



89.2



Change over time: 9.7

86.1 Moderate Innovators

Spain

	Performance relative to EU in 2023	Performance change 2016- 2023	Performance change 2022- 2023
SUMMARY INNOVATION INDEX	89.2	9.7	4.0
Human resources	127.2	5.9	5.9
Doctorate graduates	100.0	0.0	0.0
Population with tertiary education	149.1	10.8	10.8
Lifelong learning	133.3	9.9	9.9
Attractive research systems	96.1	11.6	0.9
International scientific co-publications	91.6	40.7	-1.0
Most cited publications	92.5	-4.1	-0.9
Foreign doctorate students	108.5	20.5	6.9
Digitalisation	144.9	20.8	8.2
Broadband penetration	140.0	41.0	16.2
People with above basic overall digital skills	151.7	0.0	0.0
Finance and support	81.1	20.1	5.7
R&D expenditures in the public sector	78.1	6.5	0.0
Venture capital expenditures	103.2	55.4	13.6
Government support for business R&D	55.9	1.7	5.1
Firm investments	61.0	11.9	-2.5
R&D expenditure in the business sector	52.1	10.8	1.5
Non-R&D Innovation expenditures	81.3	18.4	-2.6
Innovation expenditures per employee	53.0	7.1	-6.3
Use of information technologies	90.1	0.4	5.4
Enterprises providing ICT training	90.2	-6.4	3.8
Employed ICT specialists	90.0	6.9	6.9
Innovators	50.1	19.4	20.6
Product innovators (SMEs)	59.6	42.3	22.9
Business process innovators (SMEs)	41.8	-4.9	18.1
Linkages	88.2	37.9	-9.6
Innovative SMEs collaborating with others	57.0	7.5	3.6
Public-private co-publications	115.6	52.4	0.7
Job-to-job mobility of HRST	102.1	58.8	-26.5
Intellectual assets	80.1	-2.4	0.3
PCT patent applications	61.2	-5.0	-1.6
Trademark applications	112.6	7.7	0.1
Design applications	72.2	-6.8	3.0
Employment impacts	59.7	-5.8	5.5
Employment in knowledge-intensive activities	83.1	0.0	0.0
Employment in innovative enterprises	40.5	-11.3	10.7
Sales impacts	97.5	22.8	11.6
Medium and high-tech goods exports	67.9	-2.2	4.0
Knowledge-intensive services exports	68.7	31.4	-9.3
Sales of innovative products	169.2	50.8	49.3
Environmental sustainability	100.4	-14.5	-2.0
Resource productivity	139.1	7.8	13.5
Air emissions by fine particulate matter	85.5	-7.6	-2.2
Environment-related technologies	83.5	-37.6	-12.2

The second column shows performance relative to that of the EU in 2023. Colours next to the column show matching colour codes: dark green: above 125% of the performance of the EU in 2023; light green: between 100% and 125%; light orange: between 70% and 100%; dark orange: below 70%. The next columns show performance change over time between 2016 and 2023 and between 2022 and 2023, with scores relative to those of the EU in 2016. Positive (negative) performance changes are shown in green (red).

SPAIN is a **Moderate Innovator** with performance at 89.2% of the EU average. Performance is above the average of the Moderate Innovators. Performance is increasing at a rate higher than that of the EU (8.5%-points). The country's performance gap to the EU is becoming smaller.

Relative strengths

Sales of innovative products
People with above basic overall digital skills
Population with tertiary education
Broadband penetration
Resource productivity

Relative weaknesses

Employment in innovative enterprises
Business process innovators
R&D expenditure in the business sector
Innovation expenditures per employee
Government support for business R&D

Strong increases since 2016

Job-to-job mobility of HRST
Venture capital expenditures
Public-private co-publications

Strong decreases since 2016

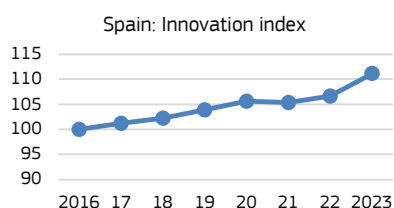
Environment-related technologies
Employment in innovative enterprises
Air emissions by fine particulate matter

