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# Regional Innovation Scoreboard **2023** Regional profiles **Greece**



*Innovation*

## Regional Innovation Scoreboard 2023 – Regional profiles Greece

European Commission

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# **Regional Innovation Scoreboard 2023**

## **Regional profiles Greece**

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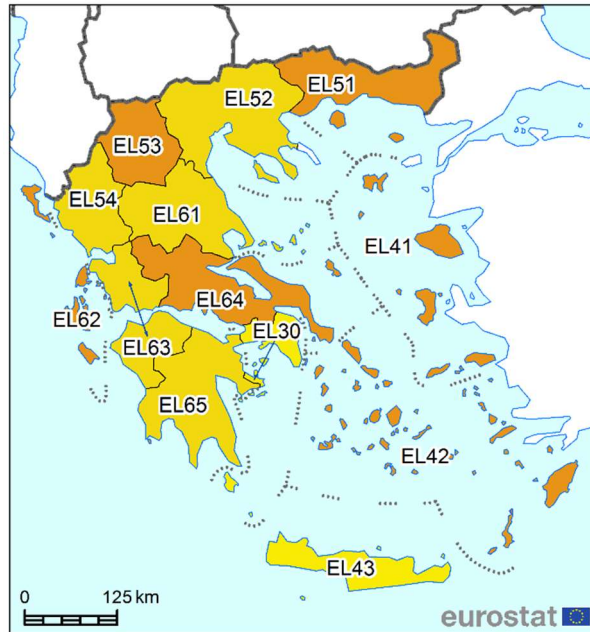
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**GREECE**



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

NUTS	Region	RII	Rank	Group	Change
EL	Greece	79.5	--	Moderate Innovator	22.2
EL3	Attiki	90.0	132	Moderate Innovator	21.9
EL41	Voreio Aigaio	57.5	207	Emerging Innovator +	10.6
EL42	Notio Aigaio	55.4	215	Emerging Innovator +	14.5
EL43	Kriti	82.4	149	Moderate Innovator	13.7
EL51	Anatoliki Makedonia, Thraki	68.7	180	Emerging Innovator +	24.6
EL52	Kentriki Makedonia	79.8	156	Moderate Innovator -	24.8
EL53	Dytiki Makedonia	69.3	178	Emerging Innovator +	25.2
EL54	Ipeiros	78.4	158	Moderate Innovator -	33.1
EL61	Thessalia	72.3	170	Moderate Innovator -	25.9
EL62	Ionia Nisia	55.8	212	Emerging Innovator +	14.0
EL63	Dytiki Ellada	76.5	164	Moderate Innovator -	20.9
EL64	Sterea Ellada	69.3	179	Emerging Innovator +	22.7
EL65	Peloponnisos	71.0	173	Moderate Innovator -	30.8

Greece is a Moderate Innovator and includes 13 regions.

Attiki (EL3) is the most innovative Greek region and, as Kriti (EL43), a Moderate Innovator. Five regions are Moderate Innovators -, and six regions are Emerging Innovator +.

Performance has increased for all regions and also at a higher rate than that of the EU (8.5). Performance has increased most strongly for Ipeiros (EL54) and Peloponnisos (EL65).

Attiki (EL3)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	52.6	0.778	131	148
Lifelong learning	4.6	0.136	144	37
International scientific co-publications	1700	0.410	144	134
Most-cited scientific publications	907.0	0.496	98	91
Above average digital skills	23.2	0.395	109	84
R&D expenditures public sector	0.80	0.577	100	102
R&D expenditures business sector	1.07	0.568	124	84
Non-R&D innovation expenditures	±	0.497	97	123
Innovation expenditures per person employed	±	0.576	109	96
Employed ICT specialists	4.8	0.560	225	106
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.828	108	170
Public-private co-publications	341.0	0.615	131	157
PCT patent applications	0.94	0.331	122	54
Trademark applications	7.48	0.507	118	102
Design applications	0.89	0.274	90	47
Employment knowledge-intensive activities	19.8	0.739	197	130
Employment innovative enterprises	±	0.831	100	145
Sales of innovative products	±	0.886	102	184
Air emissions by fine particulates	15.9	0.369	84	62
Average normalised score	--	0.589	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.493	--	--
Performance 2023 relative to EU in 2023	--	--	113.2	90.0
Performance 2023 relative to EU in 2016	--	--	--	97.6
Regional Innovation Index (RII) 2016	--	0.382	--	--
Performance 2016 relative to EU in 2016	--	--	118.3	75.7
Performance change over time	--	--	-5.0	21.9

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

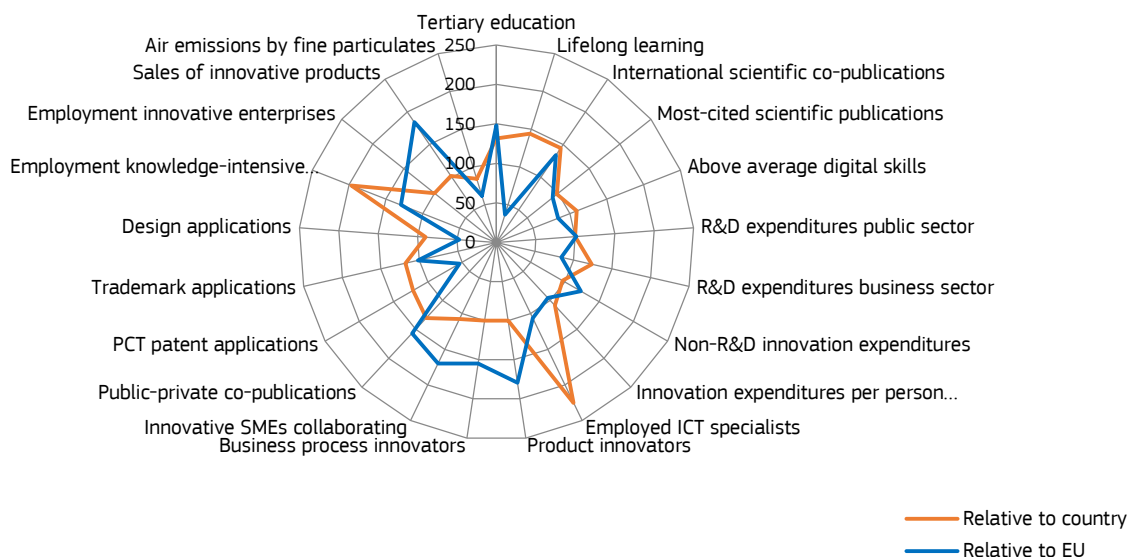
Attiki (EL3) is a Moderate Innovator. Innovation performance has increased over time (21.9%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (113.2) and the EU (90) in 2023, the RII in 2023 relative to the EU in 2016 (97.6), and the RII in 2016 relative to both Greece (118.3) and the EU in 2016 (75.7). The last row shows performance change between 2016 and 2023 compared to Greece (-5%) and to the EU (21.9%).

