



European Innovation Scoreboard **2024** Country Profile **Portugal**

European Innovation Scoreboard 2024 – Country profile Portugal

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Moderate Innovator ●

Summary innovation index (relative to EU in 2017): **91.8**

Rank: **23**

Change vs 2023: ▲ 0.5 Change vs 2017: ▲ 4.3

Portugal is a Moderate Innovator with performance at 83.5% of the EU average in 2024. Performance is below the average of the Moderate Innovators (84.8%). Performance is increasing less than the EU (+10%).

Indicator	Performance relative to the EU in 2024	Performance change 2017-2024	Performance change 2023-2024
SUMMARY INNOVATION INDEX	83.5	4.3	0.5
Human resources	97.6	-5.3	2.2
New doctorate graduates	100.0	0.0	11.6
Population with tertiary education	88.0	-25.8	-9.6
Population involved in lifelong learning	105.1	11.2	1.0
Attractive research systems	115.7	21.8	-3.3
International scientific co-publications	135.9	60.2	-2.9
Scientific publications among the top 10% most cited	82.6	-18.9	-5.3
Foreign doctorate students as a % of all doctorate students	149.7	75.8	1.1
Digitalisation	129.0	24.6	7.5
Broadband penetration	142.0	43.4	8.8
Individuals with above basic overall digital skills	111.3	6.2	6.2
Finance and support	97.3	23.2	-7.5
R&D expenditure in the public sector	78.7	-8.2	-6.5
Venture capital expenditures	51.0	-18.2	-4.4
Direct and indirect government support of business R&D	177.2	115.8	-12.9
Firm investments	56.1	3.1	4.5
R&D expenditure in the business sector	70.8	36.1	4.5
Non-R&D innovation expenditures	65.1	-23.8	3.2
Innovation expenditures per person employed	32.1	-5.1	6.0
Use of information technologies	99.3	3.7	5.7
Enterprises providing ICT training	107.5	7.6	5.1
Employed ICT specialists	91.2	0.0	6.5
Innovators	101.7	-63.0	-0.9
SMEs introducing product innovations	104.8	-69.6	9.0
SMEs introducing business process innovations	99.0	-57.1	-10.5
Linkages	99.2	39.1	-17.4
Innovative SMEs collaborating with others	67.3	-12.5	25.8
Public-private co-publications	151.3	78.5	-2.4
Job-to-job mobility of HRST	104.2	64.7	-61.7
Intellectual assets	76.7	-5.7	-3.2
PCT patent applications	54.8	6.5	0.2
Trademark applications	105.9	14.7	-6.6
Design applications	79.4	-37.6	-4.8
Employment impacts	88.2	-2.2	23.7
Employment in knowledge-intensive activities	75.3	1.2	3.6
Employment in innovative enterprises	99.6	-5.1	42.4
Sales impacts	63.6	18.3	1.2
Exports of medium and high technology products	59.4	7.9	4.1
Knowledge-intensive services exports	37.5	-4.8	-14.4
Sales of new-to-market and new-to-firm innovations	111.8	66.8	18.4
Environmental sustainability	31.4	-11.4	-4.1
Resource productivity	56.3	15.1	-0.8
Air emissions by fine particulates	6.9	7.0	0.9
Environment-related technologies	42.1	-59.0	-13.9

Relative strengths

- Direct and indirect government support of business R&D
- Public-private co-publications
- Foreign doctorate students as a % of all doctorate students

Relative weaknesses

- Air emissions by fine particulates
- Innovation expenditures per person employed
- Knowledge-intensive services exports

Strong increases since 2017

- Direct and indirect government support of business R&D
- Public-private co-publications
- Foreign doctorate students as a % of all doctorate students

Strong decreases since 2017

- SMEs introducing product innovations
- Environment-related technologies
- SMEs introducing business process innovations

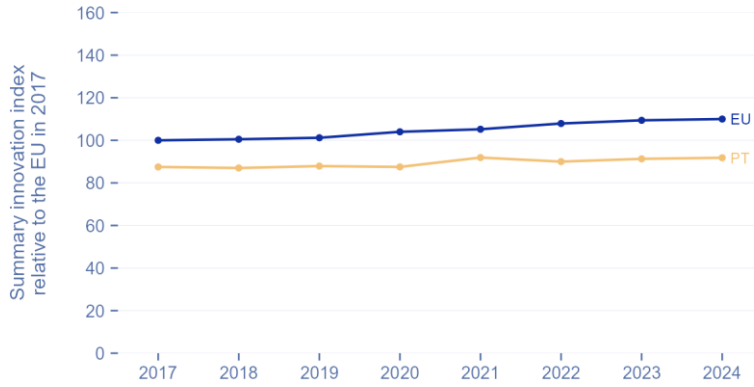
Strong increases since 2023

- Employment in innovative enterprises
- Innovative SMEs collaborating with others
- Sales of new-to-market and new-to-firm innovations

Strong decreases since 2023

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

Footnote: The first data column shows scores relative to the EU in 2024, with colour codes indicating performance levels. The subsequent columns show performance changes over time, with scores relative to the EU in 2017, coloured in purple for positive change and red for negative change. As reference years differ between the first column (2024) and the last two columns (2017), scores cannot be directly compared or subtracted across these columns.



