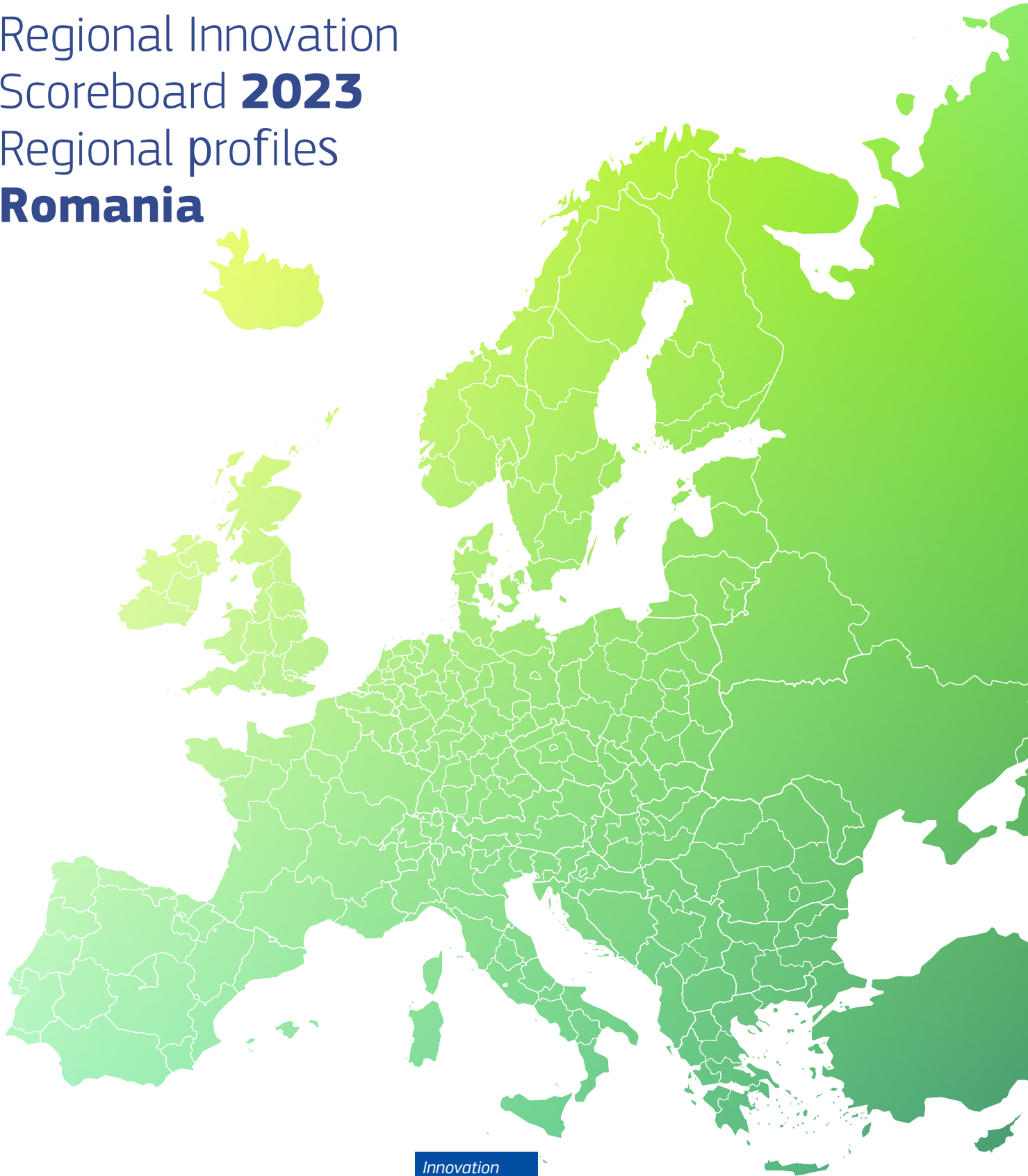




European
Commission

Regional Innovation Scoreboard **2023** Regional profiles **Romania**



Innovation

Regional Innovation Scoreboard 2023 – Regional profiles Romania

European Commission

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Regional Innovation Scoreboard 2023

Regional profiles Romania

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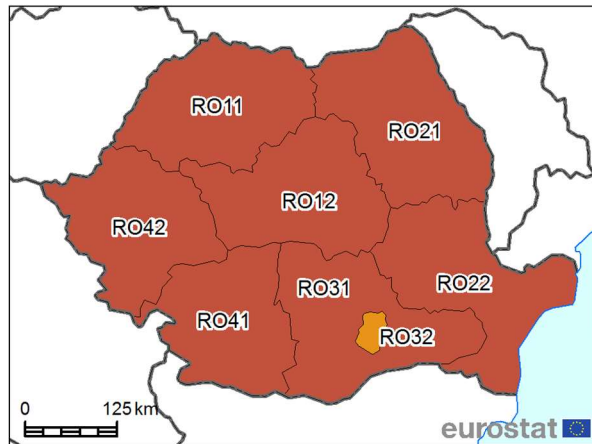
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as part of the European Innovation Scoreboard project

for the European Commission, Directorate-General for Research and Innovation under

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Map administrative boundaries: ©EuroGeographics ©UN-FAO ©Turkstat

NUTS	Region	RII	Rank	Group	Change
RO	Romania	33.1	--	Emerging Innovator	1.4
RO11	Nord-Vest	34.5	232	Emerging Innovator -	4.0
RO12	Centru	25.7	236	Emerging Innovator -	1.3
RO21	Nord-Est	35.8	230	Emerging Innovator -	2.2
RO22	Sud-Est	18.9	239	Emerging Innovator -	-7.2
RO31	Sud - Muntenia	23.0	237	Emerging Innovator -	0.9
RO32	Bucuresti - Ilfov	59.5	199	Emerging Innovator +	1.9
RO41	Sud-Vest Oltenia	19.8	238	Emerging Innovator -	3.5
RO42	Vest	32.6	234	Emerging Innovator -	-0.9

Romania is an Emerging Innovator and includes eight regions.

