



European Innovation Scoreboard **2024** Country Profile **Norway**

European Innovation Scoreboard 2024 – Country profile Norway

European Commission

Directorate-General for Research and Innovation

Directorate G – Common Policy Centre

Unit G.1 – Common R&I Strategy & Foresight Service

Contact Alexandr Hobza, Chief Economist and Head of Unit G.1

Athina Karvounaraki

Alexis Stevenson

Email RTD-STATISTICS@ec.europa.eu

RTD-PUBLICATIONS@ec.europa.eu

Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Directorate A – Strategy and Economic Analysis

Unit A.1 – Chief Economist

Contact Román Arjona, Chief Economist and Head of Unit A.1

Xosé-Luís Varela-Irimia

Email GROW-A1@ec.europa.eu

European Commission

B-1049 Brussels

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Strong Innovator ●

Summary innovation index (relative to EU in 2017): **128.7**
Rank: **7**

Change vs 2023: ▲ 0.9 Change vs 2017: ▲ 12

Norway is a Strong Innovator with performance at 117% of the EU average in 2024. Performance is above the average of the Strong Innovators (111.3%). Performance is increasing more than the EU (+10%).

Indicator	Performance relative to the EU in 2024	Performance change 2017-2024	Performance change 2023-2024
SUMMARY INNOVATION INDEX	117.0	12.0	0.9
Human resources	153.6	14.8	4.5
New doctorate graduates	113.1	11.6	0.0
Population with tertiary education	173.3	9.6	6.0
Population involved in lifelong learning	178.7	26.5	10.2
Attractive research systems	155.4	25.6	3.4
International scientific co-publications	275.9	116.5	6.7
Scientific publications among the top 10% most cited	119.1	-7.1	0.4
Foreign doctorate students as a % of all doctorate students	102.7	13.6	6.3
Digitalisation	147.2	31.7	17.5
Broadband penetration	109.0	27.4	-1.3
Individuals with above basic overall digital skills	200.4	36.2	36.2
Finance and support	119.2	25.9	-17.8
R&D expenditure in the public sector	96.7	-29.5	-31.2
Venture capital expenditures	149.4	86.0	3.0
Direct and indirect government support of business R&D	108.4	36.4	-23.0
Firm investments	77.0	-1.1	-0.1
R&D expenditure in the business sector	58.4	-12.0	-12.0
Non-R&D innovation expenditures	90.3	2.1	7.2
Innovation expenditures per person employed	84.2	7.3	4.9
Use of information technologies	141.3	-12.3	7.1
Enterprises providing ICT training	168.4	-21.7	7.6
Employed ICT specialists	114.7	-3.2	6.4
Innovators	161.0	5.8	0.0
SMEs introducing product innovations	194.1	5.4	0.0
SMEs introducing business process innovations	134.1	6.1	0.0
Linkages	242.8	55.4	-6.9
Innovative SMEs collaborating with others	239.2	77.8	0.0
Public-private co-publications	477.0	108.4	-2.3
Job-to-job mobility of HRST	150.0	11.8	-14.7
Intellectual assets	58.3	2.8	-1.4
PCT patent applications	95.6	1.2	5.0
Trademark applications	47.9	10.6	-8.1
Design applications	10.6	-0.9	-4.3
Employment impacts	129.1	22.0	1.4
Employment in knowledge-intensive activities	116.9	6.0	0.0
Employment in innovative enterprises	139.8	36.4	2.8
Sales impacts	45.9	-5.1	-6.8
Exports of medium and high technology products	0.0	-10.3	0.0
Knowledge-intensive services exports	94.8	-1.9	-7.7
Sales of new-to-market and new-to-firm innovations	43.1	-1.0	-16.3
Environmental sustainability	92.3	10.6	17.4
Resource productivity	109.3	44.8	46.2
Air emissions by fine particulates	79.6	4.3	3.1
Environment-related technologies	94.0	-7.7	15.1

Relative strengths

- Public-private co-publications
- International scientific co-publications
- Innovative SMEs collaborating with others

Relative weaknesses

- Exports of medium and high technology products
- Design applications
- Sales of new-to-market and new-to-firm innovations

Strong increases since 2017

- International scientific co-publications
- Public-private co-publications
- Venture capital expenditures

Strong decreases since 2017

- R&D expenditure in the public sector
- Enterprises providing ICT training
- R&D expenditure in the business sector

