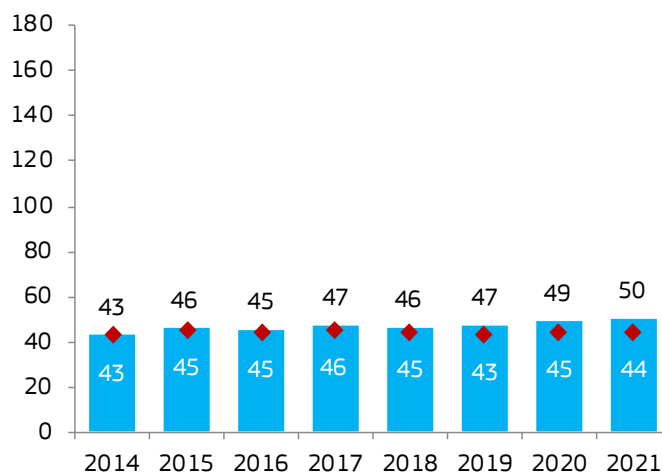



**Bulgaria is an Emerging Innovator.**

Over time, performance relative to the EU has increased slowly.



■ 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.

	BG	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	15,900	30,800
Average annual GDP growth (%)	0.4	-2.5
Employment share Manufacturing (NACE C) (%)	18.8	16.5
of which High and Medium high-tech (%)	22.2	37.9
Employment share Services (NACE G-N) (%)	41.8	41.2
of which Knowledge-intensive services (%)	28.3	35.1
Turnover share SMEs (%)	46.8	36.5
Turnover share large enterprises (%)	31.0	45.7
Foreign-controlled enterprises – share of value added (%)	17.2	11.8
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	2.0	1.0
Total Entrepreneurial Activity (TEA) (%)	4.9	6.7
FDI net inflows (% GDP)	3.2	2.0
Top R&D spending enterprises per 10 million population	0.0	16.2
Buyer sophistication (1 to 7 best)	3.4	3.7
<b>Innovation profiles</b>		
In-house product innovators with market novelties	7.8	10.7
In-house product innovators without market novelties	6.4	12.3
In-house business process innovators	5.0	11.0
Innovators that do not develop innovations themselves	7.6	11.6
Innovation active non-innovators	3.3	3.3
Non-innovators with potential to innovate	15.8	19.9
Non-innovators without disposition to innovate	54.1	31.3
<b>Governance and policy framework</b>		
Ease of starting a business (0 to 100 best)	71.8	76.5
Basic school entrepreneurial education and training	1.9	2.0
Govt. procurement of advanced tech. products	3.3	3.5
Rule of law (-2.5 to 2.5 best)	0.0	1.1
<b>Climate change indicators</b>		
Circular material use rate	2.8	11.7
Greenhouse gas emissions intensity of energy consumption	104.7	86.6
Eco-Innovation Index	34.0	100.0
<b>Demography</b>		
Population size	7.0	446.7
Average annual population growth (%)	-0.7	0.1
Population density	63.9	108.8

Bulgaria's strengths are in *Intellectual assets*, *Environmental sustainability* and *Employment impacts*. The top-3 indicators include Development of environment-related technologies, Design applications, and Trademark applications.

Recent performance has improved for several indicators using innovation survey data. Normalised performance of the share of product innovators increased with 134% and of the share of Business process innovators with 64%. Normalised performance on Lifelong learning and Enterprises providing ICT training declined with more than 30%.

Bulgaria has an above average share of Non-innovators without disposition to innovate and is showing below average scores on the Climate change related indicators.

Bulgaria	Relative to EU 2021 in 2021	Relative to EU 2014 in 2014	Relative to EU 2021 in 2021
<b>SUMMARY INNOVATION INDEX</b>	<b>44.5</b>	<b>42.9</b>	<b>50.1</b>
<b>Human resources</b>	<b>41.2</b>	<b>39.4</b>	<b>43.7</b>
Doctorate graduates	48.1	42.6	42.6
Population with tertiary education	57.1	62.0	73.6
Lifelong learning	11.1	8.9	12.2
<b>Attractive research systems</b>	<b>28.5</b>	<b>24.7</b>	<b>32.0</b>
International scientific co-publications	36.3	33.7	47.6
Most cited publications	16.1	15.2	15.8
Foreign doctorate students	38.9	33.1	46.3
<b>Digitalisation</b>	<b>52.1</b>	<b>59.0</b>	<b>72.0</b>
Broadband penetration	80.8	89.4	122.5
People with above basic overall digital skills	9.1	22.2	11.1
<b>Finance and support</b>	<b>11.9</b>	<b>23.0</b>	<b>14.1</b>
R&D expenditures in the public sector	16.4	8.8	15.8
Venture capital expenditures	12.7	79.6	21.4
Government support for business R&D	5.9	2.8	6.8
<b>Firm investments</b>	<b>30.0</b>	<b>33.5</b>	<b>36.2</b>
R&D expenditure in the business sector	36.2	25.2	40.2
Non-R&D Innovation expenditures	42.6	68.2	48.4
Innovation expenditures per employee	11.5	14.1	15.2
<b>Use of information technologies</b>	<b>44.6</b>	<b>64.4</b>	<b>51.5</b>
Enterprises providing ICT training	13.3	66.7	13.3
Employed ICT specialists	71.4	61.9	95.2
<b>Innovators</b>	<b>31.8</b>	<b>19.1</b>	<b>43.6</b>
Product innovators (SMEs)	47.4	16.1	66.9
Business process innovators (SMEs)	17.3	21.6	23.0
<b>Linkages</b>	<b>26.5</b>	<b>20.9</b>	<b>35.8</b>
Innovative SMEs collaborating with others	27.4	14.7	40.1
Public-private co-publications	46.2	27.2	51.8
Job-to-job mobility of HRST	14.3	20.5	20.5
<b>Intellectual assets</b>	<b>88.4</b>	<b>88.0</b>	<b>76.6</b>
PCT patent applications	17.1	10.3	14.8
Trademark applications	112.0	94.9	117.6
Design applications	132.5	149.7	90.8
<b>Employment impacts</b>	<b>46.7</b>	<b>28.6</b>	<b>47.6</b>
Employment in knowledge-intensive activities	59.8	38.7	65.3
Employment in innovative enterprises	36.3	21.4	35.0
<b>Sales impacts</b>	<b>49.8</b>	<b>27.4</b>	<b>50.8</b>
Medium and high tech goods exports	46.5	26.5	50.9
Knowledge-intensive services exports	54.7	31.2	57.9
Sales of innovative products	48.4	23.9	42.1
<b>Environmental sustainability</b>	<b>87.5</b>	<b>76.9</b>	<b>91.1</b>
Resource productivity	10.4	2.2	15.4
Air emissions by fine particulate matter	59.0	72.0	62.7
Environment-related technologies	229.3	127.4	172.3

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.