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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

The EU Startup and Scaleup Strategy

Choose Europe to start and scale

{COM(2025) 270 final}

Contents

1. INTRODUCTION

The Competitiveness Compass and the 2025 Commission work programme underlined the EU startups and scaleups as a priority for contributing to EU's competitiveness. To deliver on this priority, the Commission is putting forward an EU Startup and Scaleup Strategy.

A vibrant ecosystem of startups and scaleups is essential for driving economic growth and market development. These companies' contribution to the economy reinforces the EU's industrial strength and helps decrease reliance on critical sectors and technologies, thereby playing a crucial role in enhancing the EU's strategic autonomy.

The European innovation landscape presents both lights and shadows as regards the European startup and scaleup ecosystem: over the past decade, it has experienced remarkable growth, establishing Europe as a significant player in the global tech arena. Since 2015, European tech companies have attracted approximately USD 426 billion in venture capital, marking a tenfold increase from the preceding decade. In 2024 alone, investment levels are projected to reach USD 45 billion, underscoring sustained investor confidence in the region's innovative ventures.

This expansion is mirrored in the talent pool, with Europe's tech workforce expanding to 3.5 million individuals, achieving a 24% annual growth rate comparable to that of the United States. Notably, Europe now hosts more early-stage startups than any other region globally, with over 35,000 such companies. European startups have demonstrated particular strength in sectors such as fintech, artificial intelligence (AI), and sustainability-focused technologies.

Even though a Startup and Scaleup Initiative[1] was adopted in 2016 aiming to remove barriers for startups to scaleup in the Single Market, the regulatory and business environment in the EU is still not sufficiently conducive for bringing innovative products, services and solutions to users at the necessary scale. It has now become urgent to address the financial, regulatory and administrative obstacles that limit or slow down startups from scaling up into mature, profitable companies in the Single Market and to incentivise them not to relocate out of the EU.

This Staff Working Document is accompanying the EU Startup and Scaleup strategy communication which is addressing these challenges and identifies a set of policy, regulatory and financial support measures to improve the framework conditions for startups and scaleups in order to close the innovation gap with the EU's global competitors, which has been identified as the first pillar of the Competitiveness Compass.

The Staff Working Document aims to present a set of five key areas of obstacles identified that startups and scaleups encounter in Europe: i) innovation-friendly regulation, ii) better finance, iii) fast market uptake and expansion, iv) support for the best talent, v) access to infrastructure, networks and services.

The Annex to this Staff Working Document includes a report of the outcome of the call for evidence conducted to inform the work on the Strategy.

1 https://digital-strategy.ec.europa.eu/en/news/new-initiative-startups-start-and-scale-europe

2. INNOVATION-FRIENDLY REGULATION

2.1. Current landscape and challenges

Throughout their lifecycle, European startups and scaleups face a fragmented landscape that imposes significant administrative burdens. In the early stages, startups struggle with navigating diverse registration, certification, and compliance requirements across Member States, or burdensome authorisation procedures at EU level. This heterogeneity slows their ability to enter new markets. As regards setting up of companies, the so-called incorporation requirements (i.e. requirements for setting up a company) remain largely defined by national law. Entrepreneurs who want to set up companies in different countries across the EU, need to adopt in each country a company form governed by that country's national law (e.g. GmbH in Germany). The only EU level legal form for limited liability companies is the Societas Europae (SE), which is a European public limited liability company with a minimum subscribed capital of EUR 120 000 and, therefore, it is most often used by large companies.

