



European Innovation Scoreboard **2024** Country Profile **Montenegro**

European Innovation Scoreboard 2024 – Country profile Montenegro

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MONTENEGRO

Emerging Innovator ●

Summary innovation index (relative to EU in 2017): **52.3**

Rank: **32**

Change vs 2023: ▲ 0.8 Change vs 2017: ▲ 5.7

Montenegro is an Emerging Innovator with performance at 47.5% of the EU average in 2024. Performance is below the average of the Emerging Innovators (48%). Performance is increasing less than the EU (+10%).

Indicator	Performance relative to the EU in 2024	Performance change 2017-2024	Performance change 2023-2024
SUMMARY INNOVATION INDEX	47.5	5.7	0.8
Human resources	34.4	11.1	0
New doctorate graduates	2.5	2.2	0
Population with tertiary education	85.3	36.5	0
Population involved in lifelong learning	14.5	-6.1	0
Attractive research systems	49.6	-4.6	6
International scientific co-publications	56.1	40.6	-0.4
Scientific publications among the top 10% most cited	47.2	-3.9	11.4
Foreign doctorate students as a % of all doctorate students	47.1	-48.1	0
Digitalisation	54.7	42.8	13.8
Broadband penetration	73.9	79.5	21.2
Individuals with above basic overall digital skills	28	6.2	6.2
Finance and support	12.5	6.7	0
R&D expenditure in the public sector	29.5	9.8	0
Venture capital expenditures	6.3	8.4	0
Direct and indirect government support of business R&D	0	0	0
Firm investments	23.8	2.2	0
R&D expenditure in the business sector	10.4	6	0
Non-R&D innovation expenditures	35	0	0
Innovation expenditures per person employed	27.4	0	0
Use of information technologies	69.4	14.7	-6.6
Enterprises providing ICT training	107.5	16.6	-13.4
Employed ICT specialists	32.4	12.9	0
Innovators	170.3	0	0
SMEs introducing product innovations	213.9	0	0
SMEs introducing business process innovations	134.6	0	0
Linkages	73.5	-16.3	-4.4
Innovative SMEs collaborating with others	146.5	0	0
Public-private co-publications	33.1	13.9	-7.5
Job-to-job mobility of HRST	29.2	-44.1	-5.9
Intellectual assets	8.9	-10.1	1.2
PCT patent applications	18.8	-16.4	8.2
Trademark applications	2.5	-12.8	-9.3
Design applications	0	0	0
Employment impacts	100.5	3.6	0
Employment in knowledge-intensive activities	64.1	7.3	0
Employment in innovative enterprises	131.7	0	0
Sales impacts	20.9	2.7	-0.7
Exports of medium and high technology products	8.6	1.8	0
Knowledge-intensive services exports	13.5	5.9	-1.8
Sales of new-to-market and new-to-firm innovations	52.2	0	0
Environmental sustainability	52.3	48.1	0
Resource productivity	N/A	N/A	N/A
Air emissions by fine particulates	N/A	N/A	N/A
Environment-related technologies	57.1	51.9	0

Relative strengths

- SMEs introducing product innovations
- Innovative SMEs collaborating with others
- SMEs introducing business process innovations

Relative weaknesses

- Direct and indirect government support of business R&D
- Design applications
- New doctorate graduates

Strong increases since 2017

- Broadband penetration
- Environment-related technologies
- International scientific co-publications

Strong decreases since 2017

- Foreign doctorate students as a % of all doctorate students
- Job-to-job mobility of HRST
- PCT patent applications

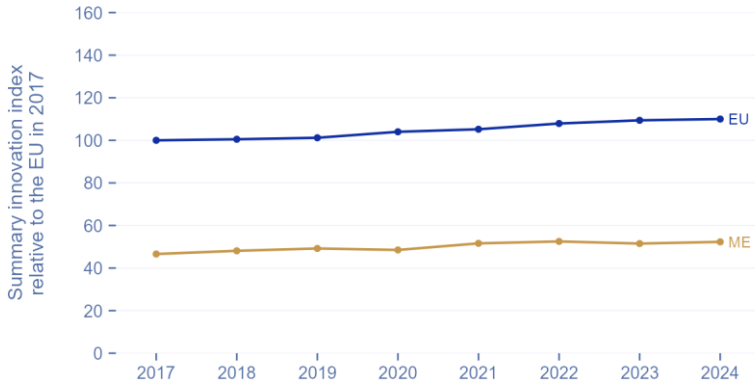
Strong increases since 2023

- Broadband penetration
- Scientific publications among the top 10% most cited
- PCT patent applications

Strong decreases since 2023

- Enterprises providing ICT training
- Trademark applications
- Public-private co-publications

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 Montenegro 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

Since 2017, Montenegro has achieved a notable 36.5%-point increase in its share of the population with tertiary education, and continued efforts in building digital skills with a modest 6.2%-point rise, but the performance on these indicators remains way below the EU average. The country takes active part in EU R&I framework programmes which contributed to the considerable 40.6%-point increase in international scientific co-publications over the last eight years, with an overall performance of 56.1% of the 2024 EU level on this indicator. The share of the foreign doctorate students has been on a declining path since 2017, with a 48.1%-point drop reflecting further need to enhance the R&I system. Montenegro managed to enhance its broadband penetration significantly (+79.5%-points since 2017) and now scores slightly below the 2024 EU average on this indicator (73.9%).

