Innovación para un Europea competitiva:
nuevas políticas europeas para apoyar la innovación

Cecilia CABELLO VALDES

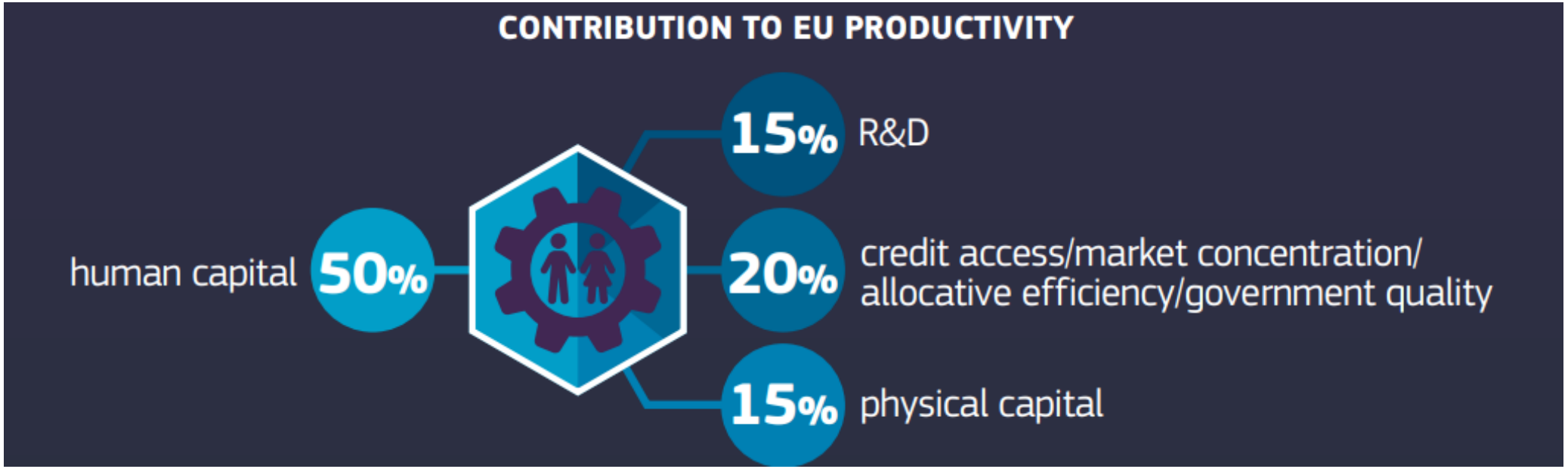
Unit: European Semester & Country Intelligence

Directorate General Research & Innovation

A new plan for Europe's sustainable prosperity & competitiveness (2024-2029)

- Make business easier and deepen our Single Market
- Build a Clean Industrial Deal to decarbonise and bring down energy prices
- **Put research and innovation at the heart of our economy**
- Boost productivity with digital tech diffusion
- Invest massively in our sustainable competitiveness
- Tackle the skills and labour gap.

R&I directly contributes to competitiveness



- **R&I Innovation EU studies** provide insights into EU productivity, innovation uptake, regional R&I strengths, and sustainability in research.
- **Why investing in research and innovation matters for a competitive, green, and fair Europe.**
- **A comparative analysis of public R&I funding in the EU, US, and China**
- **Nobel Economics 2025**

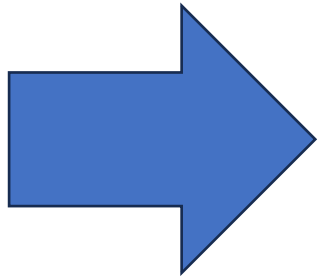
European Commission

Three transformations ahead for Europe

1. **Closing the innovation gap** → *accelerate innovation and find new growth engines.*
2. **A joint decarbonisation and competitiveness plan** →*bring down high energy prices while continuing to decarbonise.*
3. **Increasing security and reducing dependencies** → *react to a world of less stable geopolitics, where dependencies are becoming vulnerabilities, and it can no longer rely on others for its security.*

Accelerating innovation: challenges

- **Research and innovation** are essential **drivers of productivity** and people's well-being.
- The **green and digital transitions** require Europe to be at the forefront of **innovation**.



- However, the **EU has failed** to be a leader in advanced technologies and as result **does not exploit its full innovation potential**.
- For several decades, the **EU's innovation capacity has lagged** behind that of the US, while China is catching up quickly.
- **Fragmented policies, regional disparities and limited access to finance** restrict the diffusion of innovation and scale-up of innovative companies.

The Competitiveness Compass

" Europe has everything it needs to succeed in the race to the top. But, at the same time, we must fix our weaknesses to regain competitiveness. The Competitiveness Compass transforms the excellent recommendations of the Draghi report into a roadmap. So now we have a plan. We have the political will. What matters is speed and unity. The world is not waiting for us. All Member States agree on this. So, let's turn this consensus into action. "

Ursula von der Leyen, President of the European Commission

European Commission

Competitiveness compass: Pillar 1

1. Closing the innovation gap

The first pillar is about driving productivity through innovation. The Commission will work to create a new dynamism for Europe's industrial structure.

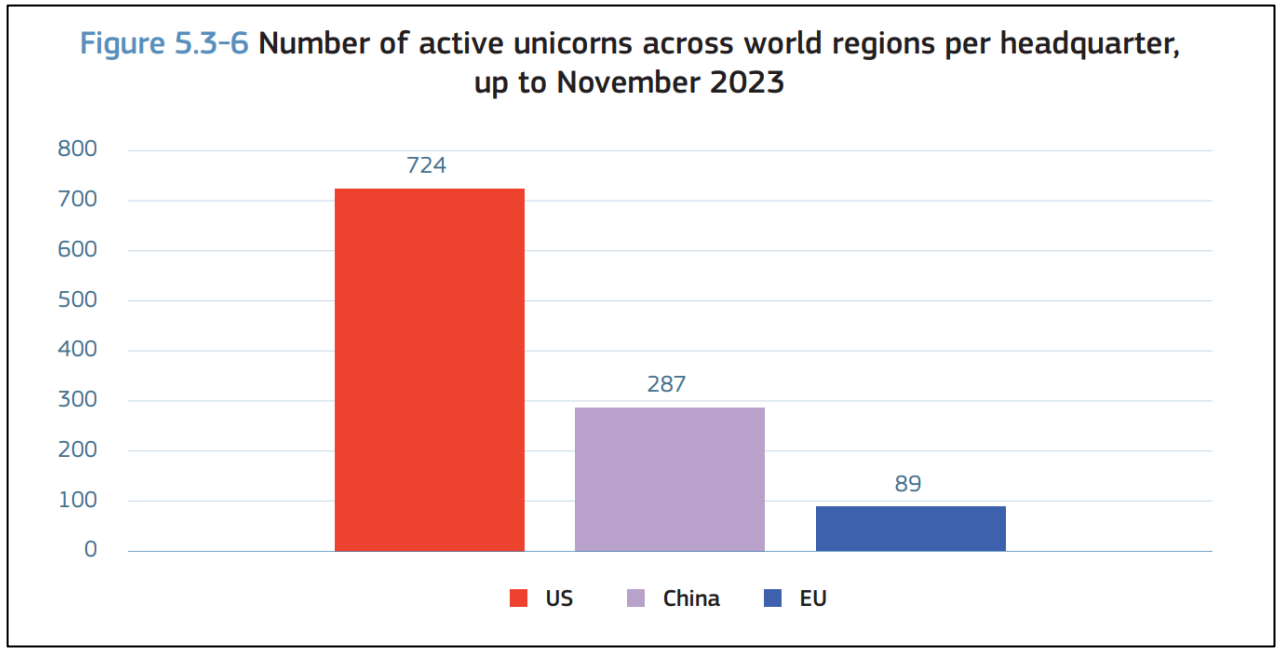
How:

