



REPUBLIC OF MOLDOVA

56th The Republic of Moldova ranks 56th among the 132 economies featured in the GII 2022.

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 2022 is between ranks 52 and 58.

Rankings for the Republic of Moldova (2020–2022)

GIIYR	GII	Innovation inputs	Innovation outputs
2020	59	75	48
2021	64	80	54
2022	56	78	46

- The Republic of Moldova performs better in innovation outputs than innovation inputs in 2022.
- This year the Republic of Moldova ranks 78th in innovation inputs, higher than last year but lower than 2020.
- As for innovation outputs, the Republic of Moldova ranks 46th. This position is higher than both 2021 and 2020.

11th The Republic of Moldova ranks 11th among the 36 upper-middle-income group economies.

33rd The Republic of Moldova ranks 33rd among the 39 economies in Europe.

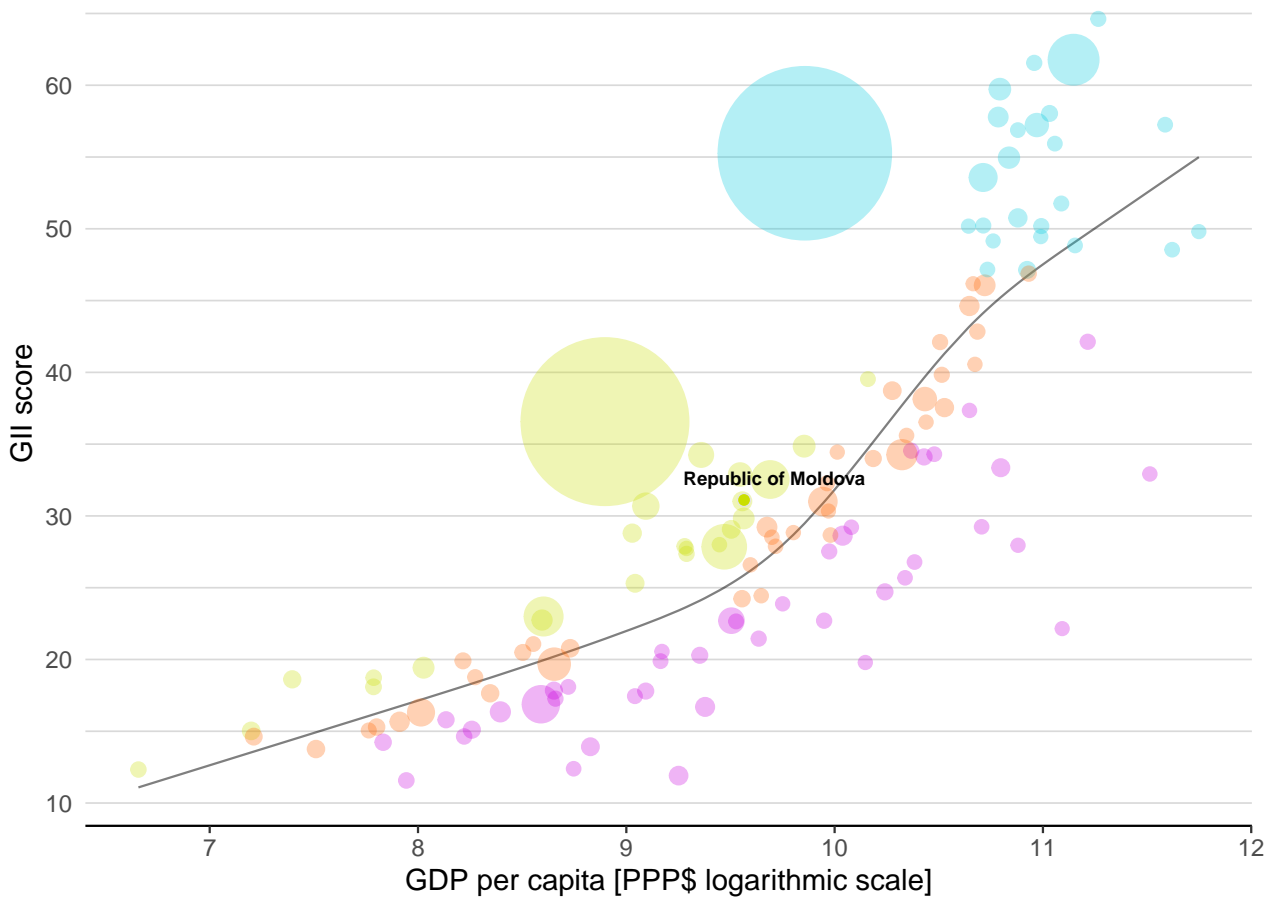


EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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



