Global Innovation Index 2021

REPUBLIC OF MOLDOVA

64th The Republic of Moldova ranks 64th 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 the Republic of Moldova 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 the Republic of Moldova in the GII 2021 is between ranks 58 and 66.

Rankings for the Republic of Moldova (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	64	80	54
2020	59	75	48
2019	58	81	45

- The Republic of Moldova performs better in innovation outputs than innovation inputs in 2021.
- This year the Republic of Moldova ranks 80th in innovation inputs, lower than last year but higher than 2019.
- As for innovation outputs, The Republic of Moldova ranks 54th. This position is lower than both 2020 and 2019.

6th Moldova ranks 6th among the 34 lower middle-income group economies.

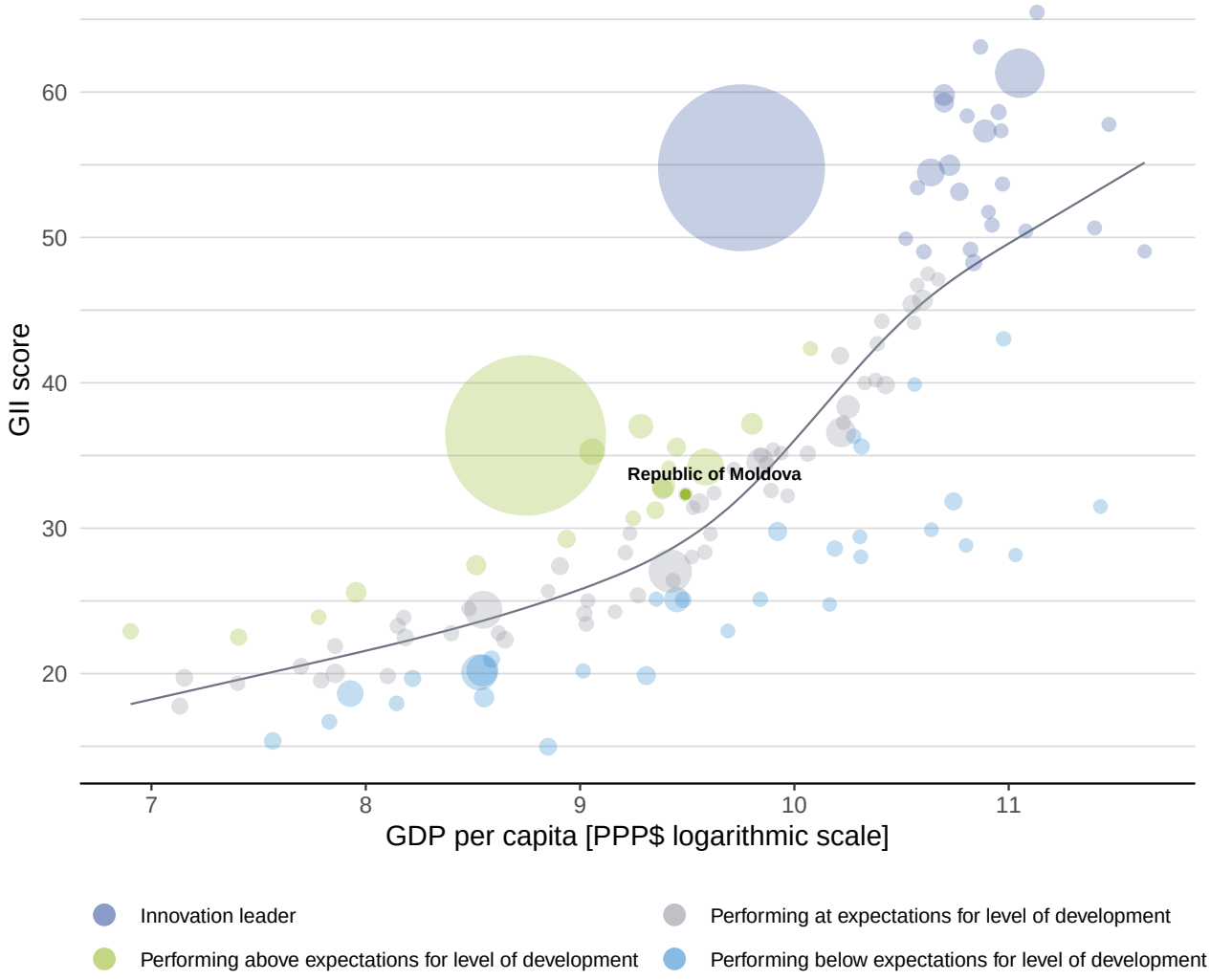
37th Moldova ranks 37th among the 39 economies in Europe.