All Romanian regions are Emerging Innovators. Regional performance differences are high in Romania with the best performing region, *Bucuresti - Ilfov* (RO32), performing more than three times as well as the lowest performing region, *Sud-Est* (RO22).

Performance has improved for six regions, most strongly for *Nord-Vest* (RO11) and *Sud-Vest Oltenia* (RO41), and declined for two regions, most strongly for *Sud-Est* (RO22). For all regions performance increased (or even decreased) at a lower rate than that of the EU (8.5).

Nord-Vest (RO11)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	24.5	0.155	121	30
Lifelong learning	8.5	0.284	192	77
International scientific co-publications	764	0.183	196	60
Most-cited scientific publications	873.0	0.474	151	87
Above average digital skills	8.9	0.068	105	14
R&D expenditures public sector	0.14	0.178	79	31
R&D expenditures business sector	0.06	0.134	47	20
Non-R&D innovation expenditures	±	0.103	102	25
Innovation expenditures per person employed	±	0.132	95	22
Employed ICT specialists	2.1	0.205	74	39
Product innovators	±	0.033	50	6
Business process innovators	±	0.000	n/a	0
Innovative SMEs collaborating	±	0.053	84	11
Public-private co-publications	94.7	0.324	126	83
PCT patent applications	0.15	0.134	104	22
Trademark applications	4.03	0.272	136	54
Design applications	0.42	0.189	73	33
Employment knowledge-intensive activities	11.4	0.341	75	60
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.137	88	29
Air emissions by fine particulates	12.7	0.525	130	88
Average normalised score	--	0.187	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.189	--	--
Performance 2023 relative to EU in 2023	--	--	104.4	34.5
Performance 2023 relative to EU in 2016	--	--	--	37.4
Regional Innovation Index (RII) 2016	--	0.169	--	--
Performance 2016 relative to EU in 2016	--	--	97.2	33.5
Performance change over time	--	--	7.1	4.0

± Scores are not shown as these would allow recalculating confidential regional CIS data.

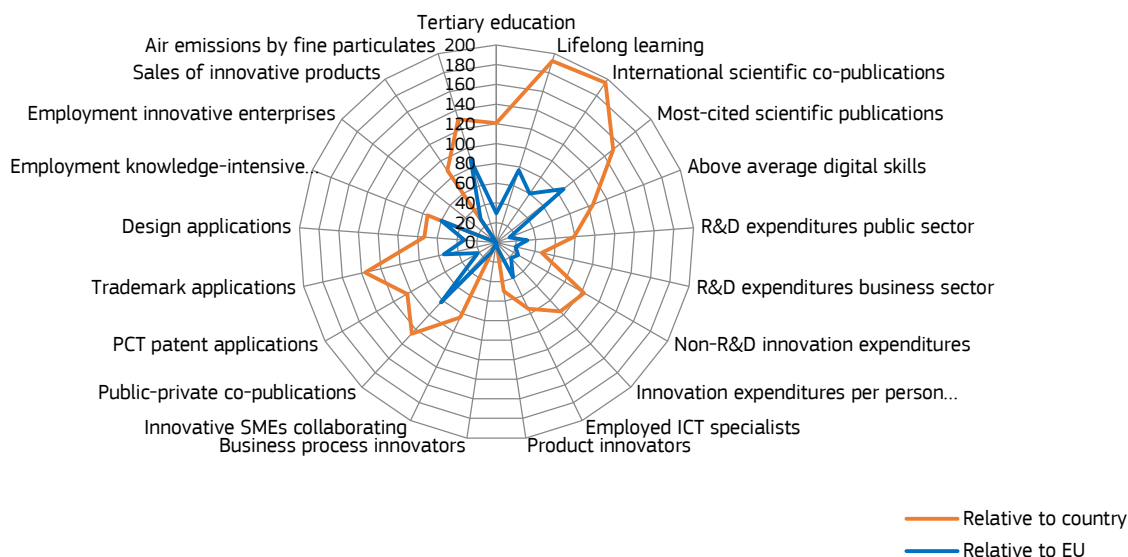
Nord-Vest (RO11) is an Emerging Innovator -. Innovation performance has increased over time (4%).

The first 21 rows and two data columns in the table on the left show the values and the normalised scores per indicator. The last two data columns show relative performance of the normalised scores compared to Romania and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Romania (104.4) and the EU (34.5) in 2023, the RII in 2023 relative to the EU in 2016 (37.4), and the RII in 2016 relative to both Romania (97.2) and the EU in 2016 (33.5). The last row shows performance change between 2016 and 2023 compared to Romania (7.1%) and to the EU (4%).

The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Most-cited scientific publications) and weaknesses (e.g. Business process innovators).

The table below shows data highlighting possible structural differences, e.g. Employment in Manufacturing (above EU average) and Employment in Public administration (below EU average).

	RO11	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	14.5	18.5	4.4
Manufacturing (C)	22.9	18.9	16.4
Utilities & Construction (D-F)	11.0	11.4	8.3
Services (G-N)	47.0	46.2	63.7
Public administration (O-U)	4.6	5.1	7.2
Average number of employed persons per enterprise	4.5	5.4	5.1
GDP per capita (PPS)	22,600	24,000	32,400
GDP per capita growth (PPS)	6.9	6.7	2.5
Population density	74	81	106
Urbanisation	57.4	62.1	75.8
Population size (000s)	2,540	19,200	447,210



Centru (RO12)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	17.5	0.000	0	0
Lifelong learning	1.5	0.019	13	5
International scientific co-publications	392	0.093	99	30
Most-cited scientific publications	472.1	0.208	66	38
Above average digital skills	8.9	0.068	105	14
R&D expenditures public sector	0.04	0.045	20	8
R&D expenditures business sector	0.31	0.306	107	45
Non-R&D innovation expenditures	±	0.095	95	23
Innovation expenditures per person employed	±	0.059	42	10
Employed ICT specialists	1.4	0.120	44	23
Product innovators	±	0.081	123	15
Business process innovators	±	0.000	n/a	0
Innovative SMEs collaborating	±	0.067	105	14
Public-private co-publications	75.7	0.290	112	74
PCT patent applications	0.10	0.111	86	18
Trademark applications	2.43	0.163	82	33
Design applications	0.20	0.131	51	23
Employment knowledge-intensive activities	14.3	0.479	105	84
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.076	49	16
Air emissions by fine particulates	12.9	0.516	128	86
Average normalised score	--	0.139	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.141	--	--
Performance 2023 relative to EU in 2023	--	--	77.8	25.7
Performance 2023 relative to EU in 2016	--	--	--	27.9
Regional Innovation Index (RII) 2016	--	0.135	--	--
Performance 2016 relative to EU in 2016	--	--	77.4	26.6
Performance change over time	--	--	0.4	1.3

± Scores are not shown as these would allow recalculating confidential regional CIS data.

