



European
Commission

European Innovation Scoreboard **2023** Country profile **Sweden**



Innovation

European Innovation Scoreboard 2023 – Country profile Sweden

European Commission

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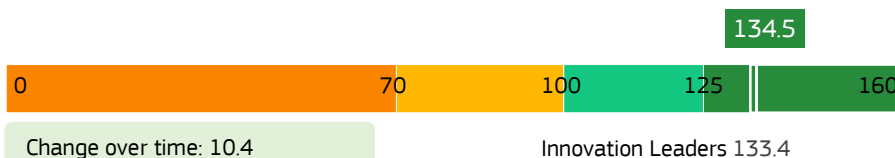
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The European Innovation Scoreboard report and annexes, and the indicators database are available at:

https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/european-innovation-scoreboard_en



Sweden

	Performance relative to EU in 2023	Performance change 2016- 2023	Performance change 2022- 2023
SUMMARY INNOVATION INDEX	134.5	10.4	-1.4
Human resources	183.5	-13.7	-3.9
Doctorate graduates	144.5	-45.8	-22.9
Population with tertiary education	160.1	18.6	18.6
Lifelong learning	256.9	0.0	0.0
Attractive research systems	176.0	12.6	-4.8
International scientific co-publications	240.9	80.7	-1.1
Most cited publications	120.8	-21.3	-10.0
Foreign doctorate students	207.6	27.2	3.8
Digitalisation	141.7	10.8	5.5
Broadband penetration	142.2	21.2	10.9
People with above basic overall digital skills	141.1	0.0	0.0
Finance and support	115.9	34.3	8.0
R&D expenditures in the public sector	128.1	-1.6	-3.2
Venture capital expenditures	134.9	112.9	18.4
Government support for business R&D	76.5	0.7	12.5
Firm investments	128.0	-10.6	-2.4
R&D expenditure in the business sector	153.5	13.8	0.0
Non-R&D Innovation expenditures	73.1	-48.7	-7.5
Innovation expenditures per employee	148.3	0.0	0.0
Use of information technologies	180.4	5.3	6.6
Enterprises providing ICT training	167.8	10.8	13.4
Employed ICT specialists	193.3	0.0	0.0
Innovators	142.6	75.0	0.8
Product innovators (SMEs)	149.5	53.5	-20.5
Business process innovators (SMEs)	136.5	97.9	23.5
Linkages	141.1	1.4	-30.3
Innovative SMEs collaborating with others	133.7	20.0	-2.9
Public-private co-publications	387.7	100.5	2.4
Job-to-job mobility of HRST	41.7	-61.8	-70.6
Intellectual assets	124.2	-7.7	-3.5
PCT patent applications	150.8	0.0	0.0
Trademark applications	118.8	12.3	-3.8
Design applications	91.6	-33.1	-7.7
Employment impacts	154.6	18.5	2.9
Employment in knowledge-intensive activities	175.9	0.0	0.0
Employment in innovative enterprises	137.1	36.0	5.7
Sales impacts	103.4	16.4	-1.7
Medium and high-tech goods exports	87.1	0.6	4.1
Knowledge-intensive services exports	130.8	7.0	-4.8
Sales of innovative products	97.9	52.5	-7.0
Environmental sustainability	88.7	8.8	-0.6
Resource productivity	58.1	11.8	7.8
Air emissions by fine particulate matter	106.1	10.9	0.7
Environment-related technologies	94.3	4.4	-7.7

The second column shows performance relative to that of the EU in 2023. Colours next to the column show matching colour codes: dark green: above 125% of the performance of the EU in 2023; light green: between 100% and 125%; light orange: between 70% and 100%; dark orange: below 70%. The next columns show performance change over time between 2016 and 2023 and between 2022 and 2023, with scores relative to those of the EU in 2016. Positive (negative) performance changes are shown in green (red).

SWEDEN is an **Innovation Leader** with performance at 134.5% of the EU average. Performance is above the average of the Innovation Leaders. Performance is increasing at a rate higher than that of the EU (8.5%-points). The country's performance lead over the EU is becoming larger.

Relative strengths

Public-private co-publications
Lifelong learning
International scientific co-publications
Foreign doctorate students
Employed ICT specialists

Relative weaknesses

Job-to-job mobility of HRST
Resource productivity
Non-R&D Innovation expenditures
Government support for business R&D
Medium and high-tech goods exports

Strong increases since 2016

Venture capital expenditures
Public-private co-publications
Business process innovators

Strong decreases since 2016

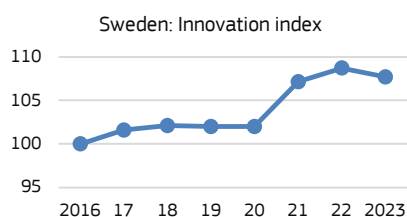
Job-to-job mobility of HRST
Non-R&D Innovation expenditures
Doctorate graduates

Strong increases since 2022

Business process innovators
Population with tertiary education
Venture capital expenditures

