



European  
Commission

# European Innovation Scoreboard **2023** Country profile **Ukraine**



Innovation

## European Innovation Scoreboard 2023 – Country profile Ukraine

European Commission

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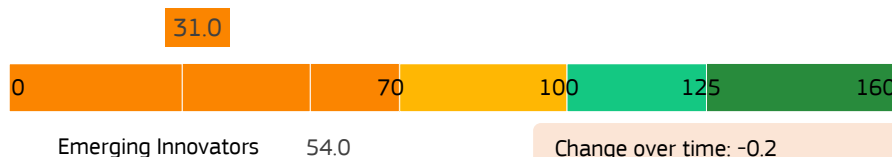
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The European Innovation Scoreboard report and annexes, and the indicators database are available at:

[https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/european-innovation-scoreboard\\_en](https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/european-innovation-scoreboard_en)



## Ukraine \*

	Performance relative to EU in 2023	Performance change 2016- 2023	Performance change 2022- 2023
<b>SUMMARY INNOVATION INDEX</b>	<b>31.0</b>	<b>-0.2</b>	<b>-0.7</b>
<b>Human resources</b>	<b>34.9</b>	<b>-11.0</b>	<b>0.0</b>
Doctorate graduates	33.1	-8.5	0.0
Population with tertiary education	N/A	N/A	N/A
Lifelong learning	N/A	N/A	N/A
<b>Attractive research systems</b>	<b>17.5</b>	<b>4.2</b>	<b>1.7</b>
International scientific co-publications	6.2	7.0	-0.7
Most cited publications	15.6	6.8	3.4
Foreign doctorate students	34.8	-4.6	0.0
<b>Digitalisation</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Broadband penetration	N/A	N/A	N/A
People with above basic overall digital skills	N/A	N/A	N/A
<b>Finance and support</b>	<b>31.2</b>	<b>5.7</b>	<b>1.5</b>
R&D expenditures in the public sector	11.8	-14.2	0.0
Venture capital expenditures	53.6	45.0	4.7
Government support for business R&D	24.9	-8.4	0.0
<b>Firm investments</b>	<b>31.7</b>	<b>-3.5</b>	<b>0.1</b>
R&D expenditure in the business sector	15.7	-7.0	0.0
Non-R&D Innovation expenditures	53.6	0.2	0.2
Innovation expenditures per employee	N/A	N/A	N/A
<b>Use of information technologies</b>	<b>22.1</b>	<b>-3.7</b>	<b>0.0</b>
Enterprises providing ICT training	21.8	-3.8	0.0
Employed ICT specialists	N/A	N/A	N/A
<b>Innovators</b>	<b>0.0</b>	<b>-7.1</b>	<b>-7.1</b>
Product innovators (SMEs)	0.0	-6.9	-6.9
Business process innovators (SMEs)	N/A	N/A	N/A
<b>Linkages</b>	<b>21.0</b>	<b>4.5</b>	<b>-0.8</b>
Innovative SMEs collaborating with others	31.3	0.0	0.0
Public-private co-publications	13.4	15.4	-2.8
Job-to-job mobility of HRST	N/A	N/A	N/A
<b>Intellectual assets</b>	<b>17.3</b>	<b>1.5</b>	<b>-1.4</b>
PCT patent applications	29.4	-4.8	-4.9
Trademark applications	16.5	15.1	3.0
Design applications	0.7	-1.3	-0.4
<b>Employment impacts</b>	<b>72.8</b>	<b>-25.8</b>	<b>0.0</b>
Employment in knowledge-intensive activities	80.7	-26.5	0.0
Employment in innovative enterprises	N/A	N/A	N/A
<b>Sales impacts</b>	<b>38.3</b>	<b>5.6</b>	<b>-1.8</b>
Medium and high-tech goods exports	13.4	-18.8	-14.4
Knowledge-intensive services exports	105.6	37.6	9.5
Sales of innovative products	3.1	3.4	3.4
<b>Environmental sustainability</b>	<b>76.7</b>	<b>-10.5</b>	<b>-3.0</b>
Resource productivity	N/A	N/A	N/A
Air emissions by fine particulate matter	N/A	N/A	N/A
Environment-related technologies	87.8	-10.0	-2.9

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).

\* Results for Ukraine are less reliable due to limited data availability.

**UKRAINE** is an **Emerging Innovator** with performance at 31.0% of the EU average. Performance is below the average of the Emerging Innovators. Performance is decreasing marginally and is lower than that of the EU (8.5%-points). The country's performance gap to the EU is becoming larger.

### Relative strengths

Knowledge-intensive services exports  
Environment-related technologies  
Employment in knowledge-intensive activities  
Venture capital expenditures  
Non-R&D Innovation expenditures

### Relative weaknesses

Product innovators  
Design applications  
Sales of innovative products  
International scientific co-publications  
R&D expenditures in the public sector

### Strong increases since 2016

Venture capital expenditures  
Knowledge-intensive services exports  
Public-private co-publications

### Strong decreases since 2016

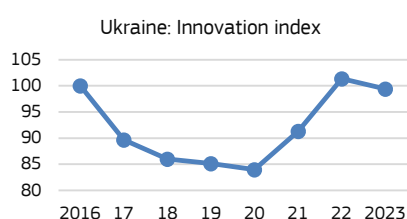
Employment in knowledge-intensive activities  
Medium and high-tech goods exports  
R&D expenditures in the public sector

### Strong increases since 2022

Knowledge-intensive services exports  
Venture capital expenditures  
Most cited publications