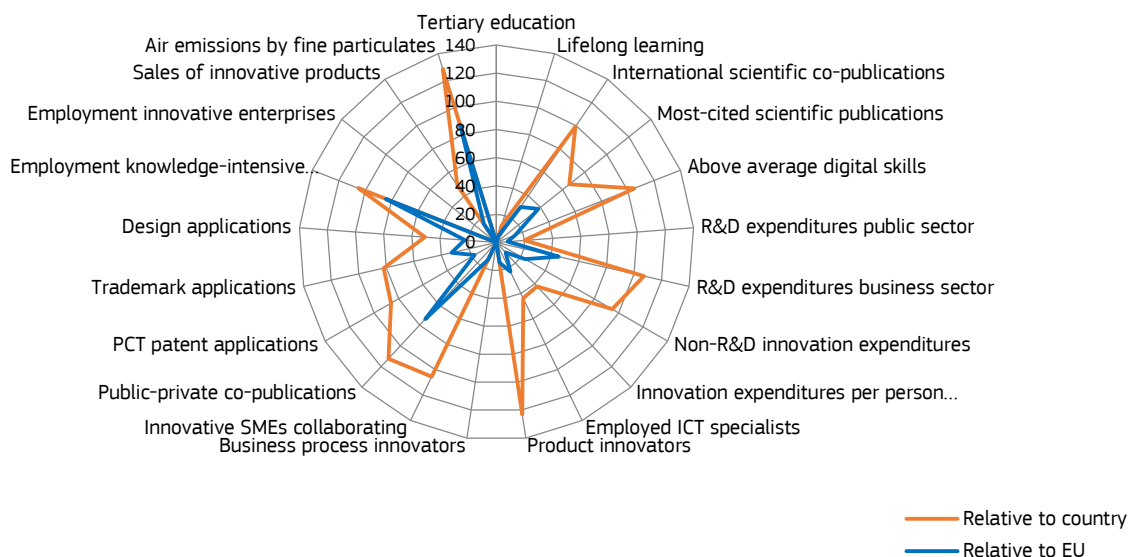
Centru (RO12) is an Emerging Innovator -. Innovation performance has increased over time (1.3%).

The first 21 rows and two data columns in the table on the left show the values and the normalised scores per indicator. The last two data columns show relative performance of the normalised scores compared to Romania and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Romania (77.8) and the EU (25.7) in 2023, the RII in 2023 relative to the EU in 2016 (27.9), and the RII in 2016 relative to both Romania (77.4) and the EU in 2016 (26.6). The last row shows performance change between 2016 and 2023 compared to Romania (0.4%) and to the EU (1.3%).

The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Employment knowledge-intensive activities) and weaknesses (e.g. Tertiary education).

The table below shows data highlighting possible structural differences, e.g. Employment in Manufacturing (above EU average) and Employment in Public administration (below EU average).

	RO12	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	10.2	18.5	4.4
Manufacturing (C)	28.8	18.9	16.4
Utilities & Construction (D-F)	11.5	11.4	8.3
Services (G-N)	45.0	46.2	63.7
Public administration (O-U)	4.4	5.1	7.2
Average number of employed persons per enterprise	5.1	5.4	5.1
GDP per capita (PPS)	22,900	24,000	32,400
GDP per capita growth (PPS)	6.8	6.7	2.5
Population density	68	81	106
Urbanisation	60.6	62.1	75.8
Population size (000s)	2,300	19,200	447,210



Nord-Est (RO21)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	32.9	0.341	266	65
Lifelong learning	11.5	0.398	269	107
International scientific co-publications	299	0.070	75	23
Most-cited scientific publications	703.2	0.361	115	66
Above average digital skills	8.6	0.061	95	13
R&D expenditures public sector	0.51	0.439	194	77
R&D expenditures business sector	1.18	0.596	209	88
Non-R&D innovation expenditures	±	0.063	62	15
Innovation expenditures per person employed	±	0.049	35	8
Employed ICT specialists	1.9	0.183	67	35
Product innovators	±	0.052	79	9
Business process innovators	±	0.000	n/a	0
Innovative SMEs collaborating	±	0.033	52	7
Public-private co-publications	41.3	0.214	83	55
PCT patent applications	0.07	0.092	72	15
Trademark applications	2.24	0.150	75	30
Design applications	1.40	0.344	133	59
Employment knowledge-intensive activities	6.0	0.085	19	15
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.075	48	16
Air emissions by fine particulates	13.9	0.469	117	78
Average normalised score	--	0.194	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.196	--	--
Performance 2023 relative to EU in 2023	--	--	108.4	35.8
Performance 2023 relative to EU in 2016	--	--	--	38.9
Regional Innovation Index (RII) 2016	--	0.185	--	--
Performance 2016 relative to EU in 2016	--	--	106.6	36.7
Performance change over time	--	--	1.8	2.2

± Scores are not shown as these would allow recalculating confidential regional CIS data.