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, the Republic of Moldova's performance is above expectations for its level of development.

The positive relationship between innovation and development

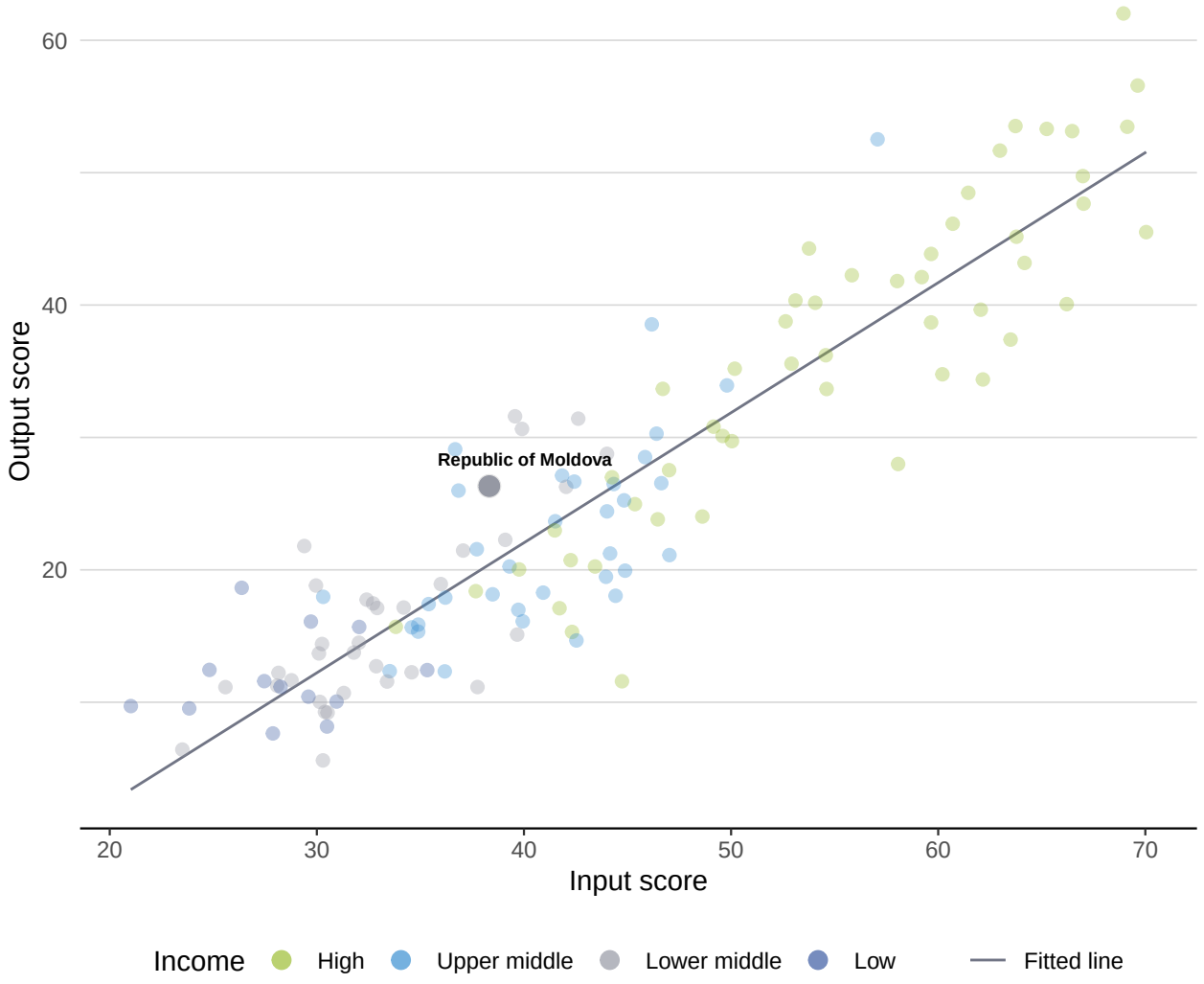


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

The Republic of Moldova produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance



BENCHMARKING AGAINST OTHER LOWER MIDDLE-INCOME GROUP ECONOMIES AND EUROPE

The seven GII pillar scores for the Republic of Moldova

Lower middle-income group economies