Strong increases since 2022

Sales of innovative products
Product innovators
Business process innovators

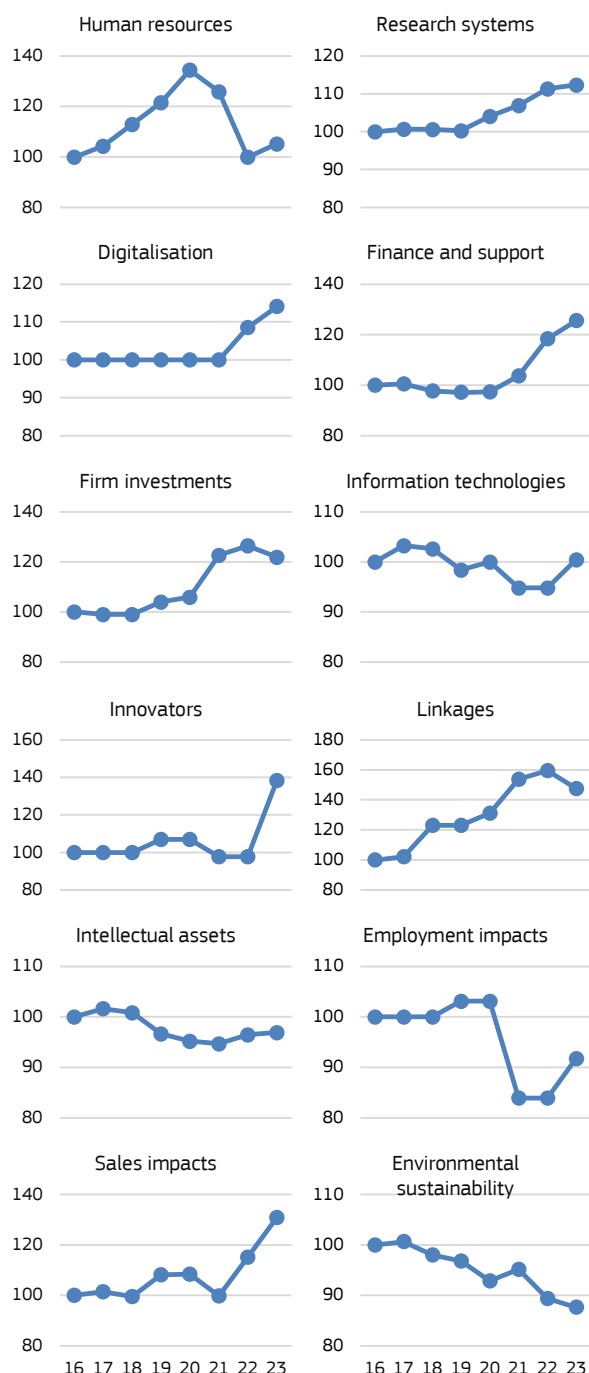
Strong decreases since 2022

Job-to-job mobility of HRST
Environment-related technologies
Knowledge-intensive services exports



The graph on the left shows the evolution of **innovation performance over time** against the performance of the country in 2016. Innovation performance increased steadily between 2016 and 2022 and accelerated in 2023, leading to an overall increase of 11% over time.

The graphs below show the evolution of innovation performance in the different **innovation dimensions** against the performance of the country in 2016. Performance increased strongly for Innovators, Linkages and Sales impacts. Performance did not change for Information technologies and declined for Intellectual assets, Employment impacts and Environmental sustainability.



Performance is measured relative to that of the country in 2016 (=100).

Structural differences with the EU are shown below:

- Spain has lower per capita income but a faster growing economy. Business services takes up a larger share of the economy, with SMEs accounting for a larger share of turnover.
- Enterprise births and FDI net inflows add positively to the innovation climate, entrepreneurial activities and top R&D spenders add negatively.
- Spain has a much higher share of Non-innovators with potential to innovate.
- Entrepreneurial training and government procurement are at par with the EU as drivers of research and innovation.
- Spain shows a close to average performance on Climate change related indicators, with below average scores for the circular material use rate and environmental innovation but a stronger reduction in greenhouse gas emissions

	ES	EU
Performance and structure of the economy		
GDP per capita (PPS)	27,300	32,600
Average annual GDP growth (%)	5.2	4.4
Employment share Manufacturing (NACE C) (%)	12.5	16.4
of which High and Medium high-tech (%)	32.0	38.0
Employment share Services (NACE G-N) (%)	48.2	41.1
of which Knowledge-intensive services (%)	32.1	35.8
Turnover share SMEs (%)	35.7	34.1
Turnover share large enterprises (%)	43.9	49.6
Foreign-controlled enterprises – share of value added (%)	10.2	11.8
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	1.4	1.0
Total Entrepreneurial Activity (TEA) (%)	5.6	6.8
FDI net inflows (% GDP)	2.6	2.1
Top R&D spending enterprises per 10 mln. population	5.4	20.3
Buyer sophistication (1 to 7 best)	3.5	3.7
Innovation profiles		
In-house product innovators with market novelties	7.2	12.2
In-house product innovators without market novelties	8.9	12.8
In-house business process innovators	8.4	16.5
Innovators that do not develop innovations themselves	5.9	6.5
Innovation active non-innovators	3.0	4.1
Non-innovators with potential to innovate	41.5	17.2
Non-innovators without disposition to innovate	25.1	30.7
Governance and policy framework		
Corruption Perceptions Index (0 to 100 best)	61.0	64.0
Basic school entrepreneurial education and training	3.3	3.3
Govt. procurement of advanced tech. products	3.2	3.5
Rule of law (-2.5 to 2.5 best)	0.9	1.0
Climate change indicators		
Circular material use rate	9.0	11.8
Greenhouse gas emissions intensity of energy consumption	79.7	82.8
Eco-Innovation Index	95.9	100.0
Demography		
Population size	47.4	447.1
Average annual population growth (%)	0.1	-0.1
Population density	93.2	108.8