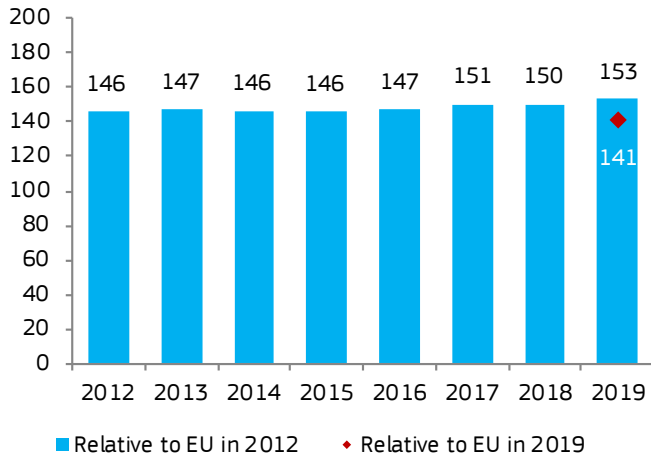




### Sweden is an Innovation Leader.

Over time, performance has increased relative to that of the EU in 2012.



Sweden	Relative to EU 2019 in 2019	Performance relative to EU 2012 in 2012	Performance relative to EU 2012 in 2019
<b>SUMMARY INNOVATION INDEX</b>	<b>140.7</b>	<b>146.2</b>	<b>153.1</b>
<b>Human resources</b>	<b>188.4</b>	<b>219.3</b>	<b>217.0</b>
New doctorate graduates	144.8	168.8	159.5
Population with tertiary education	157.1	196.7	200.0
Lifelong learning	284.5	306.7	306.7
<b>Attractive research systems</b>	<b>184.7</b>	<b>172.0</b>	<b>210.9</b>
International scientific co-publications	257.3	257.8	377.9
Most cited publications	132.8	131.2	132.9
Foreign doctorate students	198.1	182.5	228.4
<b>Innovation-friendly environment</b>	<b>178.3</b>	<b>240.4</b>	<b>310.2</b>
Broadband penetration	178.3	220.0	410.0
Opportunity-driven entrepreneurship	178.4	254.1	243.1
<b>Finance and support</b>	<b>122.1</b>	<b>146.6</b>	<b>141.1</b>
R&D expenditure in the public sector	144.8	145.8	142.2
Venture capital expenditures	96.3	147.8	139.2
<b>Firm investments</b>	<b>135.2</b>	<b>143.8</b>	<b>175.5</b>
R&D expenditure in the business sector	163.6	176.1	187.4
Non-R&D innovation expenditures	92.2	109.4	129.2
Enterprises providing ICT training	150.0	138.5	207.7
<b>Innovators</b>	<b>115.7</b>	<b>123.8</b>	<b>103.4</b>
SMEs product/process innovations	117.0	137.1	116.6
SMEs marketing/organizational innovations	105.5	106.6	86.6
SMEs innovating in-house	124.3	128.7	108.2
<b>Linkages</b>	<b>150.5</b>	<b>162.9</b>	<b>154.9</b>
Innovative SMEs collaborating with others	147.8	199.0	146.8
Public-private co-publications	298.5	297.2	337.5
Private co-funding of public R&D exp.	82.5	85.7	83.3
<b>Intellectual assets</b>	<b>131.3</b>	<b>122.9</b>	<b>122.6</b>
PCT patent applications	155.6	144.4	144.4
Trademark applications	125.0	117.3	133.1
Design applications	100.4	97.7	84.2
<b>Employment impacts</b>	<b>155.5</b>	<b>159.9</b>	<b>167.8</b>
Employment in knowledge-intensive activities	163.8	177.0	177.0
Employment fast-growing enterprises	148.9	146.2	160.3
<b>Sales impacts</b>	<b>89.7</b>	<b>85.2</b>	<b>89.2</b>
Medium and high-tech product exports	96.7	93.5	107.2
Knowledge-intensive services exports	105.8	114.1	109.3
Sales of new-to-market/firm innovations	59.4	46.6	49.6

The colours show normalised performance in 2019 relative to that of the EU in 2012: dark green: above 125%; light green: between 95% and 125%; yellow: between 50% and 95%; orange: below 50%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

Human resources, Attractive research systems and Innovation-friendly environment are the strongest innovation dimensions. Sweden scores high on most indicators compared to the EU but particularly on Public-private co-publications, Lifelong learning, International scientific co-publications, and Foreign doctorate students. Sales impacts is the weakest innovation dimension with performance below the EU average. Low-scoring indicators include Sales of new-to-market and new-to-firm product innovations, Private co-funding of public R&D expenditures, Enterprises providing ICT training, and Venture capital expenditures.

**Structural differences** with the EU are shown in the table below. Sweden shows the highest positive difference to the EU in Top R&D spending enterprises, Basic-school entrepreneurial education and training and Employment share knowledge-intensive services, and the biggest negative difference in Enterprise births, Employment share in manufacturing and Average annual change in GDP.

	SE	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	36,700	29,100
Average annual GDP growth (%)	1.70	1.84
Employment share manufacturing (NACE C) (%)	10.2	16.6
of which High and medium high-tech (%)	43.1	37.5
Employment share services (NACE G-N) (%)	41.3	41.4
of which Knowledge-intensive services (%)	44.3	34.3
Turnover share SMEs (%)	38.5	38.3
Turnover share large enterprises (%)	43.1	43.2
Foreign-controlled enterprises – share of value added (%)	13.2	11.1
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	0.4	1.1
Total Entrepreneurial Activity (TEA) (%)	7.5	6.7
FDI net inflows (% GDP)	2.9	2.6
Top R&D spending enterprises per 10 million population	79.1	16.2
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)	82.1	76.5
Basic-school entrepreneurial education and training (1 to 5 best)	2.5	1.9
Govt. procurement of advanced technology products (1 to 7 best)	4.0	3.5
Rule of law (-2.5 to 2.5 best)	2.0	1.1
<b>Demography</b>		
Population size (millions)	10.1	446.2
Average annual population growth (%)	1.17	0.14
Population density (inhabitants/km <sup>2</sup> )	24.7	108.6

### EU targets for 2020

Indicator	2015	Latest	Target <sup>1</sup>
Gross domestic expenditure on R&D (% of GDP)	3.23	3.32	4.00
Tertiary educational attainment (% of population aged 30-34)	50.2	52.3	45.0

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

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

[https://ec.europa.eu/info/publications/2020-european-semester-country-reports\\_en](https://ec.europa.eu/info/publications/2020-european-semester-country-reports_en)

<https://rio.jrc.ec.europa.eu/en/country-analysis/Sweden>