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

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

	EL3	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	0.9	11.5	4.4
Manufacturing (C)	9.9	9.7	16.4
Utilities & Construction (D-F)	4.8	5.2	8.3
Services (G-N)	74.6	64.3	63.7
Public administration (O-U)	9.8	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	27,900	20,700	32,400
GDP per capita growth (PPS)	1.0	1.4	2.5
Population density	979	81	106
Urbanisation	97.8	74.3	75.8
Population size (000s)	3,740	10,680	447,210



Voreio Aigaio (EL41)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	36.0	0.410	69	78
Lifelong learning	4.2	0.121	128	33
International scientific co-publications	1265	0.305	107	99
Most-cited scientific publications	1079.1	0.611	120	112
Above average digital skills	21.1	0.347	96	74
R&D expenditures public sector	0.81	0.582	101	102
R&D expenditures business sector	0.07	0.145	32	22
Non-R&D innovation expenditures	±	0.606	118	150
Innovation expenditures per person employed	±	0.404	76	67
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	0.802	80	144
Business process innovators	±	0.688	69	107
Innovative SMEs collaborating	±	0.279	36	57
Public-private co-publications	138.3	0.392	83	100
PCT patent applications	0.21	0.156	57	25
Trademark applications	2.30	0.154	36	31
Design applications	0.00	0.000	0	0
Employment knowledge-intensive activities	6.9	0.128	34	23
Employment innovative enterprises	±	0.520	62	91
Sales of innovative products	±	0.354	41	74
Air emissions by fine particulates	12.7	0.526	120	88
Average normalised score	--	0.376	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.315	--	--
Performance 2023 relative to EU in 2023	--	--	72.3	57.5
Performance 2023 relative to EU in 2016	--	--	--	62.4
Regional Innovation Index (RII) 2016	--	0.261	--	--
Performance 2016 relative to EU in 2016	--	--	80.8	51.7
Performance change over time	--	--	-8.5	10.6

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

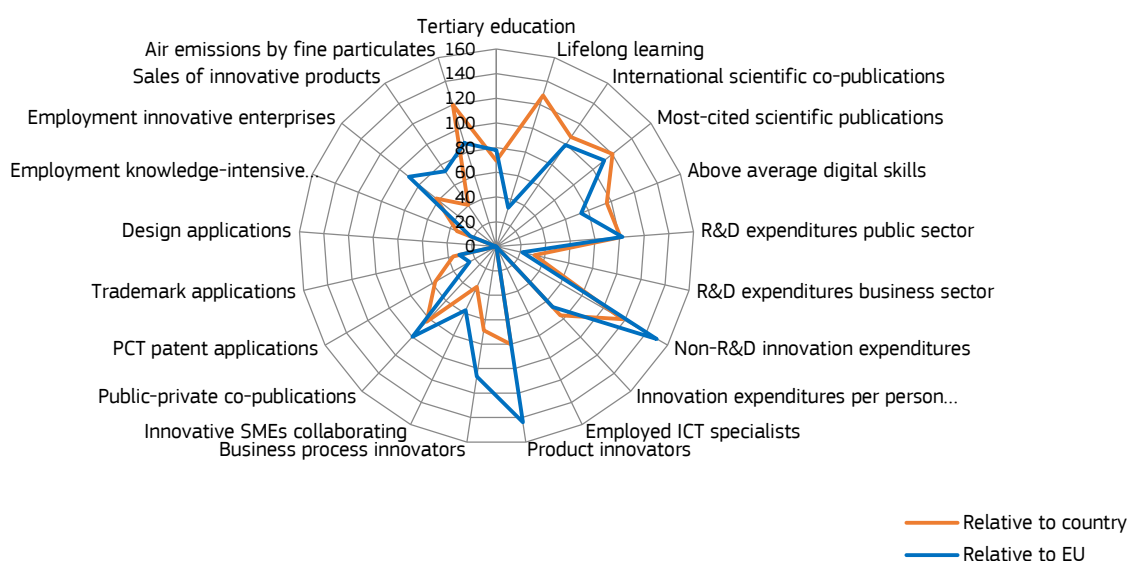
Voreio Aigaio (EL41) is an Emerging Innovator +. Innovation performance has increased over time (10.6%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (72.3) and the EU (57.5) in 2023, the RII in 2023 relative to the EU in 2016 (62.4), and the RII in 2016 relative to both Greece (80.8) and the EU in 2016 (51.7). The last row shows performance change between 2016 and 2023 compared to Greece (-8.5%) and to the EU (10.6%).

The radar graph shows relative strengths compared to Greece (orange line) and the EU (blue line), showing relative strengths (e.g. Non-R&D innovation expenditures) and weaknesses (e.g. Design applications).

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

	EL41	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	16.4	11.5	4.4
Manufacturing (C)	4.1	9.7	16.4
Utilities & Construction (D-F)	4.4	5.2	8.3
Services (G-N)	58.2	64.3	63.7
Public administration (O-U)	16.9	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	13,500	20,700	32,400
GDP per capita growth (PPS)	-0.9	1.4	2.5
Population density	60	81	106
Urbanisation	41.2	74.3	75.8
Population size (000s)	230	10,680	447,210



Notio Aigaio (EL42)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	27.9	0.231	39	44
Lifelong learning	1.9	0.034	36	9
International scientific co-publications	168	0.039	14	13
Most-cited scientific publications	1229.4	0.710	140	130
Above average digital skills	21.1	0.347	96	74
R&D expenditures public sector	0.26	0.283	49	50
R&D expenditures business sector	0.01	0.055	12	8
Non-R&D innovation expenditures	±	0.431	84	107
Innovation expenditures per person employed	±	0.316	60	52
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	1.000	100	179
Business process innovators	±	0.733	73	113
Innovative SMEs collaborating	±	0.434	56	89
Public-private co-publications	24.4	0.165	35	42
PCT patent applications	0.11	0.113	42	18
Trademark applications	2.79	0.188	44	38
Design applications	0.59	0.224	74	39
Employment knowledge-intensive activities	8.6	0.209	56	37
Employment innovative enterprises	±	0.726	87	127
Sales of innovative products	±	0.545	63	113
Air emissions by fine particulates	13.7	0.475	108	79
Average normalised score	--	0.363	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.303	--	--
Performance 2023 relative to EU in 2023	--	--	69.7	55.4
Performance 2023 relative to EU in 2016	--	--	--	60.1
Regional Innovation Index (RII) 2016	--	0.230	--	--
Performance 2016 relative to EU in 2016	--	--	71.3	45.6
Performance change over time	--	--	-1.6	14.5

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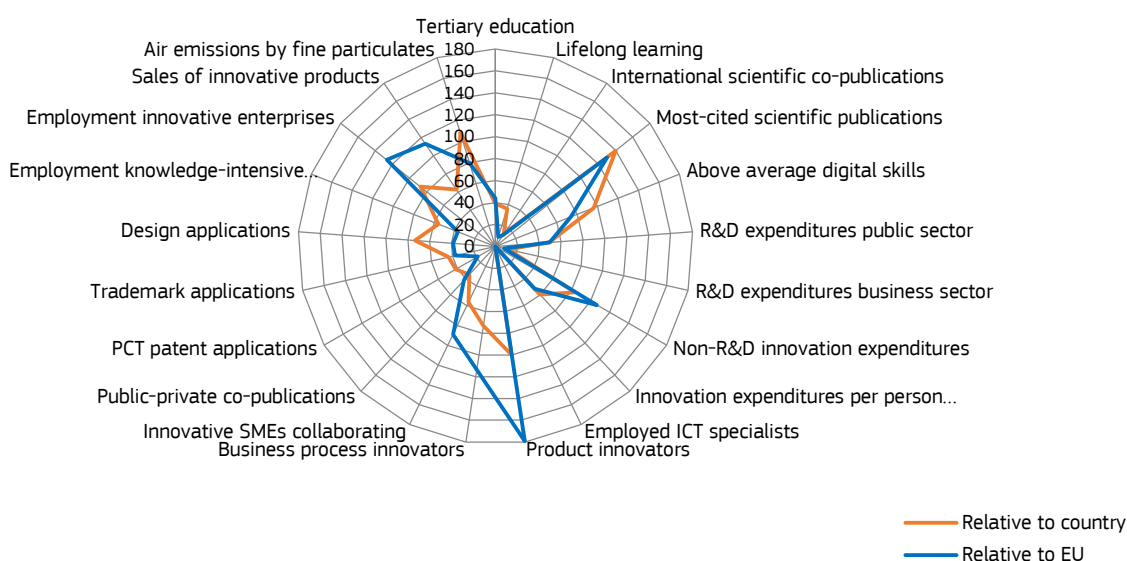
Notio Aigaio (EL42) is an Emerging Innovator +. Innovation performance has increased over time (14.5%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (69.7) and the EU (55.4) in 2023, the RII in 2023 relative to the EU in 2016 (60.1), and the RII in 2016 relative to both Greece (71.3) and the EU in 2016 (45.6). The last row shows performance change between 2016 and 2023 compared to Greece (-1.6%) and to the EU (14.5%).

The radar graph shows relative strengths compared to Greece (orange line) and the EU (blue line), showing relative strengths (e.g. Product innovators) and weaknesses (e.g. R&D expenditures business sector).