The Republic of Moldova performs above the lower middle-income group average in all GII pillars.

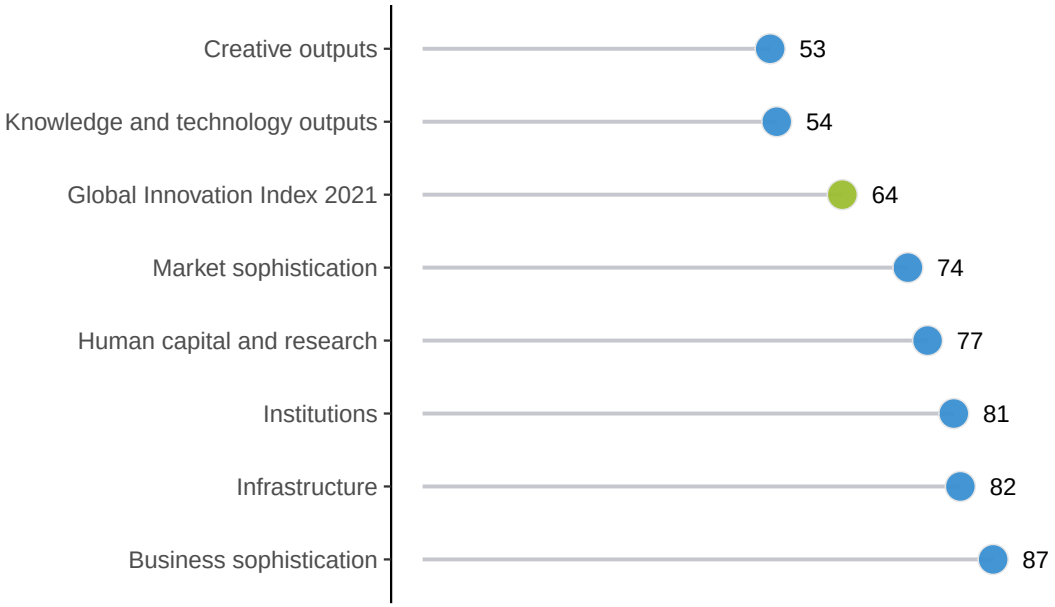
Europe

The Republic of Moldova performs below the regional average in all GII pillars.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

The Republic of Moldova performs best in Creative outputs and its weakest performance is in Business sophistication.

The seven GII pillar ranks for the Republic of Moldova



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 the Republic of Moldova in the GII 2021.