- Facilitate the establishment of start-ups and conditions for scaling up
- Create a deeper and efficient venture capital market
- Ease mobility and retention of talent
- Invest in state-of-the-art infrastructures
- Boost innovation and research

Flagship Actions Pillar 1

- Start-up and Scale-up Strategy
- 28th regime
- European Innovation Act
- European Research Area Act
- AI Factories Initiative, Apply AI, AI in Science, and Data Union Strategies
- EU Cloud and AI Development Act
- EU Quantum Strategy and a Quantum Act
- European Biotech Act and Bioeconomy Strategy
- Life Sciences Strategy
- Advanced Materials Act
- Space Act
- Review of the Horizontal Merger Control Guidelines
- Digital Networks Act

Context - Startups and Scaleups in Europe



- Overall, Europe reports a **positive performance in terms of startups creation**.
- The **number of new tech startups** founded each year **in Europe has exceeded that observed in US** over the period 2019-2023.
- On average, around **15 200 new tech startups have been founded per year in Europe**, compared to 13 700 in the US
- European innovative companies often face **two** so-called **"valleys of death".**
- Around 60% of all global scaleups are based in North America, while **only 8% in EU countries**.

European Commission

EU Startup and Scaleup Strategy (May 2025)

Key concerns:

- Regulatory and administrative barriers
- Access to finance
- Access to markets
- Access to talents
- Access to infrastructure, network, and services

Key lines of action:

- ❖ Simple, harmonised and more innovation-friendly regulation
- ❖ More finance for startups and scaleups
- ❖ Fast market expansion
- ❖ Support for best talent in Europe
- ❖ Improve access to cutting-edge research, technology facilities, and expertise

EU Startup and Scaleup Strategy

"The Commission will propose a European Innovation Act which will also **promote regulatory sandboxes**, to allow innovators to develop and test new ideas. It will contain a **common legal definition and basic principles regarding the establishment of regulatory sandboxes**, including cross-border or place-based regulatory sandboxes, while ensuring sector specific needs."

"In the context of the European Innovation Act, complementing the above, the Commission will seek ways to **increase total investments in public and private innovation procurement across Europe** i) provide a fast-track procedure for public procurement of R&D services that fall outside of the EU public procurement directives, including pre-commercial procurements; ii) incentivize innovation-minded sourcing strategies for private procurers."

"[t]he European Innovation Act will further promote the **access of innovative companies to European research and technology infrastructures through legislative measures**."

European Innovation Act

General objective of the Innovation Act is to **improve the framework conditions of European innovative companies**, including startups and scaleups, and **ensure diffusion of innovation across the EU Single Market.**

European Commission

European Innovation Act: Potential areas of intervention

Burden reduction	Innovation friendly legislation	Regulatory sandboxes
Access to finance	Commercialisation of research results	Access to research and technology infrastructures
Innovation procurement	Access to talent – employee stock options	Innovation policy coordination

European Innovation Act:
Call for evidence and public Consultation!

- The public **consultation and the call for evidence** on the European Innovation Act **were launched and now completed. THANKS for you input!**

- The consultation was **open until 3 October**. Over 330 responses received

- Visualize some input from in **the Have Your Say portal** using the following link:
-

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14593-European-Innovation-Act_en

European Commission

European Research Area Act (ERA Act)

General objective of ERA Act aims to improve **the general environment for generating innovation**, **reducing fragmentation** and boosting the EU's competitiveness, and it aims to **strengthen R&D investment** and bring it up to the 3% GDP target.

European Commission

ERA Act – areas of intervention

The following topics are currently followed under the ERA Act:

1. **R&D investment in light of the Barcelona target of reaching 3% of GDP**

2. **Alignment of priorities between EU and MS and governance framework**

3. **Improvement of framework conditions for research and talent**

For more information: European Research Area (ERA) Act - Research and innovation

Public Consultation!

- The public **consultation** on the ERA Act **are now online.**
- The consultation was now **open,**
- *The ERA Act public consultation questionnaire is published on the Have Your Say Portal.*
- *The questionnaire is an important part of the consultation process and follows the call for evidence that closed in September.*
- *You may find the questionnaire via this link clicking on the button 'respond to the questionnaire'.*

European Commission

EU R&I policies and instruments

European Semester

European R&I Area (ERA)

NEIA

Recovery and
Resilience Facility

EU R&I Framework
Program (2021-2027)

European Commission

European Semester: *Why does it matter for R&I policy?*

- Most of the budget & policies for **R&I happen at national level**
- European Semester process is an important vehicle to convey key messages to each MS in terms of **structural R&I investments and reforms**
- A key opportunity to raise the **profile and visibility of R&I and to discuss R&I with a broader audience**, beyond the actors responsible for R&I policy at national level (incl. Finance ministries)
- Major adaptation in the last years to make room for the **Recovery & Resilience Funds (RRF),** revamped Semester in 2022, tied with the monitoring of the RRF
- Link between **EU funding and Country Specific Recommendations** (e.g. Cohesion funding, Recovery & Resilience Funds -RRF). Many Member States in their Recovery and Resilience Plans have included **R&I components.**

2025 European Semester Spring Package:
A New Framework

- First application of the new Economic Governance Framework
- Consolidated set of policy recommendations **reflecting the priorities from the Competitiveness Compass**
- Strong focus on research and innovation.