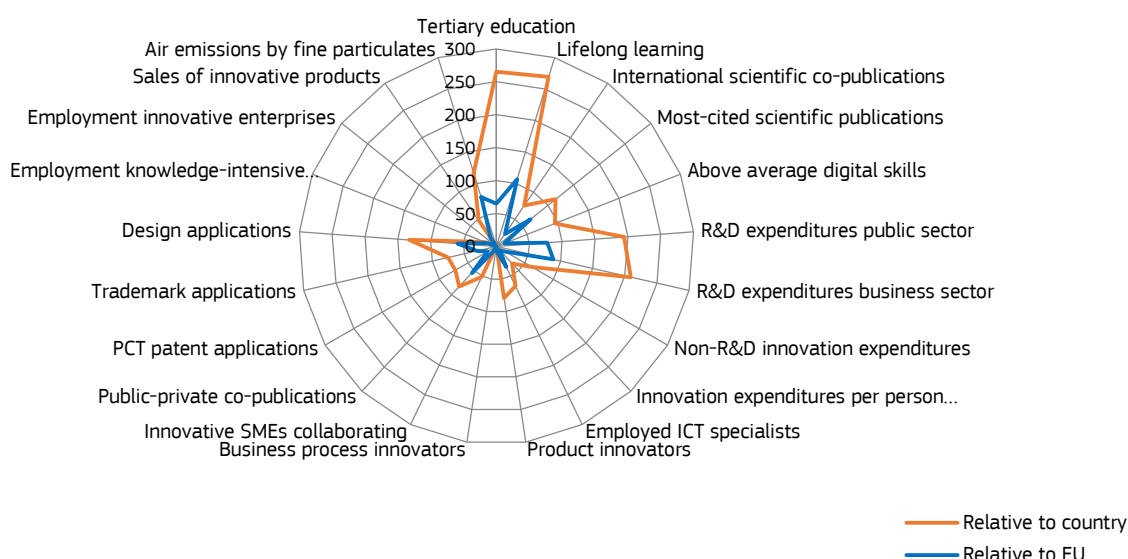
Nord-Est (RO21) is an Emerging Innovator -. Innovation performance has increased over time (2.2%).

The first 21 rows and two data columns in the table on the left show the values and the normalised scores per indicator. The last two data columns show relative performance of the normalised scores compared to Romania and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Romania (108.4) and the EU (35.8) in 2023, the RII in 2023 relative to the EU in 2016 (38.9), and the RII in 2016 relative to both Romania (106.6) and the EU in 2016 (36.7). The last row shows performance change between 2016 and 2023 compared to Romania (1.8%) and to the EU (2.2%).

The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Lifelong learning) and weaknesses (e.g. Business process innovators).

The table below shows data highlighting possible structural differences, e.g. Employment in Agriculture & Mining (above EU average) and Employment in Public administration (below EU average).

	RO21	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	38.1	18.5	4.4
Manufacturing (C)	11.4	18.9	16.4
Utilities & Construction (D-F)	13.0	11.4	8.3
Services (G-N)	34.7	46.2	63.7
Public administration (O-U)	2.8	5.1	7.2
Average number of employed persons per enterprise	4.1	5.4	5.1
GDP per capita (PPS)	15,800	24,000	32,400
GDP per capita growth (PPS)	8.0	6.7	2.5
Population density	86	81	106
Urbanisation	52.3	62.1	75.8
Population size (000s)	3,160	19,200	447,210



Sud-Est (RO22)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	15.9	0.000	0	0
Lifelong learning	5.1	0.155	105	42
International scientific co-publications	144	0.033	35	11
Most-cited scientific publications	390.6	0.154	49	28
Above average digital skills	8.3	0.056	86	12
R&D expenditures public sector	0.08	0.108	48	19
R&D expenditures business sector	0.01	0.055	19	8
Non-R&D innovation expenditures	±	0.050	50	12
Innovation expenditures per person employed	±	0.092	66	15
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	0.000	0	0
Business process innovators	±	0.000	n/a	0
Innovative SMEs collaborating	±	0.035	54	7
Public-private co-publications	19.9	0.149	58	38
PCT patent applications	0.06	0.086	67	14
Trademark applications	1.83	0.122	61	24
Design applications	0.40	0.183	71	32
Employment knowledge-intensive activities	10.6	0.303	67	53
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.058	37	12
Air emissions by fine particulates	15.0	0.415	103	69
Average normalised score	--	0.103	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.104	--	--
Performance 2023 relative to EU in 2023	--	--	57.3	18.9
Performance 2023 relative to EU in 2016	--	--	--	20.6
Regional Innovation Index (RII) 2016	--	0.140	--	--
Performance 2016 relative to EU in 2016	--	--	80.6	27.7
Performance change over time	--	--	-23.2	-7.2

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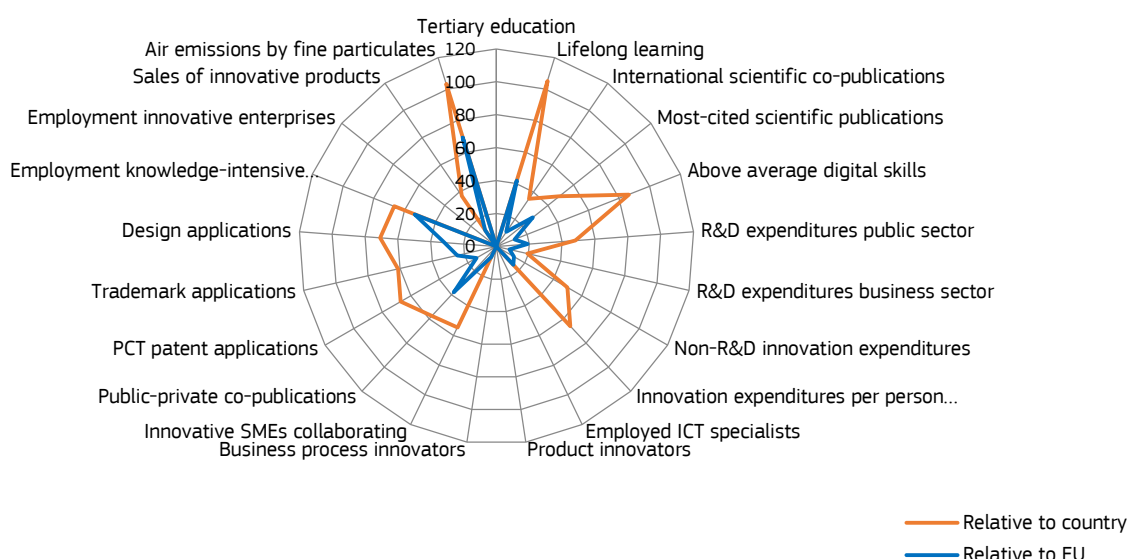
Sud-Est (RO22) is an Emerging Innovator -. Innovation performance has decreased over time (-7.2%).

