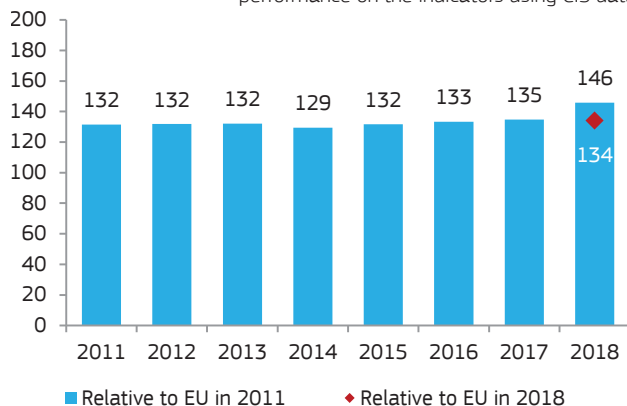




**Finland** is an **Innovation Leader**. Over time, performance has increased relative to that of the EU in 2011. The strong increase in 2018 is almost entirely explained by improved performance on the indicators using CIS data.



Finland	Relative to EU 2018 in 2018	Performance relative to EU 2011 in	
	2018	2011	2018
<b>SUMMARY INNOVATION INDEX</b>	<b>134.0</b>	<b>131.6</b>	<b>145.9</b>
<b>Human resources</b>	<b>157.0</b>	<b>176.8</b>	<b>192.0</b>
New doctorate graduates	128.8	184.6	187.0
Population with tertiary education	102.5	123.1	122.4
Lifelong learning	268.4	228.1	274.0
<b>Attractive research systems</b>	<b>135.4</b>	<b>108.6</b>	<b>152.5</b>
International scientific co-publications	202.8	199.4	295.0
Most cited publications	112.8	107.9	123.5
Foreign doctorate students	107.8	49.0	103.1
<b>Innovation-friendly environment</b>	<b>182.3</b>	<b>161.2</b>	<b>288.1</b>
Broadband penetration	177.8	222.2	355.6
Opportunity-driven entrepreneurship	187.0	119.6	242.2
<b>Finance and support</b>	<b>113.6</b>	<b>158.5</b>	<b>124.2</b>
R&D expenditure in the public sector	152.5	161.6	141.1
Venture capital expenditures	80.6	154.8	104.3
<b>Firm investments</b>	<b>129.8</b>	<b>174.1</b>	<b>154.7</b>
R&D expenditure in the business sector	135.0	220.2	152.4
Non-R&D innovation expenditures	88.9	83.5	103.8
Enterprises providing ICT training	168.4	226.7	213.3
<b>Innovators</b>	<b>168.2</b>	<b>111.2</b>	<b>152.7</b>
SMEs product/process innovations	174.9	124.5	169.8
SMEs marketing/organizational innovations	136.6	71.3	116.6
SMEs innovating in-house	191.1	138.2	172.1
<b>Linkages</b>	<b>152.0</b>	<b>158.1</b>	<b>157.9</b>
Innovative SMEs collaborating with others	189.1	141.4	201.9
Public-private co-publications	202.2	234.6	237.2
Private co-funding of public R&D exp.	95.3	137.3	91.5
<b>Intellectual assets</b>	<b>151.8</b>	<b>142.4</b>	<b>147.6</b>
PCT patent applications	219.4	212.8	199.5
Trademark applications	137.1	115.4	152.7
Design applications	97.5	91.8	89.9
<b>Employment impacts</b>	<b>80.2</b>	<b>86.4</b>	<b>83.7</b>
Employment in knowledge-intensive activities	123.5	121.8	134.6
Employment fast-growing enterprises	46.5	60.8	47.0
<b>Sales impacts</b>	<b>85.4</b>	<b>80.2</b>	<b>88.0</b>
Medium and high-tech product exports	67.5	67.2	72.9
Knowledge-intensive services exports	105.6	56.4	109.9
Sales of new-to-market/firm innovations	83.1	123.1	80.6

The colours show normalised performance in 2018 relative to that of the EU in 2018: dark green: above 120%; light green: between 90% and 120%; yellow: between 50% and 90%; orange: below 50%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

*Innovation-friendly environment, Innovators and Human resources* are the strongest innovation dimensions. Performance on Lifelong learning, PCT patent applications, and International scientific co-publications is well above the EU average. *Employment impacts* and *Sales impacts* are the weakest innovation dimensions. Finland's lowest indicator scores are on Employment fast-growing enterprises of innovative sectors, Medium and high-tech product exports, and Venture capital expenditures.

**Structural differences** with the EU are shown in the table below. All indicators are close to the EU average, except for the share of enterprise births, which is well below the EU average, and top R&D spending enterprises per 10 million population, which is well above the EU average.

	FI	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	32,100	29,500
Average annual GDP growth (%)	2.5	2.2
Employment share manufacturing (NACE C) (%)	13.4	15.5
of which High and medium high-tech (%)	36.1	37.5
Employment share services (NACE G-N) (%)	40.0	41.8
of which Knowledge-intensive services (%)	39.3	35.0
Turnover share SMEs (%)	40.1	37.9
Turnover share large enterprises (%)	44.3	44.4
Foreign-controlled enterprises – share of value added (%)	9.5	12.6
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	0.4	1.5
Total Entrepreneurial Activity (TEA) (%)	6.7	6.7
FDI net inflows (% GDP)	4.9	4.3
Top R&D spending enterprises per 10 million population	67.4	19.6
Buyer sophistication (1 to 7 best)	4.6	3.7
<b>Governance and policy framework</b>		
Ease of starting a business (0 to 100 best)	80.4	76.8
Basic-school entrepren. education and training (1 to 5 best)	2.4	1.9
Govt. procurement of advanced tech products (1 to 7 best)	3.9	3.5
Rule of law (-2.5 to 2.5 best)	2.0	1.2
<b>Demography</b>		
Population size (millions)	5.5	511.3
Average annual population growth (%)	0.2	0.2
Population density (inhabitants/km <sup>2</sup> )	18.1	117.5

#### EU targets for 2020

Indicator	2014	Latest	Target <sup>1</sup>
Gross domestic expenditure on R&D (% of GDP)	3.17	2.76	4.00
Tertiary educational attainment (% of population aged 30-34)	45.3	44.2	42.0

<sup>1</sup> Sources are provided in the introduction to the country profiles.

#### European Semester country report and country specific recommendations:

<https://rio.jrc.ec.europa.eu/en/library/research-and-innovation-analysis-european-semester-2019-country-reports>  
<https://rio.jrc.ec.europa.eu/en/library/country-specific-recommendations-2019-research-and-innovation-analysis>