- Innovation leader
- Performing at expectations for level of development
- Performing above expectations for level of development
- Performing below expectations for level of development

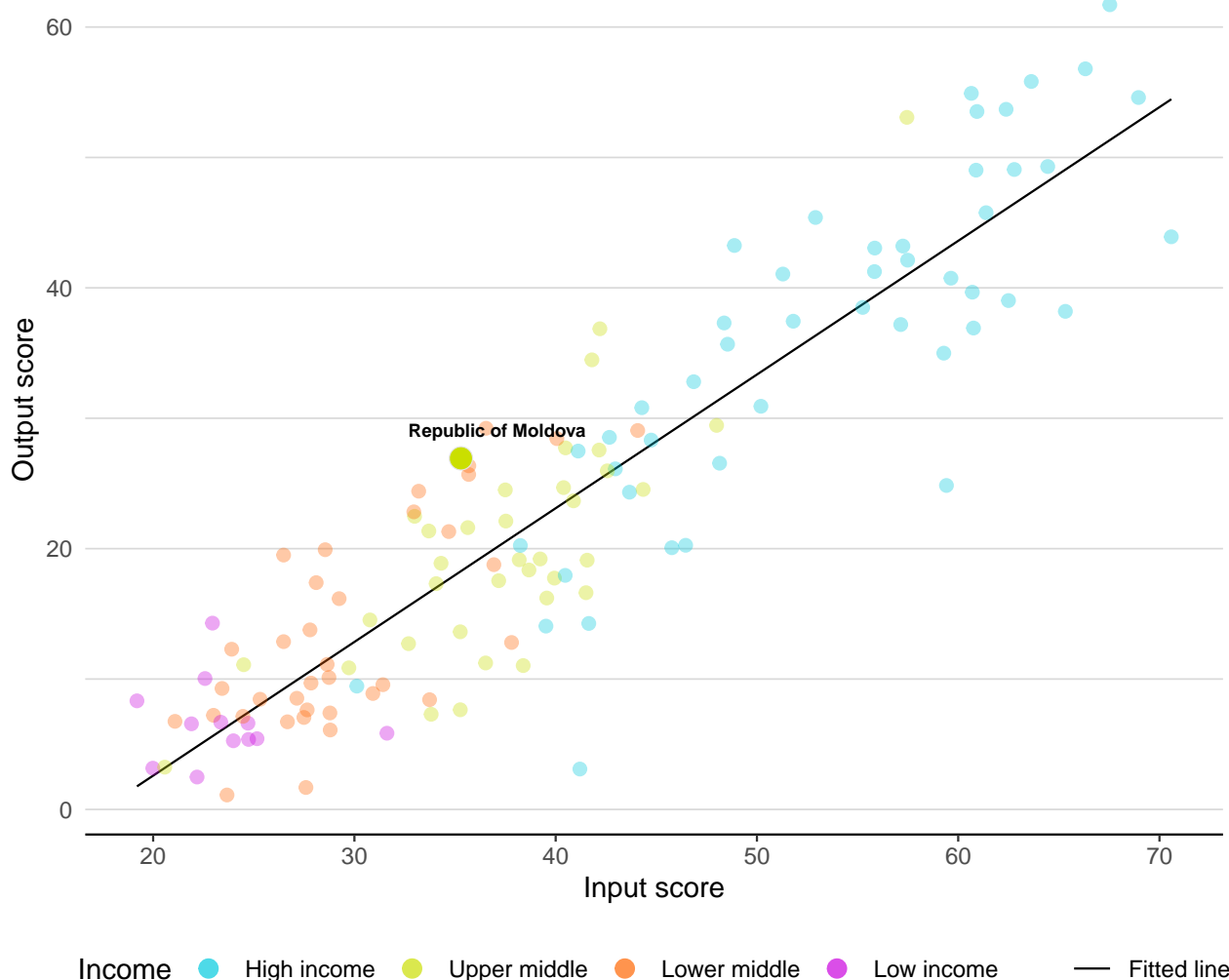


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

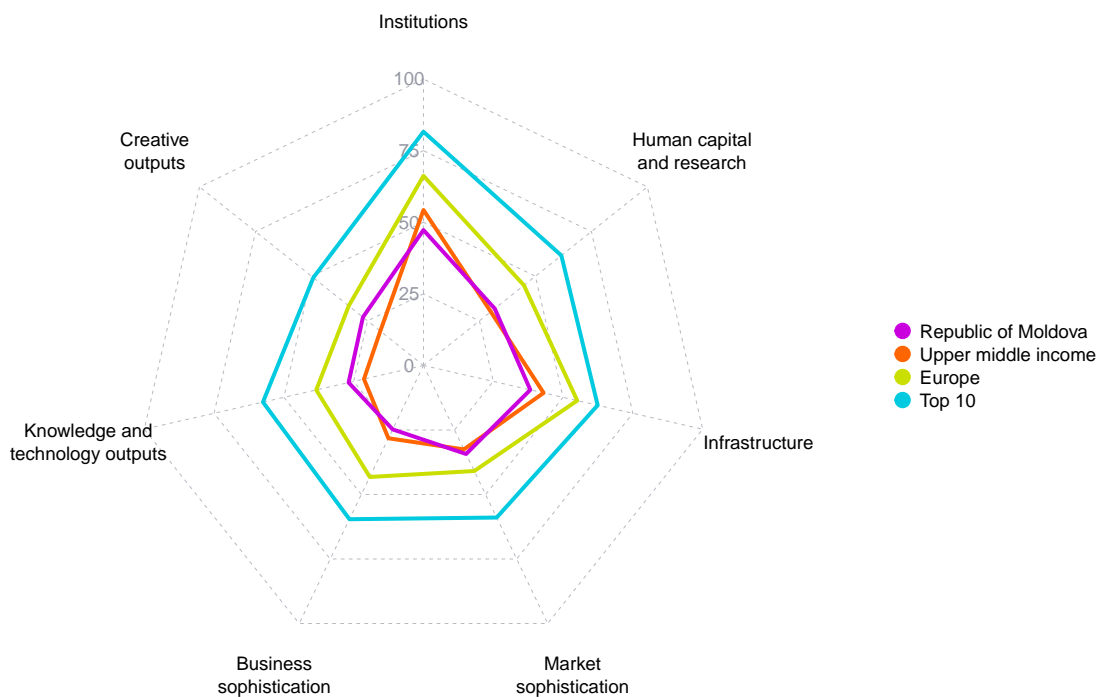
Innovation input to output performance





BENCHMARKING AGAINST OTHER UPPER MIDDLE-INCOME GROUP ECONOMIES AND EUROPE

The seven GII pillar scores for the Republic of Moldova



Upper-middle-income group economies

The Republic of Moldova performs above the upper-middle-income group average in four pillars, namely: Human capital and research; Market sophistication; Knowledge and technology outputs; and, Creative outputs.