Summary innovation index

The line chart shows the evolution of the innovation performance of Portugal over time, relative to the performance of the EU in 2017.

Footnote: All performance scores (SII and dimensions below) are relative to that of the EU in 2017.

Framework conditions

Portugal’s performance in framework conditions for R&I in 2024 includes digitalisation at 129.0% of the EU average, followed by its research system at 115.7% of the EU average and human resources at 97.6% of the EU average. Notable changes observed since 2017 include a significant rise in international scientific co-publications (+60.2%-points) and an impressive increase in the percentage of foreign doctorate students (+75.8%-points). An increase of 11.2%-points is also observed in lifelong learning. Despite the fact that Portugal’s research environment has improved markedly, it remains below the EU average in terms of the number of highly cited scientific publications, which also shows a decline since 2017 of -18.9%-points. In Digitalisation, Portugal has progressed well and also performs above the EU average (129% of EU performance in 2024), with significant improvements in broadband penetration of 43.4% and above basic overall digital skills among the population of 6.2% since 2017. National initiatives like the INCoDe.2030 programme, focusing on digital competencies, the Portugal 2020 strategy and more recently the 2030 Programme aimed at boosting research and innovation through structural funds, have likely contributed to these advancements.

Human resources



Attractive research systems



Digitalisation



Investments

Portugal performs below the EU average in finance and support (97.3% of the EU average in 2024), firm investments (56.1% of the EU average in 2024) and use of information technologies (99.3% of the EU in 2024). A notable exception is direct and indirect government support for business R&D, which is significantly above the EU average (177.2% of the EU average in 2024) and has increased by +115.8%-points. The support is evident in large programmes, such as Portugal 2020, 2030, and several programs aimed at Startups, such as Startup Portugal+, Startup Lisboa and analogous ecosystems in other major cities. While PT 2020 and 2030 are aimed at innovative businesses and projects can be received by established companies, the “startup” programmes are specifically intended to support new ventures through incubation and initial launch. The share of R&D expenditures invested by venture capital, which has always been lower (in the share of total R&D investments) in Portugal than the EU average (51.0% of the EU average in 2024), has seen a decline of 18.2%-points since 2017. Firm investments, such as business sector R&D expenditures are below the EU average (70.8% of the EU average in 2024) although they have increased significantly by 36.1%-points. Non-R&D innovation expenditures and innovation expenditures per person employed have decreased and dropped to 32.1% of the EU average in 2024.

Finance and support



Firm investments



Use of information technologies



Innovation activities

In innovation activities, the performance of Portugal across all dimensions, including innovators, linkages and intellectual assets, is around and below the EU average, ranging from 76.7% to 101.7% of the EU average in 2024. The overall number of innovators has significantly decreased by 63%-points since 2017, particularly among SMEs introducing product innovations (-69.6%-points) and business process innovations (-67.1%-points). However, there are notable areas of improvement. Linkages within the innovation ecosystem are strong, with public-private co-publications (at 151.3% of the EU average in 2024) growing by 78.5%-points and job-to-job mobility of highly skilled professionals (at 104.2% of the EU average in 2024) increasing by 64.7%-points. Regarding collaboration, despite the encouraging performance in public-private co-publications, collaboration between innovative SMEs and others is below the EU average and declining. The need to further nourish collaboration is addressed through programmes like the Collaborative Laboratories (CoLABs) framework, which aims to foster industry-research partnerships. In intellectual assets, Portugal performs below the EU average in its PCT patent applications (54.8% of the EU average in 2024). An increase in PCT patent applications and trademark applications has been recorded over the eight-year period (+6.5 and +14.7%-points respectively), although design applications have significantly declined (-37%-points)

Innovators



Linkages



Intellectual assets



Impacts

Impacts in terms of Employment are below the EU average (88.2% of the EU average in 2024). While employment in knowledge-intensive activities has remained stable, employment in innovative enterprises has decreased. Regarding sales, there has been notable growth, with significant increases in the sales of new-to-market and new-to-firm innovations (+66.8%-points). However, exports of medium and high-technology products have seen only a modest increase, and exports of knowledge-intensive services have declined. In both indicators, Portugal ranks significantly below the EU average in 2024. In environmental sustainability, resource productivity and air emissions by fine particulates have improved, but the performance of Portugal is significantly below the EU average in 2024. A particularly poor performance is noted for air emissions compared to the EU (6.9% of the EU average in 2024). Environment-related technologies have significantly decreased and are now 42.1% of the EU average in 2024.

