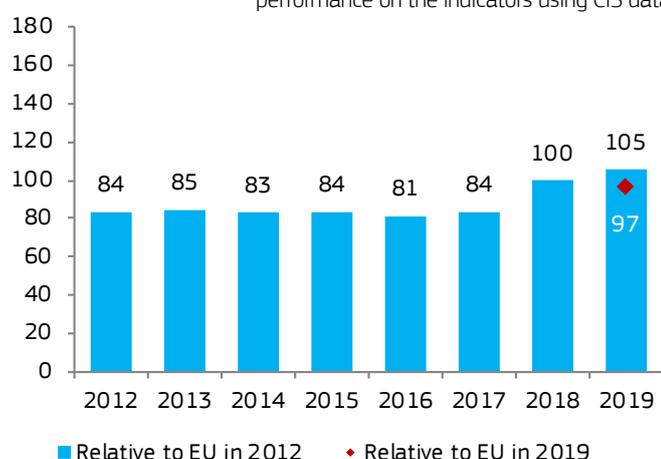




Portugal is a Strong Innovator.

Over time, performance has increased relative to that of the EU in 2012. The strong increase in 2018 is almost entirely explained by improved performance on the indicators using CIS data.



| Portugal | Performance relative to EU | | |
|--|-----------------------------|--------------|--------------|
| | Relative to EU 2019 in 2019 | 2012 in 2019 | |
| SUMMARY INNOVATION INDEX | 96.7 | 83.8 | 105.3 |
| Human resources | 91.2 | 94.7 | 105.1 |
| New doctorate graduates | 93.2 | 104.9 | 102.7 |
| Population with tertiary education | 85.1 | 62.8 | 108.3 |
| Lifelong learning | 96.9 | 117.8 | 104.4 |
| Attractive research systems | 118.4 | 95.6 | 135.2 |
| International scientific co-publications | 130.9 | 110.8 | 192.2 |
| Most cited publications | 91.4 | 94.4 | 91.5 |
| Foreign doctorate students | 153.6 | 84.7 | 177.1 |
| Innovation-friendly environment | 130.7 | 118.1 | 227.2 |
| Broadband penetration | 178.3 | 130.0 | 410.0 |
| Opportunity-driven entrepreneurship | 76.6 | 110.1 | 104.4 |
| Finance and support | 83.3 | 84.2 | 83.3 |
| R&D expenditure in the public sector | 86.9 | 90.8 | 86.9 |
| Venture capital expenditures | 79.2 | 73.0 | 79.2 |
| Firm investments | 95.8 | 91.5 | 124.5 |
| R&D expenditure in the business sector | 46.3 | 53.0 | 53.0 |
| Non-R&D innovation expenditures | 114.5 | 92.6 | 160.5 |
| Enterprises providing ICT training | 127.8 | 138.5 | 176.9 |
| Innovators | 174.9 | 124.1 | 156.3 |
| SMEs product/process innovations | 177.0 | 138.8 | 176.4 |
| SMEs marketing/organizational innovations | 151.8 | 124.6 | 124.6 |
| SMEs innovating in-house | 195.2 | 109.3 | 170.0 |
| Linkages | 63.0 | 53.2 | 64.9 |
| Innovative SMEs collaborating with others | 105.0 | 84.3 | 104.3 |
| Public-private co-publications | 47.4 | 41.3 | 53.6 |
| Private co-funding of public R&D exp. | 46.4 | 40.2 | 46.9 |
| Intellectual assets | 75.8 | 69.1 | 70.8 |
| PCT patent applications | 49.7 | 39.4 | 46.1 |
| Trademark applications | 102.9 | 76.9 | 109.5 |
| Design applications | 88.2 | 104.0 | 74.0 |
| Employment impacts | 89.1 | 48.1 | 96.1 |
| Employment in knowledge-intensive activities | 65.0 | 45.9 | 70.3 |
| Employment fast-growing enterprises | 108.6 | 49.8 | 117.0 |
| Sales impacts | 55.7 | 67.1 | 55.4 |
| Medium and high-tech product exports | 60.7 | 50.3 | 67.3 |
| Knowledge-intensive services exports | 38.5 | 52.1 | 39.8 |
| Sales of new-to-market/firm innovations | 70.7 | 100.2 | 59.1 |

The colours show normalised performance in 2019 relative to that of the EU in 2012: 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, Innovation-friendly environment and Attractive research systems are the strongest innovation dimensions. Portugal scores particularly well on SMEs innovating in-house, Broadband penetration, SMEs with product or process innovations, and Foreign doctorate students. *Sales impacts, Linkages and Intellectual assets* are the weakest innovation dimensions. Portugal's lowest indicator scores comprise Exports of knowledge-intensive services, R&D expenditures in the business sector, Private co-funding of public R&D expenditures, and Public-private co-publications.

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

| | PT | EU |
|---|--------|--------|
| Performance and structure of the economy | | |
| GDP per capita (PPS) | 23,100 | 29,100 |
| Average annual GDP growth (%) | 2.39 | 1.84 |
| Employment share manufacturing (NACE C) (%) | 17.2 | 16.6 |
| of which High and medium high-tech (%) | 19.2 | 37.5 |
| Employment share services (NACE G-N) (%) | 41.4 | 41.4 |
| of which Knowledge-intensive services (%) | 30.7 | 34.3 |
| Turnover share SMEs (%) | n/a | 38.3 |
| Turnover share large enterprises (%) | n/a | 43.2 |
| Foreign-controlled enterprises – share of value added (%) | 9.5 | 11.1 |
| Business and entrepreneurship | | |
| Enterprise births (10+ employees) (%) | 1.5 | 1.1 |
| Total Entrepreneurial Activity (TEA) (%) | 12.9 | 6.7 |
| FDI net inflows (% GDP) | 3.6 | 2.6 |
| Top R&D spending enterprises per 10 million population | 4.2 | 16.2 |
| Buyer sophistication (1 to 7 best) | 3.7 | 3.7 |
| Governance and policy framework | | |
| Ease of starting a business (0 to 100 best) | 76.5 | 76.5 |
| Basic-school entrepreneurial education and training (1 to 5 best) | 1.9 | 1.9 |
| Govt. procurement of advanced technology products (1 to 7 best) | 3.5 | 3.5 |
| Rule of law (-2.5 to 2.5 best) | 1.1 | 1.1 |
| Demography | | |
| Population size (millions) | 10.3 | 446.2 |
| Average annual population growth (%) | -0.16 | 0.14 |
| Population density (inhabitants/km ²) | 113.2 | 108.6 |

EU targets for 2020

| Indicator | 2015 | Latest | Target ¹ |
|--|------|--------|---------------------|
| Gross domestic expenditure on R&D (% of GDP) | 1.24 | 1.36 | 2.70 |
| Tertiary educational attainment (% of population aged 30-34) | 31.9 | 35.5 | 40.0 |

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/Portugal>