Europe

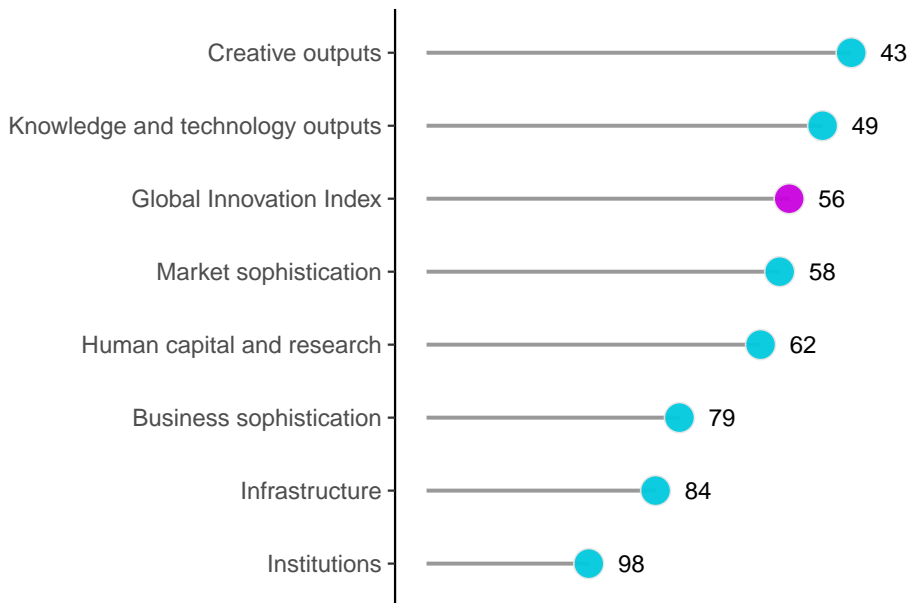
The Republic of Moldova performs below the regional average in all GII pillars.



OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 AREAS

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

The seven GII pillar ranks for the Republic of Moldova



Note: The highest possible ranking in each pillar is 1.

The full WIPO Intellectual Property Statistics profile for the Republic of Moldova can be found at:

https://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=MD.



INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the indicator strengths and weaknesses of the Republic of Moldova in the GII 2022.