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The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Employment knowledge-intensive activities) and weaknesses (e.g. Tertiary education).

The table below shows data highlighting possible structural differences, e.g. Employment in Agriculture & Mining (above EU average) and GDP per capita (below EU average).

	RO22	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	19.2	18.5	4.4
Manufacturing (C)	18.7	18.9	16.4
Utilities & Construction (D-F)	12.0	11.4	8.3
Services (G-N)	43.5	46.2	63.7
Public administration (O-U)	6.6	5.1	7.2
Average number of employed persons per enterprise	4.4	5.4	5.1
GDP per capita (PPS)	19,000	24,000	32,400
GDP per capita growth (PPS)	5.6	6.7	2.5
Population density	66	81	106
Urbanisation	63.2	62.1	75.8
Population size (000s)	2,350	19,200	447,210



Sud - Muntenia (RO31)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	15.3	0.000	0	0
Lifelong learning	6.3	0.201	136	54
International scientific co-publications	108	0.024	26	8
Most-cited scientific publications	484.8	0.216	69	40
Above average digital skills	8.5	0.059	91	13
R&D expenditures public sector	0.05	0.063	28	11
R&D expenditures business sector	0.31	0.306	107	45
Non-R&D innovation expenditures	±	0.038	38	9
Innovation expenditures per person employed	±	0.092	66	15
Employed ICT specialists	0.9	0.049	18	9
Product innovators	±	0.000	0	0
Business process innovators	±	0.000	n/a	0
Innovative SMEs collaborating	±	0.024	37	5
Public-private co-publications	23.5	0.161	63	41
PCT patent applications	0.10	0.110	85	18
Trademark applications	1.16	0.077	38	15
Design applications	0.73	0.248	96	43
Employment knowledge-intensive activities	15.6	0.540	119	95
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.037	24	8
Air emissions by fine particulates	15.8	0.373	93	62
Average normalised score	--	0.125	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.126	--	--
Performance 2023 relative to EU in 2023	--	--	69.6	23.0
Performance 2023 relative to EU in 2016	--	--	--	25.0
Regional Innovation Index (RII) 2016	--	0.122	--	--
Performance 2016 relative to EU in 2016	--	--	70.1	24.1
Performance change over time	--	--	-0.4	0.9

± Scores are not shown as these would allow recalculating confidential regional CIS data.

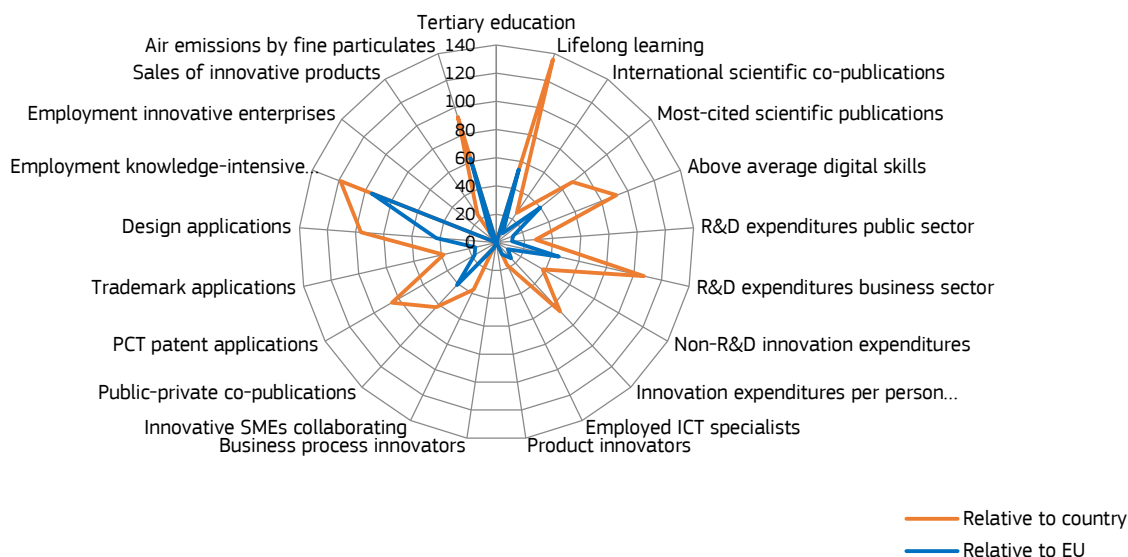
Sud - Muntenia (RO31) is an Emerging Innovator -. Innovation performance has increased over time (0.9%).

The first 21 rows and two data columns in the table on the left show the values and the normalised scores per indicator. The last two data columns show relative performance of the normalised scores compared to Romania and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Romania (69.6) and the EU (23) in 2023, the RII in 2023 relative to the EU in 2016 (25), and the RII in 2016 relative to both Romania (70.1) and the EU in 2016 (24.1). The last row shows performance change between 2016 and 2023 compared to Romania (-0.4%) and to the EU (0.9%).

The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Employment knowledge-intensive activities) and weaknesses (e.g. Tertiary education).

The table below shows data highlighting possible structural differences, e.g. Employment in Utilities & Construction (above EU average) and GDP per capita (below EU average).