Strengths and weaknesses for the Republic of Moldova

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.3.1	Ease of starting a business	12	2.3.3	Global corporate R&D investors, top 3, mn US$	41
2.1.1	Expenditure on education, % GDP	13	2.3.4	QS university ranking, top 3	74
2.1.2	Government funding/pupil, secondary, % GDP/cap	18	3.2.2	Logistics performance	108
2.1.5	Pupil-teacher ratio, secondary	31	3.3.1	GDP/unit of energy use	107
6.1.1	Patents by origin/bn PPP$ GDP	31	4.3.3	Domestic market scale, bn PPP$	116
6.1.3	Utility models by origin/bn PPP$ GDP	1	5.1.3	GERD performed by business, % GDP	76
6.3.4	ICT services exports, % total trade	15	5.2	Innovation linkages	119
7.1.1	Trademarks by origin/bn PPP$ GDP	14	5.2.1	University-industry R&D collaboration	116
7.1.3	Industrial designs by origin/bn PPP$ GDP	9	5.2.2	State of cluster development and depth	126
7.3.4	Mobile app creation/bn PPP$ GDP	20	7.1.2	Global brand value, top 5,000, % GDP	80
			7.2.2	National feature films/mn pop. 15–69	101

Republic of Moldova

GII 2021 rank
64

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
54	80	Lower middle	EUR	4.0	34.9	13,253	59

		Score/ Value	Rank	
Institutions		**59.8**	**81**	
1.1	**Political environment**	**49.5**	**92**	
1.1.1	Political and operational stability*	64.3	80	
1.1.2	Government effectiveness*	42.1	93	
1.2	**Regulatory environment**	**54.6**	**95**	
1.2.1	Regulatory quality*	43.8	70	◆
1.2.2	Rule of law*	36.9	84	
1.2.3	Cost of redundancy dismissal	23.7	101	
1.3	**Business environment**	**75.2**	**49**	◆
1.3.1	Ease of starting a business*	95.7	12	● ◆
1.3.2	Ease of resolving insolvency*	54.8	62	
Human capital and research		**28.8**	**77**	
2.1	**Education**	**51.7**	**63**	
2.1.1	Expenditure on education, % GDP	6.1	13	● ◆
2.1.2	Government funding/pupil, secondary, % GDP/cap	24.2	18	●
2.1.3	School life expectancy, years	11.4	96	
2.1.4	PISA scales in reading, maths and science	424.4	51	
2.1.5	Pupil-teacher ratio, secondary	10.3	31	● ◆
2.2	**Tertiary education**	**31.5**	**70**	
2.2.1	Tertiary enrolment, % gross	39.2	75	
2.2.2	Graduates in science and engineering, %	24.8	40	
2.2.3	Tertiary inbound mobility, %	5.6	41	◆
2.3	**Research and development (R&D)**	**3.2**	**84**	
2.3.1	Researchers, FTE/mn pop.	696.1	59	
2.3.2	Gross expenditure on R&D, % GDP	0.3	87	
2.3.3	Global corporate R&D investors, top 3, mn US$	0.0	41	○ ◇
2.3.4	QS university ranking, top 3*	0.0	74	○ ◇
Infrastructure		**36.5**	**82**	◆
3.1	**Information and communication technologies (ICTs)**	**68.0**	**62**	◆
3.1.1	ICT access*	66.4	68	◆
3.1.2	ICT use*	54.2	73	◆
3.1.3	Government's online service*	75.3	52	◆
3.1.4	E-participation*	76.2	55	◆
3.2	**General infrastructure**	**22.2**	**95**	
3.2.1	Electricity output, GWh/mn pop.	1,520.3	90	
3.2.2	Logistics performance*	19.0	108	○
3.2.3	Gross capital formation, % GDP	25.5	41	
3.3	**Ecological sustainability**	**19.3**	**105**	
3.3.1	GDP/unit of energy use	6.0	107	○
3.3.2	Environmental performance*	44.4	76	◆
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.3	97	
Market sophistication		**44.9**	**74**	
4.1	**Credit**	**33.6**	**94**	
4.1.1	Ease of getting credit*	70.0	44	
4.1.2	Domestic credit to private sector, % GDP	24.8	105	
4.1.3	Microfinance gross loans, % GDP	0.7	30	
4.2	**Investment**	**39.1**	**[38]**	
4.2.1	Ease of protecting minority investors*	68.0	44	
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital investors, deals/bn PPP$ GDP	n/a	n/a	
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	42	
4.3	**Trade, diversification, and market scale**	**61.8**	**86**	
4.3.1	Applied tariff rate, weighted avg., %	3.5	71	
4.3.2	Domestic industry diversification	80.1	78	
4.3.3	Domestic market scale, bn PPP$	34.9	116	○

