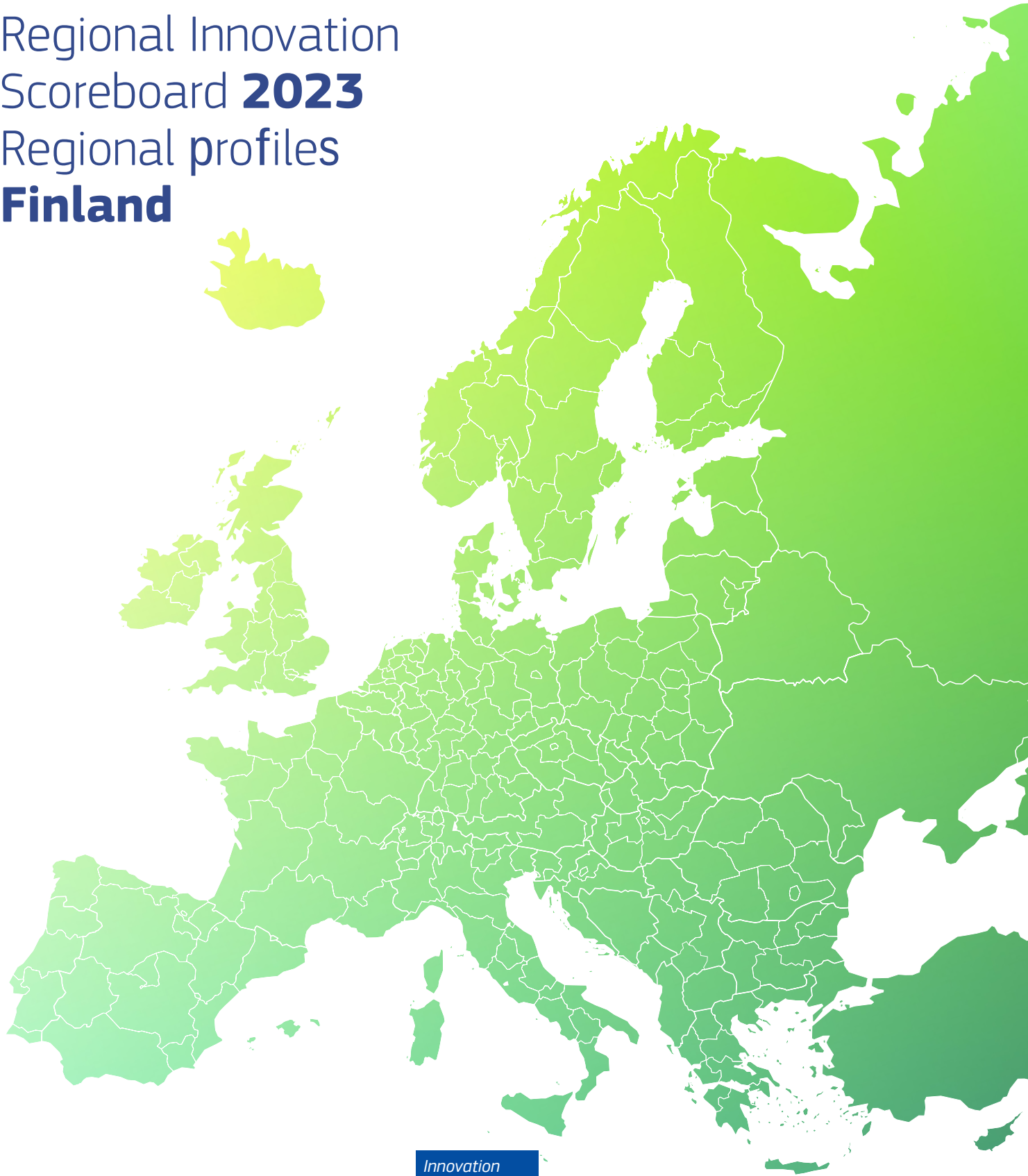
European Commission

# Regional Innovation Scoreboard **2023** Regional profiles **Finland**



*Innovation*

**Regional Innovation Scoreboard 2023 – Regional profiles Finland**

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# Regional Innovation Scoreboard 2023

