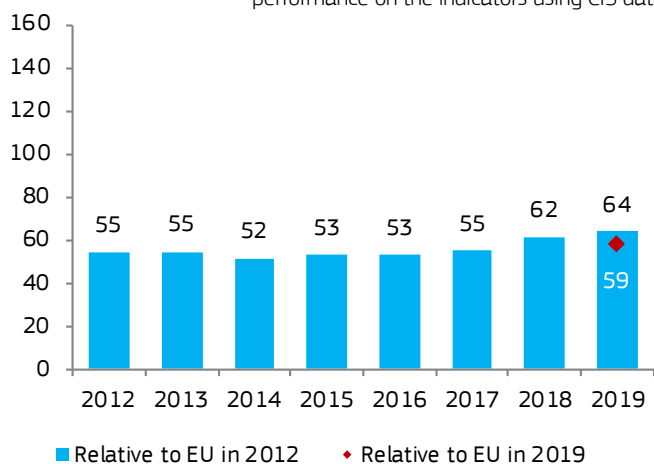




Croatia is a Moderate Innovator.

Over time, performance has increased relative to that of the EU in 2011. The strong increase in 2018 is entirely explained by improved performance on the indicators using CIS data.



Croatia	Relative to EU 2019 in 2019	Performance relative to EU 2012 in 2012	Performance relative to EU 2012 in 2019
SUMMARY INNOVATION INDEX	58.8	54.5	64.0
Human resources	57.1	57.5	65.7
New doctorate graduates	62.8	75.8	69.1
Population with tertiary education	79.2	66.9	100.8
Lifelong learning	20.6	24.4	22.2
Attractive research systems	44.0	26.7	50.2
International scientific co-publications	69.3	59.3	101.8
Most cited publications	26.8	19.5	26.8
Foreign doctorate students	47.0	13.2	54.2
Innovation-friendly environment	41.0	22.0	71.4
Broadband penetration	52.2	10.0	120.0
Opportunity-driven entrepreneurship	28.4	30.1	38.7
Finance and support	38.8	43.0	44.8
R&D expenditure in the public sector	58.9	43.2	57.8
Venture capital expenditures	15.9	42.6	23.0
Firm investments	90.8	96.4	117.9
R&D expenditure in the business sector	30.8	24.7	35.2
Non-R&D innovation expenditures	142.2	105.1	199.3
Enterprises providing ICT training	100.0	176.9	138.5
Innovators	96.2	74.6	86.0
SMEs product/process innovations	88.6	82.6	88.3
SMEs marketing/organizational innovations	110.9	71.4	91.1
SMEs innovating in-house	90.1	70.1	78.5
Linkages	65.5	81.8	67.5
Innovative SMEs collaborating with others	106.2	98.6	105.4
Public-private co-publications	87.5	80.4	99.0
Private co-funding of public R&D exp.	32.1	72.7	32.4
Intellectual assets	35.1	30.2	32.8
PCT patent applications	36.5	43.3	33.9
Trademark applications	55.1	42.7	58.6
Design applications	12.8	2.1	10.7
Employment impacts	75.0	49.2	80.9
Employment in knowledge-intensive activities	85.0	66.2	91.9
Employment fast-growing enterprises	66.9	35.6	72.0
Sales impacts	38.5	43.1	38.3
Medium and high-tech product exports	58.4	58.8	64.7
Knowledge-intensive services exports	6.0	4.8	6.2
Sales of new-to-market/firm innovations	52.3	65.9	43.7

The colours show normalised performance in 2019 relative to that of the EU in 2019: dark green: above 125%; light green: between 95% and 125%; yellow: between 50% and 95%; orange: below 50%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

Innovators and *Firm investments* are the strongest innovation dimensions. Croatia scores well on Non-R&D innovation expenditures, SMEs with marketing or organizational innovations, Innovative SMEs collaborating with others, and Enterprises providing ICT training. *Intellectual assets*, *Sales impacts* and *Finance and support* are the weakest innovation dimensions. Croatia's lowest indicator scores are for Exports of knowledge-intensive services, Design applications, Venture capital expenditures, and Lifelong learning.

Structural differences with the EU are shown in the table below. Croatia shows the highest positive difference to the EU in Enterprise births, Average annual change in GDP and Total Entrepreneurial Activity, and the biggest negative difference in Top R&D spending enterprises, Employment share high and medium high-tech manufacturing and GDP per capita.

	HR	EU
Performance and structure of the economy		
GDP per capita (PPS)	18,600	29,100
Average annual GDP growth (%)	2.79	1.84
Employment share manufacturing (NACE C) (%)	17.2	16.6
of which High and medium high-tech (%)	20.5	37.5
Employment share services (NACE G-N) (%)	41.1	41.4
of which Knowledge-intensive services (%)	30.7	34.3
Turnover share SMEs (%)	42.3	38.3
Turnover share large enterprises (%)	39.1	43.2
Foreign-controlled enterprises – share of value added (%)	11.7	11.1
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	2.2	1.1
Total Entrepreneurial Activity (TEA) (%)	9.7	6.7
FDI net inflows (% GDP)	3.1	2.6
Top R&D spending enterprises per 10 million population	0.0	16.2
Buyer sophistication (1 to 7 best)	2.8	3.7
Governance and policy framework		
Ease of starting a business (0 to 100 best)	73.1	76.5
Basic-school entrepreneurial education and training (1 to 5 best)	1.6	1.9
Govt. procurement of advanced technology products (1 to 7 best)	2.5	3.5
Rule of law (-2.5 to 2.5 best)	0.4	1.1
Demography		
Population size (millions)	4.1	446.2
Average annual population growth (%)	-0.94	0.14
Population density (inhabitants/km ²)	73.9	108.6

EU targets for 2020

Indicator	2015	Latest	Target ¹
Gross domestic expenditure on R&D (% of GDP)	0.84	0.97	1.40
Tertiary educational attainment (% of population aged 30-34)	30.8	34.3	35.0

1 Sources are provided in the introduction to the country profiles.

European Semester country report and country specific recommendations:

https://ec.europa.eu/info/publications/2020-european-semester-country-reports_en

<https://rio.jrc.ec.europa.eu/en/country-analysis/Croatia>