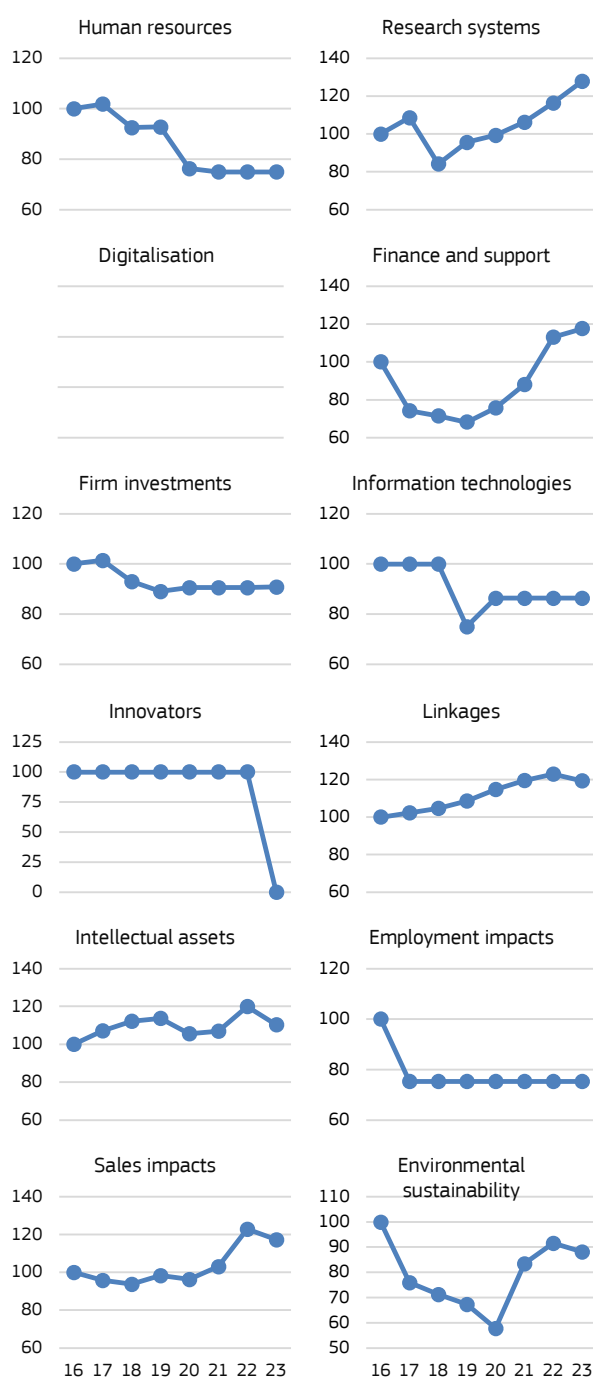
### Strong decreases since 2022

Medium and high-tech goods exports  
Product innovators  
PCT patent applications



The graph on the left shows the evolution of **innovation performance over time** against the performance of the country in 2016. Innovation performance declined from 2016 to 2020 but experienced an increase in 2021 and 2022. However, there was a slight decrease in 2023, resulting in an overall negative performance change between 2016 and 2023.

The graphs below show the evolution of innovation performance in the different **innovation dimensions** against the performance of the country in 2016. Performance improved strongest for Research systems. Performance declined for Human resources, Firm investments, Information technologies, Innovators, Employment impacts and Environmental sustainability.





**Structural differences** with the EU are shown below:

- Ukraine has lower per capita income, but a faster growing economy. Manufacturing and business services take up a larger share of the economy, with SMEs and large enterprises accounting for a larger share of turnover.
- FDI net inflows add positively to the innovation climate, Top R&D spenders, and Buyer sophistication add negatively.
- Information on Innovation profiles is not available.
- Government procurement is below the EU average as driver of research and innovation.
- Information on Climate change related indicators is not available.

	UA	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	9,330	32,600
Average annual GDP growth (%)	4.4	4.4
Employment share Manufacturing (NACE C) (%)	12.3	16.4
of which High and Medium high-tech (%)	n/a	38.0
Employment share Services (NACE G-N) (%)	33.8	41.1
of which Knowledge-intensive services (%)	n/a	35.8
Turnover share SMEs (%)	n/a	34.1
Turnover share large enterprises (%)	n/a	49.6
Foreign-controlled enterprises – share of value added (%)	n/a	11.8
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	n/a	1.0
Total Entrepreneurial Activity (TEA) (%)	n/a	6.8
FDI net inflows (% GDP)	2.6	2.1
Top R&D spending enterprises per 10 mln. population	0.0	20.3
Buyer sophistication (1 to 7 best)	3.3	3.7
<b>Innovation profiles</b>		
In-house product innovators with market novelties	n/a	12.2
In-house product innovators without market novelties	n/a	12.8
In-house business process innovators	n/a	16.5
Innovators that do not develop innovations themselves	n/a	6.5
Innovation active non-innovators	n/a	4.1
Non-innovators with potential to innovate	n/a	17.2
Non-innovators without disposition to innovate	n/a	30.7
<b>Governance and policy framework</b>		
Corruption Perceptions Index (0 to 100 best)	32.7	64.0
Basic school entrepreneurial education and training	n/a	3.3
Govt. procurement of advanced tech. products	3.0	3.5
Rule of law (-2.5 to 2.5 best)	-0.7	1.0
<b>Climate change indicators</b>		
Circular material use rate	n/a	11.8
Greenhouse gas emissions intensity of energy consumption	n/a	82.8
Eco-Innovation Index	n/a	100.0
<b>Demography</b>		
Population size	41.4	447.1
Average annual population growth (%)	-0.9	-0.1
Population density	76.6	108.8

Performance is measured relative to that of the country in 2016 (=100). There are no results for Digitalisation.



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

*Studies and reports*