		Score/ Value	Rank	
Business sophistication		**21.7**	**87**	
5.1	**Knowledge workers**	**30.5**	**67**	
5.1.1	Knowledge-intensive employment, %	31.1	46	◆
5.1.2	Firms offering formal training, %	38.1	33	
5.1.3	GERD performed by business, % GDP	0.0	76	○
5.1.4	GERD financed by business, %	15.5	72	
5.1.5	Females employed w/advanced degrees, %	16.4	42	◆
5.2	**Innovation linkages**	**13.0**	**119**	○
5.2.1	University-industry R&D collaboration†	28.7	116	○
5.2.2	State of cluster development and depth†	26.1	126	○ ◇
5.2.3	GERD financed by abroad, % GDP	0.0	75	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	n/a	n/a	
5.2.5	Patent families/bn PPP$ GDP	0.2	45	◆
5.3	**Knowledge absorption**	**21.6**	**82**	
5.3.1	Intellectual property payments, % total trade	0.5	66	
5.3.2	High-tech imports, % total trade	7.6	67	
5.3.3	ICT services imports, % total trade	1.9	35	◆
5.3.4	FDI net inflows, % GDP	2.8	60	
5.3.5	Research talent, % in businesses	6.2	69	
Knowledge and technology outputs		**24.2**	**54**	◆
6.1	**Knowledge creation**	**30.2**	**34**	◆
6.1.1	Patents by origin/bn PPP$ GDP	2.4	31	● ◆
6.1.2	PCT patents by origin/bn PPP$ GDP	0.1	59	◆
6.1.3	Utility models by origin/bn PPP$ GDP	3.8	1	● ◆
6.1.4	Scientific and technical articles/bn PPP$ GDP	7.4	98	
6.1.5	Citable documents H-index	6.0	96	
6.2	**Knowledge impact**	**19.9**	**104**	
6.2.1	Labor productivity growth, %	–1.1	84	
6.2.2	New businesses/th pop. 15–64	1.9	59	
6.2.3	Software spending, % GDP	0.1	87	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	2.6	81	
6.2.5	High-tech manufacturing, %	16.2	70	
6.3	**Knowledge diffusion**	**22.4**	**51**	
6.3.1	Intellectual property receipts, % total trade	0.1	63	
6.3.2	Production and export complexity	39.7	70	
6.3.3	High-tech exports, % total trade	0.9	74	
6.3.4	ICT services exports, % total trade	5.0	15	● ◆
Creative outputs		**28.5**	**53**	◆
7.1	**Intangible assets**	**43.3**	**34**	◆
7.1.1	Trademarks by origin/bn PPP$ GDP	87.8	14	● ◆
7.1.2	Global brand value, top 5,000, % GDP	0.0	80	○ ◇
7.1.3	Industrial designs by origin/bn PPP$ GDP	12.5	9	● ◆
7.1.4	ICTs and organizational model creation†	48.3	87	
7.2	**Creative goods and services**	**8.2**	**88**	
7.2.1	Cultural and creative services exports, % total trade	0.9	32	◆
7.2.2	National feature films/mn pop. 15–69	0.3	101	○
7.2.3	Entertainment and media market/th pop. 15–69	n/a	n/a	
7.2.4	Printing and other media, % manufacturing	0.7	74	
7.2.5	Creative goods exports, % total trade	0.1	97	
7.3	**Online creativity**	**19.1**	**60**	◆
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	2.1	75	◆
7.3.2	Country-code TLDs/th pop. 15–69	2.3	66	◆
7.3.3	Wikipedia edits/mn pop. 15–69	45.2	75	◆
7.3.4	Mobile app creation/bn PPP$ GDP	27.4	20	● ◆

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 the Republic of Moldova.