Furthermore, as they grow, scaleups need to allocate significant financial and human resources to managing multiple national tax systems, labour mobility and social security systems, and reporting obligations, diverting focus from innovation, expansion, and market competition. In addition, complexity of sector specific regulations and variety of national derogations in MS create additional burdens for cross-border operations, with disapplication of host Member State rules in temporary cross-border services, as per the fundamental freedom to provide services, almost inexistent in practice.[2]

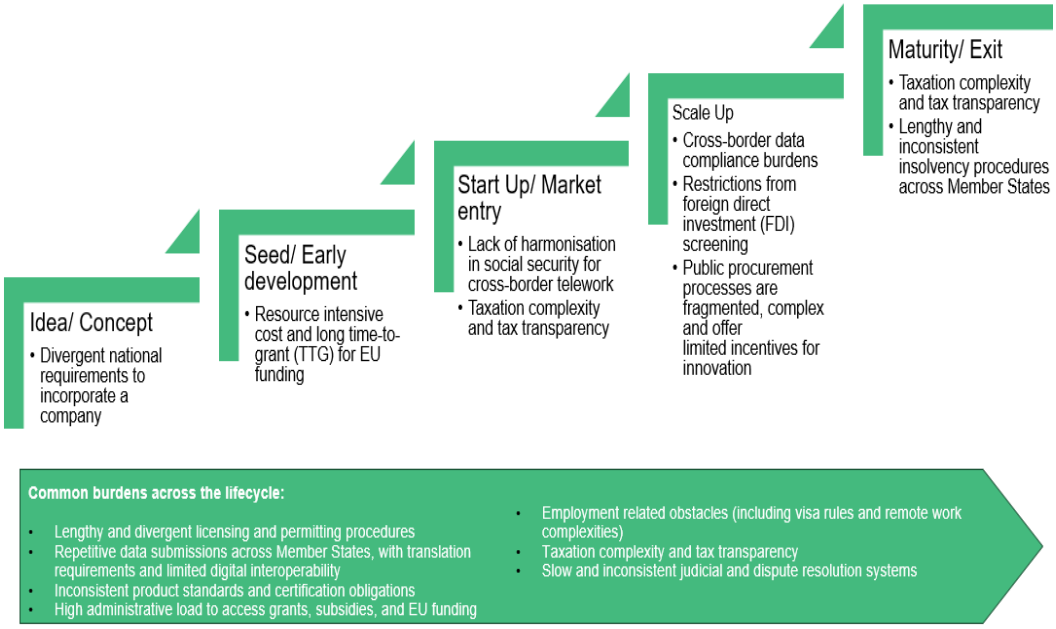
This regulatory fragmentation also poses major obstacles for investors and continues to undermine the creation of a truly integrated Single Market for capital. Despite the achievements of the past years, the Single Market for capital in the EU is still not complete. Across the EU Member States, investors face different national legal systems, including within the areas of securities law, taxation, company law and foreign direct investment restrictions at national level. This lack of harmonisation results in significant additional costs and legal uncertainty, which further limit investment.

Companies also often raise the lack of an easily recognisable EU company brand, which would be trusted by public authorities or investors and not being able to develop a "pan-European" company from the outset. The most recent calls from the startup community[3] also stress that current procedures for setting up and investing into companies are not sufficiently digital, easy and quick and not sufficiently available in English. However, some of these calls do not reflect the latest developments in EU company law - which provides for digital solutions, including fully online procedures for setting up of companies - or could indicate challenges in the transposition or implementation of such EU provisions by Member States.

[2] As demonstrated by the very limited use of the case-by-case derogation mechanism of Articles 18 and 35 of Directive 2006/123/EC (the "Services Directive"), made operational through the Internal Market Information System (IMI) as per Regulation (EU) No 1024/2012 (the "IMI Regulation"), which seems to point to the (nearly) full application of host Member State rules to incoming temporary cross-border providers, which consultations with stakeholders further demonstrated – see below point 3.2.

[3] EU-Inc (2025), EU-Inc Policy Proposal An industry blueprint for the upcoming 28th regime.

