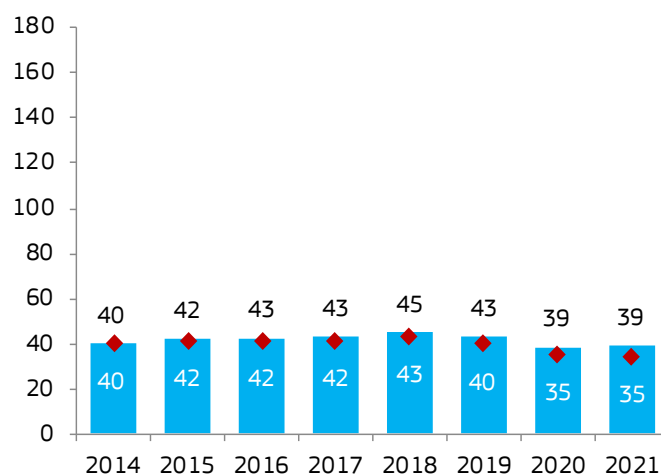




**Bosnia and Herzegovina** is an **Emerging Innovator**. Over time, performance relative to the EU has decreased, in particular in the last two years.



■ Relative to EU in base year ◆ Relative to EU in same year

**Structural differences** with the EU are shown in the table below including, compared to the EIS 2020, new information on different types of (innovating) enterprises (Innovation profiles) and environmental indicators.

	BA	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	10,060	30,800
Average annual GDP growth (%)	-1.5	-2.5
Employment share Manufacturing (NACE C) (%)	18.0	16.5
of which High and Medium high-tech (%)	n/a	37.9
Employment share Services (NACE G-N) (%)	29.3	41.2
of which Knowledge-intensive services (%)	n/a	35.1
Turnover share SMEs (%)	n/a	36.5
Turnover share large enterprises (%)	n/a	45.7
Foreign-controlled enterprises – share of value added (%)	9.4	11.8
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	n/a	1.0
Total Entrepreneurial Activity (TEA) (%)	4.0	6.7
FDI net inflows (% GDP)	2.8	2.0
Top R&D spending enterprises per 10 million population	0.0	16.2
Buyer sophistication (1 to 7 best)	2.5	3.7
<b>Innovation profiles</b>		
In-house product innovators with market novelties	n/a	10.7
In-house product innovators without market novelties	n/a	12.3
In-house business process innovators	n/a	11.0
Innovators that do not develop innovations themselves	n/a	11.6
Innovation active non-innovators	n/a	3.3
Non-innovators with potential to innovate	n/a	19.9
Non-innovators without disposition to innovate	n/a	31.3
<b>Governance and policy framework</b>		
Ease of starting a business (0 to 100 best)	65.4	76.5
Basic school entrepreneurial education and training	2.1	2.0
Govt. procurement of advanced tech. products	1.9	3.5
Rule of law (-2.5 to 2.5 best)	-0.2	1.1
<b>Climate change indicators</b>		
Circular material use rate	n/a	11.7
Greenhouse gas emissions intensity of energy consumption	n/a	86.6
<b>Demography</b>		
Population size	3.4	446.7
Average annual population growth (%)	-0.9	0.1
Population density	65.5	108.8

Bosnia and Herzegovina's strengths are in *Innovators*, *Employment impacts* and *Use of information technologies*. The top-3 indicators include Product innovators, Business process innovators, and Employment in innovative enterprises.

Innovation performance has decreased in the last two years due to reduced performance on Tertiary education, Public R&D expenditures, Design applications, and Environment-related technologies.

Performance did improve strongly for Medium and high-tech goods exports.

Bosnia and Herzegovina	Relative to EU 2021 in 2021	Relative to EU 2014 in 2014	Relative to EU 2021 in 2021
<b>SUMMARY INNOVATION INDEX</b>	<b>34.6</b>	<b>40.2</b>	<b>39.0</b>
<b>Human resources</b>	<b>8.5</b>	<b>6.7</b>	<b>9.0</b>
Doctorate graduates	14.2	4.6	12.6
Population with tertiary education	2.0	0.0	2.5
Lifelong learning	9.1	17.8	10.0
<b>Attractive research systems</b>	<b>61.7</b>	<b>34.1</b>	<b>69.5</b>
International scientific co-publications	81.9	66.7	107.4
Most cited publications	31.8	6.9	31.3
Foreign doctorate students	N/A	N/A	N/A
<b>Digitalisation</b>	<b>39.5</b>	<b>54.7</b>	<b>54.7</b>
Broadband penetration	65.9	100.0	100.0
People with above basic overall digital skills	0.0	0.0	0.0
<b>Finance and support</b>	<b>1.2</b>	<b>2.0</b>	<b>1.4</b>
R&D expenditures in the public sector	0.0	0.0	0.0
Venture capital expenditures	N/A	N/A	N/A
Government support for business R&D	2.5	4.2	2.9
<b>Firm investments</b>	<b>0.2</b>	<b>3.1</b>	<b>0.3</b>
R&D expenditure in the business sector	1.4	8.7	1.6
Non-R&D Innovation expenditures	0.0	0.0	0.0
Innovation expenditures per employee	0.0	0.0	0.0
<b>Use of information technologies</b>	<b>61.7</b>	<b>78.4</b>	<b>71.2</b>
Enterprises providing ICT training	66.7	73.3	66.7
Employed ICT specialists	N/A	N/A	N/A
<b>Innovators</b>	<b>112.0</b>	<b>153.3</b>	<b>153.3</b>
Product innovators (SMEs)	147.1	207.5	207.5
Business process innovators (SMEs)	79.3	105.5	105.5
<b>Linkages</b>	<b>24.3</b>	<b>14.4</b>	<b>32.8</b>
Innovative SMEs collaborating with others	N/A	N/A	N/A
Public-private co-publications	31.8	15.7	35.7
Job-to-job mobility of HRST	N/A	N/A	N/A
<b>Intellectual assets</b>	<b>26.7</b>	<b>14.0</b>	<b>23.1</b>
PCT patent applications	3.3	5.8	2.8
Trademark applications	61.8	35.7	64.8
Design applications	0.0	0.0	0.0
<b>Employment impacts</b>	<b>85.3</b>	<b>86.9</b>	<b>86.9</b>
Employment in knowledge-intensive activities	N/A	N/A	N/A
Employment in innovative enterprises	76.9	74.2	74.2
<b>Sales impacts</b>	<b>26.7</b>	<b>20.8</b>	<b>27.2</b>
Medium and high tech goods exports	19.5	5.7	21.4
Knowledge-intensive services exports	1.6	0.0	1.7
Sales of innovative products	75.1	65.3	65.3
<b>Environmental sustainability</b>	<b>27.8</b>	<b>91.6</b>	<b>29.0</b>
Resource productivity	16.1	20.2	23.9
Air emissions by fine particulate matter	N/A	N/A	N/A
Environment-related technologies	55.1	163.5	41.4

The colours show normalised performance in 2021 relative to that of the EU in 2021: dark green: above 125%; light green: between 100% and 125%; yellow: between 70% and 100%; orange: below 70%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.