European Commission

2025 Country-Specific Recommendations:

R&I investments & reforms for 26 MS

	R&D investment	Fragmentation of the science base	R&I governance	Researchers / research careers	Science-business links / commercialisation	Public support to business innovation	Startups & Scaleups / Venture capital
Belgium							
Bulgaria							
Czechia							
Denmark							
Germany							
Estonia							
Ireland							
Greece							
Spain							
France							
Croatia							
Italy							
Cyprus							
Latvia							
Lithuania							
Luxembourg							
Hungary							
Malta							
Netherlands							
Austria							
Poland							
Portugal							
Romania							
Slovenia							
Slovakia							
Finland							
Sweden							

Annex 3: R&I analysis for each country

PRODUCTIVITY

ANNEX 3: INNOVATION TO BUSINESS

Germany remains a strong performer in research and innovation (R&I) but faces growing global competition. The 2024 European Innovation Scoreboard ranks Germany as a 'strong innovator', with performance above the EU average (111.6%) albeit slightly decreasing ([95]). Germany's R&D intensity (gross domestic expenditure on R&D as a percentage of GDP) exceeds the EU average, but has stagnated since 2018 (at around 3.1%), falling short of its own target of 3.5% by 2025 ([96]). Reliance on mid-tech sectors underlines the need to promote disruptive innovation and accelerate the commercialisation (bringing to market) of research outputs to close the innovation gap with the USA. Germany's R&D intensity is also subject to considerable regional disparities (see Annex 17). Despite solid performance in adopting digital technologies by small and medium-sized enterprises (SMEs) and the uptake of advanced technologies by firms in gene… the EU's Digital Decade … development of the start-… Germany harbours potential … although recently positive tren…

research outputs (as measured by the share of scientific publications within the top 10% most cited publications worldwide as a percentage of total publications) is just above the EU average (10.2% vs 9.6%) and below that of several EU peers such as Sweden, Denmark, Finland and Austria. Public R&D expenditure as a percentage of GDP is the fourth highest in the EU (0.92% vs EU average of 0.72% in 2023). However, to reach the expected 3.5% target it should be increased to at least 1.16% (i.e. one third of 3.5%) ([99]). Increasing the budget for the Excellence Strategy ([100]) could further advance scientific excellence in the country and create a critical mass of support for top-tier research ([101]). In addition, strengthening Germany's research base requires transparent and stable career paths for young researchers. This makes the ongoing discussions on the Temporary Contract Law ([102]) and those on the creation of more permanent positions of key importance ([103]). Furthermore, there is a pressing need to make R&I …

Science and innovative …

Germany has a strong pub… but its scientific performa… certain peer countries cou… science system builds on … network of public research … supported by numerous … programmes ([98]). Nonethele…

([95]) European Commission, 2024, *Euro… Scoreboard (EIS), country profile: G…*

([96]) Moreover, international competitiv… 3.45% in 2025) are rapidly adva… China are catching up (2.43% i… intensity target was reiterated in G… and Innovation Strategy' (202… document for R&I at national level.

Business Innovation

Germany's reliance on mid-tech industries, fewer high-tech start-ups and a weaker innovation output rate suggest lock-in effects and signal difficulties in adapting to emerging technologies. Business expenditure on R&D as a percentage of GDP is well above the EU average (2.12% vs 1.49%), but differs greatly between regions ([105]). Moreover, it is concentrated in large companies in mid-tech sectors, such as automotive ([106]), and has broadly stagnated since 2018 (2.10%). According to the EU Industrial R&D Investment Scoreboard, 7 of the 10 top private R&D investors in 2023 were the same as in 2003 (e.g. Volkswagen, Siemens, Bosch), underlining a heavy reliance on mid-tech industries (see also Graph A3.1) ([107]). The size of the ICT sector is below the EU average (5% vs 5.5% in gross value added in 2021), and its R&D business expenditure …

remains ([110]), SPRIN-D marks a positive step towards a more agile R&I landscape. Its impact on supporting breakthrough innovations and integrating new players in the German R&I system will need to be assessed.

Graph A3.1: **Sectoral distribution of R&D investment among the world's top 2 000 R&D investors, in Germany (blue) and worldwide (red)**

Source: European Commission, 2024 EU Industrial R&D Investment Scoreboard.

visibility in order to improve SME access to the scheme ([113]).

Graph A3.2: **Start-up rate in Germany by economic sector (2010-2023)**

(1) High-tech encompasses industries with the highest R&D intensity and advanced technology industries with moderate R&D intensity (see Neuhaeusler et al. (2022) for more information). The start-up rate is calculated as the number of start-ups in relation to the number of companies.

Source: Based on the German Commission of Experts for R&I (2025).

The adoption of digital technologies by firms is slowly gaining traction, and Germany is also very active in developing digital technologies and infrastructure. The country performs above the EU average in its level of basic digital intensity for SMEs and in the share of firms that have taken up advanced digital technologies (i.e. AI, cloud or data analytics), although cloud uptake is around the EU average. To support the further adoption and development of digital technologies, Germany is making the most of national measures and investment under its recovery and resilience plan. These initiatives range from increasing the uptake of digital technologies by SMEs for example via European Digital Innovation Hubs, the Digital Hub Initiative and the SME digital programme Mittelstand-Digital, to the development of digital technology and infrastructure. Key focus areas include semiconductors via Important Projects of Common European Interest (IPCEI) on Microelectronics and Communication Technologies to stimulate the design, testing at industrial scale, and manufacturing capacities for EU semiconductor companies and investment under the European Chips Act. Furthermore, Germany is developing interoperable and accessible European data processing technologies via the IPCEI on Next Generation Cloud Infrastructure and Services. Additionally, cohesion policy programmes include several measures to support SME innovation in order to boost digitalisation and decarbonisation of industry.

Business-science linkages are strong but are skewed towards large companies, while challenges in the commercialisation of research outputs hinder broader economic transformation efforts. The number of public-private scientific co-publications as a percentage of total publications remains high and well above the EU average (11.8% vs 7.7% in 2023). Research and development activities carried out by public research organisations and universities for private companies remain at a very high level and are driven by players such as the Fraunhofer-Gesellschaft ([114]). However, this model has mainly been effective in promoting incremental innovation within existing industries. Overall, Germany's performance in commercialising research has been mixed, as illustrated by the relatively low – and slowly increasing – number of academic spin-offs ([115]). Commercialisation of research and entrepreneurship still plays a subordinate role at Germany universities and is not included as a mandatory task in some federal states' higher education laws ([116]). This is reflected in support structures for commercialisation such as technology transfer offices ([117]). These often face unstable levels of financial support, leading to limited capacity to advise researchers on topics linked to technology transfer ([118]). In addition, bureaucratic hurdles linked to the transfer of intellectual property persist ([119]). To improve the …

([114]) 'Contractual research' as measured in public R&D expenditure financed by business enterprises as a percentage of GDP is the highest in the EU (0.11% vs EU average 0.05%).