Figure 1. Administrative costs and regulatory burdens across startups and scaleups' lifecycle



Note: These phases are not always linear, and startups may go through them multiple times or in a different order. The specific challenges and opportunities at each stage will also vary depending on the industry, the company's business model, and other factors.
Source: European Commission services

Tax compliance burdens disproportionally affect small medium enterprises (SMEs) as compared to large companies. SMEs face disproportionately higher compliance costs than larger enterprises (which can benefit from economies of scale in relation to regulatory expenses).[4] While larger enterprises have higher absolute costs, SMEs bear a greater relative burden, thus struggling proportionally more than larger enterprises with complex EU and national tax rules and dealing with multiple tax authorities and their relative compliance burden is larger. [5]

These difficulties are to a large extent applicable to both startups and scaleups. Startups and scaleups operating across multiple EU jurisdictions may face significant tax compliance complexity and reporting burdens, including multiple tax filings requirements, fragmented R&D tax incentives, different tax treatments of various assets or transactions and tax reporting standards.

Furthermore, the degree of efficiency of justice systems varies across Member States, with some countries experiencing prolonged case durations.[6] Lengthy legal proceedings can create uncertainty for startups, particularly in intellectual property (IP) disputes or contract enforcement, discouraging investment and innovation. For startups, extended legal battles over intellectual property rights can delay product launches and

[4] European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, European Innovation Council and SMEs Executive Agency, Di Legge, A., Ceccanti, D., Hortal Foronda, F. et al., *Tax compliance costs for SMEs – An update and a complement – Final report*, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2873/180570.
[5] European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, European Innovation Council and SMEs Executive Agency, Di Legge, A., Ceccanti, D., Hortal Foronda, F. et al., *Tax compliance costs for SMEs – An update and a complement – Final report*, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2873/180570.
[6] 2023 EU Justice Scoreboard.

reduce competitiveness, while slow contract enforcement can disrupt cash flow and strain business relationships. These uncertainties deter potential investors, who may perceive a higher risk in jurisdictions with inefficient legal systems, ultimately hindering innovation and growth within the startup ecosystem.[7] [8]

2.2. Key Barriers

2.2.1. Regulatory uncertainty and fragmentation as an obstacle to both international and within the EU cross-border expansion

Startups and scaleups developing innovative technologies often encounter significant regulatory challenges that impede their growth and competitiveness. A key challenge is regulatory fragmentation, as emerging technologies frequently span sectoral and territorial boundaries that may not align with existing legislative frameworks. This can lead to regulatory gaps or duplications. Another area of legal uncertainty is how the existing legal framework should apply to innovative digital technologies and business models.

Regulatory ambiguity, or the perception of regulatory complexity, can thus also have a constraining effect on innovation. In many sectors, market entry is contingent on prior authorisation, certification, or compliance with harmonised standards. Where the applicable regulatory processes are lengthy or unclear, inconsistent across Member States, startups and scaleups may face delays or barriers in bringing new products and services to market. This is particularly problematic for innovative firms that rely on rapid market access and investor confidence to grow. For startups and scaleups, whose business models depend on speed and investor confidence, the absence of a clear regulatory pathway can represent a critical barrier.

The issue is further exacerbated by the risk that regulatory responses - introduced prematurely or without sufficient adaptability - may inadvertently entrench approaches that are disproportionate to the actual level of risk. While intended to provide clarity, such measures can lead to rigid frameworks that hinder appropriate and responsive regulation. As a result, even high-potential technologies may remain underdeveloped or commercially unviable—not due to shortcomings in their design or functionality, but because of regulatory uncertainty and an absence of clear pathways to market.