	RO31	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	18.4	18.5	4.4
Manufacturing (C)	20.5	18.9	16.4
Utilities & Construction (D-F)	12.4	11.4	8.3
Services (G-N)	43.2	46.2	63.7
Public administration (O-U)	5.5	5.1	7.2
Average number of employed persons per enterprise	4.7	5.4	5.1
GDP per capita (PPS)	18,400	24,000	32,400
GDP per capita growth (PPS)	6.5	6.7	2.5
Population density	83	81	106
Urbanisation	57.4	62.1	75.8
Population size (000s)	2,870	19,200	447,210



Bucuresti - Ilfov (RO32)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	50.5	0.732	569	139
Lifelong learning	4.6	0.136	92	37
International scientific co-publications	1394	0.336	359	110
Most-cited scientific publications	593.8	0.289	92	53
Above average digital skills	9.3	0.077	120	16
R&D expenditures public sector	0.45	0.406	180	71
R&D expenditures business sector	0.48	0.380	133	56
Non-R&D innovation expenditures	±	0.102	101	25
Innovation expenditures per person employed	±	0.234	168	39
Employed ICT specialists	9.4	1.000	363	190
Product innovators	±	0.248	377	44
Business process innovators	±	0.011	n/a	2
Innovative SMEs collaborating	±	0.141	223	29
Public-private co-publications	272.0	0.550	213	140
PCT patent applications	0.22	0.160	124	26
Trademark applications	4.99	0.337	169	68
Design applications	1.27	0.328	127	57
Employment knowledge-intensive activities	22.2	0.853	188	150
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.273	176	57
Air emissions by fine particulates	19.8	0.175	44	29
Average normalised score	--	0.322	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.326	--	--
Performance 2023 relative to EU in 2023	--	--	180.0	59.5
Performance 2023 relative to EU in 2016	--	--	--	64.5
Regional Innovation Index (RII) 2016	--	0.316	--	--
Performance 2016 relative to EU in 2016	--	--	182.2	62.7
Performance change over time	--	--	-2.2	1.9

± Scores are not shown as these would allow recalculating confidential regional CIS data.

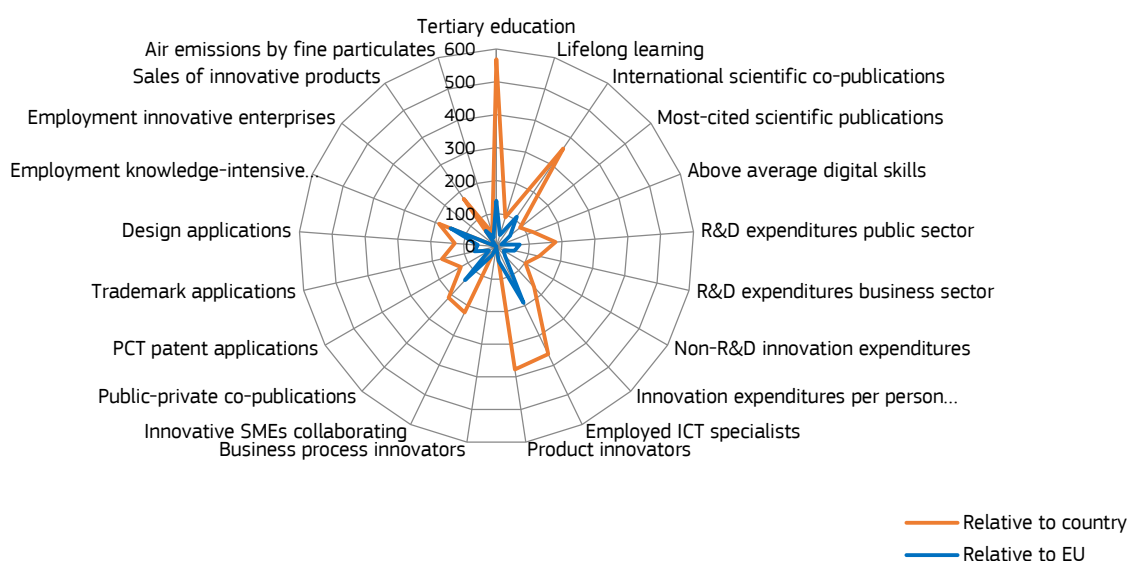
Bucuresti - Ilfov (RO32) is an Emerging Innovator +. Innovation performance has increased over time (1.9%).

The first 21 rows and two data columns in the table on the left show the values and the normalised scores per indicator. The last two data columns show relative performance of the normalised scores compared to Romania and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Romania (180) and the EU (59.5) in 2023, the RII in 2023 relative to the EU in 2016 (64.5), and the RII in 2016 relative to both Romania (182.2) and the EU in 2016 (62.7). The last row shows performance change between 2016 and 2023 compared to Romania (-2.2%) and to the EU (1.9%).

The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Employed ICT specialists) and weaknesses (e.g. Business process innovators).

The table below shows data highlighting possible structural differences, e.g. Population density (above EU average) and Employment in Agriculture & Mining (below EU average).

	RO32	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	0.9	18.5	4.4
Manufacturing (C)	7.3	18.9	16.4
Utilities & Construction (D-F)	9.5	11.4	8.3
Services (G-N)	74.8	46.2	63.7
Public administration (O-U)	7.5	5.1	7.2
Average number of employed persons per enterprise	8.0	5.4	5.1
GDP per capita (PPS)	53,900	24,000	32,400
GDP per capita growth (PPS)	5.9	6.7	2.5
Population density	1,290	81	106
Urbanisation	95.9	62.1	75.8
Population size (000s)	2,330	19,200	447,210



Sud-Vest Oltenia (RO41)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	20.5	0.067	52	13
Lifelong learning	3.1	0.080	54	21
International scientific co-publications	198	0.046	49	15
Most-cited scientific publications	719.9	0.372	118	68
Above average digital skills	8.5	0.059	92	13
R&D expenditures public sector	0.08	0.108	48	19
R&D expenditures business sector	0.02	0.078	27	12
Non-R&D innovation expenditures	±	0.209	208	52
Innovation expenditures per person employed	±	0.095	68	16
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	0.000	0	0
Business process innovators	±	0.000	n/a	0
Innovative SMEs collaborating	±	0.025	40	5
Public-private co-publications	27.8	0.176	68	45
PCT patent applications	0.04	0.070	55	11
Trademark applications	1.05	0.069	35	14
Design applications	0.44	0.194	75	33
Employment knowledge-intensive activities	8.4	0.199	44	35
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.010	7	2
Air emissions by fine particulates	17.6	0.283	70	47
Average normalised score	--	0.107	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.108	--	--
Performance 2023 relative to EU in 2023	--	--	59.8	19.8
Performance 2023 relative to EU in 2016	--	--	--	21.4
Regional Innovation Index (RII) 2016	--	0.091	--	--
Performance 2016 relative to EU in 2016	--	--	52.1	17.9
Performance change over time	--	--	7.6	3.5

