ROMANIA

Emerging Innovator

Summary innovation index (relative to EU in 2017): **37.4**

Rank: **36**

Change vs 2023: ▼ -1.6 Change vs 2017: ▲ 1.5

Romania is an Emerging Innovator with performance at 34% of the EU average in 2024. Performance is below the average of the Emerging Innovators (48%). Performance is increasing less than the EU (+10%).

Indicator	Performance relative to the EU in 2024	Performance change 2017-2024	Performance change 2023-2024
SUMMARY INNOVATION INDEX	**34.0**	**1.5**	**-1.6**
Human resources	**26.9**	**-4.9**	**3.4**
New doctorate graduates	34.5	-23.2	0.0
Population with tertiary education	0.0	0.0	0.0
Population involved in lifelong learning	48.3	18.3	13.2
Attractive research systems	**37.7**	**24.6**	**1.3**
International scientific co-publications	25.7	15.8	-1.0
Scientific publications among the top 10% most cited	59.6	33.8	3.1
Foreign doctorate students as a % of all doctorate students	14.3	12.8	-0.9
Digitalisation	**92.8**	**36.9**	**5.4**
Broadband penetration	144.4	73.2	9.7
Individuals with above basic overall digital skills	21.3	1.1	1.1
Finance and support	**20.4**	**-6.5**	**-1.7**
R&D expenditure in the public sector	8.2	-18.0	-1.6
Venture capital expenditures	38.5	10.0	-3.2
Direct and indirect government support of business R&D	12.2	-8.9	0.0
Firm investments	**14.1**	**-7.9**	**-3.8**
R&D expenditure in the business sector	16.6	5.2	-0.8
Non-R&D innovation expenditures	14.0	-33.5	-13.6
Innovation expenditures per person employed	11.5	4.5	3.2
Use of information technologies	**28.7**	**10.6**	**5.7**
Enterprises providing ICT training	21.8	21.7	18.5
Employed ICT specialists	35.3	0.0	-6.5
Innovators	**2.7**	**3.1**	**0.4**
SMEs introducing product innovations	5.9	6.3	0.8
SMEs introducing business process innovations	0.0	0.0	0.0
Linkages	**6.9**	**-3.6**	**-2.6**
Innovative SMEs collaborating with others	0.0	-7.0	-3.9
Public-private co-publications	38.6	19.6	-4.1
Job-to-job mobility of HRST	0.0	-11.8	0.0
Intellectual assets	**35.2**	**4.4**	**2.5**
PCT patent applications	22.4	-5.4	1.7
Trademark applications	63.1	19.3	4.5
Design applications	24.6	5.4	2.0
Employment impacts	**9.3**	**-0.6**	**-1.8**
Employment in knowledge-intensive activities	20.2	-1.2	-3.6
Employment in innovative enterprises	0.0	0.0	0.0
Sales impacts	**62.3**	**2.1**	**-5.8**
Exports of medium and high technology products	84.7	0.8	5.7
Knowledge-intensive services exports	56.1	13.0	-2.2
Sales of new-to-market and new-to-firm innovations	36.7	-10.3	-28.8
Environmental sustainability	**47.8**	**-18.5**	**-13.1**
Resource productivity	13.5	1.3	4.2
Air emissions by fine particulates	68.7	7.2	-0.9
Environment-related technologies	50.5	-71.4	-44.9

Emerging Innovators Moderate Innovators Strong Innovators Innovation Leaders

Relative strengths

- Broadband penetration
- Exports of medium and high technology products
- Air emissions by fine particulates

Relative weaknesses

- Population with tertiary education
- SMEs introducing business process innovations
- Innovative SMEs collaborating with others

Strong increases since 2017

- Broadband penetration
- Scientific publications among the top 10% most cited
- Enterprises providing ICT training

Strong decreases since 2017

- Environment-related technologies
- Non-R&D innovation expenditures
- New doctorate graduates

Strong increases since 2023

- Enterprises providing ICT training
- Population involved in lifelong learning
- Broadband penetration

Strong decreases since 2023

- Environment-related technologies
- Sales of new-to-market and new-to-firm innovations
- Non-R&D innovation expenditures

Footnote: *The first data column shows scores relative to the EU in 2024, with colour codes indicating performance levels. The subsequent columns show performance changes over time, with scores relative to the EU in 2017, coloured in purple for positive change and red for negative change. As reference years differ between the first column (2024) and the last two columns (2017), scores cannot be directly compared or subtracted across these columns.*