Human resources



Attractive research systems



Digitalisation



Investments

Investments in R&D increased slightly since 2017 but remain insufficient to drive innovation-led growth. R&D spending in the public sector represents roughly a third of the EU average despite a 9.8%-point increase since 2017. As to the R&D expenditures in the business sector, they remain low, representing 0.19 % of GDP (2021) and standing at 10.4% of the 2024 EU average despite the 6%-point increase compared to 2017. The government addresses this gap through measures such as grants for joint academia and business projects and venture capital funding of R&D, which represents a meagre 6.3% of the 2024 EU average. Despite a 13.4%-point decrease since 2023, Montenegro performs at 107.5% of the 2024 EU average on enterprises providing ICT training, as the country aims to enhance digital skills and boost SME digitalisation. However, the share of the employed ICT specialists is relatively low, standing at 32.4% of the 2024 EU average.

Finance and support



Firm investments



Use of information technologies



Innovation activities

Montenegro performs at 170.3% of the 2024 EU average on Innovators dimension, recording twice as many SMEs introducing product innovations as on average in the EU – 213.9% of the 2024 EU average. This is likely due to reforms targeted at increasing innovativeness of SMEs through provision of additional financial support (e.g. Competitiveness Voucher Scheme for Digitalisation, Programme for Innovation, establishment of an Innovation Fund) (OECD, 2022), strengthened regulatory framework for innovation and smart specialisation, and improved business climate. In addition, Montenegro registers almost twice as high of a share of innovative SMEs cooperating with others than on average in the EU. However, country’s performance on Linkages dimension was weakened by a 44.1%-point decrease in job-to-job HRST mobility and weak performance on public-private co-publications representing 33.1% of the EU level in 2024 and reflecting gaps in frameworks for industry-science collaboration. Finally, Montenegro performs at 8.9% of the EU level in 2024 on Intellectual assets dimension with both patent and trademark applications recording a negative trend and contributing to poor performance, reflecting substantial room for better knowledge commercialisation.

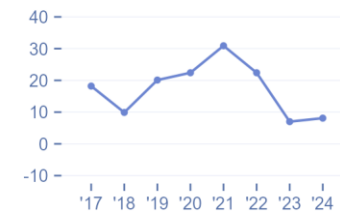
Innovators



Linkages



Intellectual assets



Impacts

Consistent with the high levels of innovation in SMEs which represent 99.9% of enterprise sector (OECD, 2022), Montenegro demonstrates 131.7% of 2024 EU level performance on employment in innovative firms. However, the employment in knowledge-intensive activities and knowledge-intensive services exports remain low, at 64.1% and 13.5% of EU average in 2024, reflecting low knowledge-intensity of the economy. An integration of green aspects into SME and industrial policies contributed to a 51.9%-point increase in environment-related technologies, but the performance on this indicator remains a bit more than half that of the EU.

Employment impacts



Sales impacts



Environmental sustainability



Structural differences

Performance and structure of the economy

Montenegro's GDP per capita is almost half that of the EU and its service-based economy employs two thirds of the population in services, travel and tourism sector playing a major role (OECD, 2022). The economy is vulnerable to external shocks due to relatively undiversified export base (e.g. the tourism sector accounted for roughly half of total exports in 2022), and persistent high levels of informality (estimated at more than 20%), issues targeted by the Government through structural reforms (OECD, 2024).

Business and entrepreneurship

With its low corporate tax and good monetary stability, Montenegro demonstrates the highest level of FDI inflows in the Western Balkans region, 12.3% compared to 1.9% for the EU, and among the highest in per capita terms in Europe (Lloyds Bank 2023). However, the positive spillovers in terms of knowledge and technology transfer arising from the FDI are yet to be realised, especially in energy, ICT and banking sectors, with FDI remaining concentrated mostly in tourism and real estate sectors. The buyer sophistication is lower than the EU average and reflects important room for improving the demand for innovative products and services.

Innovation profiles

Comparable data is missing. Montenegro ranked 36th among 39 economies in Europe in the Global Innovation Index 2023 (WIPO, 2023). The government is working to enhance the innovation policy framework for SMEs, including development of infrastructure to support innovation (e.g. incubations and acceleration programmes for start-ups, a science and technology park in Podgorica) and financial instruments (e.g. competitive co-operation grants) (OECD, 2022). However, science-industry collaboration remains limited with gaps in R&D investments hindering progress.

Governance and policy framework

Although corruption remains an issue, Montenegro has made progress in its anti-corruption efforts and enhanced scores on the Corruption Perception Index. Rule of law requires further alignment with the EU benchmarks, in particular as concerns the reform of the justice system (European Commission, 2023), to facilitate the EU integration. The introduction of an e-public procurement system in 2021 contributed to higher transparency of the process with potential positive effect for procurement of advanced technology products, a figure slightly below the EU average.

Climate change

Comparable data is missing. Montenegro updated its Nationally Determined Contribution (NDC) in 2021 committing to reduce GHG emissions by 35% below 1990 levels by 2030 (UNDP Climate Promise). The National Adaptation Plan was recently developed identifying agriculture, water, health and tourism as priority sectors for adaptation to climate change (NAP Montenegro).

Demography

Montenegro has a population size of 618,372 inhabitants and suffers from a negative 0.3% population growth, even if to a lesser extent than the rest of the Western Balkan countries (World Bank Database, 2023). The population density is roughly half that of the EU, standing at 45.6 inhabitants per square kilometre. The recent 2% increase in the population in 2023 is most likely due to the increase in number of immigrants, including from Russia and Ukraine following the invasion of Ukraine (Kajosevic, 2024).

Structural indicators

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

	ME	EU
Performance and structure of the economy		
GDP per capita	49.7	100
Business and entrepreneurship		
FDI net inflows	12.3	1.9
Buyer sophistication	3	3.6
Governance and policy frameworks		
Corruption Perceptions Index	45.7	64
Government procurement of advanced technology products	3.2	3.4
Rule of law	-0.1	1
Demography		
Population size (in millions)	0.6	447
Average annual population growth (2021-2023 average)	-0.3	0.3
Population density	45.6	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 Montenegro

Studies and reports