Strengths and weaknesses for the Republic of Moldova

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.1.1	Expenditure on education, % GDP	13	1.3.1	Policies for doing business	107
2.1.2	Government funding/pupil, secondary, % GDP/cap	23	2.3.3	Global corporate R&D investors, top 3, mn USD	38
4.1.3	Loans from microfinance institutions, % GDP	5	2.3.4	QS university ranking, top 3	72
4.3.1	Applied tariff rate, weighted avg., %	14	3.2.2	Logistics performance	106
6.1.3	Utility models by origin/bn PPP\$ GDP	1	4.3.3	Domestic market scale, bn PPP\$	118
6.2.1	Labor productivity growth, %	19	5.1.3	GERD performed by business, % GDP	74
6.3.4	ICT services exports, % total trade	13	5.2.1	University-industry R&D collaboration	101
7.1.2	Trademarks by origin/bn PPP\$ GDP	8	5.2.2	State of cluster development and depth	114
7.1.4	Industrial designs by origin/bn PPP\$ GDP	13	5.3.5	Research talent, % in businesses	67
7.3.4	Mobile app creation/bn PPP\$ GDP	22	7.1.3	Global brand value, top 5,000, % GDP	77

Republic of Moldova

56

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
46	78	Upper middle	EUR	4.0	36.9	14,258

	Score/Value	Rank		Score/Value	Rank
 Institutions	47.3	98	 Business sophistication	24.8	79
1.1 Political environment	52.7	92	5.1 Knowledge workers	32.4	63
1.1.1 Political and operational stability*	65.5	74	5.1.1 Knowledge-intensive employment, %	31.3	48
1.1.2 Government effectiveness*	39.9	95	5.1.2 Firms offering formal training, %	38.1	37
1.2 Regulatory environment	54.8	95	5.1.3 GERD performed by business, % GDP	⊙	0.0 74 ○
1.2.1 Regulatory quality*	46.0	71	5.1.4 GERD financed by business, %	⊙	15.5 71
1.2.2 Rule of law*	35.4	87	5.1.5 Females employed w/advanced degrees, %	15.4	48
1.2.3 Cost of redundancy dismissal	23.7	102	5.2 Innovation linkages	16.3	116 ○
1.3 Business environment	34.4	[97]	5.2.1 University-industry R&D collaboration†	35.4	101 ○
1.3.1 Policies for doing business†	34.4	107 ○	5.2.2 State of cluster development and depth†	35.5	114 ○ ◇
1.3.2 Entrepreneurship policies and culture*	n/a	n/a	5.2.3 GERD financed by abroad, % GDP	⊙	0.0 71
Human capital and research	31.8	62	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	78
2.1 Education	57.1	51	5.2.5 Patent families/bn PPP\$ GDP	0.1	58
2.1.1 Expenditure on education, % GDP	6.4	13 ● ◆	5.3 Knowledge absorption	25.6	88
2.1.2 Government funding/pupil, secondary, % GDP/cap	24.8	23 ●	5.3.1 Intellectual property payments, % total trade	0.6	66
2.1.3 School life expectancy, years	14.4	64	5.3.2 High-tech imports, % total trade	8.8	57
2.1.4 PISA scales in reading, maths and science	424.4	51	5.3.3 ICT services imports, % total trade	1.8	47
2.1.5 Pupil-teacher ratio, secondary	10.4	33	5.3.4 FDI net inflows, % GDP	2.7	53
2.2 Tertiary education	36.3	45	5.3.5 Research talent, % in businesses	⊙	6.2 67 ○
2.2.1 Tertiary enrolment, % gross	58.0	54	Knowledge and technology outputs	26.8	49
2.2.2 Graduates in science and engineering, %	25.4	38	6.1 Knowledge creation	27.1	33 ◆
2.2.3 Tertiary inbound mobility, %	6.6	39	6.1.1 Patents by origin/bn PPP\$ GDP	2.5	30