# Regional profiles Finland

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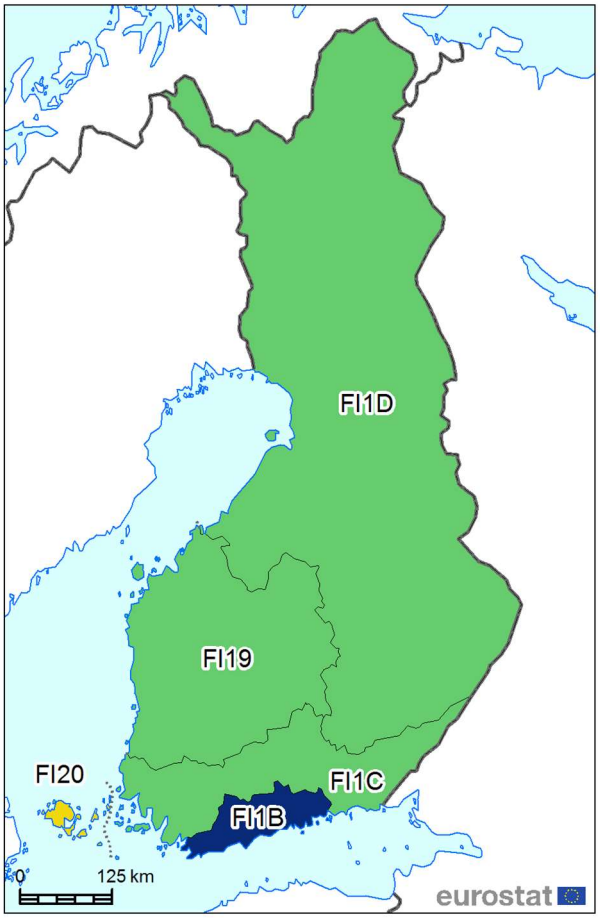
# FINLAND




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

| NUTS | Region | RII | Rank | Group | Change |
|---|---|---|---|---|---|
| FI | Finland | 134.3 | -- | Innovation Leader | 18.3 |
| | | | | | |
| FI1B | Helsinki-Uusimaa | 152.1 | 2 | Innovation Leader + | 18.0 |
| FI1C | Etelä-Suomi | 121.5 | 48 | Strong Innovator + | 16.4 |
| FI19 | Länsi-Suomi | 123.7 | 43 | Strong Innovator + | 14.4 |
| FI1D | Pohjois- ja Itä-Suomi | 122.0 | 46 | Strong Innovator + | 18.3 |
| FI2 | Åland | 72.9 | 168 | Moderate Innovator - | -0.5 |

Finland is an Innovation Leader and includes five regions.

Only one region is an Innovation Leader: *Helsinki-Uusimaa* (FI1B), the overall second most innovative region in Europe. Three regions are a Strong Innovator + and one region is a Moderate Innovator -.

Performance has increased for four regions and decreased marginally for *Åland* (FI2). Performance change for all regions is at best equal to that of Finland, a result which seems counter-intuitive but that can be explained by the method used for calculating performance change.[1] Performance increase for four regions has been at a higher rate than that of the EU (8.5), only for *Åland* (FI2) performance increase has been at a lower rate.

[1] Performance change at the national level for Finland is above that of four regions within Finland and equal to that of Pohjois- ja Itä-Suomi (FI1D), which can be explained by the statistical method of calculating performance change by taking the difference between the relative to EU scores in 2016 and 2023, a method which does not fully account for differences in performance levels.

## Helsinki-Uusimaa (FI1B)

| | Data | Normalised score | Relative to | |
|---|---|---|---|---|
| | | | FI | EU |
| Tertiary education | 45.8 | 0.627 | 125 | 119 |
| Lifelong learning | 35.1 | 1.000 | 100 | 269 |
| International scientific co-publications | 4732 | 1.000 | 150 | 326 |
| Most-cited scientific publications | 1198.6 | 0.690 | 102 | 126 |
| Above average digital skills | 49.3 | 0.993 | 103 | 211 |
| R&D expenditures public sector | 1.10 | 0.696 | 110 | 122 |
| R&D expenditures business sector | 2.55 | 0.876 | 114 | 130 |
| Non-R&D innovation expenditures | ± | 0.346 | 96 | 86 |
| Innovation expenditures per person employed | ± | 0.964 | 113 | 160 |
| Employed ICT specialists | 12.7 | 1.000 | 110 | 190 |
| Product innovators | ± | 0.954 | 118 | 171 |
| Business process innovators | ± | 0.909 | 104 | 141 |
| Innovative SMEs collaborating | ± | 1.000 | 100 | 205 |
| Public-private co-publications | 1067.2 | 1.000 | 135 | 255 |
| PCT patent applications | 8.75 | 1.000 | 114 | 162 |
| Trademark applications | 13.57 | 0.921 | 147 | 185 |
| Design applications | 5.86 | 0.705 | 108 | 121 |
| Employment knowledge-intensive activities | 23.4 | 0.910 | 142 | 160 |
| Employment innovative enterprises | ± | 0.804 | 103 | 140 |
| Sales of innovative products | ± | 0.837 | 116 | 174 |
| Air emissions by fine particulates | 5.3 | 0.891 | 95 | 149 |
| | | | | |
| Average normalised score | -- | 0.863 | -- | -- |
| Country EIS-RIS correction factor | -- | 0.965 | -- | -- |
| Regional Innovation Index (RII) 2023 | -- | 0.833 | -- | -- |
| Performance 2023 relative to EU in 2023 | -- | -- | 113.3 | 152.1 |
| Performance 2023 relative to EU in 2016 | -- | -- | -- | 165.0 |
| Regional Innovation Index (RII) 2016 | -- | 0.743 | -- | -- |
| Performance 2016 relative to EU in 2016 | -- | -- | 115.5 | 147.1 |
| Performance change over time | -- | -- | -2.2 | 18.0 |