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

	EL42	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	4.9	11.5	4.4
Manufacturing (C)	4.1	9.7	16.4
Utilities & Construction (D-F)	8.7	5.2	8.3
Services (G-N)	74.1	64.3	63.7
Public administration (O-U)	8.3	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	20,900	20,700	32,400
GDP per capita growth (PPS)	0.1	1.4	2.5
Population density	65	81	106
Urbanisation	48.9	74.3	75.8
Population size (000s)	350	10,680	447,210





Kriti (EL43)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	35.0	0.388	66	74
Lifelong learning	2.7	0.064	68	17
International scientific co-publications	2508	0.606	214	198
Most-cited scientific publications	1048.5	0.590	116	108
Above average digital skills	21.1	0.347	96	74
R&D expenditures public sector	1.65	0.876	152	154
R&D expenditures business sector	0.21	0.252	55	37
Non-R&D innovation expenditures	±	0.582	113	144
Innovation expenditures per person employed	±	0.438	83	73
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.652	85	134
Public-private co-publications	415.3	0.679	144	173
PCT patent applications	0.68	0.282	104	46
Trademark applications	8.55	0.580	135	116
Design applications	0.78	0.258	85	44
Employment knowledge-intensive activities	6.0	0.085	23	15
Employment innovative enterprises	±	0.823	99	143
Sales of innovative products	±	0.747	86	155
Air emissions by fine particulates	12.3	0.546	125	91
Average normalised score	--	0.540	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.451	--	--
Performance 2023 relative to EU in 2023	--	--	103.7	82.4
Performance 2023 relative to EU in 2016	--	--	--	89.4
Regional Innovation Index (RII) 2016	--	0.382	--	--
Performance 2016 relative to EU in 2016	--	--	118.3	75.7
Performance change over time	--	--	-14.6	13.7

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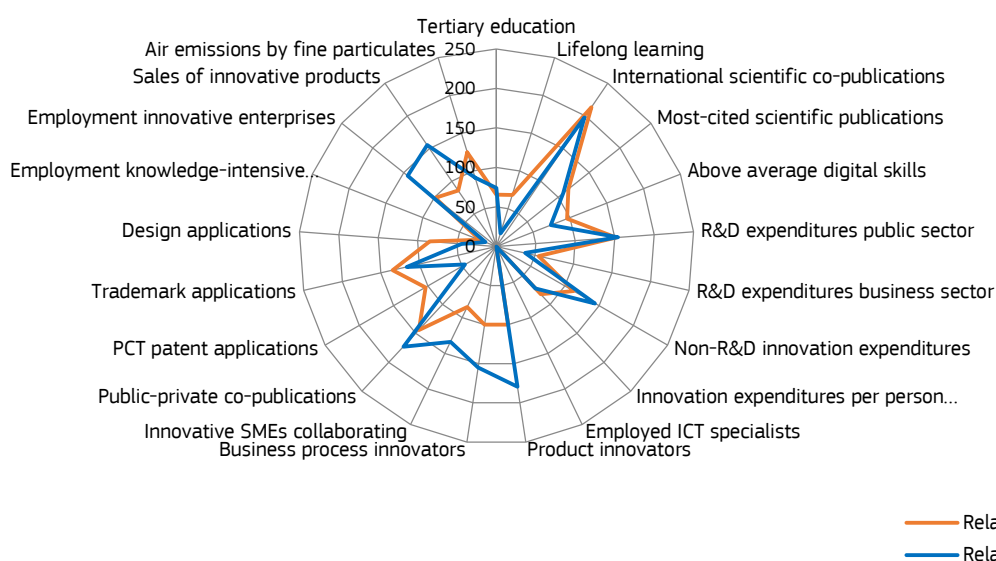
Kriti (EL43) is a Moderate Innovator. Innovation performance has increased over time (13.7%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (103.7) and the EU (82.4) in 2023, the RII in 2023 relative to the EU in 2016 (89.4), and the RII in 2016 relative to both Greece (118.3) and the EU in 2016 (75.7). The last row shows performance change between 2016 and 2023 compared to Greece (-14.6%) and to the EU (13.7%).

The radar graph shows relative strengths compared to Greece (orange line) and the EU (blue line), showing relative strengths (e.g. International scientific co-publications) and weaknesses (e.g. Employment knowledge-intensive activities).

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

	EL43	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	18.7	11.5	4.4
Manufacturing (C)	6.1	9.7	16.4
Utilities & Construction (D-F)	6.5	5.2	8.3
Services (G-N)	60.7	64.3	63.7
Public administration (O-U)	8.1	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	17,000	20,700	32,400
GDP per capita growth (PPS)	0.6	1.4	2.5
Population density	76	81	106
Urbanisation	54.0	74.3	75.8
Population size (000s)	640	10,680	447,210





Anatoliki Makedonia, Thraki (EL51)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	38.9	0.475	80	90
Lifelong learning	3.0	0.076	80	20
International scientific co-publications	908	0.218	77	71
Most-cited scientific publications	982.0	0.546	108	100
Above average digital skills	20.7	0.339	94	72
R&D expenditures public sector	0.74	0.551	95	97
R&D expenditures business sector	0.26	0.280	61	41
Non-R&D innovation expenditures	±	0.481	94	119
Innovation expenditures per person employed	±	0.396	75	66
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	0.912	91	163
Business process innovators	±	0.948	95	147
Innovative SMEs collaborating	±	0.589	77	121
Public-private co-publications	219.3	0.494	105	126
PCT patent applications	0.14	0.128	47	21
Trademark applications	3.77	0.254	59	51
Design applications	0.58	0.221	72	38
Employment knowledge-intensive activities	6.2	0.095	25	17
Employment innovative enterprises	±	0.840	101	146
Sales of innovative products	±	0.769	88	160
Air emissions by fine particulates	15.5	0.388	89	65
Average normalised score	--	0.450	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.376	--	--
Performance 2023 relative to EU in 2023	--	--	86.4	68.7
Performance 2023 relative to EU in 2016	--	--	--	74.5
Regional Innovation Index (RII) 2016	--	0.252	--	--
Performance 2016 relative to EU in 2016	--	--	78.0	49.9
Performance change over time	--	--	8.5	24.6

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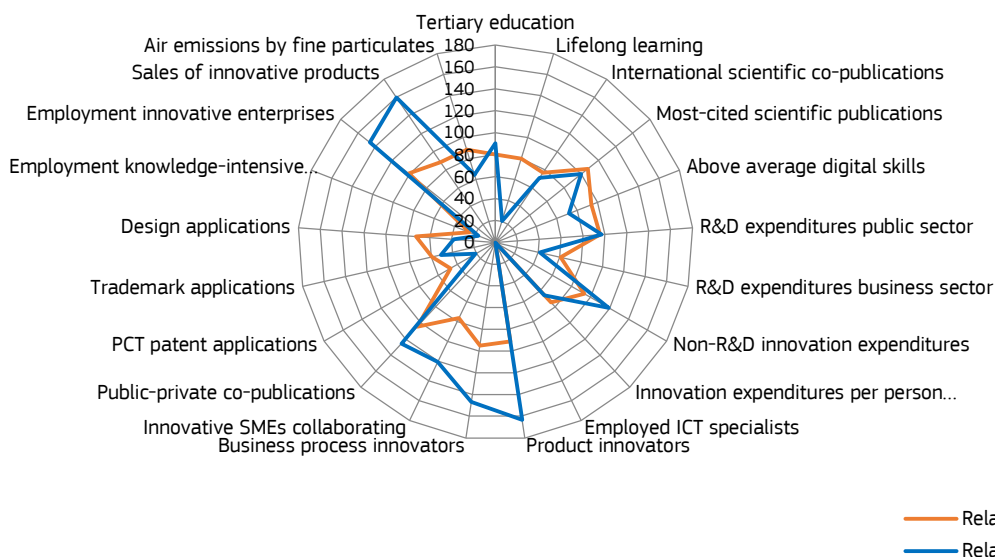
Anatoliki Makedonia, Thraki (EL51) is an Emerging Innovator +. Innovation performance has increased over time (24.6%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (86.4) and the EU (68.7) in 2023, the RII in 2023 relative to the EU in 2016 (74.5), and the RII in 2016 relative to both Greece (78) and the EU in 2016 (49.9). The last row shows performance change between 2016 and 2023 compared to Greece (8.5%) and to the EU (24.6%).

