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.

Republic of Moldova ranking in the Global Innovation Index 2023

> Republic of Moldova ranks 60th among the 132 economies featured in the GII 2023.

> Republic of Moldova ranks 13th among the 33 upper-middle-income group economies.

> Republic of Moldova ranks 35th among the 39 economies in Europe.

**Republic of Moldova GII Ranking (2020-2023)**

The table shows the rankings of Republic of Moldova 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 Republic of Moldova in the GII 2023 is between ranks 53 and 65.

<table>
<thead>
<tr>
<th>Year</th>
<th>GII Position</th>
<th>Innovation Inputs</th>
<th>Innovation Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>59th</td>
<td>75th</td>
<td>48th</td>
</tr>
<tr>
<td>2021</td>
<td>64th</td>
<td>80th</td>
<td>54th</td>
</tr>
<tr>
<td>2022</td>
<td>56th</td>
<td>78th</td>
<td>46th</td>
</tr>
<tr>
<td>2023</td>
<td>60th</td>
<td>81st</td>
<td>50th</td>
</tr>
</tbody>
</table>

Republic of Moldova performs better in innovation outputs than innovation inputs in 2023.

This year Republic of Moldova ranks 81st in innovation inputs. This position is lower than last year.

Republic of Moldova ranks 50th in innovation outputs. This position is lower 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, Republic of Moldova is performing above expectations for its level of development.

→ Innovation overperformers relative to their economic development

↑ GII Score

GDP per capita, PPP logarithmic scale (thousands of $)
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.

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

Relationship between innovation inputs and outputs

Output score

Input score

High income
Upper middle
Lower middle
Low income
Fitted line
Overview of Republic of Moldova’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 Republic of Moldova are those that rank above the GII (shown in blue) and the weakest are those that rank below.

*Knowledge and technology outputs

**Highest rankings**
- 42nd Creative outputs
- 60th 1 pillar and the Global Innovation Index
- 67th Human capital and research
- 75th Infrastructure
- 78th Market sophistication

**Lowest rankings**
- 96th Institutions
- 101st Business sophistication

The full WIPO Intellectual Property Statistics profile for Republic of Moldova can be found on this link.
Benchmark of Republic of Moldova against other country groupings for each of the seven areas of the GII Index

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

**Upper-Middle-Income economies**
Republic of Moldova performs below the upper-middle-income group average in Business sophistication, Market sophistication, Infrastructure, Institutions.

**Europe**
Republic of Moldova performs below the regional average in all the pillars.

### Knowledge and technology outputs
- Top 10 | Score: 58.96
- Europe | Score: 38.80
- Republic of Moldova | Score: 23.81
- Upper middle income | Score: 22.36

### Creative outputs
- Top 10 | 56.09
- Europe | 39.87
- Republic of Moldova | 33.16
- Upper middle income | 23.16

### Business sophistication
- Top 10 | 64.39
- Europe | 44.61
- Upper middle income | 29.27
- Republic of Moldova | 21.25

### Market sophistication
- Top 10 | 61.93
- Europe | 43.65
- Upper middle income | 35.45
- Republic of Moldova | 32.44

### Human capital and research
- Top 10 | 60.28
- Europe | 44.05
- Republic of Moldova | 30.52
- Upper middle income | 29.68

### Infrastructure
- Top 10 | 62.83
- Europe | 54.69
- Upper middle income | 40.40
- Republic of Moldova | 37.30

### Institutions
- Top 10 | 79.85
- Europe | 61.69
- Upper middle income | 47.71
- Republic of Moldova | 39.42
## Innovation strengths and weaknesses in Republic of Moldova

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

> Republic of Moldova’s main innovation strengths are **Utility models by origin/bn PPP$ GDP** (rank 5), **Industrial designs by origin/bn PPP$ GDP** (rank 6) and **Loans from microfinance institutions, % GDP** (rank 7).

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rank</strong></td>
<td><strong>Code</strong></td>
</tr>
<tr>
<td>5</td>
<td>6.1.3</td>
</tr>
<tr>
<td>6</td>
<td>7.1.4</td>
</tr>
<tr>
<td>7</td>
<td>4.1.3</td>
</tr>
<tr>
<td>11</td>
<td>7.1.2</td>
</tr>
<tr>
<td>13</td>
<td>6.3.4</td>
</tr>
<tr>
<td>14</td>
<td>7.3.4</td>
</tr>
<tr>
<td>14</td>
<td>4.3.1</td>
</tr>
<tr>
<td>20</td>
<td>2.1.1</td>
</tr>
<tr>
<td>28</td>
<td>6.2.1</td>
</tr>
<tr>
<td>30</td>
<td>3.2.3</td>
</tr>
</tbody>
</table>
Global Innovation Index 2023

→ Republic of Moldova's innovation system

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

→ Innovation inputs in Republic of Moldova

2.1.1 Expenditure on education, % GDP
was equal to 5.83% GDP in 2021, down by 0.59 percentage points from the year prior – and equivalent to an indicator rank of 20.