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

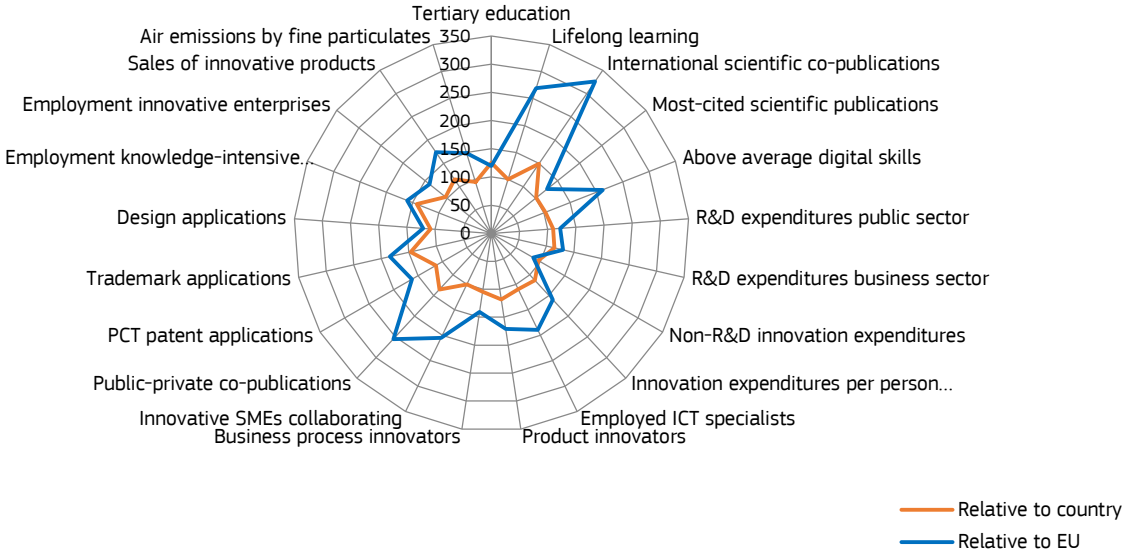
Helsinki-Uusimaa (FI1B) is an Innovation Leader +. Innovation performance has increased over time (18%).

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 Finland and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Finland (113.3) and the EU (152.1) in 2023, the RII in 2023 relative to the EU in 2016 (165), and the RII in 2016 relative to both Finland (115.5) and the EU in 2016 (147.1). The last row shows performance change between 2016 and 2023 compared to Finland (-2.2%) and to the EU (18%).

The radar graph shows relative strengths compared to Finland (orange line) and the EU (blue line), showing relative strengths (e.g. International scientific co-publications) and weaknesses (e.g. Non-R&D innovation expenditures).

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

| | FI1B | FI | EU |
|---|---|---|---|
| Share of employment in: | | | |
| Agriculture & Mining (A-B) | 0.8 | 4.1 | 4.4 |
| Manufacturing (C) | 8.6 | 12.9 | 16.4 |
| Utilities & Construction (D-F) | 7.9 | 8.6 | 8.3 |
| Services (G-N) | 77.4 | 69.9 | 63.7 |
| Public administration (O-U) | 5.2 | 4.6 | 7.2 |
| Average number of employed persons per enterprise | 6.9 | 5.0 | 5.1 |
| GDP per capita (PPS) | 46,400 | 36,400 | 32,400 |
| GDP per capita growth (PPS) | 2.1 | 2.7 | 2.5 |
| Population density | 178 | 16 | 106 |
| Urbanisation | 89.0 | 73.2 | 75.8 |
| Population size (000s) | 1,700 | 5,530 | 447,210 |