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

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

	EL51	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	22.8	11.5	4.4
Manufacturing (C)	10.6	9.7	16.4
Utilities & Construction (D-F)	3.2	5.2	8.3
Services (G-N)	49.8	64.3	63.7
Public administration (O-U)	13.7	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	14,600	20,700	32,400
GDP per capita growth (PPS)	2.0	1.4	2.5
Population density	42	81	106
Urbanisation	53.8	74.3	75.8
Population size (000s)	590	10,680	447,210



Kentriki Makedonia (EL52)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	46.4	0.641	108	122
Lifelong learning	3.1	0.080	84	21
International scientific co-publications	1547	0.373	131	122
Most-cited scientific publications	944.1	0.521	103	95
Above average digital skills	20.7	0.339	94	72
R&D expenditures public sector	0.88	0.611	106	107
R&D expenditures business sector	0.48	0.380	83	56
Non-R&D innovation expenditures	±	0.508	99	126
Innovation expenditures per person employed	±	0.449	85	75
Employed ICT specialists	1.7	0.151	61	29
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.770	100	158
Public-private co-publications	296.5	0.574	122	146
PCT patent applications	0.52	0.246	90	40
Trademark applications	8.16	0.553	129	111
Design applications	2.20	0.432	142	74
Employment knowledge-intensive activities	9.8	0.265	71	47
Employment innovative enterprises	±	0.918	110	160
Sales of innovative products	±	0.827	95	172
Air emissions by fine particulates	16.6	0.336	77	56
Average normalised score	--	0.523	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.437	--	--
Performance 2023 relative to EU in 2023	--	--	100.4	79.8
Performance 2023 relative to EU in 2016	--	--	--	86.5
Regional Innovation Index (RII) 2016	--	0.311	--	--
Performance 2016 relative to EU in 2016	--	--	96.4	61.7
Performance change over time	--	--	4.0	24.8

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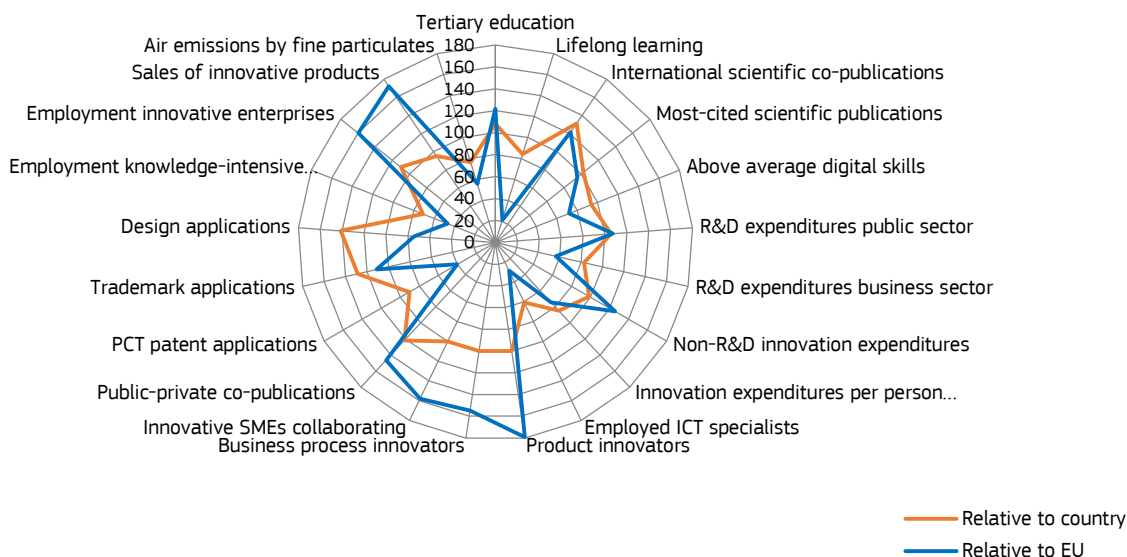
Kentriki Makedonia (EL52) is a Moderate Innovator -. Innovation performance has increased over time (24.8%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (100.4) and the EU (79.8) in 2023, the RII in 2023 relative to the EU in 2016 (86.5), and the RII in 2016 relative to both Greece (96.4) and the EU in 2016 (61.7). The last row shows performance change between 2016 and 2023 compared to Greece (4%) and to the EU (24.8%).

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

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

	EL52	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	12.5	11.5	4.4
Manufacturing (C)	13.1	9.7	16.4
Utilities & Construction (D-F)	4.1	5.2	8.3
Services (G-N)	62.9	64.3	63.7
Public administration (O-U)	7.4	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	16,300	20,700	32,400
GDP per capita growth (PPS)	1.6	1.4	2.5
Population density	99	81	106
Urbanisation	71.0	74.3	75.8
Population size (000s)	1,860	10,680	447,210



Dytiki Makedonia (EL53)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	41.0	0.521	88	99
Lifelong learning	3.3	0.087	92	23
International scientific co-publications	717	0.172	60	56
Most-cited scientific publications	1487.2	0.881	174	161
Above average digital skills	20.7	0.339	94	72
R&D expenditures public sector	0.47	0.417	72	73
R&D expenditures business sector	0.13	0.198	43	29
Non-R&D innovation expenditures	±	0.458	89	113
Innovation expenditures per person employed	±	0.405	76	67
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	0.986	99	177
Business process innovators	±	0.972	97	151
Innovative SMEs collaborating	±	0.731	95	150
Public-private co-publications	173.3	0.439	93	112
PCT patent applications	0.03	0.060	22	10
Trademark applications	2.69	0.180	42	36
Design applications	1.76	0.387	127	67
Employment knowledge-intensive activities	3.9	0.000	0	0
Employment innovative enterprises	±	0.658	79	115
Sales of innovative products	±	0.664	76	138
Air emissions by fine particulates	12.8	0.523	119	87
Average normalised score	--	0.454	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.380	--	--
Performance 2023 relative to EU in 2023	--	--	87.2	69.3
Performance 2023 relative to EU in 2016	--	--	--	75.2
Regional Innovation Index (RII) 2016	--	0.252	--	--
Performance 2016 relative to EU in 2016	--	--	78.1	50.0
Performance change over time	--	--	9.1	25.2

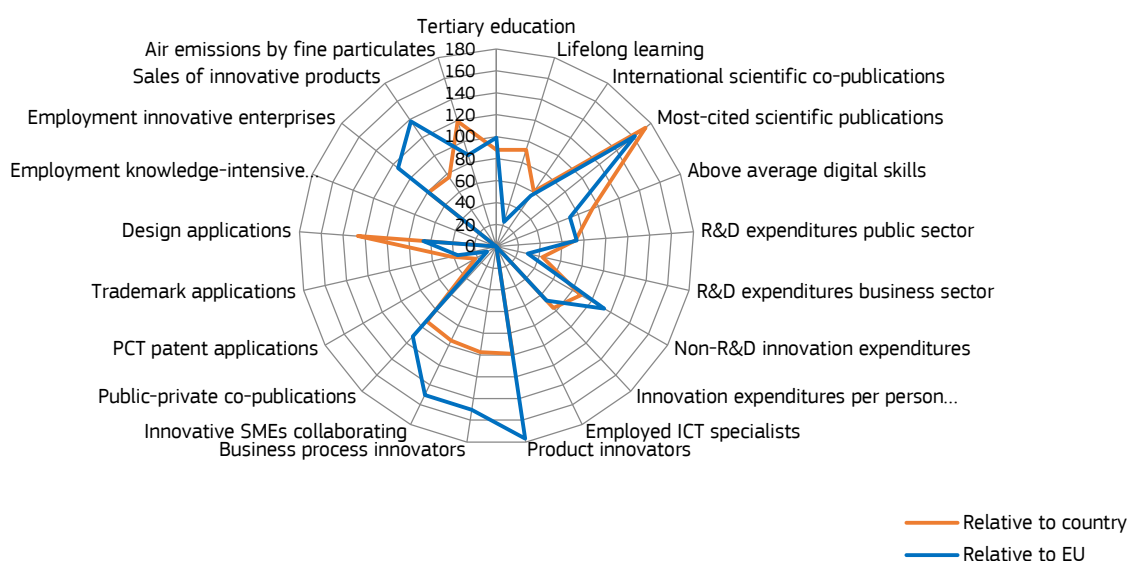
± Scores are not shown as these would allow recalculating confidential regional CIS data.