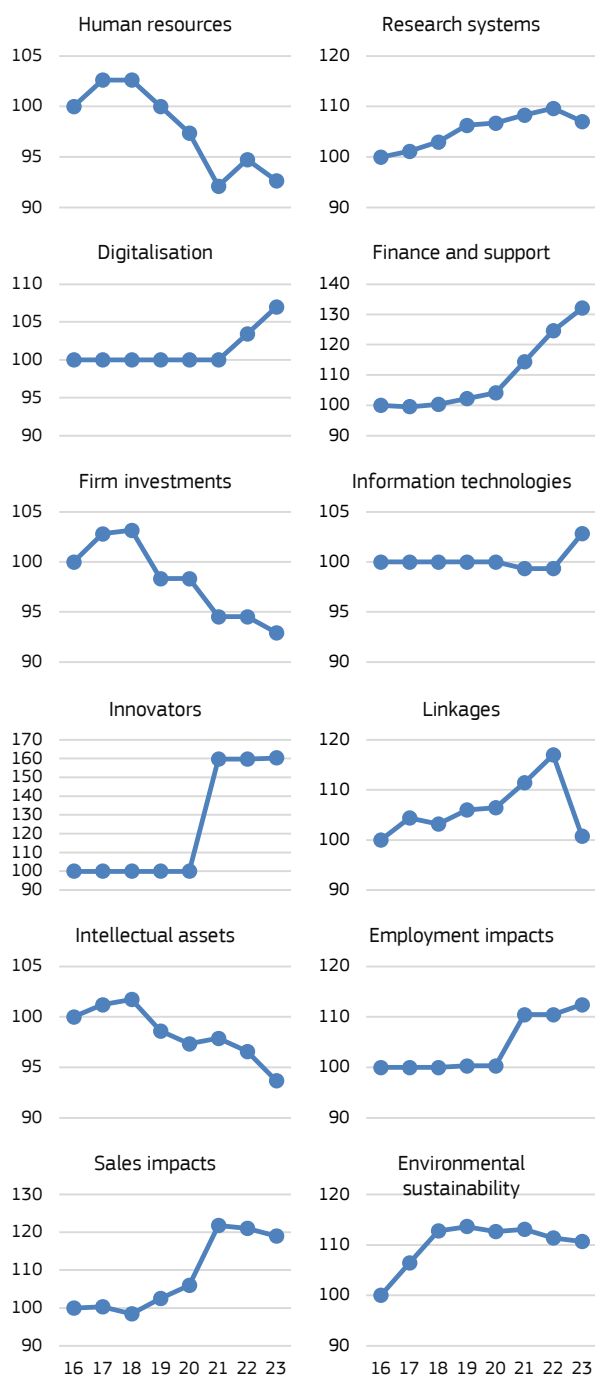
Strong decreases since 2022

Job-to-job mobility of HRST
Doctorate graduates
Product innovators



The graph on the left shows the evolution of **innovation performance over time** against the performance of the country in 2016. Innovation performance did not change much between 2016 and 2020 and increased strongly in 2021. After a moderate increase in 2022, performance declined in 2023, leading to a 8% performance increase in 2023.

The graphs below show the evolution of innovation performance in the different **innovation dimensions** against the performance of the country in 2016. Performance increased most strongly for Innovators. Performance declined for Human resources, Firm investments and Intellectual assets.





Performance is measured relative to that of the country in 2016 (=100).

Structural differences with the EU are shown below:

- Sweden has higher per capita income, but a slower growing economy. Manufacturing takes up a smaller share of the economy, with large enterprises accounting for a larger share of turnover.
- Entrepreneurial Activity, FDI net inflows, Top R&D spenders, and Buyer sophistication add positively to the innovation climate.
- Sweden has higher shares of In-house product innovators with market novelties, In-house product innovators without market novelties, In-house business process innovators, and Innovators that do not develop innovations themselves.
- Entrepreneurial training and government procurement are above the EU average as drivers of research and innovation.
- Sweden excels in climate change indicators, with a below-average reliance on recycled waste materials, significant reductions in greenhouse gas emissions, and an above-average score in environmental innovation.

	SE	EU
Performance and structure of the economy		
GDP per capita (PPS)	39,500	32,600
Average annual GDP growth (%)	3.3	4.4
Employment share Manufacturing (NACE C) (%)	10.0	16.4
of which High and Medium high-tech (%)	43.3	38.0
Employment share Services (NACE G-N) (%)	41.1	41.1
of which Knowledge-intensive services (%)	47.0	35.8
Turnover share SMEs (%)	32.7	34.1
Turnover share large enterprises (%)	54.0	49.6
Foreign-controlled enterprises – share of value added (%)	13.5	11.8
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	0.4	1.0
Total Entrepreneurial Activity (TEA) (%)	8.2	6.8
FDI net inflows (% GDP)	4.9	2.1
Top R&D spending enterprises per 10 mln. population	123.2	20.3
Buyer sophistication (1 to 7 best)	4.6	3.7
Innovation profiles		
In-house product innovators with market novelties	17.2	12.2
In-house product innovators without market novelties	16.7	12.8
In-house business process innovators	19.2	16.5
Innovators that do not develop innovations themselves	9.5	6.5
Innovation active non-innovators	2.5	4.1
Non-innovators with potential to innovate	7.9	17.2
Non-innovators without disposition to innovate	26.9	30.7
Governance and policy framework		
Corruption Perceptions Index (0 to 100 best)	84.3	64.0
Basic school entrepreneurial education and training	4.2	3.3
Govt. procurement of advanced tech. products	4.0	3.5
Rule of law (-2.5 to 2.5 best)	1.8	1.0
Climate change indicators		
Circular material use rate	6.6	11.8
Greenhouse gas emissions intensity of energy consumption	68.8	82.8
Eco-Innovation Index	132.5	100.0
Demography		
Population size	10.4	447.1
Average annual population growth (%)	0.6	-0.1
Population density	39,500	32,600



This report provides the Country profile from the 2023 European Innovation Scoreboard for Sweden.

Studies and reports