Missing data for the Republic of Moldova

Code	Indicator name	Economy year	Model year	Source
4.2.2	Market capitalization, % GDP	n/a	2019	World Federation of Exchanges
4.2.3	Venture capital investors, deals/bn PPP$ GDP	n/a	2020	Refinitiv Eikon
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	n/a	2020	Refinitiv
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2020	PwC

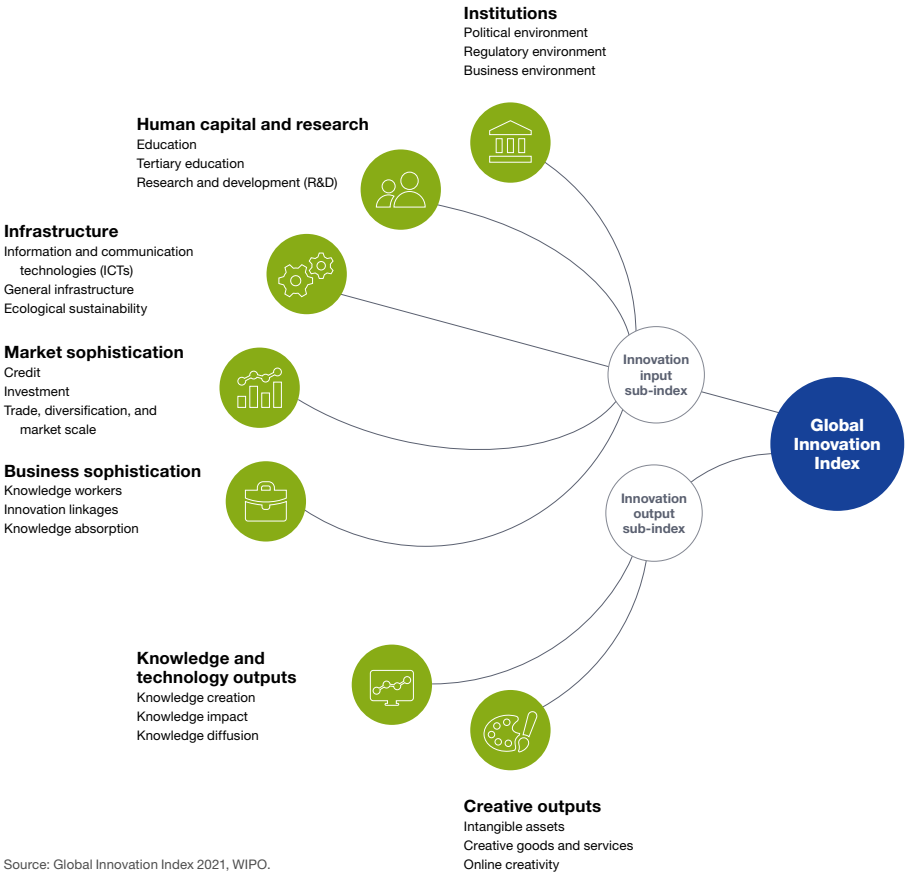
Outdated data for the Republic of Moldova

Code	Indicator name	Economy year	Model year	Source
2.3.1	Researchers, FTE/mn pop.	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.3.1	Applied tariff rate, weighted avg., %	2016	2019	World Bank
5.1.3	GERD performed by business, % GDP	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.2.1	University-industry R&D collaboration	2019	2020	World Economic Forum
5.2.2	State of cluster development and depth	2019	2020	World Economic Forum
5.3.5	Research talent, % in businesses	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
7.2.2	National feature films/mn pop. 15–69	2015	2017	UNESCO Institute for Statistics

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 2021, WIPO.

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.