## Etelä-Suomi (FI1C)

| | Data | Normalised score | Relative to | |
|---|---|---|---|---|
| | | | FI | EU |
| Tertiary education | 36.3 | 0.417 | 83 | 79 |
| Lifelong learning | 27.6 | 1.000 | 100 | 269 |
| International scientific co-publications | 2832 | 0.685 | 102 | 223 |
| Most-cited scientific publications | 1207.5 | 0.696 | 102 | 127 |
| Above average digital skills | 47.6 | 0.955 | 99 | 203 |
| R&D expenditures public sector | 0.77 | 0.564 | 89 | 99 |
| R&D expenditures business sector | 1.10 | 0.576 | 75 | 85 |
| Non-R&D innovation expenditures | ± | 0.354 | 98 | 88 |
| Innovation expenditures per person employed | ± | 0.723 | 85 | 120 |
| Employed ICT specialists | 4.6 | 0.542 | 59 | 103 |
| Product innovators | ± | 0.711 | 88 | 127 |
| Business process innovators | ± | 0.794 | 91 | 123 |
| Innovative SMEs collaborating | ± | 1.000 | 100 | 205 |
| Public-private co-publications | 449.3 | 0.706 | 96 | 180 |
| PCT patent applications | 4.09 | 0.692 | 79 | 112 |
| Trademark applications | 6.24 | 0.422 | 67 | 85 |
| Design applications | 5.85 | 0.704 | 108 | 121 |
| Employment knowledge-intensive activities | 15.9 | 0.555 | 87 | 98 |
| Employment innovative enterprises | ± | 0.785 | 101 | 137 |
| Sales of innovative products | ± | 0.683 | 95 | 142 |
| Air emissions by fine particulates | 4.8 | 0.915 | 98 | 153 |
| | | | | |
| Average normalised score | -- | 0.689 | -- | -- |
| Country EIS-RIS correction factor | -- | 0.965 | -- | -- |
| Regional Innovation Index (RII) 2023 | -- | 0.666 | -- | -- |
| Performance 2023 relative to EU in 2023 | -- | -- | 90.5 | 121.5 |
| Performance 2023 relative to EU in 2016 | -- | -- | -- | 131.8 |
| Regional Innovation Index (RII) 2016 | -- | 0.583 | -- | -- |
| Performance 2016 relative to EU in 2016 | -- | -- | 90.6 | 115.4 |
| Performance change over time | -- | -- | -0.1 | 16.4 |

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

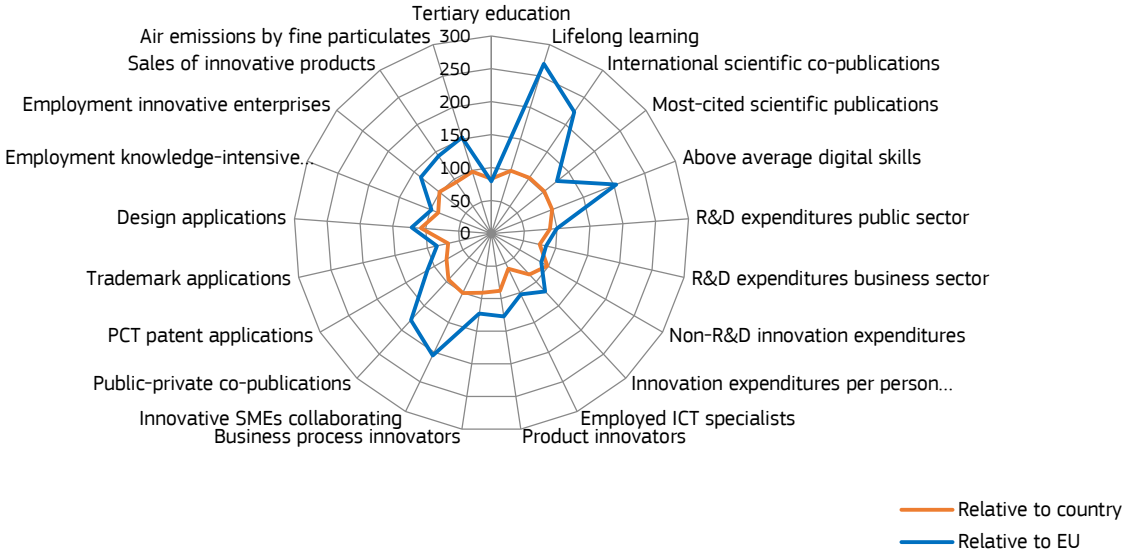
Etelä-Suomi (FI1C) is a Strong Innovator +. Innovation performance has increased over time (16.4%).

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 Finland and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Finland (90.5) and the EU (121.5) in 2023, the RII in 2023 relative to the EU in 2016 (131.8), and the RII in 2016 relative to both Finland (90.6) and the EU in 2016 (115.4). The last row shows performance change between 2016 and 2023 compared to Finland (-0.1%) and to the EU (16.4%).