Startups face growing regulatory complexity around data governance, data processing, and cross-border transfers. Next to the General Data Protection Regulation, which became a global standard for privacy and human rights protection, the EU adopted various acts, aimed at: enabling the reuse of public sector data (Data Governance Act) and data generated through the use of smart objects (Data Act); reuse of high level value datasets from public sector; ensuring fair digital markets and online content (Digital Markets Act, Digital Service Act) to name just few. In parallel, some Member States adopted national derogations from the established EU rules (e.g. GDPR), creating a regulatory challenges for operators. Differences in the national interpretations by the national data protection authorities create additional hurdles for European innovators operating at European and global markets.[9] Startups and scale ups often lack in house data protection expertise and do not receive sufficient tailor-made support from the national daa

[7] European Commission – EU Justice Scoreboard

[8] https://www.europeansources.info/record/2023-eu-justice-scoreboard; https://ec.europa.eu/info/policies/justice-and-fundamental-rights_en

[9] Second report on the application of the General Data Protection Regulation, COM(2024) 357 final: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52024DC0357

protection authorities in terms of tools such as templates, helplines, checklists and guidelines which can be easily understood by those without legal training.[10]

Furthermore, despite the existence of a comprehensive EU legal framework aimed at protecting the social security rights of mobile workers, **the existence of different social security systems remains a challenge, particularly for cross-border teleworkers**. Rather than a unified regime, EU law in the field of social security provides for coordination of the national social security schemes, which may result in administrative burdens for remote workers (see section 5).

2.2.2. Regulatory capacity and responsiveness

Well-designed legislation can facilitate innovation, but badly designed legislation can hamper innovation. **The challenge of regulatory pacing is increasingly evident, as the speed of technological innovation often outstrips the ability of regulatory systems to adapt**. Compounding this issue, many Member State regulators face persistent difficulties in attracting and retaining specialised expertise, particularly in high-demand areas such as digital technologies, data science, and artificial intelligence[11]. This lack of internal capacity limits the ability of regulatory bodies to keep pace with emerging trends and engage meaningfully with innovators.

When EU legislation is prepared, the Commission performs checks about possible interactions of legislation with emerging innovations in line with the innovation principle[12]. However, when EU legislation is transposed into national legislation or when other national legislation is created that does not derive from EU legislation, there is not always such a check at national level. **Improving the assessment of the potential innovation impacts of upcoming legislation when it is under preparation could draw on feedback from experts, innovators and other stakeholders e.g. through public consultations or regulatory sandboxes.** This could help regulators gather the necessary specialised feedback to ensure that new rules do not pose disproportionate restrictions on innovation and that, where possible, they make optimal use of available mechanisms to actively stimulate innovation. This could reduce the need for revising regulations afterwards. **An innovation stress test could provide a simple checklist of questions to help legislators assess these types of impacts in a structured way**. An innovation stress test could thus help make legislation more innovation-friendly in line with public interests.

Institutional incentives within regulatory authorities rarely promote proactive or risk-tolerant behaviour. While pro-innovation instruments—such as regulatory sandboxes, testbeds, and advisory hubs—do exist, their effective use is often hindered by staffing shortages and budget constraints[13]. Regulatory attention does not always align with the strategic or economic relevance of emerging technologies, especially in sectors with strong innovation potential. As a result, companies frequently face uncertainty, delays, and inconsistencies when attempting to navigate regulatory requirements. These challenges can obstruct their ability to scale and compete effectively within the Single Market.

A lack of regulatory expertise also affects innovators directly. Early-stage companies often struggle to interpret how existing regulations apply to novel products or services—particularly in cases involving cross-sectoral or entirely new domains. For genuinely

[10] Ibid

[11] European Investment Bank (2025), The state of local infrastructure investment in Europe, EIB Municipalities Survey 2024-2025, https://www.eib.org/en/publications/20250028-eib-municipalities-survey-2024-2025

12 EU Better regulation toolbox, tool #22.

[13] OECD/KDI (2021), Case Studies on the Regulatory Challenges Raised by Innovation and the Regulatory Responses, OECD Publishing, Paris, https://doi.org/10.1787/8fa190b5-en

disruptive technologies, there is often no clear regulatory pathway or guidance on demonstrating compliance. This regulatory ambiguity is especially burdensome for startups and scaleups, which typically introduce untested technologies, new business models, or unconventional go-to-market approaches. Premature regulation, meanwhile, risks stifling innovation by locking in requirements that may not reflect evolving realities.