2.3 Research and development (R&D)	2.2	86	6.1.2 PCT patents by origin/bn PPP\$ GDP	0.1	75
2.3.1 Researchers, FTE/mn pop.	788.6	57	6.1.3 Utility models by origin/bn PPP\$ GDP	4.5	1 ● ◆
2.3.2 Gross expenditure on R&D, % GDP	0.2	85	6.1.4 Scientific and technical articles/bn PPP\$ GDP	7.3	103
2.3.3 Global corporate R&D investors, top 3, mn USD	0.0	38 ○ ◇	6.1.5 Citable documents H-index	5.1	95
2.3.4 QS university ranking, top 3*	0.0	72 ○ ◇	6.2 Knowledge impact	28.0	64
Infrastructure	38.3	84	6.2.1 Labor productivity growth, %	2.9	19 ●
3.1 Information and communication technologies (ICTs)	72.2	68	6.2.2 New businesses/th pop. 15-64	n/a	n/a
3.1.1 ICT access*	79.2	87	6.2.3 Software spending, % GDP	0.1	87
3.1.2 ICT use*	58.2	78	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	2.6	78
3.1.3 Government's online service*	75.3	52	6.2.5 High-tech manufacturing, %	19.9	64
3.1.4 E-participation*	76.2	55	6.3 Knowledge diffusion	25.4	57
3.2 General infrastructure	21.3	102	6.3.1 Intellectual property receipts, % total trade	0.0	74
3.2.1 Electricity output, GWh/mn pop.	2,358.8	74	6.3.2 Production and export complexity	38.0	66
3.2.2 Logistics performance*	19.1	106 ○ ◇	6.3.3 High-tech exports, % total trade	0.8	81
3.2.3 Gross capital formation, % GDP	24.3	58	6.3.4 ICT services exports, % total trade	6.7	13 ● ◆
3.3 Ecological sustainability	21.3	88	Creative outputs	27.0	43
3.3.1 GDP/unit of energy use	7.7	98	7.1 Intangible assets	44.8	29
3.3.2 Environmental performance*	42.7	62	7.1.1 Intangible asset intensity, top 15, %	n/a	n/a
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	0.4	87	7.1.2 Trademarks by origin/bn PPP\$ GDP	114.8	8 ● ◆
Market sophistication	34.3	58	7.1.3 Global brand value, top 5,000, % GDP	0.0	77 ○ ◇
4.1 Credit	38.6	33 ◆	7.1.4 Industrial designs by origin/bn PPP\$ GDP	8.0	13 ● ◆
4.1.1 Finance for startups and scaleups*	n/a	n/a	7.2 Creative goods and services	12.1	[76]
4.1.2 Domestic credit to private sector, % GDP	27.8	100	7.2.1 Cultural and creative services exports, % total trade	0.9	34
4.1.3 Loans from microfinance institutions, % GDP	4.7	5 ● ◆	7.2.2 National feature films/mn pop. 15-69	n/a	n/a
4.2 Investment	8.1	[58]	7.2.3 Entertainment and media market/th pop. 15-69	n/a	n/a
4.2.1 Market capitalization, % GDP	n/a	n/a	7.2.4 Printing and other media, % manufacturing	0.7	74
4.2.2 Venture capital investors, deals/bn PPP\$ GDP	n/a	n/a	7.2.5 Creative goods exports, % total trade	0.1	98
4.2.3 Venture capital recipients, deals/bn PPP\$ GDP	⊙	0.0 52	7.3 Online creativity	6.6	54
4.2.4 Venture capital received, value, % GDP	⊙	0.0 54	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	2.0	76
4.3 Trade, diversification, and market scale	56.2	68	7.3.2 Country-code TLDs/th pop. 15-69	2.9	64
4.3.1 Applied tariff rate, weighted avg., %	1.3	14 ●	7.3.3 GitHub commit pushes received/mn pop. 15-69	5.5	53
4.3.2 Domestic industry diversification	76.1	75	7.3.4 Mobile app creation/bn PPP\$ GDP	15.8	22 ● ◆
4.3.3 Domestic market scale, bn PPP\$	36.9	118 ○			