Dytiki Makedonia (EL53) is an Emerging Innovator +. Innovation performance has increased over time (25.2%). 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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (87.2) and the EU (69.3) in 2023, the RII in 2023 relative to the EU in 2016 (75.2), and the RII in 2016 relative to both Greece (78.1) and the EU in 2016 (50). The last row shows performance change between 2016 and 2023 compared to Greece (9.1%) and to the EU (25.2%).

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

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

	EL53	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	23.2	11.5	4.4
Manufacturing (C)	6.6	9.7	16.4
Utilities & Construction (D-F)	10.4	5.2	8.3
Services (G-N)	47.2	64.3	63.7
Public administration (O-U)	12.6	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	17,200	20,700	32,400
GDP per capita growth (PPS)	-2.5	1.4	2.5
Population density	28	81	106
Urbanisation	56.0	74.3	75.8
Population size (000s)	260	10,680	447,210



Ipeiros (EL54)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	37.0	0.432	73	82
Lifelong learning	4.2	0.121	128	33
International scientific co-publications	2497	0.604	213	197
Most-cited scientific publications	778.8	0.411	81	75
Above average digital skills	20.9	0.344	95	73
R&D expenditures public sector	1.50	0.831	144	146
R&D expenditures business sector	0.20	0.245	53	36
Non-R&D innovation expenditures	±	0.622	121	154
Innovation expenditures per person employed	±	0.529	100	88
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.563	73	116
Public-private co-publications	338.3	0.613	130	156
PCT patent applications	0.41	0.219	80	36
Trademark applications	3.79	0.256	59	51
Design applications	0.10	0.093	30	16
Employment knowledge-intensive activities	4.2	0.000	0	0
Employment innovative enterprises	±	0.818	98	143
Sales of innovative products	±	1.000	115	208
Air emissions by fine particulates	11.7	0.573	131	96
Average normalised score	--	0.514	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.430	--	--
Performance 2023 relative to EU in 2023	--	--	98.7	78.4
Performance 2023 relative to EU in 2016	--	--	--	85.1
Regional Innovation Index (RII) 2016	--	0.263	--	--
Performance 2016 relative to EU in 2016	--	--	81.3	52.0
Performance change over time	--	--	17.4	33.1

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

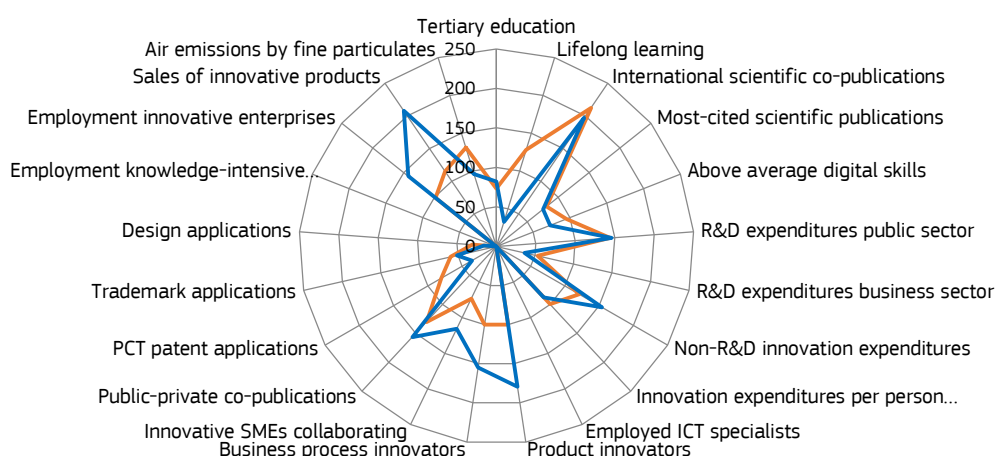
Ipeiros (EL54) is a Moderate Innovator -. Innovation performance has increased over time (33.1%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (98.7) and the EU (78.4) in 2023, the RII in 2023 relative to the EU in 2016 (85.1), and the RII in 2016 relative to both Greece (81.3) and the EU in 2016 (52). The last row shows performance change between 2016 and 2023 compared to Greece (17.4%) and to the EU (33.1%).

The radar graph shows relative strengths compared to Greece (orange line) and the EU (blue line), showing relative strengths (e.g. International scientific co-publications) and weaknesses (e.g. Employment knowledge-intensive activities).

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

	EL54	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	15.5	11.5	4.4
Manufacturing (C)	6.3	9.7	16.4
Utilities & Construction (D-F)	5.7	5.2	8.3
Services (G-N)	62.8	64.3	63.7
Public administration (O-U)	9.8	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	14,900	20,700	32,400
GDP per capita growth (PPS)	1.9	1.4	2.5
Population density	36	81	106
Urbanisation	42.8	74.3	75.8
Population size (000s)	330	10,680	447,210



— Relative to country  
— Relative to EU

Thessalia (EL61)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	37.8	0.450	76	86
Lifelong learning	3.8	0.106	112	29
International scientific co-publications	1301	0.313	110	102
Most-cited scientific publications	1064.6	0.601	118	110
Above average digital skills	20.7	0.339	94	72
R&D expenditures public sector	0.81	0.582	101	102
R&D expenditures business sector	0.38	0.338	74	50
Non-R&D innovation expenditures	±	0.649	126	161
Innovation expenditures per person employed	±	0.465	88	77
Employed ICT specialists	0.8	0.040	16	8
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.716	93	147
Public-private co-publications	174.8	0.441	94	112
PCT patent applications	0.24	0.169	62	27
Trademark applications	6.32	0.428	100	86
Design applications	0.19	0.126	41	22
Employment knowledge-intensive activities	6.3	0.100	27	18
Employment innovative enterprises	±	0.824	99	144
Sales of innovative products	±	0.783	90	163
Air emissions by fine particulates	13.7	0.479	109	80
Average normalised score	--	0.474	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.396	--	--
Performance 2023 relative to EU in 2023	--	--	91.0	72.3
Performance 2023 relative to EU in 2016	--	--	--	78.5
Regional Innovation Index (RII) 2016	--	0.265	--	--
Performance 2016 relative to EU in 2016	--	--	82.2	52.6
Performance change over time	--	--	8.8	25.9