The radar graph shows relative strengths compared to Finland (orange line) and the EU (blue line), showing relative strengths (e.g. Lifelong learning) 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 Average employed persons per enterprise (below EU average).

| | FI1C | FI | EU |
|---|---|---|---|
| Share of employment in: | | | |
| Agriculture & Mining (A-B) | 4.0 | 4.1 | 4.4 |
| Manufacturing (C) | 15.8 | 12.9 | 16.4 |
| Utilities & Construction (D-F) | 8.7 | 8.6 | 8.3 |
| Services (G-N) | 66.8 | 69.9 | 63.7 |
| Public administration (O-U) | 4.7 | 4.6 | 7.2 |
| Average number of employed persons per enterprise | 3.8 | 5.0 | 5.1 |
| GDP per capita (PPS) | 32,300 | 36,400 | 32,400 |
| GDP per capita growth (PPS) | 2.6 | 2.7 | 2.5 |
| Population density | 32 | 16 | 106 |
| Urbanisation | 77.8 | 73.2 | 75.8 |
| Population size (000s) | 1,150 | 5,530 | 447,210 |



## Länsi-Suomi (FI19)

| | Data | Normalised score | Relative to | |
|---|---|---|---|---|
| | | | FI | EU |
| Tertiary education | 38.0 | 0.455 | 91 | 86 |
| Lifelong learning | 28.8 | 1.000 | 100 | 269 |
| International scientific co-publications | 2269 | 0.548 | 82 | 179 |
| Most-cited scientific publications | 1146.3 | 0.655 | 97 | 120 |
| Above average digital skills | 48.2 | 0.968 | 100 | 206 |
| R&D expenditures public sector | 0.77 | 0.564 | 89 | 99 |
| R&D expenditures business sector | 1.94 | 0.764 | 100 | 113 |
| Non-R&D innovation expenditures | ± | 0.364 | 101 | 90 |
| Innovation expenditures per person employed | ± | 0.679 | 80 | 113 |
| Employed ICT specialists | 5.4 | 0.652 | 71 | 124 |
| Product innovators | ± | 0.750 | 93 | 134 |
| Business process innovators | ± | 0.876 | 100 | 136 |
| Innovative SMEs collaborating | ± | 1.000 | 100 | 205 |
| Public-private co-publications | 476.8 | 0.728 | 98 | 186 |
| PCT patent applications | 5.64 | 0.813 | 92 | 132 |
| Trademark applications | 7.30 | 0.495 | 79 | 99 |
| Design applications | 5.69 | 0.694 | 106 | 120 |
| Employment knowledge-intensive activities | 15.6 | 0.540 | 84 | 95 |
| Employment innovative enterprises | ± | 0.757 | 97 | 132 |
| Sales of innovative products | ± | 0.473 | 65 | 98 |
| Air emissions by fine particulates | 4.0 | 0.956 | 102 | 159 |
| | | | | |
| Average normalised score | -- | 0.701 | -- | -- |
| Country EIS-RIS correction factor | -- | 0.965 | -- | -- |
| Regional Innovation Index (RII) 2023 | -- | 0.677 | -- | -- |
| Performance 2023 relative to EU in 2023 | -- | -- | 92.1 | 123.7 |
| Performance 2023 relative to EU in 2016 | -- | -- | -- | 134.1 |
| Regional Innovation Index (RII) 2016 | -- | 0.604 | -- | -- |
| Performance 2016 relative to EU in 2016 | -- | -- | 94.0 | 119.7 |
| Performance change over time | -- | -- | -1.9 | 14.4 |

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

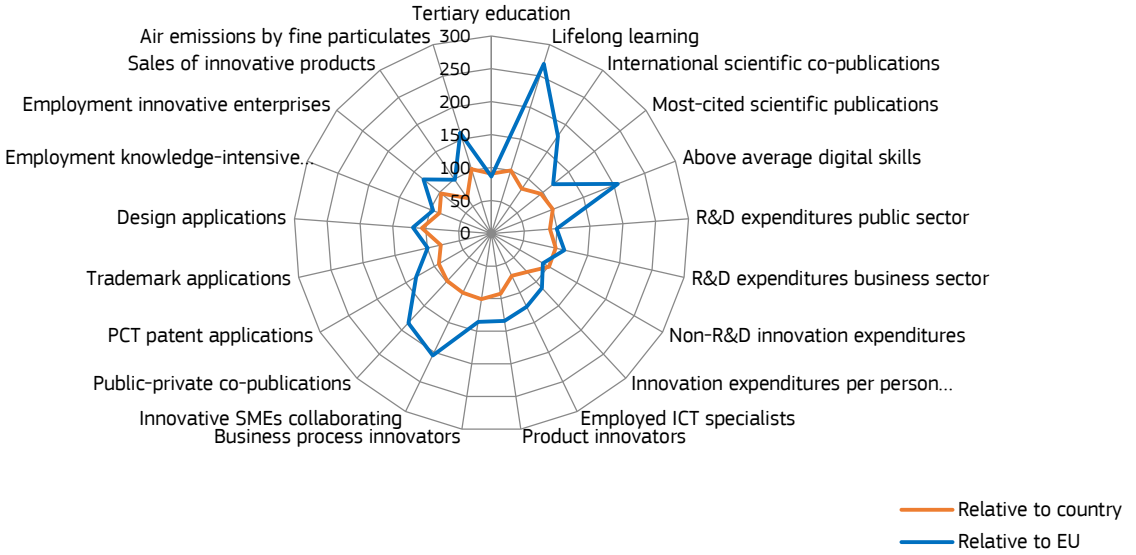
Länsi-Suomi (FI19) is a Strong Innovator +. Innovation performance has increased over time (14.4%).