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/global_innovation_index/en/2022. 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 indicators 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
1.3.2	Entrepreneurship policies and culture	n/a	2021	Global Entrepreneurship Monitor
4.1.1	Finance for startups and scaleups	n/a	2021	Global Entrepreneurship Monitor
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges
4.2.2	Venture capital investors, deals/bn PPP\$ GDP	n/a	2021	Refinitiv
6.2.2	New businesses/th pop. 15–64	n/a	2020	World Bank, Entrepreneurship Database
7.1.1	Intangible asset intensity, top 15, %	n/a	2021	Brand Finance
7.2.2	National feature films/mn pop. 15–69	n/a	2019	OMDIA
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2021	PwC, GEMO

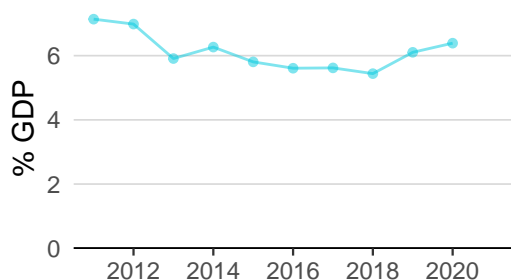
Outdated data for the Republic of Moldova

Code	Indicator name	Economy year	Model year	Source
4.2.3	Venture capital recipients, deals/bn PPP\$ GDP	2020	2021	Refinitiv
4.2.4	Venture capital received, value, % GDP	2020	2021	Refinitiv
5.1.3	GERD performed by business, % GDP	2018	2020	UNESCO Institute for Statistics
5.1.4	GERD financed by business, %	2018	2019	UNESCO Institute for Statistics
5.2.3	GERD financed by abroad, % GDP	2018	2019	UNESCO Institute for Statistics
5.3.5	Research talent, % in businesses	2018	2020	UNESCO Institute for Statistics

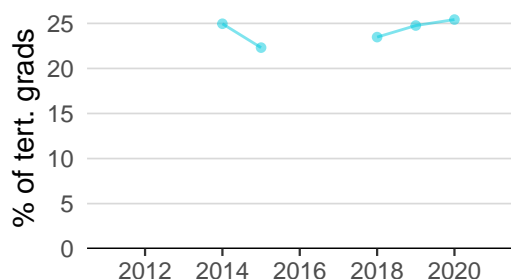
INNOVATION SYSTEM FOR THE REPUBLIC OF MOLDOVA

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

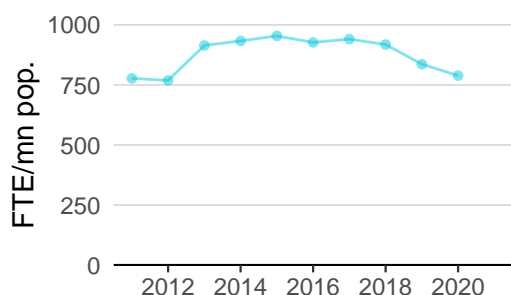
Innovation inputs



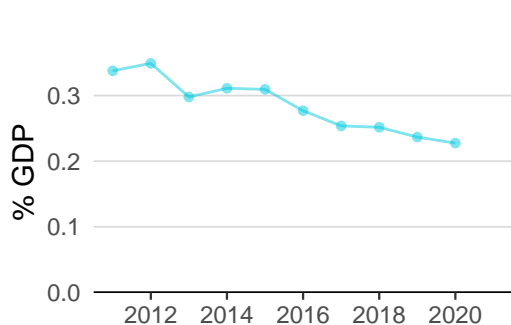
2.1.1 Expenditure on education was equal to 6.4% GDP in 2020—up by 5 percentage points from the year prior—and equivalent to an indicator rank of 13.



2.2.2 Graduates in science and engineering was equal to 25.4% of tert. grads in 2020—up by 3 percentage points from the year prior—and equivalent to an indicator rank of 38.



2.3.1 Researchers was equal to 788.6 FTE/mn pop. in 2020—down by 6 percentage points from the year prior—and equivalent to an indicator rank of 57.



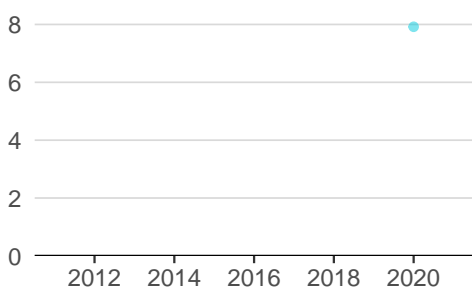
2.3.2 Gross expenditure on R&D was equal to 0.2% GDP in 2020—down by 4 percentage points from the year prior—and equivalent to an indicator rank of 85.



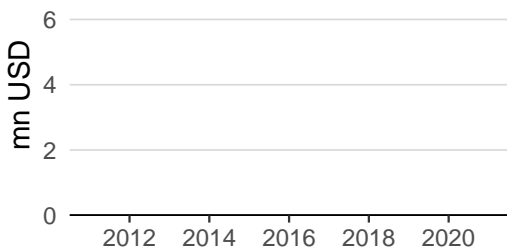
2.3.4 QS university ranking was equal to 0.0 in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 72.



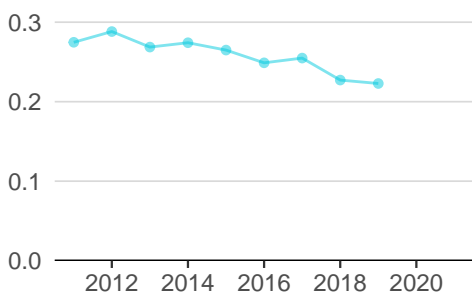
3.1.1 ICT access was equal to 7.9 in 2020 and equivalent to an indicator rank of 87.



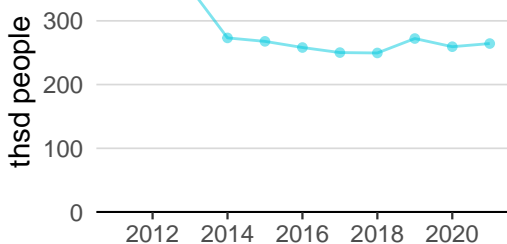
4.2.4 Venture capital received was equal to 7.0 mn USD in 2020 and equivalent to an indicator rank of 54.