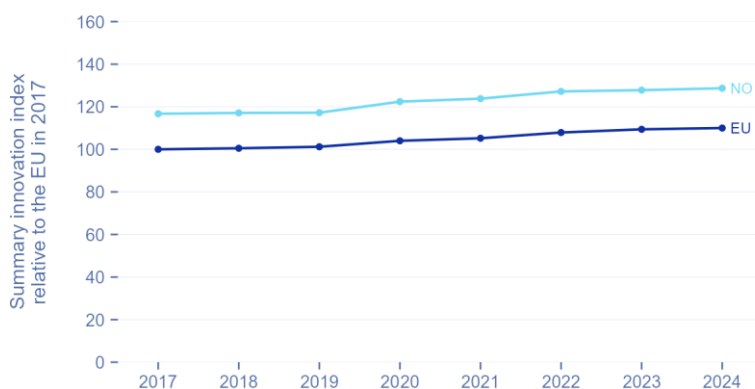
Strong increases since 2023

- Resource productivity
- Individuals with above basic overall digital skills
- Environment-related technologies

Strong decreases since 2023

- R&D expenditure in the public sector
- Direct and indirect government support of business R&D
- Sales of new-to-market and new-to-firm innovations

Footnote: The first data column shows scores relative to the EU in 2024, with colour codes indicating performance levels. The subsequent columns show performance changes over time, with scores relative to the EU in 2017, coloured in purple for positive change and red for negative change. As reference years differ between the first column (2024) and the last two columns (2017), scores cannot be directly compared or subtracted across these columns.



Summary innovation index

The line chart shows the evolution of the innovation performance of Norway over time, relative to the performance of the EU in 2017.

Footnote: All performance scores (SII and dimensions below) are relative to that of the EU in 2017.

Framework conditions

Norway performs at the level of the EU average or higher on all indicators in this category, with strengths in population with tertiary education (173.3% of the 2024 EU average) and individuals involved in lifelong learning (178.7% of the 2024 EU average). Furthermore, the country outperforms considerably the EU in international scientific co-publications, standing at 275.9% of the EU level in 2024, having increased by 116.5%-points since 2017. The country's attractive research system continues to draw foreign doctorate students, with a 6.3%-point increase compared to 2023, even if the number of new doctorate graduates remained stable over the same period.

Norway continued its efforts on digitalisation, performing at 147.2% of the 2024 EU average on this dimension. However, challenges remain as rural areas have poorer broadband access and slower connectivity at higher costs (Davidson, 2024). Norway has a relatively high share of individuals with above basic overall digital skills with performance at 200.4% of the EU level in 2024, with an increase since 2023 by 36.2%-points.

Human resources



Attractive research systems



Digitalisation



Investments

Norway's public sector R&D expenditure declined by more than 30%-points compared to 2023, and the support to business R&D fell by more than 20%-points in 2024, amid inflationary pressures and rising public spending against the backdrop of a slowing down economy (OECD, 2024).

With the spike in the interest rates, the non-oil business investment weakened contributing to a decline in R&D expenditures in the private sector, which stand at 58.4% of the EU average in 2024. However, the non-R&D innovation expenditures of firms and innovation spending per person employed have slightly increased since 2023, reflecting solid absorptive capacities of the economy, even if the performance on these indicators remains below the EU average (90.3% and 84.2% of the EU average in 2024, respectively).

Norway registers a higher than the EU average performance on enterprises providing ICT training in 2024 (168.4%). This is likely a way to address the increasing shortage of ICT specialists as the country produces relatively few STEM graduates compared to the OECD average (OECD, 2024).

Finance and support



Firm investments



Use of information technologies



Innovation activities

Norway significantly outperforms the EU on the Innovators and Linkages dimensions, at 161.0% and 242.8% of the EU performance in 2024, respectively. Such a result demonstrates strong innovativeness of Norway’s business sector, high absorptive capacities and dynamic collaborations on technology and innovation across businesses, as well as between industry and academia. In fact, Norway ranks 19th among the 132 economies of the WIPO’s Global Innovation Index 2023 with strong performance on innovation inputs (WIPO, 2023).

However, the country fails to effectively translate its strong innovation investments into innovation outputs. Norway ranks below the EU average performance on intellectual assets, at 58.3% of the 2024 EU level. Such a result might be partly explained by Norway’s economy high reliance on oil and gas industry, which is less patent-intensive, and the focus on incremental, rather than breakthrough, innovation which results in less dynamic IP activity.

Finally, given high reliance of tertiary education on state funding and prevalence of basic funding of research at universities (OECD, 2022), the universities may have fewer incentives to attract industry funding for research (OECD, 2024) and engage in cooperation with businesses, hence contributing to low IPR activity.

Innovators



Linkages



Intellectual assets



Impacts

Norway demonstrates between 100% and 125% of the EU average performance in employment in knowledge-intensive industries and resource productivity, and it stands at 139.8% of the EU average in 2024 on employment in innovative enterprises.