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 Finland and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Finland (92.1) and the EU (123.7) in 2023, the RII in 2023 relative to the EU in 2016 (134.1), and the RII in 2016 relative to both Finland (94) and the EU in 2016 (119.7). The last row shows performance change between 2016 and 2023 compared to Finland (-1.9%) and to the EU (14.4%).

The radar graph shows relative strengths compared to Finland (orange line) and the EU (blue line), showing relative strengths (e.g. Lifelong learning) 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 Employment in Public administration (below EU average).

| | FI19 | FI | EU |
|---|---|---|---|
| Share of employment in: | | | |
| Agriculture & Mining (A-B) | 5.2 | 4.1 | 4.4 |
| Manufacturing (C) | 16.9 | 12.9 | 16.4 |
| Utilities & Construction (D-F) | 8.8 | 8.6 | 8.3 |
| Services (G-N) | 65.5 | 69.9 | 63.7 |
| Public administration (O-U) | 3.6 | 4.6 | 7.2 |
| Average number of employed persons per enterprise | 3.9 | 5.0 | 5.1 |
| GDP per capita (PPS) | 32,600 | 36,400 | 32,400 |
| GDP per capita growth (PPS) | 3.1 | 2.7 | 2.5 |
| Population density | 21 | 16 | 106 |
| Urbanisation | 61.1 | 73.2 | 75.8 |
| Population size (000s) | 1,380 | 5,530 | 447,210 |



## Pohjois- ja Itä-Suomi (FI1D)

| | Data | Normalised score | Relative to | |
|---|---|---|---|---|
| | | | FI | EU |
| Tertiary education | 36.0 | 0.410 | 82 | 78 |
| Lifelong learning | 28.5 | 1.000 | 100 | 269 |
| International scientific co-publications | 2795 | 0.676 | 101 | 220 |
| Most-cited scientific publications | 1170.8 | 0.671 | 99 | 123 |
| Above average digital skills | 47.0 | 0.940 | 97 | 200 |
| R&D expenditures public sector | 1.02 | 0.666 | 105 | 117 |
| R&D expenditures business sector | 1.70 | 0.716 | 93 | 106 |
| Non-R&D innovation expenditures | ± | 0.398 | 110 | 98 |
| Innovation expenditures per person employed | ± | 0.891 | 105 | 148 |
| Employed ICT specialists | 3.7 | 0.416 | 46 | 79 |
| Product innovators | ± | 0.711 | 88 | 127 |
| Business process innovators | ± | 0.865 | 99 | 134 |
| Innovative SMEs collaborating | ± | 1.000 | 100 | 205 |
| Public-private co-publications | 506.0 | 0.750 | 101 | 191 |
| PCT patent applications | 5.98 | 0.837 | 95 | 136 |
| Trademark applications | 5.60 | 0.379 | 60 | 76 |
| Design applications | 2.00 | 0.412 | 63 | 71 |
| Employment knowledge-intensive activities | 12.6 | 0.398 | 62 | 70 |
| Employment innovative enterprises | ± | 0.742 | 95 | 129 |
| Sales of innovative products | ± | 0.682 | 94 | 142 |
| Air emissions by fine particulates | 3.6 | 0.978 | 105 | 163 |
| | | | | |
| Average normalised score | -- | 0.692 | -- | -- |
| Country EIS-RIS correction factor | -- | 0.965 | -- | -- |
| Regional Innovation Index (RII) 2023 | -- | 0.668 | -- | -- |
| Performance 2023 relative to EU in 2023 | -- | -- | 90.9 | 122.0 |
| Performance 2023 relative to EU in 2016 | -- | -- | -- | 132.4 |
| Regional Innovation Index (RII) 2016 | -- | 0.576 | -- | -- |
| Performance 2016 relative to EU in 2016 | -- | -- | 89.6 | 114.0 |
| Performance change over time | -- | -- | 1.3 | 18.3 |