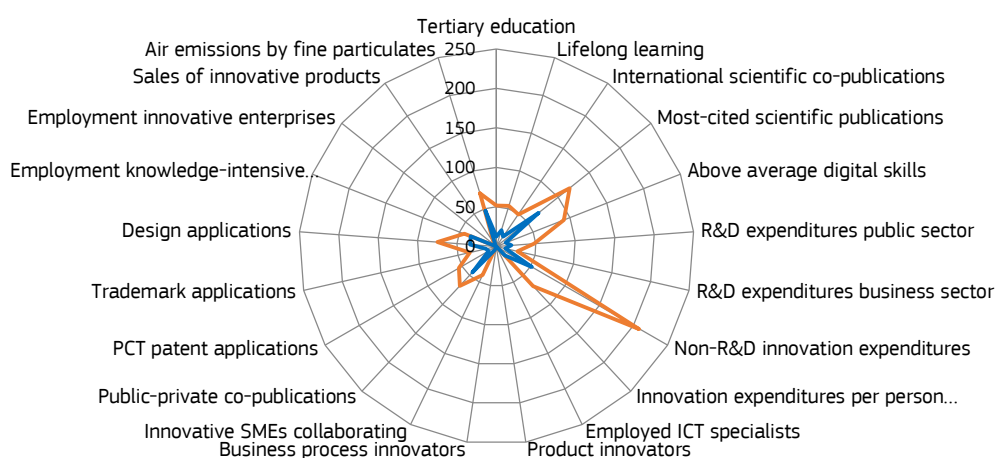
± Scores are not shown as these would allow recalculating confidential regional CIS data.

Sud-Vest Oltenia (RO41) is an Emerging Innovator -. Innovation performance has increased over time (3.5%). The first 21 rows and two data columns in the table on the left show the values and the normalised scores per indicator. The last two data columns show relative performance of the normalised scores compared to Romania and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Romania (59.8) and the EU (19.8) in 2023, the RII in 2023 relative to the EU in 2016 (21.4), and the RII in 2016 relative to both Romania (52.1) and the EU in 2016 (17.9). The last row shows performance change between 2016 and 2023 compared to Romania (7.6%) and to the EU (3.5%).

The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Most-cited scientific publications) and weaknesses (e.g. Product innovators).

The table below shows data highlighting possible structural differences, e.g. Employment in Agriculture & Mining (above EU average) and GDP per capita (below EU average).

	RO41	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	30.1	18.5	4.4
Manufacturing (C)	15.1	18.9	16.4
Utilities & Construction (D-F)	12.0	11.4	8.3
Services (G-N)	37.5	46.2	63.7
Public administration (O-U)	5.3	5.1	7.2
Average number of employed persons per enterprise	4.5	5.4	5.1
GDP per capita (PPS)	18,700	24,000	32,400
GDP per capita growth (PPS)	7.9	6.7	2.5
Population density	65	81	106
Urbanisation	47.9	62.1	75.8
Population size (000s)	1,890	19,200	447,210



— Relative to country
— Relative to EU

Vest (RO42)

	Data	Normalised score	Relative to	
			RO	EU
Tertiary education	17.8	0.007	5	1
Lifelong learning	2.0	0.038	26	10
International scientific co-publications	409	0.097	104	32
Most-cited scientific publications	619.3	0.306	97	56
Above average digital skills	9.0	0.070	108	15
R&D expenditures public sector	0.12	0.157	70	28
R&D expenditures business sector	0.50	0.388	136	58
Non-R&D innovation expenditures	±	0.122	122	30
Innovation expenditures per person employed	±	0.104	75	17
Employed ICT specialists	1.5	0.127	46	24
Product innovators	±	0.020	30	4
Business process innovators	±	0.000	n/a	0
Innovative SMEs collaborating	±	0.029	45	6
Public-private co-publications	70.1	0.279	108	71
PCT patent applications	0.23	0.165	128	27
Trademark applications	1.98	0.132	66	26
Design applications	0.62	0.229	89	40
Employment knowledge-intensive activities	24.1	0.943	207	166
Employment innovative enterprises	±	0.000	n/a	0
Sales of innovative products	±	0.087	56	18
Air emissions by fine particulates	15.1	0.410	102	68
Average normalised score	--	0.177	--	--
Country EIS-RIS correction factor	--	1.011	--	--
Regional Innovation Index (RII) 2023	--	0.179	--	--
Performance 2023 relative to EU in 2023	--	--	98.7	32.6
Performance 2023 relative to EU in 2016	--	--	--	35.4
Regional Innovation Index (RII) 2016	--	0.183	--	--
Performance 2016 relative to EU in 2016	--	--	105.5	36.3
Performance change over time	--	--	-6.9	-0.9

± Scores are not shown as these would allow recalculating confidential regional CIS data.

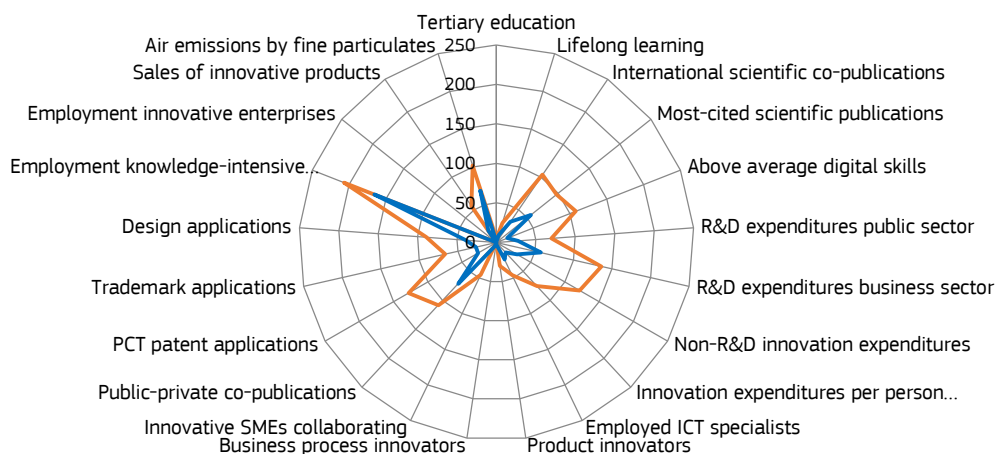
Vest (RO42) is an Emerging Innovator -. Innovation performance has decreased over time (-0.9%).