3. BETTER FINANCE FOR STARTUPS AND SCALEUPS

3.1. Current landscape and challenges

With over 3.5 million of skilled tech professionals, the European tech ecosystem has experienced a trend of continued growth in the last decade.[14] On average, the ability of Europe to create new tech startups exceeded that of the US, with around 15 200 new tech startups founded per year against the 13 700 observed in the US between 2018-2023.[15] Furthermore, the number of early-stage companies in Europe **has more than quadrupled** between 2015 and 2024, increasing from 7 800 in 2015 to 35 000 in 2024. [16]

In order to thrive, startups founders need both financing resources and partners. In this regard, business angels play a central role in the early life of innovative companies, as they do not only offer financial support but also bring industry expertise and valuable networks, thereby significantly enhancing the company's chances of success.

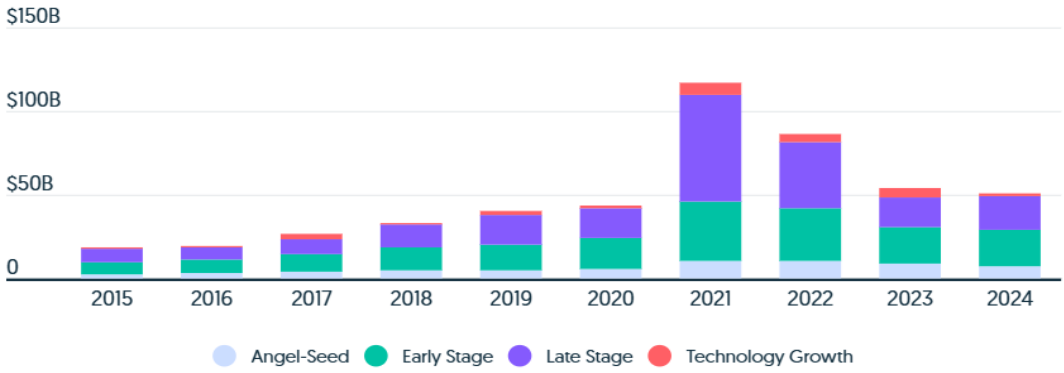
Since 2013, the size of the business angel investment market in Europe has more than doubled, increasing from EUR 550 million to EUR 1.25 billion in 2023. [17] Despite the significant development, Europe underperforms compared to the US, where angel investment reached USD 18.6 billion in 2023.[18]

One of the main challenges faced by business angels is the high risk associated to very-early-early-stage investments. [19] Being the first line for private investment in startups, business angels grapple with significant risk-reward trade-offs. These difficulties are further compounded by the lack of sufficient early-stage investments from institutional investors in Europe, which limits the flow of capital into strategic sectors.[20]

Meanwhile, venture capital (VC) investments into EU startups reached USD 51 billion in 2024. [21] After the exceptional peak in 2021, European VC funding reverted back to their long-term growth and stabilised in 2024. Late-stage funding has plummeted the most since the continent's funding heyday. The post-2021 slowdown in investments is comparable to global developments, where investments have slowed due to the high-interest rate environment, economic and geopolitical uncertainty as well as a slowdown in company exits.[22]

Figure 2. Venture Capital investments in Europe, 2015-2024 (USD billion)

[14] Atomico (2024), State of the European Tech 2024.
[15] European Commission (2024), Science, Research and Innovation Performance Report of the EU 2024: A competitive Europe for a sustainable future.
[16] Atomico (2024), State of the European Tech 2024.
[17] EBAN Statistics Compendium – European Early Stage Market Statistics 2023.
[18] EBAN Statistics Compendium – European Early Stage Market Statistics 2023.
[19] EBAN (2024), Building a Vibrant Business Angel Ecosystem in Europe Recommendations for EU and National Policy Makers.
[20] EBAN (2024), Building a Vibrant Business Angel Ecosystem in Europe Recommendations for EU and National Policy Makers.
[21] Europe's Startup Funding Stabilized In 2024, But Remains Far Off Market Peak
[22] Europe's Startup Funding Stabilized In 2024, But Remains Far Off Market Peak