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

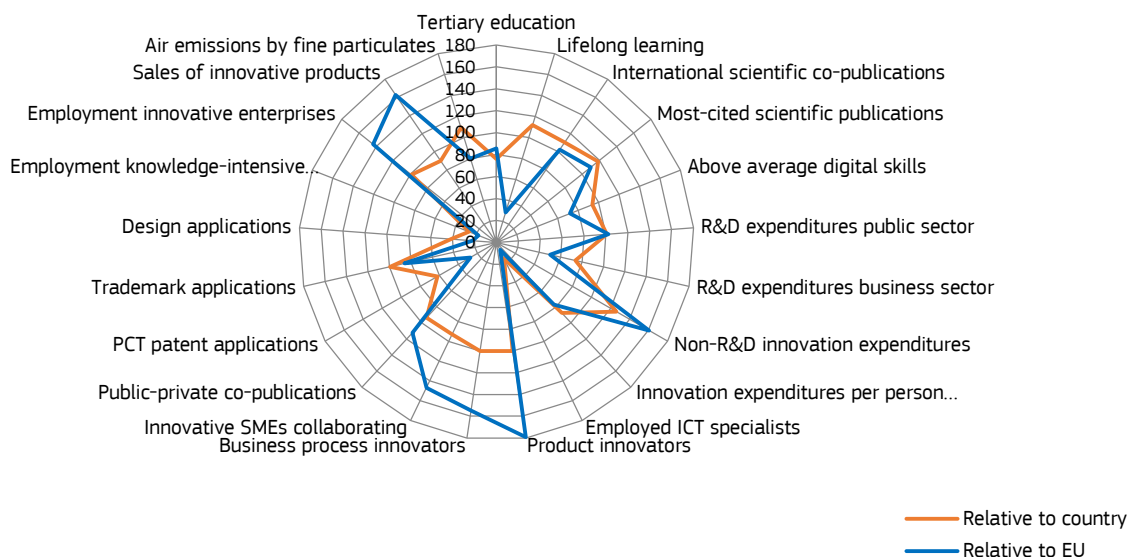
Thessalia (EL61) is a Moderate Innovator -. Innovation performance has increased over time (25.9%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (91) and the EU (72.3) in 2023, the RII in 2023 relative to the EU in 2016 (78.5), and the RII in 2016 relative to both Greece (82.2) and the EU in 2016 (52.6). The last row shows performance change between 2016 and 2023 compared to Greece (8.8%) and to the EU (25.9%).

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

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

	EL61	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	19.4	11.5	4.4
Manufacturing (C)	9.4	9.7	16.4
Utilities & Construction (D-F)	5.0	5.2	8.3
Services (G-N)	56.6	64.3	63.7
Public administration (O-U)	9.6	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	16,000	20,700	32,400
GDP per capita growth (PPS)	2.1	1.4	2.5
Population density	51	81	106
Urbanisation	68.5	74.3	75.8
Population size (000s)	710	10,680	447,210





## Regional Innovation Scoreboard 2023

### Ionia Nisia (EL62)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	33.3	0.350	59	67
Lifelong learning	2.0	0.038	40	10
International scientific co-publications	377	0.089	31	29
Most-cited scientific publications	653.5	0.328	65	60
Above average digital skills	20.9	0.344	95	73
R&D expenditures public sector	0.36	0.352	61	62
R&D expenditures business sector	0.14	0.205	45	30
Non-R&D innovation expenditures	±	0.570	111	141
Innovation expenditures per person employed	±	0.433	82	72
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	0.788	79	141
Business process innovators	±	0.922	92	143
Innovative SMEs collaborating	±	0.222	29	46
Public-private co-publications	29.4	0.181	38	46
PCT patent applications	0.00	0.000	0	0
Trademark applications	2.37	0.159	37	32
Design applications	0.13	0.107	35	18
Employment knowledge-intensive activities	4.7	0.024	6	4
Employment innovative enterprises	±	0.712	85	124
Sales of innovative products	±	0.860	99	179
Air emissions by fine particulates	10.7	0.623	142	104
Average normalised score	--	0.365	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.305	--	--
Performance 2023 relative to EU in 2023	--	--	70.2	55.8
Performance 2023 relative to EU in 2016	--	--	--	60.5
Regional Innovation Index (RII) 2016	--	0.235	--	--
Performance 2016 relative to EU in 2016	--	--	72.6	46.5
Performance change over time	--	--	-2.5	14.0

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

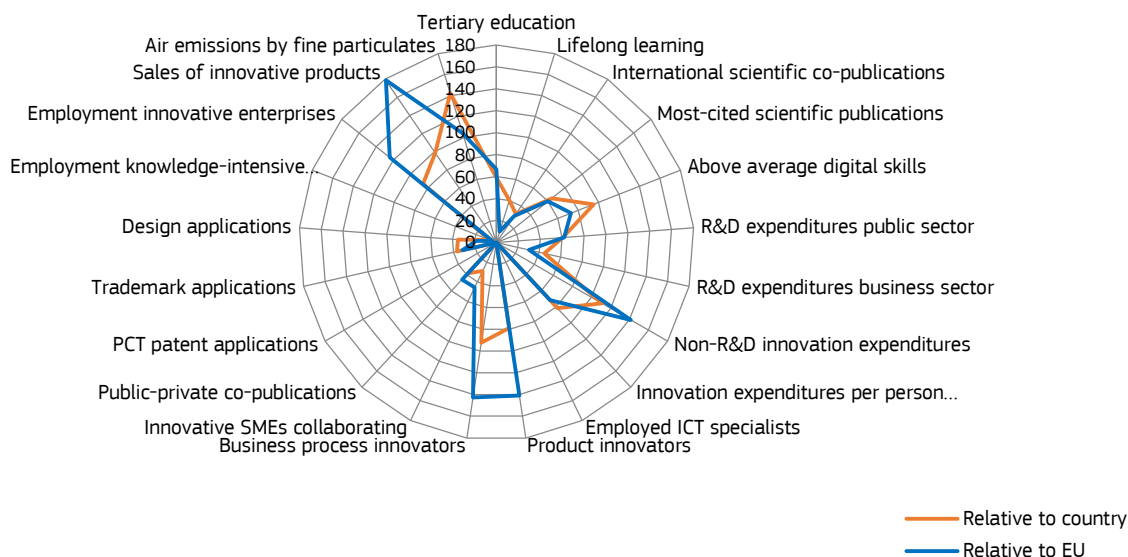
Ionia Nisia (EL62) is an Emerging Innovator +. Innovation performance has increased over time (14%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (70.2) and the EU (55.8) in 2023, the RII in 2023 relative to the EU in 2016 (60.5), and the RII in 2016 relative to both Greece (72.6) and the EU in 2016 (46.5). The last row shows performance change between 2016 and 2023 compared to Greece (-2.5%) and to the EU (14%).

The radar graph shows relative strengths compared to Greece (orange line) and the EU (blue line), showing relative strengths (e.g. Business process innovators) and weaknesses (e.g. PCT patent applications).

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

	EL62	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	10.3	11.5	4.4
Manufacturing (C)	3.5	9.7	16.4
Utilities & Construction (D-F)	7.9	5.2	8.3
Services (G-N)	72.6	64.3	63.7
Public administration (O-U)	5.8	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	18,400	20,700	32,400
GDP per capita growth (PPS)	0.8	1.4	2.5
Population density	88	81	106
Urbanisation	27.2	74.3	75.8
Population size (000s)	200	10,680	447,210



Dytiki Ellada (EL63)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	38.3	0.461	78	88
Lifelong learning	3.2	0.083	88	22
International scientific co-publications	1915	0.462	163	151
Most-cited scientific publications	823.9	0.441	87	81
Above average digital skills	20.9	0.344	95	73
R&D expenditures public sector	1.26	0.752	130	132
R&D expenditures business sector	0.34	0.320	70	47
Non-R&D innovation expenditures	±	0.477	93	118
Innovation expenditures per person employed	±	0.568	107	94
Employed ICT specialists	1.3	0.100	40	19
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.918	119	189
Public-private co-publications	354.1	0.627	133	160
PCT patent applications	0.58	0.262	96	42
Trademark applications	3.44	0.232	54	47
Design applications	0.51	0.207	68	36
Employment knowledge-intensive activities	7.8	0.171	46	30
Employment innovative enterprises	±	0.774	93	135
Sales of innovative products	±	0.753	87	157
Air emissions by fine particulates	11.8	0.569	130	95
Average normalised score	--	0.501	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.419	--	--
Performance 2023 relative to EU in 2023	--	--	96.3	76.5
Performance 2023 relative to EU in 2016	--	--	--	83.0
Regional Innovation Index (RII) 2016	--	0.314	--	--
Performance 2016 relative to EU in 2016	--	--	97.1	62.1
Performance change over time	--	--	-0.8	20.9

