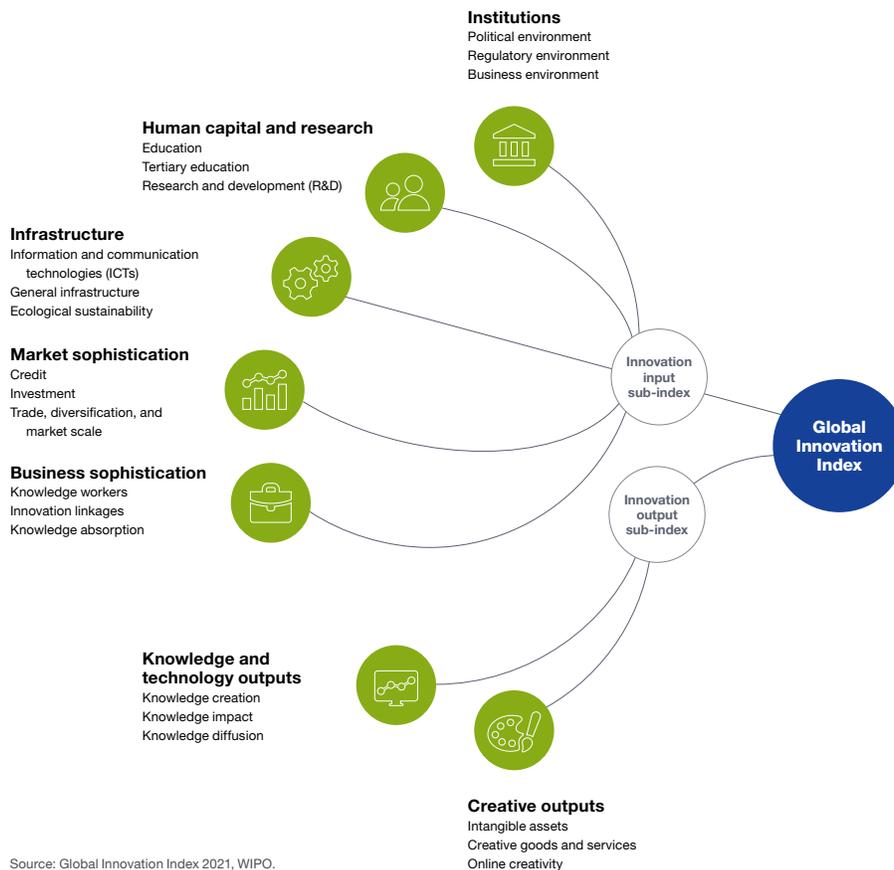
Code	Indicator name	Economy year	Model year	Source
4.2.2	Market capitalization, % GDP	2018	2019	World Federation of Exchanges



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.



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.