2.2.2 Graduates in science and engineering, %
was equal to 25.01% of total tertiary graduates in 2021, down by 0.41 percentage points from the year prior – and equivalent to an indicator rank of 45.

2.3.1 Researchers, FTE/mn pop.
was equal to 788.08 FTE/mn pop. in 2021, up by 1.072% from the year prior – and equivalent to an indicator rank of 58.

2.3.2 Gross expenditure on R&D, % GDP
was equal to 0.232% GDP in 2021, up by 0.0032 percentage points from the year prior – and equivalent to an indicator rank of 85.

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 8.94 in 2021, up by 12.88% from the year prior – and equivalent to an indicator rank of 57.
4.2.4 VC received, value, % GDP was equal to 0.00061 % GDP in 2020, equivalent to an indicator rank of 60.

4.3.2 Domestic industry diversification was equal to an index score of 0.218 in 2020, down by 2.31% from the year prior – and equivalent to an indicator rank of 71.

5.1.1 Knowledge-intensive employment, % was equal to 17.71% in 2022, up by 0.38 percentage points from the year prior – and equivalent to an indicator rank of 82.
> Innovation outputs in Republic of Moldova

6.1.1 Patents by origin
was equal to 0.064 Thousands in 2021, down by 24.71% from the year prior – and equivalent to an indicator rank of 43.

6.1.5 Citable documents H-index
was equal to an index value of 143 in 2022, up by 5.93% from the year prior – and equivalent to an indicator rank of 96.

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 0.081% GDP in 2022, down by 0.002 percentage points from the year prior – and equivalent to an indicator rank of 93.

6.2.4 High-tech manufacturing, %
was equal to 18.98% of total manufacturing output in 2020, down by 0.89 percentage points from the year prior – and equivalent to an indicator rank of 64.

6.3.1 Intellectual property receipts, % total trade
was equal to 0.048% total trade in 2021, up by 0.0087 percentage points from the year prior – and equivalent to an indicator rank of 72.
6.3.2 Production and export complexity
was equal to a score of -0.04 in 2020, up by 70.2% from the year prior – and equivalent to an indicator rank of 62.

6.3.3 High-tech exports
was equal to 40,265,485 USD in 2021, up by 17.41% from the year prior – and equivalent to an indicator rank of 83.

7.1.3 Global brand value, top 5,000
was equal to 0 bn USD in 2023 – and equivalent to an indicator rank of 74.

7.2.1 Cultural and creative services exports
was equal to 52,258,000 USD in 2021, up by 29.11% from the year prior – and equivalent to an indicator rank of 38.

7.3.4 Mobile app creation/bn PPP$ GDP
was equal to 1,697,689.63 Apps/bn PPP$ GDP in 2022, up by 119.3% from the year prior – and equivalent to an indicator rank of 14.
Global Innovation Index 2023

Republic of Moldova

Output rank: 50  Input rank: 81  Income: Upper middle  Region: EUR

Population (mn): 3.3  GDP, PPP$ (bn): 41.9  GDP per capita, PPP$: 16,482.6

Business sophistication: 21.3  101

1.1 Knowledge workers: 25.1  77
1.1.1 Knowledge-intensive employment, %: 17.7  82
1.1.2 Firms offering formal training, %: 38.1  38
1.1.3 GERD performed by business, % GDP: 4.0  74
1.1.4 GERD financed by business, %: 15.5  72
1.1.5 Females employed w/advanced degrees, %: 10.9  70
1.2 Innovation linkages: 10.7  116
1.2.1 University-industry R&D collaboration: 25.9  105
1.2.2 State of cluster development: 14.4  121
1.2.3 GERD financed by abroad, % GDP: 0.0  72
1.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP: 0.0  55
1.2.5 Patent families/bn PPP$ GDP: 0.1  91
1.3 Knowledge absorption: 27.9  89
1.3.1 Intellectual property payments, % total trade: 0.7  57
1.3.2 High-tech imports, % total trade: 8.4  61
1.3.3 ICT services imports, % total trade: 1.4  62
1.3.4 FDI net inflows, % GDP: 2.8  54
1.3.5 Research talent, % in businesses: 6.2  67

Knowledge and technology outputs: 23.8  60

6.1 Knowledge creation: 23.1  46
6.1.1 Patents by origin/bn PPP$ GDP: 1.6  43
6.1.2 PCT patents by origin/bn PPP$ GDP: 0.1  62
6.1.3 Utility models by origin/bn PPP$ GDP: 2.9  6
6.1.4 Scientific and technical articles/bn PPP$ GDP: n/a n/a
6.1.5 Citable documents H-index: 5.6  96
6.2 Knowledge impact: 23.7  86
6.2.1 Labor productivity growth, %: 2.2  28
6.2.2 Uncorn, valuation, % GDP: 0.0  48
6.2.3 Software spending, % GDP: 0.1  93
6.2.4 High-tech manufacturing, %: 19.0  64
6.3 Knowledge diffusion: 24.7  58
6.3.1 Intellectual property receipts, % total trade: 0.0  72
6.3.2 Production and export complexity: 51.7  62
6.3.3 High-tech exports, % total trade: 0.7  83
6.3.4 ICT services exports, % total trade: 6.6  13
6.3.5 ISO 9001 quality/bn PPP$ GDP: 2.5  80