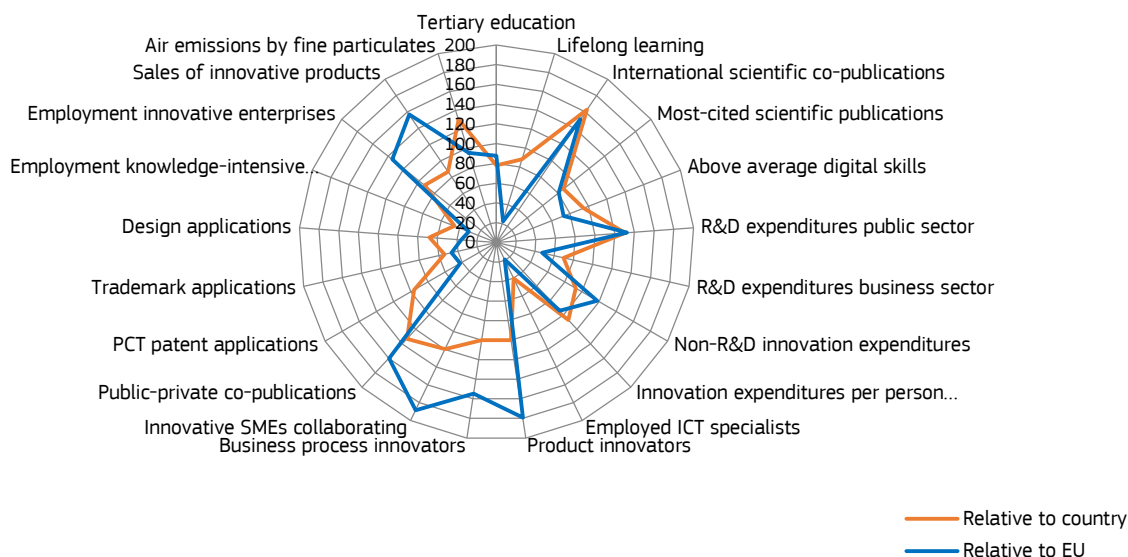
± Scores are not shown as these would allow recalculating confidential regional CIS data.

Dytiki Ellada (EL63) is a Moderate Innovator -. Innovation performance has increased over time (20.9%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (96.3) and the EU (76.5) in 2023, the RII in 2023 relative to the EU in 2016 (83), and the RII in 2016 relative to both Greece (97.1) and the EU in 2016 (62.1). The last row shows performance change between 2016 and 2023 compared to Greece (-0.8%) and to the EU (20.9%). The radar graph shows relative strengths compared to Greece (orange line) and the EU (blue line), showing relative strengths (e.g. Innovative SMEs collaborating) and weaknesses (e.g. Employed ICT specialists).

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

	EL63	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	25.2	11.5	4.4
Manufacturing (C)	7.2	9.7	16.4
Utilities & Construction (D-F)	6.4	5.2	8.3
Services (G-N)	52.2	64.3	63.7
Public administration (O-U)	9.0	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	15,400	20,700	32,400
GDP per capita growth (PPS)	2.2	1.4	2.5
Population density	57	81	106
Urbanisation	54.9	74.3	75.8
Population size (000s)	650	10,680	447,210





**Stereia Ellada (EL64)**

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	36.6	0.424	72	81
Lifelong learning	1.6	0.023	24	6
International scientific co-publications	284	0.067	24	22
Most-cited scientific publications	1352.9	0.792	156	145
Above average digital skills	20.9	0.344	95	73
R&D expenditures public sector	0.14	0.178	31	31
R&D expenditures business sector	0.70	0.459	100	68
Non-R&D innovation expenditures	±	0.617	120	153
Innovation expenditures per person employed	±	0.545	103	90
Employed ICT specialists	0.8	0.034	14	7
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.569	74	117
Public-private co-publications	65.1	0.269	57	69
PCT patent applications	0.22	0.160	59	26
Trademark applications	2.60	0.174	41	35
Design applications	2.23	0.435	142	75
Employment knowledge-intensive activities	4.9	0.033	9	6
Employment innovative enterprises	±	0.821	99	143
Sales of innovative products	±	1.000	115	208
Air emissions by fine particulates	11.5	0.583	133	97
Average normalised score	--	0.454	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.379	--	--
Performance 2023 relative to EU in 2023	--	--	87.2	69.3
Performance 2023 relative to EU in 2016	--	--	--	75.1
Regional Innovation Index (RII) 2016	--	0.265	--	--
Performance 2016 relative to EU in 2016	--	--	81.9	52.4
Performance change over time	--	--	5.2	22.7

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

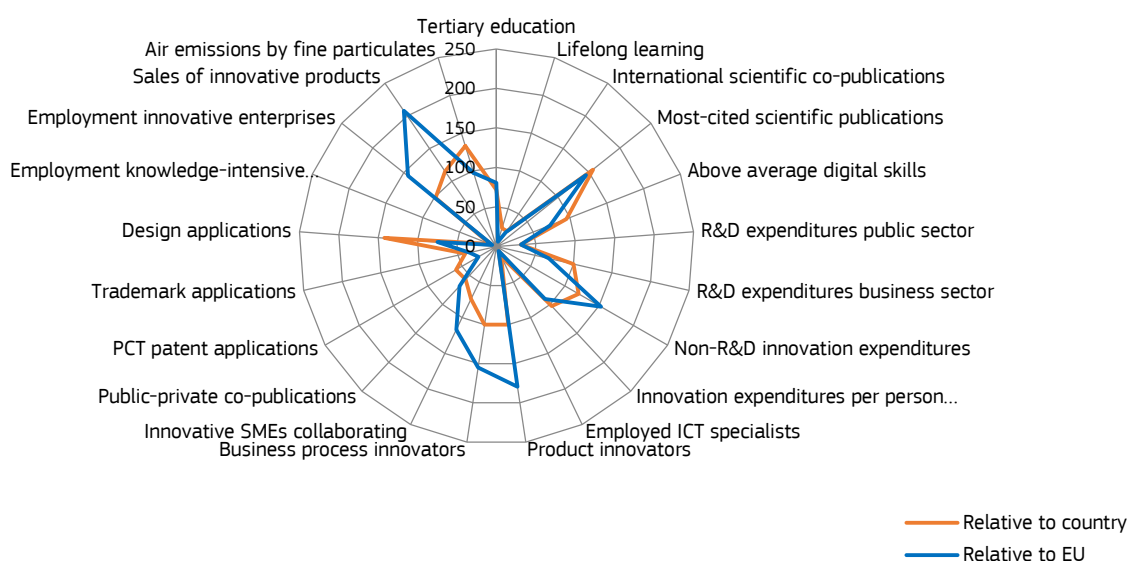
Stereia Ellada (EL64) is an Emerging Innovator +. Innovation performance has increased over time (22.7%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (87.2) and the EU (69.3) in 2023, the RII in 2023 relative to the EU in 2016 (75.1), and the RII in 2016 relative to both Greece (81.9) and the EU in 2016 (52.4). The last row shows performance change between 2016 and 2023 compared to Greece (5.2%) and to the EU (22.7%).

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

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

	EL64	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	21.1	11.5	4.4
Manufacturing (C)	17.7	9.7	16.4
Utilities & Construction (D-F)	5.7	5.2	8.3
Services (G-N)	48.5	64.3	63.7
Public administration (O-U)	7.1	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	21,200	20,700	32,400
GDP per capita growth (PPS)	4.3	1.4	2.5
Population density	36	81	106
Urbanisation	42.6	74.3	75.8
Population size (000s)	550	10,680	447,210



Peloponnisos (EL65)

