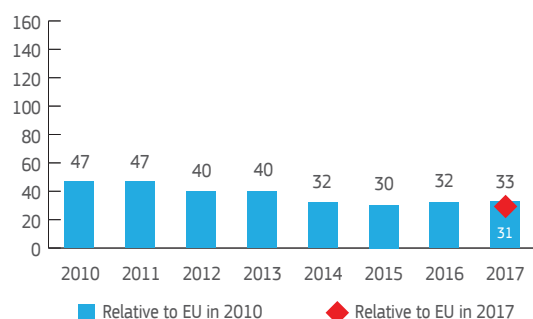




Romania is a Modest Innovator. Over time, performance has declined relative to that of the EU in 2010.



Innovation-friendly environment and Sales impacts are the strongest innovation dimensions. Innovators and Firm investments are the weakest innovation dimensions.

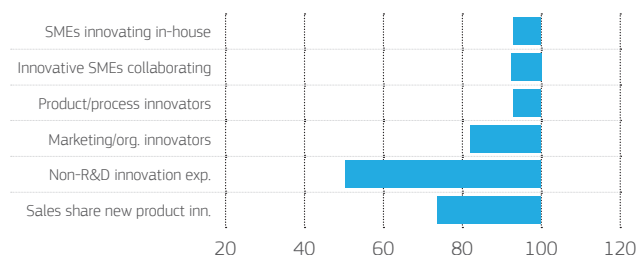
Romania	Performance relative to EU 2010 in		Relative to EU 2017 in
	2010	2017	2017
SUMMARY INNOVATION INDEX	46.9	32.9	31.1
Human resources	40.7	22.5	18.8
New doctorate graduates	100.0	49.9	35.8
Population with tertiary education	11.9	13.4	11.8
Lifelong learning	5.1	0.0	0.0
Attractive research systems	22.8	29.7	26.1
International scientific co-publications	22.7	46.8	28.8
Most cited publications	30.2	35.6	34.3
Foreign doctorate students	12.3	15.3	13.8
Innovation-friendly environment	81.1	96.8	72.3
Broadband penetration	122.2	188.9	106.3
Opportunity-driven entrepreneurship	56.7	42.2	39.1
Finance and support	48.3	22.4	20.8
R&D expenditure in the public sector	27.4	9.7	10.1
Venture capital expenditures	75.1	38.6	31.6
Firm investments	64.9	13.3	11.9
R&D expenditure in the business sector	11.8	19.6	17.6
Non-R&D innovation expenditures	209.4	21.3	19.5
Enterprises providing ICT training	0.0	0.0	0.0
Innovators	39.1	0.0	0.0
SMEs product/process innovations	26.4	0.0	0.0
SMEs marketing/organisational innovations	52.0	0.0	0.0
SMEs innovating in-house	38.0	0.0	0.0
Linkages	53.7	38.1	37.7
Innovative SMEs collaborating with others	10.7	5.8	5.8
Public-private co-publications	46.2	30.4	30.1
Private co-funding of public R&D exp.	105.3	79.1	78.0
Intellectual assets	8.6	22.5	22.3
PCT patent applications	4.2	5.9	6.1
Trademark applications	14.3	35.4	31.3
Design applications	8.4	28.4	29.4
Employment impacts	18.8	34.7	34.6
Employment in knowledge-intensive activities	5.9	26.0	23.5
Employment fast-growing enterprises	29.5	41.0	43.8
Sales impacts	83.4	66.6	64.0
Medium and high tech product exports	90.1	103.4	97.7
Knowledge-intensive services exports	48.8	57.9	55.2
Sales of new-to-market/firm innovations	115.9	33.2	32.9

Dark green: normalised performance above 120% of EU; light green: normalised performance between 90% and 120% of EU; yellow: normalised performance between 50% and 90% of EU; orange: normalised performance below 50% of EU. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

Data in red show a decline in performance compared to 2010.

Provisional CIS 2016 data show reduced performance for all six indicators, in particular for Non-R&D innovation expenditures.

Provisional CIS 2016 vs CIS 2014 (=100)



Structural differences with the EU are shown in the table below. The value added share of foreign-controlled enterprises is well above the EU average. GDP per capita and the employment shares in services and in knowledge-intensive services are well below the EU average.

	RO	EU
Performance and structure of the economy		
GDP per capita (PPS)	16,200	28,600
Average annual GDP growth (%)	5.9	2.2
Employment share Manufacturing (NACE C) (%)	18.5	15.5
of which High and Medium high-tech (%)	30.0	37.2
Employment share Services (NACE G-N) (%)	29.7	41.6
of which Knowledge-intensive services (%)	27.4	35.0
Turnover share SMEs (%)	42.4	38.0
Turnover share large enterprises (%)	41.6	44.4
Foreign-controlled enterprises – share of value added (%)	18.1	12.5
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	3.1	1.5
Total Entrepreneurial Activity (TEA) (%)	10.8	6.6
FDI net inflows (% GDP)	2.4	3.6
Top R&D spending enterprises per 10 mln population	0.3	19.7
Buyer sophistication (1 to 7 best)	2.8	3.7
Governance and policy framework		
Ease of starting a business (0 to 100 best)	74.3	76.9
Basic-school entrepren. education and training (1 to 5 best)	2.4	1.9
Govt. procurement of advanced tech products (1 to 7 best)	2.9	3.5
Rule of law (-2.5 to 2.5 best)	0.2	1.2
Demography		
Population size (millions)	19.8	510.1
Average annual population growth (%)	-0.6	0.3
Population density (inhabitants/km ²)	85.6	117.1

EU targets for 2020

Indicator	2013	Latest	Target ¹
Gross domestic expenditure on R&D (% of GDP)	0.39	0.48	2.00
Tertiary educational attainment (% of population aged 30-34)	22.9	26.3	26.7

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

RIO country report:

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

European Semester country report:

<https://ec.europa.eu/info/sites/info/files/2018-european-semester-country-report-romania-en.pdf>