However, Norway shows poor performance in sales impacts, with a decline in knowledge-intensive services exports (-1.9%-points since 2017) and in sales of new-to-market and new-to-enterprise innovations (-16.3%-points compared to 2023). The latter indicator relies on the data from CIS 2020 and will be reassessed once the CIS 2022 data is available.

Norway’s exports are dominated by oil and oil-related industries (ships, oil platforms) that made up around 60% of total goods exports in 2023 with transport (shipping) being the largest service sector (OECD, 2024). Innovation in these sectors has a lot of potential for increasing the share of high and medium-tech exports complemented by the increasing exports of telecommunication equipment, medical instruments and digital services (OECD, 2024).

In the development of environment-related technologies as a share in total patents, Norway performs slightly below the EU average but registers an upward trend of 15.1%-points since 2023 as the country continues its decarbonisation efforts and climate action.

Employment impacts**Sales impacts****Environmental sustainability****Structural differences****Performance and structure of the economy**

Norway is an advanced, high-income economy with state-ownership in strategic areas and high dependence on the petroleum sector (US International Trade Administration, 2024). According to the OECD Economic Survey 2024, Norway's economy is slowing as inflation and higher interest rates weigh on consumption and investment, but the growth is expected to reach 0.8% in 2024 and further 1.8% in 2025 as the result of lower inflation and monetary easing measures (OECD, 2024).

Business and entrepreneurship

The business environment in Norway shows dynamism, performing just below the EU average on total entrepreneurial activity, and exhibiting strength in top enterprises investing in R&D, with performance almost double that of the EU average. Buyer sophistication is higher than in the EU, contributing to shaping the demand for innovative products and services in response to population needs.

Foreign direct investment inflows are below the EU average, as the oil and energy sectors – where most investment takes place – are in domestic public ownership (OECD, 2024) and require diversification as the role of oil and gas is expected to decline in Norwegian economy in the long-term.

Innovation profiles

No Innovation profiles are available for Norway.

Governance and policy framework

Norway outperforms the EU on basic-school entrepreneurial education and training and has higher than the EU average share of state procurement of advanced technologies. With Norway accelerating its innovative public procurement (e.g., through the Supplier Development Programme, the Action Plan to increase the proportion of green public procurements and green innovation (2021-2030)), it is ahead of the EU on this indicator. Despite the large share of state-owned enterprises in oil and gas sector, strong institutions and transparent governance structures keep the corruption risk away and build trust and confidence within its population – results reflected in higher than EU performance on Corruption Perception Index and the Rule of law.

Climate change

Norway's economy is more GHG intensive in terms of energy consumption than the EU average, but its per capita greenhouse gas emissions are around the OECD average and have declined following the mass electrification of the transport sector over the past few years (OECD, 2024). As the electricity consumption is projected to rise due to electrification of transport and green industries, OECD estimates that Norway will need to invest in additional 10 TWh in generation capacity by 2030 along with the grid expansion.

Demography

Norway has a population of around 5.4 million and is growing at a higher rate than the EU average. It has a much lower population density compared to the EU average and is one of the most sparsely populated countries in Europe with concentration of population in the south.

Structural indicators

The table below presents some structural differences between Norway and the EU.

	NO	EU
Performance and structure of the economy		
GDP per capita	187.7	100
Employment share Manufacturing	7.2	15.8
Employment share High and Medium high-tech	31	37.9
Employment share Services	36.5	39.8
Employment share Knowledge-intensive services	34.6	28.6
Turnover share SMEs	15.6	12.6
Turnover share large enterprises	37.5	49.6
Foreign-controlled enterprises – share of value added	13.3	13.3
Business and entrepreneurship		
Enterprise births	0.8	0.8
Total Entrepreneurial Activity	5.5	6.8
FDI net inflows	1.4	1.9
Top R&D spending enterprises	17.3	8.4
Buyer sophistication	4.5	3.6
Governance and policy frameworks		
Corruption Perceptions Index	84.3	64
Basic-school entrepreneurial education and training	4.4	2.6
Government procurement of advanced technology products	4.1	3.4
Rule of law	1.9	1
Innovation procurement as a share of total public procurement	10.3	9.2
Climate change		
Greenhouse gas emissions intensity of energy consumption	88.2	82.8
Demography		
Population size (in millions)	5.4	447
Average annual population growth (2021-2023 average)	0.9	0.3
Population density	17.5	109

References

The country's relative strengths and weaknesses for each indicator, compared to other EU Member States and neighbouring countries, can be found in [Annex B](#).

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This report provides the Country profile from the 2024 European Innovation Scoreboard for Norway

Studies and reports