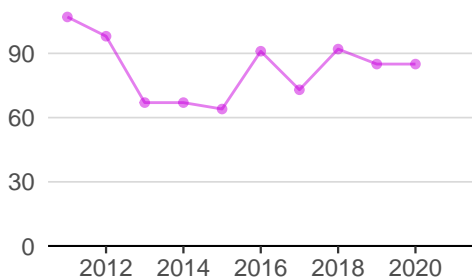
4.3.2 Domestic industry diversification was equal to 0.2 in 2019—down by 2 percentage points from the year prior—and equivalent to an indicator rank of 75.



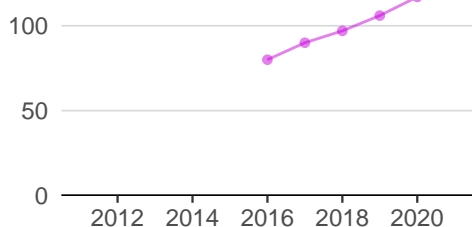
5.1.1 Knowledge-intensive employment was equal to 264.3 thsd people in 2021—up by 2 percentage points from the year prior—and equivalent to an indicator rank of 48.



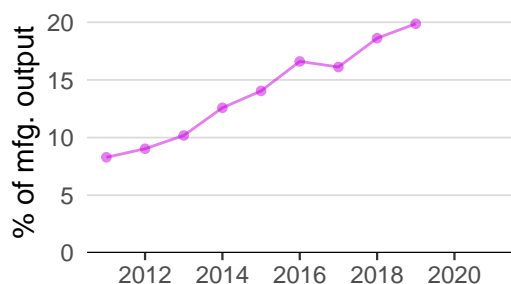
Innovation outputs



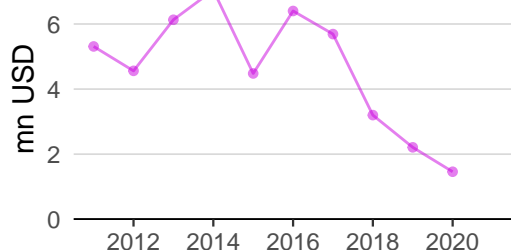
6.1.1 Patents by origin was equal to 85.0 in 2020—effectively unchanged from the year prior—and equivalent to an indicator rank of 30.



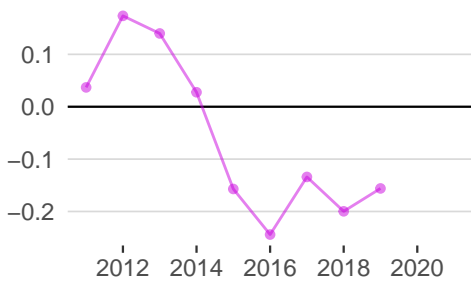
6.1.5 Citable documents H-index was equal to 135.0 in 2021—up by 15 percentage points from the year prior—and equivalent to an indicator rank of 95.



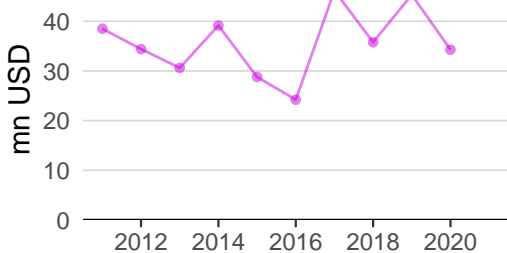
6.2.5 High-tech manufacturing was equal to 19.9% of mfg. output in 2019—up by 7 percentage points from the year prior—and equivalent to an indicator rank of 64.



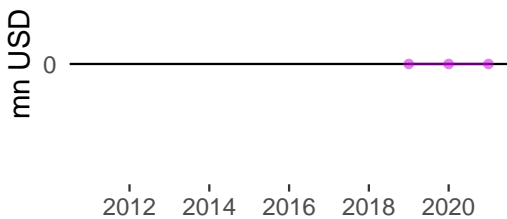
6.3.1 Intellectual property receipts was equal to 1.5 mn USD in 2020—down by 34 percentage points from the year prior—and equivalent to an indicator rank of 74.



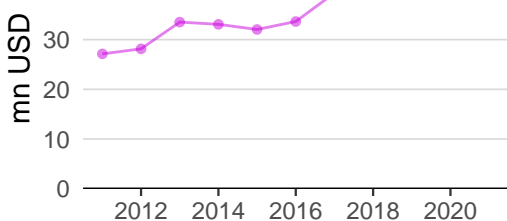
6.3.2 Production and export complexity was equal to -0.2 in 2019—up by 22 percentage points from the year prior—and equivalent to an indicator rank of 66.



