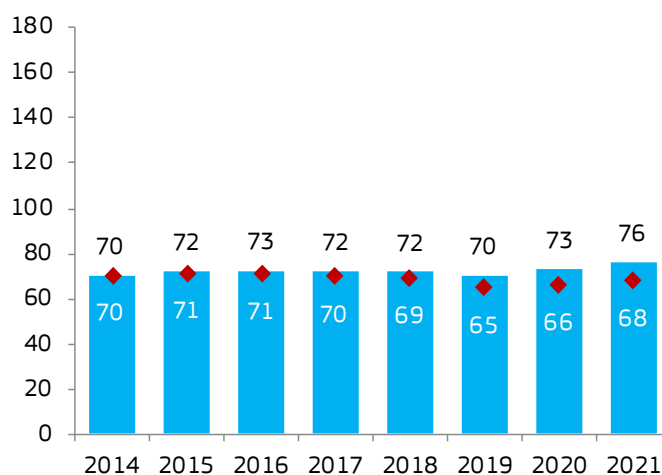




### Hungary is an Emerging Innovator.

Over time, performance relative to the EU has decreased.



■ 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.

	HU	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	22,000	30,800
Average annual GDP growth (%)	-0.1	-2.5
Employment share Manufacturing (NACE C) (%)	22.1	16.5
of which High and Medium high-tech (%)	44.1	37.9
Employment share Services (NACE G-N) (%)	35.6	41.2
of which Knowledge-intensive services (%)	30.0	35.1
Turnover share SMEs (%)	38.4	36.5
Turnover share large enterprises (%)	42.4	45.7
Foreign-controlled enterprises – share of value added (%)	25.3	11.8
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	1.4	1.0
Total Entrepreneurial Activity (TEA) (%)	7.9	6.7
FDI net inflows (% GDP)	-19.1	2.0
Top R&D spending enterprises per 10 million population	1.0	16.2
Buyer sophistication (1 to 7 best)	3.2	3.7
<b>Innovation profiles</b>		
In-house product innovators with market novelties	9.5	10.7
In-house product innovators without market novelties	6.5	12.3
In-house business process innovators	3.2	11.0
Innovators that do not develop innovations themselves	6.3	11.6
Innovation active non-innovators	3.0	3.3
Non-innovators with potential to innovate	44.9	19.9
Non-innovators without disposition to innovate	26.6	31.3
<b>Governance and policy framework</b>		
Ease of starting a business (0 to 100 best)	73.1	76.5
Basic school entrepreneurial education and training	1.5	2.0
Govt. procurement of advanced tech. products	2.8	3.5
Rule of law (-2.5 to 2.5 best)	0.5	1.1
<b>Climate change indicators</b>		
Circular material use rate	6.9	11.7
Greenhouse gas emissions intensity of energy consumption	79.3	86.6
Eco-Innovation Index	54.0	100.0
<b>Demography</b>		
Population size	9.8	446.7
Average annual population growth (%)	0.0	0.1
Population density	107.2	108.8

Hungary's strengths are in *Sales impacts*, *Digitalisation* and *Linkages*. The top-3 indicators include Government support for business R&D, Medium and high-tech goods exports, and Foreign doctorate students.

The strong performance improvement between 2019 and 2021 is the result of improved performance on Foreign doctorate students, Broadband penetration, Venture capital, Government support for business R&D, Product and Business process innovators, Innovative SMEs collaborating with others, and Job-to-job mobility of HRST.

Hungary has an above average share of Non-innovators with potential to innovate and is showing below average scores on the Climate change related indicators.

Hungary	Relative to EU 2021 in 2021	Relative to EU 2014 in 2014	Relative to EU 2021 in 2021
<b>SUMMARY INNOVATION INDEX</b>	<b>67.9</b>	<b>70.5</b>	<b>76.4</b>
<b>Human resources</b>	<b>42.0</b>	<b>52.0</b>	<b>44.5</b>
Doctorate graduates	35.1	31.1	31.1
Population with tertiary education	43.6	68.6	56.2
Lifelong learning	49.5	68.9	54.4
<b>Attractive research systems</b>	<b>68.0</b>	<b>48.1</b>	<b>76.6</b>
International scientific co-publications	65.5	64.2	85.9
Most cited publications	49.6	39.5	48.7
Foreign doctorate students	103.6	45.6	123.0
<b>Digitalisation</b>	<b>86.4</b>	<b>84.6</b>	<b>119.5</b>
Broadband penetration	95.6	94.9	144.9
People with above basic overall digital skills	72.7	72.2	88.9
<b>Finance and support</b>	<b>83.4</b>	<b>95.1</b>	<b>99.4</b>
R&D expenditures in the public sector	32.7	40.4	31.6
Venture capital expenditures	73.9	53.6	124.3
Government support for business R&D	151.0	199.0	174.7
<b>Firm investments</b>	<b>64.2</b>	<b>74.8</b>	<b>77.6</b>
R&D expenditure in the business sector	75.2	61.4	83.5
Non-R&D Innovation expenditures	59.2	93.4	67.3
Innovation expenditures per employee	42.2	73.3	55.6
<b>Use of information technologies</b>	<b>78.1</b>	<b>85.8</b>	<b>90.2</b>
Enterprises providing ICT training	73.3	73.3	73.3
Employed ICT specialists	82.1	100.0	109.5
<b>Innovators</b>	<b>35.7</b>	<b>29.8</b>	<b>48.8</b>
Product innovators (SMEs)	56.3	13.1	79.4
Business process innovators (SMEs)	16.4	44.5	21.8
<b>Linkages</b>	<b>83.5</b>	<b>65.0</b>	<b>112.5</b>
Innovative SMEs collaborating with others	79.8	58.2	116.9
Public-private co-publications	99.3	82.9	111.4
Job-to-job mobility of HRST	76.8	56.4	110.3
<b>Intellectual assets</b>	<b>48.1</b>	<b>38.0</b>	<b>41.7</b>
PCT patent applications	37.3	43.0	32.4
Trademark applications	69.6	56.0	73.0
Design applications	27.9	15.8	19.1
<b>Employment impacts</b>	<b>46.0</b>	<b>56.6</b>	<b>46.8</b>
Employment in knowledge-intensive activities	79.3	90.7	86.7
Employment in innovative enterprises	19.2	32.4	18.6
<b>Sales impacts</b>	<b>94.6</b>	<b>93.2</b>	<b>96.4</b>
Medium and high tech goods exports	131.0	134.8	143.5
Knowledge-intensive services exports	68.0	65.9	72.0
Sales of innovative products	72.9	71.1	63.4
<b>Environmental sustainability</b>	<b>72.2</b>	<b>96.7</b>	<b>75.2</b>
Resource productivity	42.9	105.3	63.5
Air emissions by fine particulate matter	95.4	103.5	101.4
Environment-related technologies	64.6	82.9	48.5

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.