([115]) OECD, 2022, Innovation Review: Germany 2022, oecd-ilibrary.org.

([116]) Roessler, Isabel (2024): Third Mission Aspekte in den Hochschulgesetzen der Bundesländer,

([117]) A technology transfer office (TTO) facilitates the commercialisation of research by connecting universities and research institutions with industry, supporting patenting, licensing and the creation of spin-offs.

([118]) OECD, 2022, Innovation Review: Germany 2022, oecd-ilibrary.org

environment for commercialising research, Germany has introduced several initiatives like IP Transfer 3.0 to streamline intellectual property transfer and the Start-up Factories programme to promote spin-offs. Going forward, it is crucial to swiftly implement the remaining measures from the Start-up Strategy ([120]) such as those that facilitate regulatory sandboxes, and to launch the envisaged Agency for Transfer and Innovation (DATI) to provide a new impetus for science-business collaboration in an agile manner. This should follow and take into account the dedicated expert recommendations ([121]).

Regulatory barriers to innovation remain, particularly on data regulation. Inconsistent interpretation of data privacy laws, such as the General Data Protection Regulation, continue to hamper the usability of public data for research purposes. While adoption of the Health Data Utilisation Act is an important step, other initiatives, such as the Research Data Act, face legal and administrative hurdles in balancing data protection with open access. However, making progress on the provision and use of data is essential for driving data applications and digital transformation ([122]). The proposed Regulatory Sandboxes Act, designed to formalise controlled testing of innovative technologies, has yet to be adopted. It is essential that the experimentation clauses are broadly defined to provide flexibility in testing diverse innovations, adapt to unforeseen changes and ensure a lasting impact ([123]).

Financing innovation

Venture capital financing in Germany has shown a slight upward trend in recent years, but the market fails to meet the demand of young, innovative firms. Seed funding has stagnated at around 0.005% of GDP, while there has only been a moderate increase in investment in start-up activities, from 0.028% of GDP in 2019 to 0.036% of GDP in 2023 ([124]). The number of companies that received seed and start-up funding decreased in 2023, with the average deal volume also showing a downward trend ([125]). The start-up rate is stagnating, but showed a slight increase in 2023 (see also Graph A3.2) ([126]). For young entrepreneurs, raising funds remains a key challenge, with 28% of respondents in a KfW survey citing this as a barrier, ranking it one of the top 5 biggest obstacles. Moreover, the share of young entrepreneurs who have to rely on their own financial resources has risen significantly, from 56% in 2019 to 69% in 2023 ([127]). While the German government's Start-up Strategy and its Future Fund aim to improve Germany's venture capital system, a majority of measures are targeted towards firms that already went through several financing rounds ([128]). Given the market dynamics described above, measures explicitly targeting start-ups' access to seed and early-stage funding could benefit the German start-up ecosystem.

Due to recent reforms the market for later stage funding has shown signs of improvements, but a significant financing gap remains. The amount of capital available for later-stage funding has increased significantly, rising from 0.018% of GDP in 2019 to 0.045% of GDP in 2023, well above the EU average of 0.03% GDP ([129]), but still below the level of international competitors such as the USA. This indicates a picking up of investment for companies in more mature stages of development. The German government has contributed to this positive trend through initiatives like the High-Tech Gründerfonds (HTGF) Opportunity and the WIN Initiative, both part of the Start-up Strategy. These programmes target the funding gaps in the later stages of start-up financing, with a focus on technology and innovation. The HTGF Opportunity Fund, with a …

fude and OECD, 2022, Innovation Review: Germany 2022, oecd-ilibrary.org.

([120]) Germany's Start-up Strategy from 2022 focuses on promoting innovation and entrepreneurship through support mechanisms like funding and regulatory simplification.

([121]) Empfehlungen der Gründungskommission zum Auf- und Ausbau der DATI, 2024.

([122]) Expertenkommission Forschung und Innovation, 2024,

([124]) OECD, Venture capital investments (market statistics).

([125]) InvestEurope.

([126]) Next Generation: Startup-Neugruendungen in Deutschland, 2019-2023.

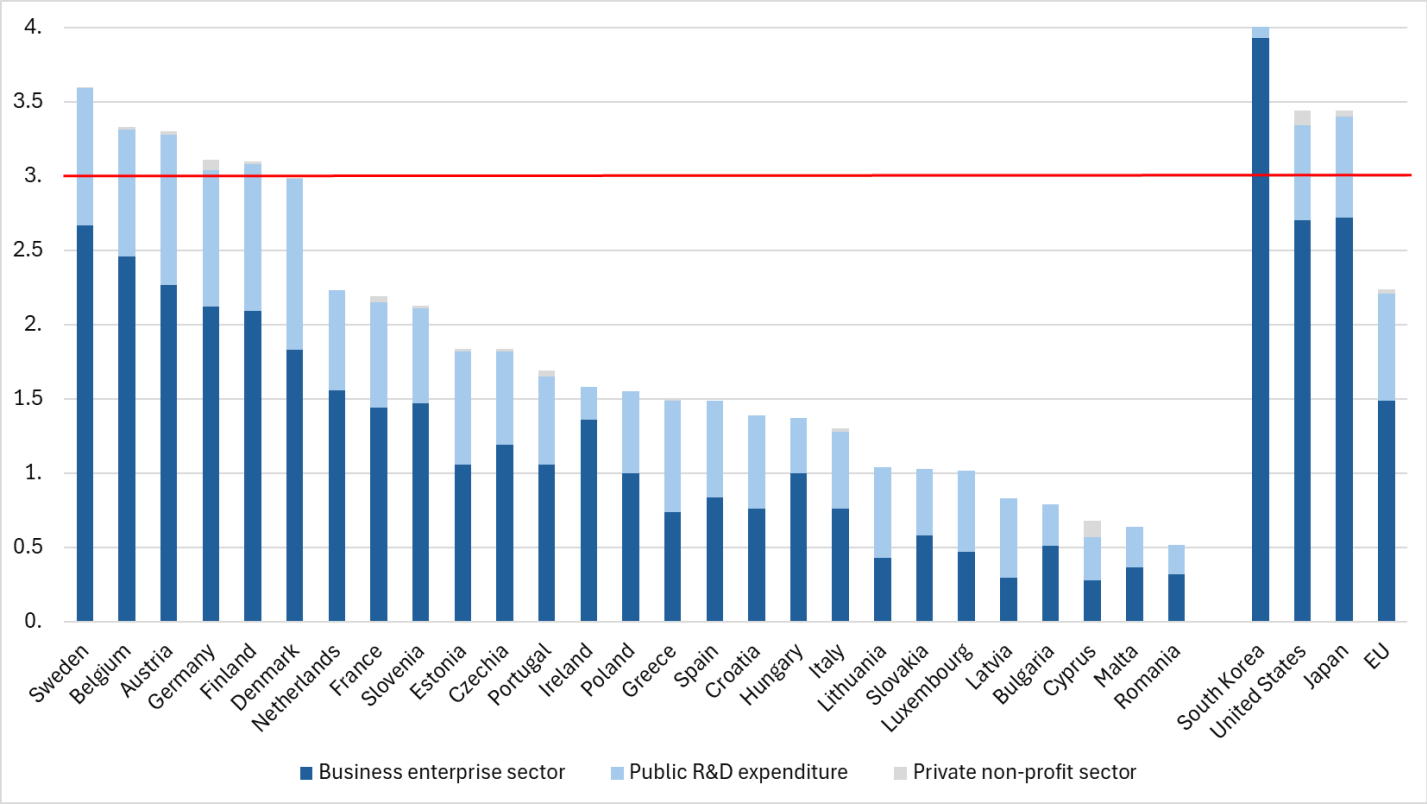
([127]) KfW Entrepreneurship Monitor 2024.