Source: Crunchbase Database

Investments by VC funds have improved significantly over the last decade. In 2024, VC investments in the EU were more than three times as large as in 2016 (USD 41.2 billion against USD 13.3 billion. Increased contributions from public funds, both at European and national level, were a primary driver of the increase in venture capital financing. These funds have been used to set up a number of venture capital funds across the EU, with public funds being used as an anchor to attract private investment. [23]

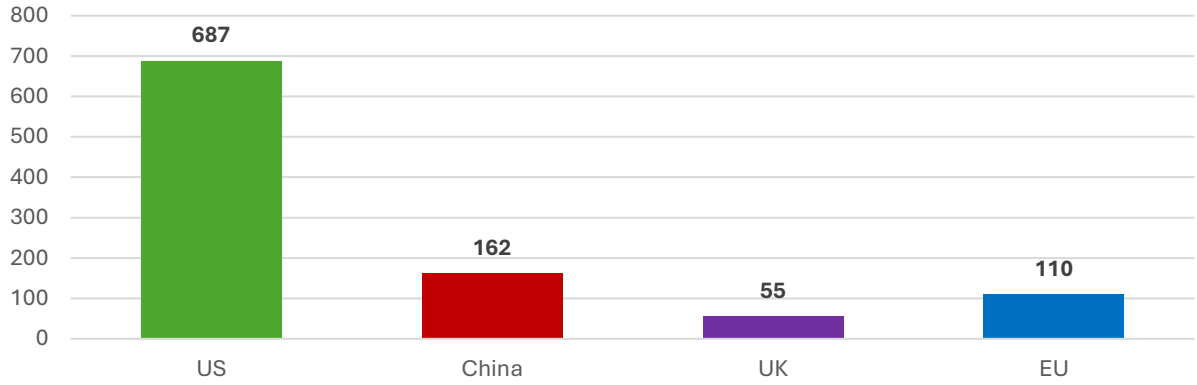
The geographic distribution of VC funds raised across the EU is vastly heterogenous and tend to concentrate in certain geographic areas. The European tech ecosystem is characterised by many different hubs and sub-regions, all at different stages of maturity. Germany and the Netherlands alone account for around 52% of total VC capital raised in 2023, but only 30.4% of the EU GDP.[24]

However, investment levels into European tech companies continues to be below investment levels in other global jurisdictions. When looking at VC-backed startups with valuations under USD 50 million, Europe has 50% fewer than the US.[25] Furthermore, startups in Europe are 40% less likely than their US counterparts to secure VC funding after five years in operation.[26] This suggests that early-stage companies in Europe either fail to reach scale for offering their products/services, choose to remain small, or do not have access to suitable financing opportunities to support their growth. The gap is even more pronounced when looking at the number of scaleup companies, with the EU reporting only 1/5 the number of scaleups[27] as the US.[28]

The EU underperforms also in terms of number of unicorns. At the beginning of 2025, there were 110 companies with a market valuation of USD 1 billion or above in the EU. significantly lower than the 687 reported in the US, but also below the Chinese performance (162) (Figure 2).

[23] European Commission, based on PitchBook data, as of 11 February 2025.
[24] European Commission (2024), Science, Research and Innovation Performance Report of the EU: A competitive Europe for a sustainable future.
[25] EIB (2024), The scale-up gap: financial market constraints holding back innovative firms in the European Union, European Investment Bank, https://data.europa.eu/doi/10.2867/382579
[26] Atomico (2023), State of the European Tech 2023.
[27] Defined as VC-backed companies with a market valuation between USD 500 million and USD 10 billion.
[28] EIB (2024), The scale-up gap: financial market constraints holding back innovative firms in the European Union, European Investment Bank, https://data.europa.eu/doi/10.2867/382579

Figure 3. Number of unicorn companies as of January 2025



Note: The numbers refer to the number of unicorn companies headquartered in the different geographical reasons.
Source: CB Insights, as of January 7th, 2025.