The first 21 rows and two data columns in the table on the left show the values and the normalised scores per indicator. The last two data columns show relative performance of the normalised scores compared to Romania and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Romania (98.7) and the EU (32.6) in 2023, the RII in 2023 relative to the EU in 2016 (35.4), and the RII in 2016 relative to both Romania (105.5) and the EU in 2016 (36.3). The last row shows performance change between 2016 and 2023 compared to Romania (-6.9%) and to the EU (-0.9%).

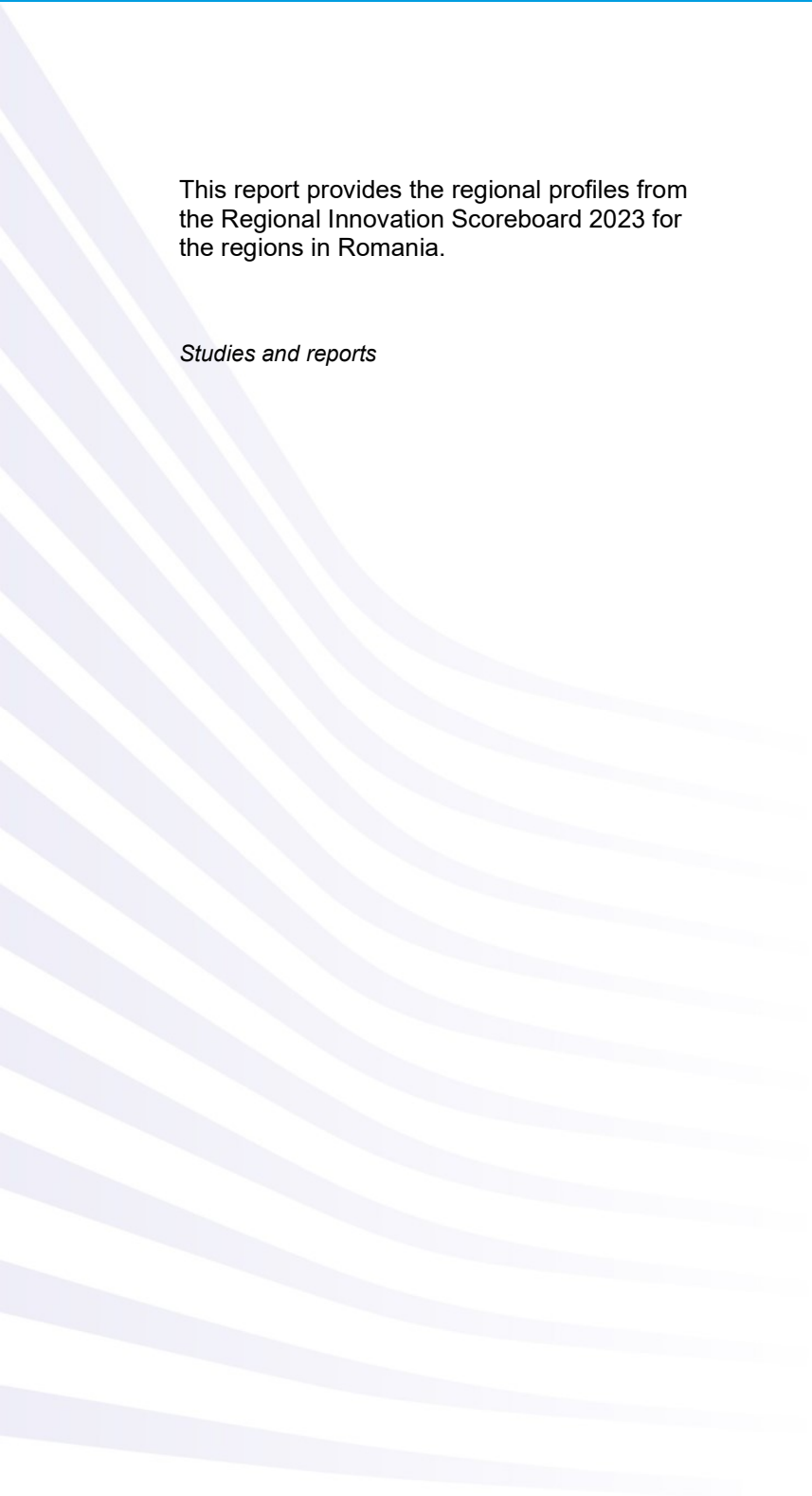

The radar graph shows relative strengths compared to Romania (orange line) and the EU (blue line), showing relative strengths (e.g. Employment knowledge-intensive activities) and weaknesses (e.g. Business process innovators).

The table below shows data highlighting possible structural differences, e.g. Employment in Manufacturing (above EU average) and Population density (below EU average).

	RO42	RO	EU
Share of employment in:			
Agriculture & Mining (A-B)	8.2	18.5	4.4
Manufacturing (C)	35.9	18.9	16.4
Utilities & Construction (D-F)	8.7	11.4	8.3
Services (G-N)	42.9	46.2	63.7
Public administration (O-U)	4.3	5.1	7.2
Average number of employed persons per enterprise	5.6	5.4	5.1
GDP per capita (PPS)	24,300	24,000	32,400
GDP per capita growth (PPS)	6.2	6.7	2.5
Population density	55	81	106
Urbanisation	64.1	62.1	75.8
Population size (000s)	1,760	19,200	447,210



— Relative to country
— Relative to EU



This report provides the regional profiles from the Regional Innovation Scoreboard 2023 for the regions in Romania.

Studies and reports