Employment impacts



Sales impacts



Environmental sustainability



Structural differences

Performance and structure of the economy

Portugal's GDP per capita (79.0%) is well below the EU average. However, its average annual GDP growth (4.5%) is the second highest in the EU, indicating robust economic expansion. The share of employment in high and medium-high-tech sectors is notably low (21.8%). Services are very important to Portugal's economy, accounting for more than three-fifths of total output. SMEs play a vital role in Portugal's economy, with a higher turnover share than the EU average. Additionally, foreign-controlled enterprises contribute a significant share of value added.

Business and entrepreneurship

Portugal has a solid business and entrepreneurship ecosystem. The rate of enterprise births is higher (1.3) than the EU average, and FDI net inflows (2.9) are also relatively higher. However, the proportion of top companies in the top 2500 R&D spending enterprises is very low (1.9).

Innovation profiles

Portugal exhibits a relatively strong presence in in-house business process innovators (20.7) and a comparable level of in-house product innovators with market novelties (11.6) compared to the EU average. However, there are fewer in-house product innovators without market novelties. The percentage of innovators not developing innovations themselves is lower than the EU average and Portugal also has a higher proportion of non-innovators with potential to innovate (32.2).

Governance and policy framework

Portugal's Corruption Perceptions Index reflects a perception of moderate corruption, slightly below the EU average. Nonetheless, the country maintains a rule of law score on par with the EU average. Despite initiatives like PROCURE+i, a national innovation procurement community aimed at raising awareness about the benefits and opportunities of innovation procurement, Portugal's performance in government procurement of advanced technology products and innovative public procurement remains moderate (7.8), falling below the EU average.

Climate change

Portugal has the second lowest circular material use (2.6) in the EU, with Romania being the lowest. Challenges also occur in reducing greenhouse gas emissions intensity from energy consumption (80.1), with a score lower than the EU average even with large availability of renewable energy. However, actions undertaken by Portugal's National Energy and Climate Plan for 2021-2030 include a focus on decarbonisation, energy efficiency, energy security, internal energy markets and research, innovation and competitiveness.

Demography

Portugal's demographic landscape reveals a population size of approximately 10.4 million people, characterised by a modest annual population growth rate of 0.8% and a population density of 113.5 people per square kilometre.

Structural indicators

The table below presents some structural differences between Portugal and the EU.

	PT	EU
Performance and structure of the economy		
GDP per capita	79	100
Average annual GDP growth (2021-2023 average)	4.5	1.9
Employment share Manufacturing	17.1	15.8
Employment share High and Medium high-tech	21.8	37.9
Employment share Services	39.8	39.8
Employment share Knowledge-intensive services	25.3	28.6
Turnover share SMEs	15.1	12.6
Turnover share large enterprises		49.6
Foreign-controlled enterprises – share of value added	14	13.3
Business and entrepreneurship		
Enterprise births	1.3	0.8
FDI net inflows	2.9	1.9
Top R&D spending enterprises	1.9	8.4
Buyer sophistication	3.6	3.6
Innovation profiles		
In-house product innovators with market novelties	11.6	11.7
In-house product innovators without market novelties	10.4	13.7
In-house business process innovators	20.7	17.6
Innovators that do not develop innovations themselves	5.5	6.1
Innovation active non-innovators	2.9	4.2
Non-innovators with potential to innovate	32.2	17.8
Non-innovators without disposition to innovate	16.7	30.6
Governance and policy frameworks		
Corruption Perceptions Index	61.7	64
Government procurement of advanced technology products	3.5	3.4
Rule of law	1.1	1
Innovation procurement as a share of total public procurement	7.8	9.2
Climate change		
Circular material use rate	2.6	11.5
Greenhouse gas emissions intensity of energy consumption	80.1	82.8
Eco-Innovation Index	105.7	121.5
Demography		
Population size (in millions)	10.4	447
Average annual population growth (2021-2023 average)	0.8	0.3

	PT	EU
Population density	113.5	109

References

The country's relative strengths and weaknesses for each indicator, compared to other EU Member States and neighbouring countries, can be found in [Annex B](#).

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This report provides the Country profile from the 2024 European Innovation Scoreboard for Portugal

Studies and reports