- ✓ **Data-focused analysis** (e.g. R&I indicators, most recent studies) aimed at highlighting the key bottlenecks hindering MS's R&I performance
- ✓ **Structured around four chapters**: Science and innovative ecosystems, business innovation, financing innovation and innovative talent.
- ✓ **Expanded analysis compared to previous years and stronger focus** on commercialising research and VC / start-ups.

European Commission

CSR area (1/5): R&D expenditure

R&D expenditure by sector 2023 (% of GDP)



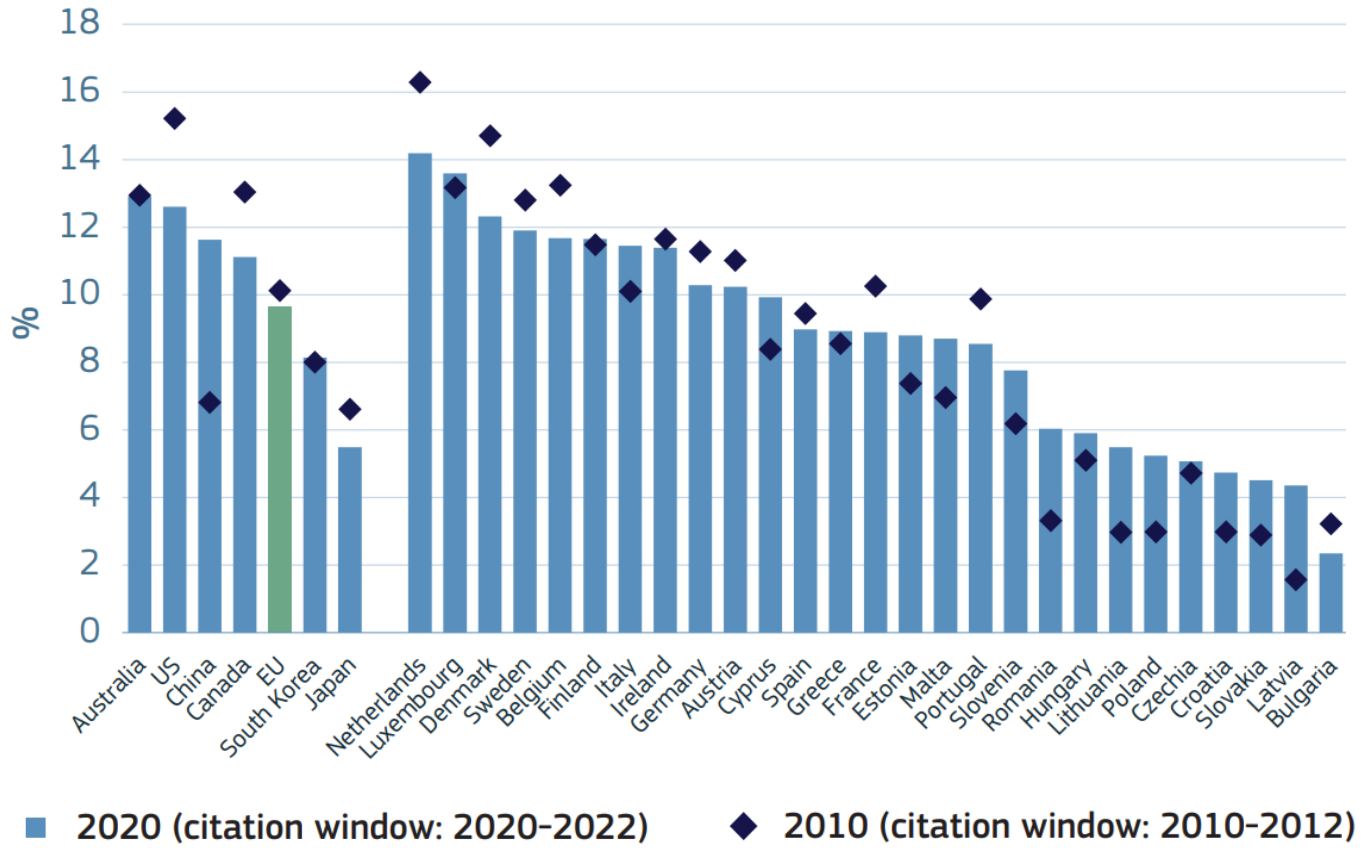
Source: Eurostat

- **Insufficient and unpredictable R&D investment** continues to hinder performance across most Member States, including some better performers.
- **Public and private R&D spending remain low**, with stagnation or declines seen EU-wide (as noted in the Draghi and Letta Reports).
- 18 CSRs calling for increased R&D spending, e.g.:
  - Ensure **stable multiannual funding** within a long-term R&I strategy linked to clear indicators (CY).
  - **Step up efforts toward the 4% R&D target** by 2030, with stronger funding for innovation commercialization (FI).