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

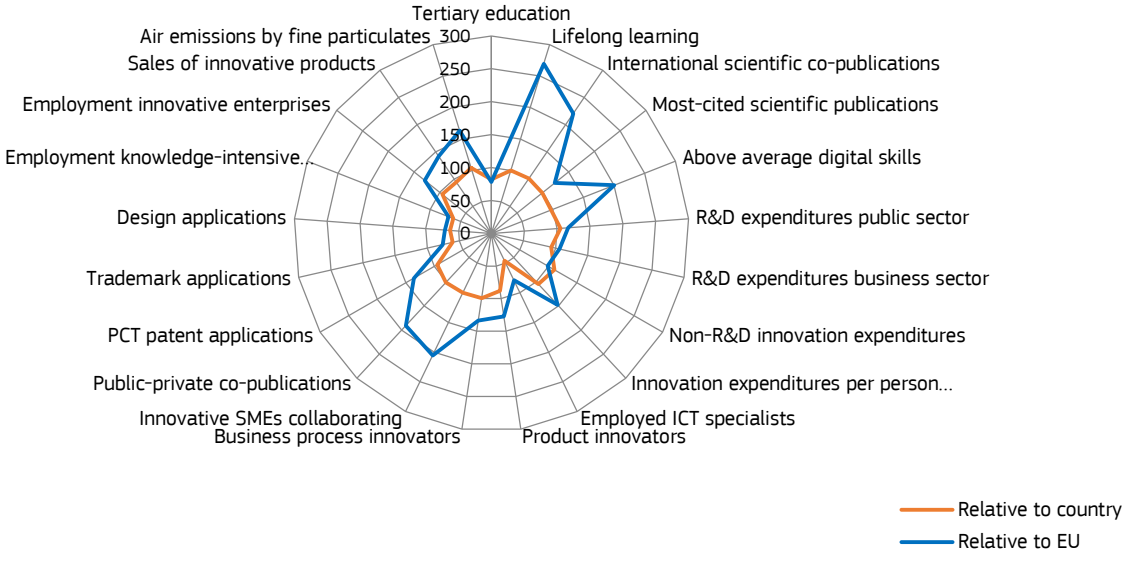
Pohjois- ja Itä-Suomi (FI1D) is a Strong Innovator +. Innovation performance has increased over time (18.3%).

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 Finland and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Finland (90.9) and the EU (122) in 2023, the RII in 2023 relative to the EU in 2016 (132.4), and the RII in 2016 relative to both Finland (89.6) and the EU in 2016 (114). The last row shows performance change between 2016 and 2023 compared to Finland (1.3%) and to the EU (18.3%).

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

| | FI1D | FI | EU |
|---|---|---|---|
| Share of employment in: | | | |
| Agriculture & Mining (A-B) | 8.0 | 4.1 | 4.4 |
| Manufacturing (C) | 12.4 | 12.9 | 16.4 |
| Utilities & Construction (D-F) | 9.1 | 8.6 | 8.3 |
| Services (G-N) | 65.8 | 69.9 | 63.7 |
| Public administration (O-U) | 4.7 | 4.6 | 7.2 |
| Average number of employed persons per enterprise | 4.1 | 5.0 | 5.1 |
| GDP per capita (PPS) | 30,800 | 36,400 | 32,400 |
| GDP per capita growth (PPS) | 3.2 | 2.7 | 2.5 |
| Population density | 6 | 16 | 106 |
| Urbanisation | 61.8 | 73.2 | 75.8 |
| Population size (000s) | 1,270 | 5,530 | 447,210 |



## Aland (FI2)

| | Data | Normalised score | Relative to | |
|---|---|---|---|---|
| | | | FI | EU |
| Tertiary education | n/a | n/a | n/a | n/a |
| Lifelong learning | 24.5 | 0.890 | 89 | 240 |
| International scientific co-publications | 132 | 0.030 | 4 | 10 |
| Most-cited scientific publications | n/a | n/a | n/a | n/a |
| Above average digital skills | n/a | n/a | n/a | n/a |
| R&D expenditures public sector | 0.04 | 0.045 | 7 | 8 |
| R&D expenditures business sector | 0.37 | 0.334 | 44 | 50 |
| Non-R&D innovation expenditures | ± | 0.734 | 204 | 182 |
| Innovation expenditures per person employed | ± | 0.743 | 87 | 123 |
| Employed ICT specialists | n/a | n/a | n/a | n/a |
| Product innovators | ± | 0.235 | 29 | 42 |
| Business process innovators | ± | 0.583 | 67 | 90 |
| Innovative SMEs collaborating | ± | 0.488 | 49 | 100 |
| Public-private co-publications | 0.0 | 0.000 | 0 | 0 |
| PCT patent applications | 0.93 | 0.331 | 38 | 54 |
| Trademark applications | 6.64 | 0.449 | 72 | 90 |
| Design applications | 0.00 | 0.000 | 0 | 0 |
| Employment knowledge-intensive activities | n/a | n/a | n/a | n/a |
| Employment innovative enterprises | ± | 0.733 | 94 | 128 |
| Sales of innovative products | ± | 0.047 | 6 | 10 |
| Air emissions by fine particulates | 3.7 | 0.970 | 104 | 162 |
| | | | | |
| Average normalised score | -- | 0.413 | -- | -- |
| Country EIS-RIS correction factor | -- | 0.965 | -- | -- |
| Regional Innovation Index (RII) 2023 | -- | 0.399 | -- | -- |
| Performance 2023 relative to EU in 2023 | -- | -- | 54.3 | 72.9 |
| Performance 2023 relative to EU in 2016 | -- | -- | -- | 79.0 |
| Regional Innovation Index (RII) 2016 | -- | 0.401 | -- | -- |
| Performance 2016 relative to EU in 2016 | -- | -- | 62.4 | 79.5 |
| Performance change over time | -- | -- | -8.2 | -0.5 |