Creative outputs: 33.2  42

7.1 Intangible assets: 49.8  27
7.1.1 Intangible asset intensity, top 15%, %: n/a n/a
7.1.2 Trademarks by origin/bn PPP$ GDP: 101.6  11
7.1.3 Global brand value, top 5,000: 0.0  74
7.1.4 Industrial designs by origin/bn PPP$ GDP: 16.7  6
7.2 Creative goods and services: 9.3  70
7.2.1 Cultural and creative services exports, % total trade: 0.9  38
7.2.2 National feature films/mn pop. 15-69: n/a n/a
7.2.3 Entertainment and media market/th pop. 15-69: n/a n/a
7.2.4 Creative goods exports, % total trade: 0.1  102
7.3 Online creativity: 23.8  56
7.3.1 Generic top-level domains (TLDs)/th pop. 15-69: 3.0  71
7.3.2 Country-code TLDs/th pop. 15-69: 3.9  60
7.3.3 Github commits/mn pop. 15-69: 10.9  54
7.3.4 Mobile app creation/bn PPP$ GDP: 77.2  14

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.
### Data availability

The following tables list indicators that are either missing or outdated for Republic of Moldova.

#### Republic of Moldova has missing data for seven indicators and outdated data for nine indicators.

### Missing data for Republic of Moldova

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Economy Year</th>
<th>Model Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.2</td>
<td>Entrepreneurship policies and culture</td>
<td>n/a</td>
<td>2022</td>
<td>Global Entrepreneurship Monitor</td>
</tr>
<tr>
<td>4.1.1</td>
<td>Finance for startups and scaleups</td>
<td>n/a</td>
<td>2022</td>
<td>Global Entrepreneurship Monitor</td>
</tr>
<tr>
<td>4.2.1</td>
<td>Market capitalization, % GDP</td>
<td>n/a</td>
<td>2020</td>
<td>World Federation of Exchanges; World Bank</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Venture capital (VC) investors, deals/bn PPP$ GDP</td>
<td>n/a</td>
<td>2022</td>
<td>Refinitiv; International Monetary Fund</td>
</tr>
<tr>
<td>7.1.1</td>
<td>Intangible asset intensity, top 15, %</td>
<td>n/a</td>
<td>2022</td>
<td>Brand Finance</td>
</tr>
<tr>
<td>7.2.2</td>
<td>National feature films/mn pop. 15-69</td>
<td>n/a</td>
<td>2021</td>
<td>OMDIA; United Nations, World Population Prospects</td>
</tr>
<tr>
<td>7.2.3</td>
<td>Entertainment and media market/th pop. 15-69</td>
<td>n/a</td>
<td>2022</td>
<td>PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund</td>
</tr>
</tbody>
</table>

### Outdated data for Republic of Moldova

<table>
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<tbody>
<tr>
<td>1.3.1</td>
<td>Policies for doing business</td>
<td>2021</td>
<td>2022</td>
<td>World Economic Forum, Executive Opinion Survey (EOS)</td>
</tr>
<tr>
<td>4.2.3</td>
<td>VC recipients, deals/bn PPP$ GDP</td>
<td>2020</td>
<td>2022</td>
<td>Refinitiv; International Monetary Fund</td>
</tr>
<tr>
<td>4.2.4</td>
<td>VC received, value, % GDP</td>
<td>2020</td>
<td>2022</td>
<td>Refinitiv; International Monetary Fund</td>
</tr>
<tr>
<td>5.1.3</td>
<td>GERD performed by business, % GDP</td>
<td>2018</td>
<td>2021</td>
<td>UNESCO Institute for Statistics; Eurostat; OECD; RICYT</td>
</tr>
<tr>
<td>5.1.4</td>
<td>GERD financed by business, %</td>
<td>2018</td>
<td>2020</td>
<td>UNESCO Institute for Statistics; Eurostat; OECD; RICYT</td>
</tr>
<tr>
<td>5.2.1</td>
<td>University-industry R&amp;D collaboration</td>
<td>2021</td>
<td>2022</td>
<td>World Economic Forum, Executive Opinion Survey (EOS)</td>
</tr>
<tr>
<td>5.2.2</td>
<td>State of cluster development</td>
<td>2021</td>
<td>2022</td>
<td>World Economic Forum, Executive Opinion Survey (EOS)</td>
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<td>5.2.3</td>
<td>GERD financed by abroad, % GDP</td>
<td>2018</td>
<td>2020</td>
<td>UNESCO Institute for Statistics; Eurostat; OECD; RICYT</td>
</tr>
<tr>
<td>5.3.5</td>
<td>Research talent, % in businesses</td>
<td>2018</td>
<td>2021</td>
<td>UNESCO Institute for Statistics; Eurostat; OECD; RICYT</td>
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</table>
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.