European Commission

CSR area (2/5): Public science base

Percentage of publications in the top 10% of most cited publications worldwide, 2010 and 2020



Source: Science, research and innovation performance of the EU 2024

- In addition to a low level of public R&D investments, **structural challenges hamper the effectiveness of public R&D investment** and the **quality of scientific outputs** (measured in highly-cited publications) in a number of countries:
  - TALENT: Low **number of researchers** employed by the public sector, **unattractive research careers**
  - FRAGMENTATION: High degree of institutional **fragmentation of the public research system** (universities, PROs)
  - GOVERNANCE: **Insufficient collaboration between responsible ministries/agencies** or complex procedures to administer funding

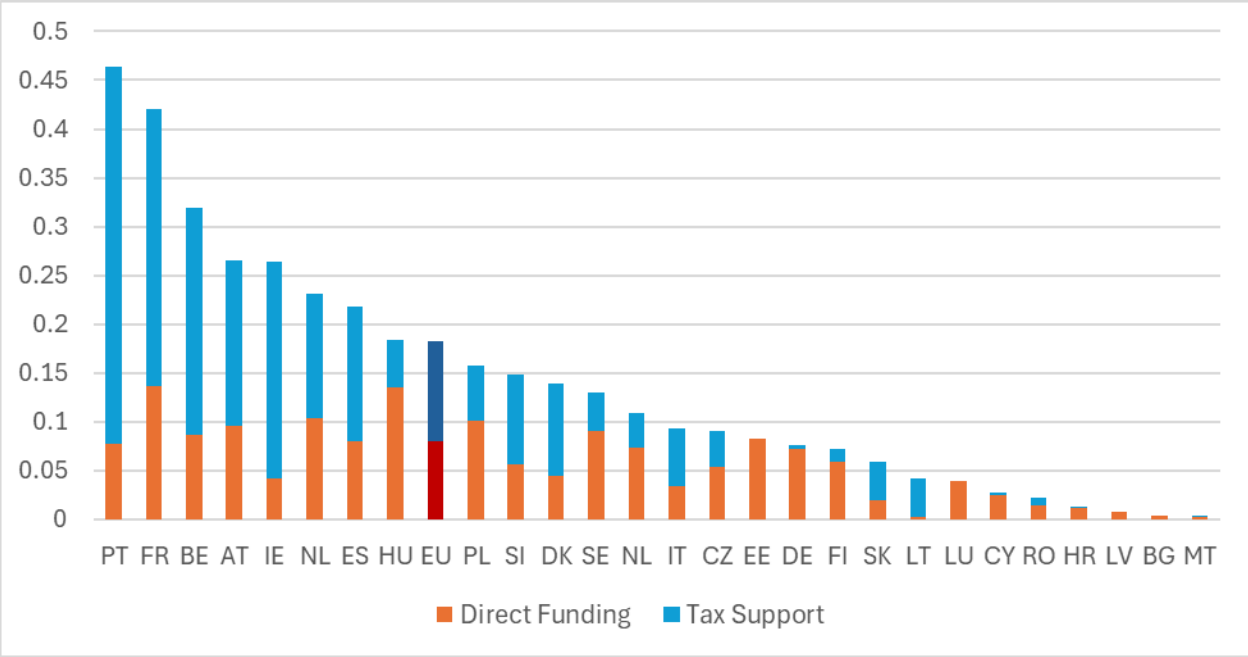
European Commission

CSR area (3/5): Science-business collaboration

- **R&D investment in collaborative research:** Several Member States lack sufficient and sustained investment in joint research projects between academia and industry.
- **Support for intermediary services:** In many countries, institutions such as technology transfer offices and incubators face fragmented financial support and are heavily dependent on short-term project-based funding.
- **Entrepreneurship education:** Universities and research organisations often lack the resources—or the necessary legal framework—to consistently offer entrepreneurship-related courses.
- **Regulatory barriers:** In some Member States, the commercialisation of research results (e.g. intellectual property transfer) is costly and administratively complex, discouraging researchers from launching spin-off companies.

CSR area (4/5): Business innovation

Public support to business R&D as % of GDP, 2023

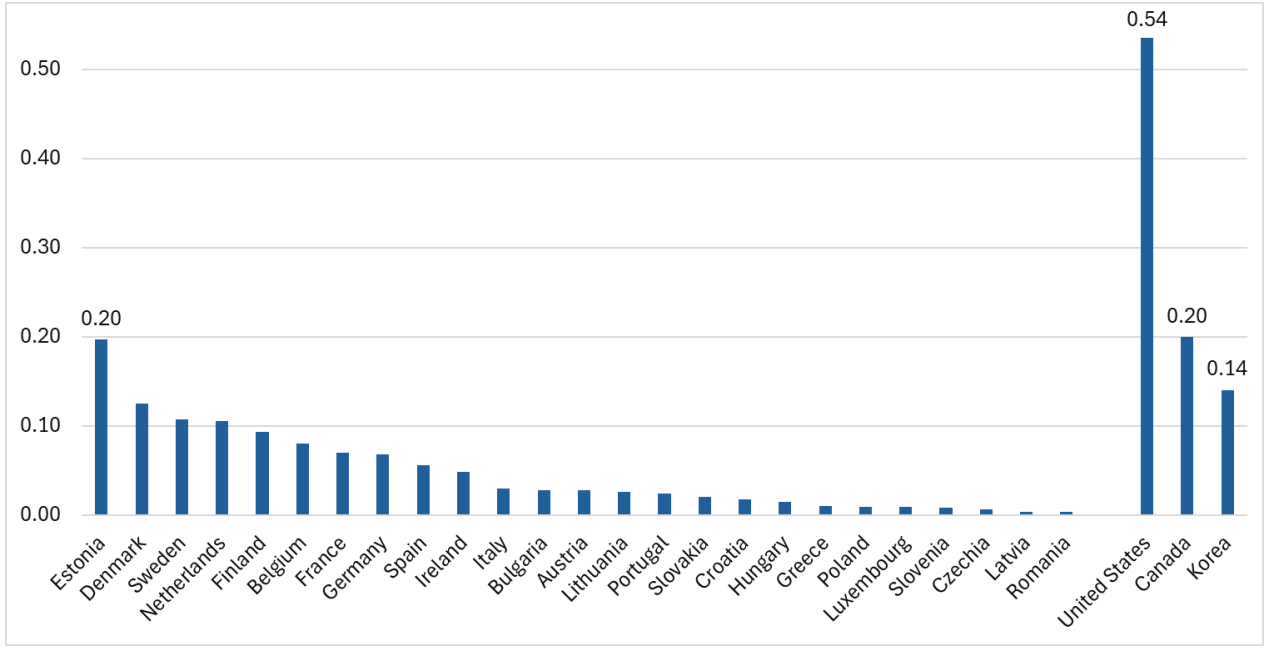


Source: OECD

- There is room to **expand, diversify and/or improve the efficiency of public support to business innovation** in several countries
- A narrow innovation base (with **too few innovative SMEs)** hinders the innovation potential of some high-performing Member States
- Business R&D remains markedly **concentrated in mid-tech sectors** in some countries (risk of '**mid-tech trap**'), highlighting the need to foster disruptive innovation and a shift towards higher-tech sectors

CSR area (5/5): Start-ups / Scale-ups / Venture capital

Venture Capital in 2024 as % of GDP



Source: OECD (2024).