6.3.3 High-tech exports was equal to 34.3 mn USD in 2020—down by 24 percentage points from the year prior—and equivalent to an indicator rank of 81.



7.1.3 Global brand value was equal to 0.0 mn USD in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 77.



7.2.1 Cultural and creative services exports was equal to 40.6 mn USD in 2020—down by 12 percentage points from the year prior—and equivalent to an indicator rank of 34.



INNOVATION TOP PERFORMERS FOR THE REPUBLIC OF MOLDOVA

2.3.3 Global corporate R&D investors

Firm	Industry	R&D	R&D Growth	R&D Intensity	Rank
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No observations

Source: European Commission's Joint Research Centre (<https://iri.jrc.ec.europa.eu/scoreboard/2021-eu-industrial-rd-investment-scoreboard>).

2.3.4 QS university ranking

University	Score	Rank
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No observations

Source: QS Quacquarelli Symonds Ltd (<https://www.topuniversities.com/university-rankings/world-university-rankings/2022>).

7.1.1 Intangible asset intensity, top 15

Firm	Rank
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No observations

Source: Brand Finance (<https://brandirectory.com/reports/gift-2021>).

7.1.3 Global brand value, top 5,000

Brand	Industry	Rank
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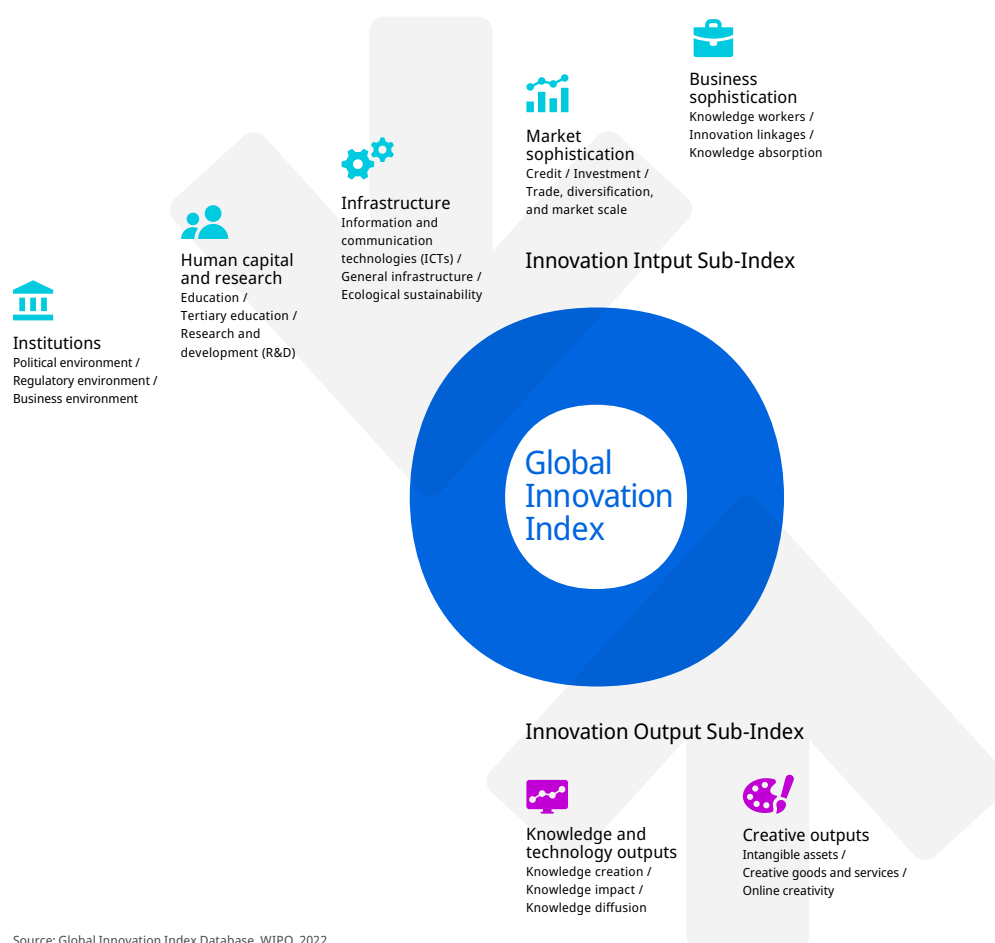
No observations

Source: Brand Finance (<https://brandirectory.com>).

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.