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

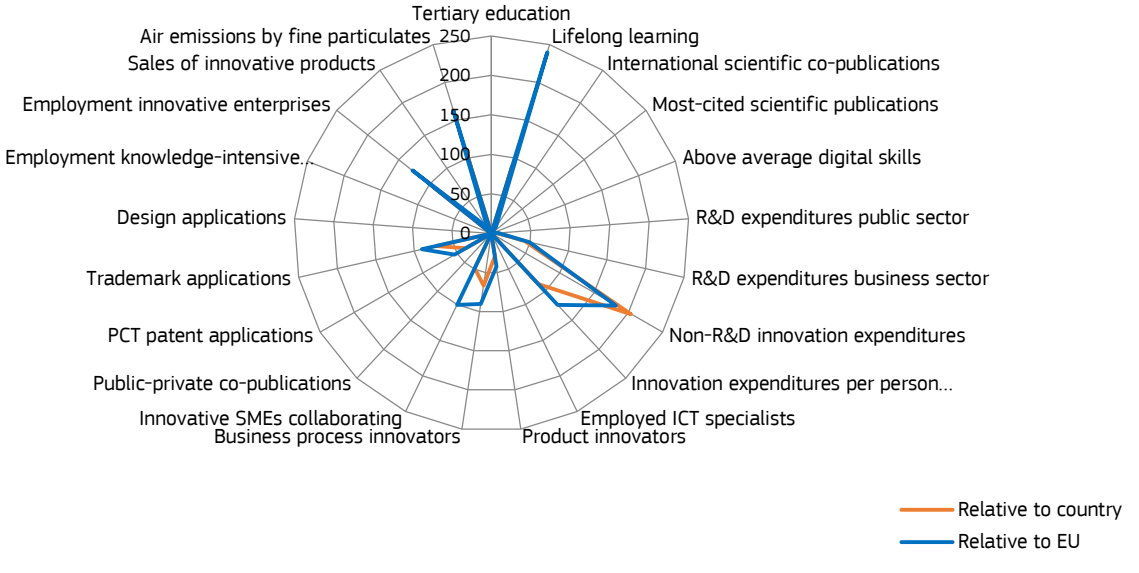
Åland (FI2) is a Moderate Innovator -. Innovation performance has decreased over time (-0.5%).

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 Finland and the EU. The next 7 rows show the calculation of the Regional Innovation Index (RII), the RII relative to both Finland (54.3) and the EU (72.9) in 2023, the RII in 2023 relative to the EU in 2016 (79), and the RII in 2016 relative to both Finland (62.4) and the EU in 2016 (79.5). The last row shows performance change between 2016 and 2023 compared to Finland (-8.2%) and to the EU (-0.5%).

The radar graph shows relative strengths compared to Finland (orange line) and the EU (blue line), showing relative strengths (e.g. Lifelong learning) and weaknesses (e.g. Public-private co-publications).

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

| | FI2 | FI | EU |
|---|---|---|---|
| Share of employment in: | | | |
| Agriculture & Mining (A-B) | n/a | 4.1 | 4.4 |
| Manufacturing (C) | n/a | 12.9 | 16.4 |
| Utilities & Construction (D-F) | n/a | 8.6 | 8.3 |
| Services (G-N) | n/a | 69.9 | 63.7 |
| Public administration (O-U) | n/a | 4.6 | 7.2 |
| Average number of employed persons per enterprise | 4.2 | 5.0 | 5.1 |
| GDP per capita (PPS) | 35,400 | 36,400 | 32,400 |
| GDP per capita growth (PPS) | -1.6 | 2.7 | 2.5 |
| Population density | 19 | 16 | 106 |
| Urbanisation | 47.2 | 73.2 | 75.8 |
| Population size (000s) | 30 | 5,530 | 447,210 |



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

*Studies and reports*