- **Underdeveloped venture capital markets** continue to constrain the growth of start-ups and scale-ups across the EU. Even for better performing EU Member States, the level of risk capital lags that of the US by a significant margin.
- The importance of the issue is reflected in **CSRs to 13 Member States**.
  - Foster start-up creation by **easing regulatory barriers** (e.g. stock options) and improving early-stage financing.
  - Enable scale-up growth by strengthening venture capital, private equity, and **later-stage financing frameworks**, including IPOs.

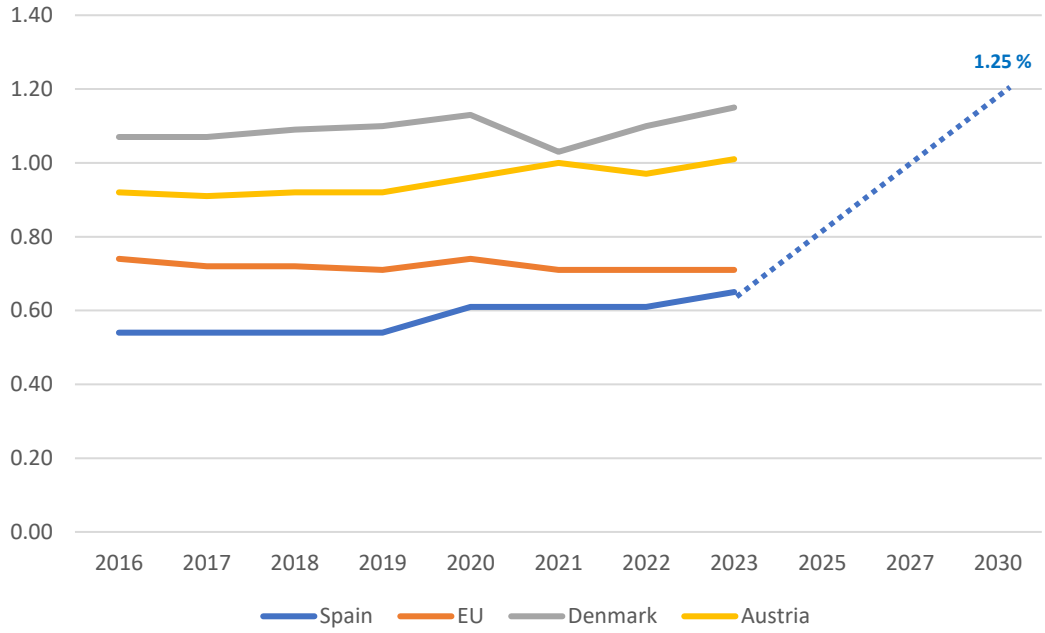
Country report for Spain – Key R&I challenges

- **Low R&D intensity and expenditure (EU - 3% target)**

Public R&D intensity and investments are low, and although progress has been made, the levels of R&D intensity need to increase at a faster pace in order to reach its national targets and/or (at least) the EU average.

- **Fragmented R&I governance**

Spain R&I governance of multilayer responsibility between central and regional governments has weaknesses which are hampering its innovative ecosystem.



Evolution of Public R&D intensity (with projections of national target for Spain)

Source: Eurostat, 2024

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Spain – key R&I challenges

- **Business innovation hampered by unfavourable conditions**

Business innovation remains modest, characterized not only by low private investment in R&D, but also by a large number of SMEs in low (value added) technology sectors, with low innovation outputs and low uptake of advanced technologies by firms.

Source: European Commission: Joint Research Centre, The 2024 EU Industrial R&D Investment Scoreboard.