	Data	Normalised score	Relative to	
			EL	EU
Tertiary education	39.3	0.483	82	92
Lifelong learning	1.3	0.011	12	3
International scientific co-publications	258	0.061	21	20
Most-cited scientific publications	920.0	0.505	99	92
Above average digital skills	20.9	0.344	95	73
R&D expenditures public sector	0.39	0.370	64	65
R&D expenditures business sector	0.40	0.347	76	51
Non-R&D innovation expenditures	±	0.748	145	185
Innovation expenditures per person employed	±	0.494	93	82
Employed ICT specialists	n/a	n/a	n/a	n/a
Product innovators	±	1.000	100	179
Business process innovators	±	1.000	100	155
Innovative SMEs collaborating	±	0.918	119	189
Public-private co-publications	42.7	0.218	46	56
PCT patent applications	0.26	0.173	64	28
Trademark applications	4.26	0.288	67	58
Design applications	2.34	0.445	146	77
Employment knowledge-intensive activities	6.8	0.123	33	22
Employment innovative enterprises	±	0.674	81	118
Sales of innovative products	±	0.478	55	99
Air emissions by fine particulates	10.9	0.615	140	103
Average normalised score	--	0.465	--	--
Country EIS-RIS correction factor	--	0.836	--	--
Regional Innovation Index (RII) 2023	--	0.389	--	--
Performance 2023 relative to EU in 2023	--	--	89.3	71.0
Performance 2023 relative to EU in 2016	--	--	--	77.0
Regional Innovation Index (RII) 2016	--	0.233	--	--
Performance 2016 relative to EU in 2016	--	--	72.2	46.2
Performance change over time	--	--	17.1	30.8

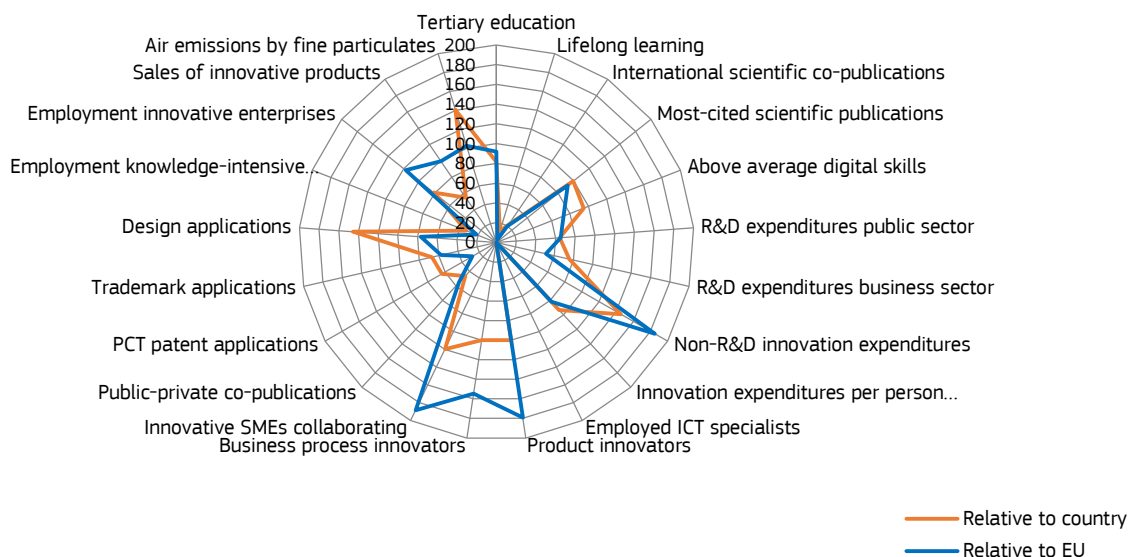
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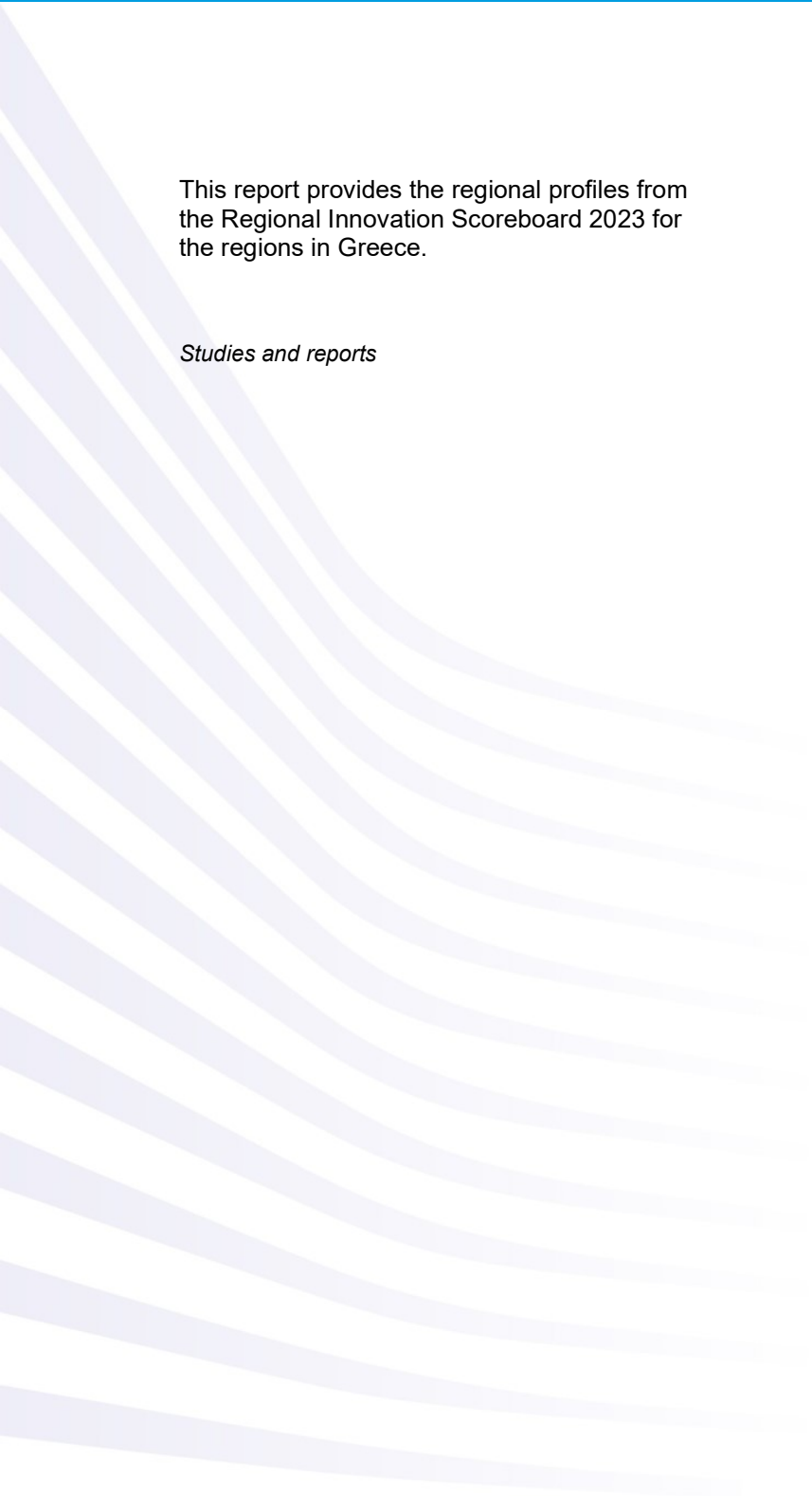

Peloponnisos (EL65) is a Moderate Innovator -. Innovation performance has increased over time (30.8%).

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 Greece and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Greece (89.3) and the EU (71) in 2023, the RII in 2023 relative to the EU in 2016 (77), and the RII in 2016 relative to both Greece (72.2) and the EU in 2016 (46.2). The last row shows performance change between 2016 and 2023 compared to Greece (17.1%) and to the EU (30.8%). The radar graph shows relative strengths compared to Greece (orange line) and the EU (blue line), showing relative strengths (e.g. Innovative SMEs collaborating) and weaknesses (e.g. Lifelong learning).

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

	EL65	EL	EU
Share of employment in:			
Agriculture & Mining (A-B)	26.0	11.5	4.4
Manufacturing (C)	7.4	9.7	16.4
Utilities & Construction (D-F)	5.3	5.2	8.3
Services (G-N)	53.4	64.3	63.7
Public administration (O-U)	7.9	9.3	7.2
Average number of employed persons per enterprise	n/a	3.8	5.1
GDP per capita (PPS)	18,000	20,700	32,400
GDP per capita growth (PPS)	1.9	1.4	2.5
Population density	37	81	106
Urbanisation	43.8	74.3	75.8
Population size (000s)	570	10,680	447,210





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

*Studies and reports*