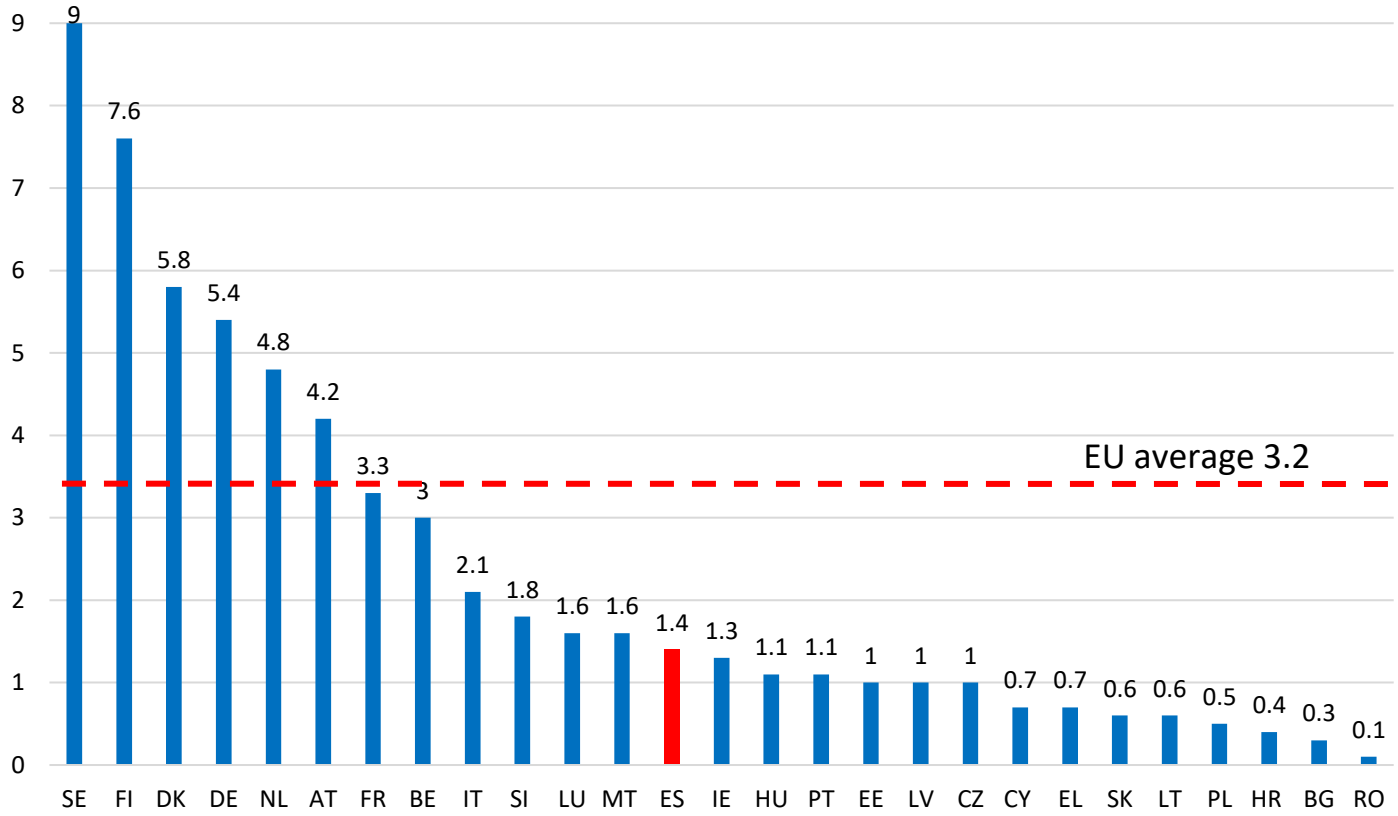
Spain – Key R&I challenges

- **Weak business – academia linkages**

The collaboration could improve by increasing the level of professionalisation of knowledge intermediation services and promoting actions to better support private R&D investment.

- **Access to finance**

The administrative burdens for accessing financial support for innovation, notably for SMEs, coupled with the overall administrative complexity are impeding innovation.

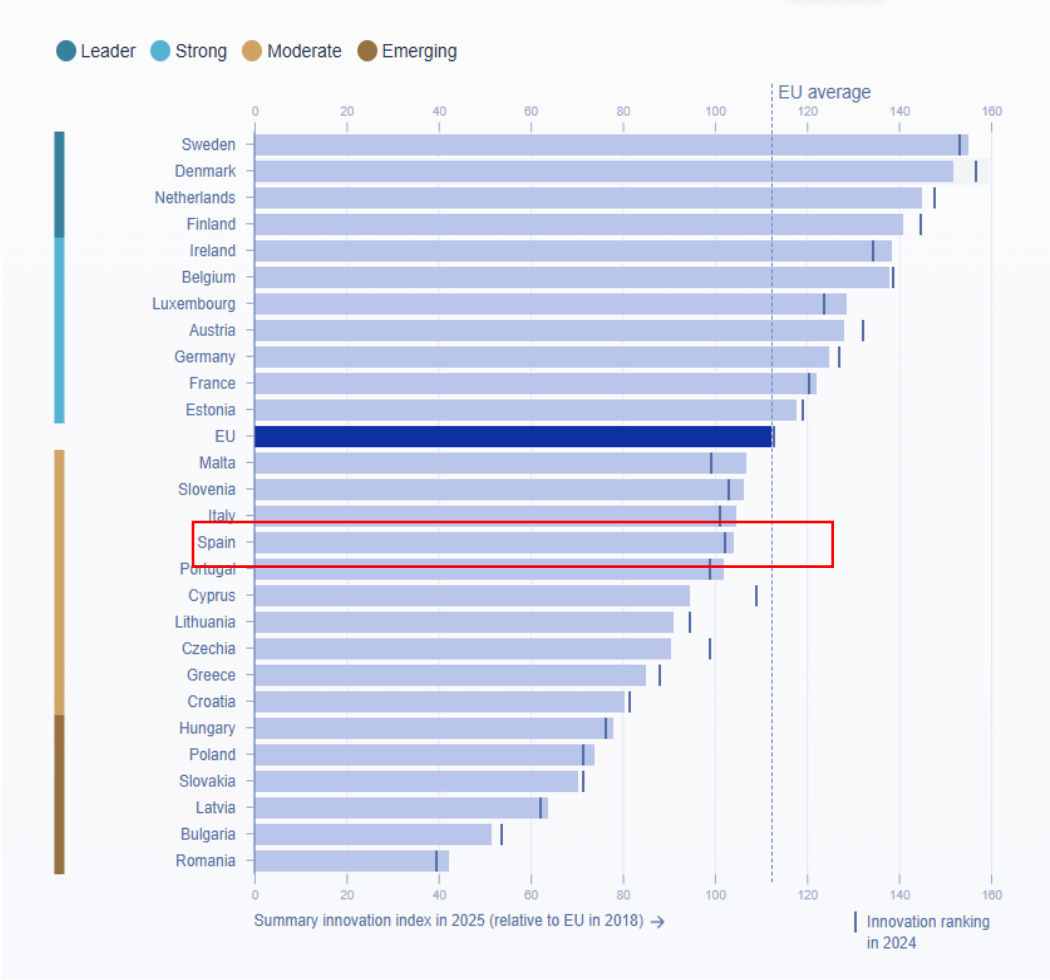


Patent applications filed under PCT per billion
Source: PATSTAT, 2024

European Commission

Country report Spain: R&I analysis

- **Spain is a 'moderate innovator', with an innovation performance below the EU average**. According to the 2025 edition of the European Innovation Scoreboard (EIS) Spain's overall performance has slightly improved although it still only reaches 92.7% of the EU average for 2025. In addition, significant differences in regional R&I performance persist.
- CSR 2025: facilitar la **innovación empresarial e incrementar la inversión en I+D**. Fomentar vínculos más sólidos entre **la ciencia y la empresa** y mejorar las **medidas para impulsar** la inversión privada en I+D.



European Commission

Supporting MS in deploying ambitious R&I investment and reform agendas

- Flexible tool to support the design, implementation and/or evaluation of national R&I reforms
- Available to Member States upon their request
- Three successful PSF exercises just ended with Finland, Czechia and Bulgaria

- Horizontal support instrument, run through annual calls allowing Member States to submit their requests
- TSI 2026 flagship: technical support for the implementation of 2025 CSRs (including in the area of R&I). Deadline to submit requests: 31 Oct. 2025

- Bilateral, bottom-up channel of cooperation with Member States on R&I policies
- Launched with 15 countries so far: CZ, HR, EE, LT, EL, LV, SI, ES, FR, IT, AT, DE, NL, DK, BG
- Upcoming: PT, DE (follow-up), BE, FI, IE

¡ MUCHAS GRACIAS !

cecilia.cabello-valdes@ec.europa.eu