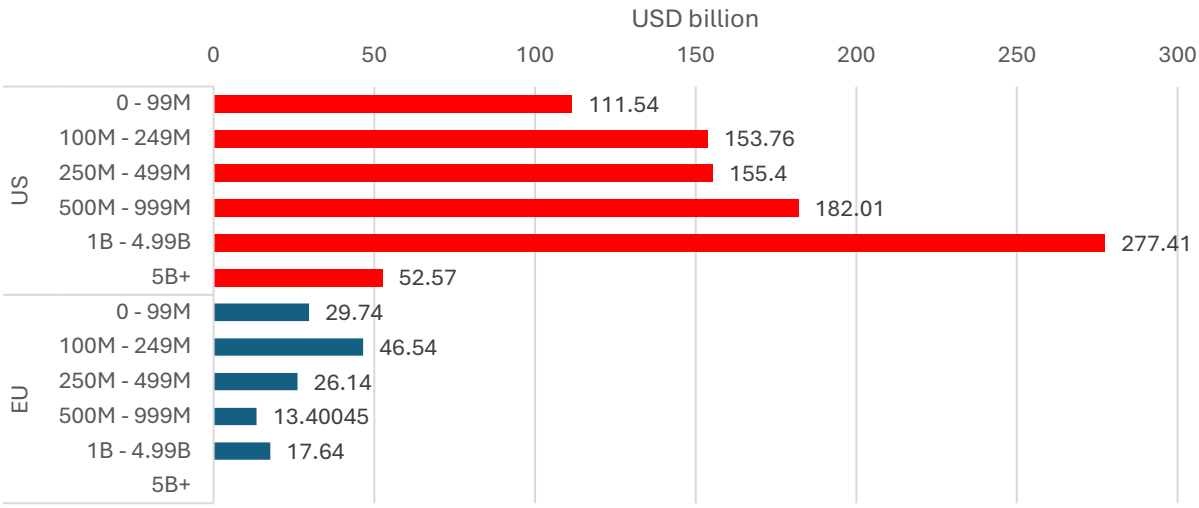
There are a number of factors that contribute to the less rapid growth of EU's startups. Remaining fragmentation of the EU's Single Market for capital, products and services significantly reduces the ability of its companies to scale. On key example is taxation, where fiscal treatment differs widely across Member States and hampers cross-border expansion of startups. Furthermore, another key obstacle is a lower risk tolerance of entrepreneurs and enterprises, resulting in a less growth-oriented approach to company building. On the supply side, this is also underpinned by lower amounts of financing from Europe's generally more risk-averse investors.

Some evidence suggests that European startups as equally efficient as their US counterparts.[29] Nevertheless, the EU attracts less VC in absolute terms, which leads to a smaller pipeline of high growth startups able to scale and reach billion-dollar valuations. US-based companies raised substantially higher levels of VC capital (USD 932 billion) than the EU (USD 133 billion) over the entire period 2016-2024.[30]

Furthermore, VC funds in the EU remain smaller than in the US both in size and number. In terms of size, although the gap is observable across all size buckets, it increases with the ticket size (Figure 4). Furthermore, between 2016 and 2024, only 12 VC funds in the EU raised tickets above USD 1 billion, against the 157 in the US.[31]

[29] Dealroom (2025), Accelerating Europe – The State of European Innovation and Why It Matters.
[30] European Commission, based on PitchBook data, as of the 11 February 2025.
[31] European Commission, based on PitchBook data, as of the 11 February 2025.

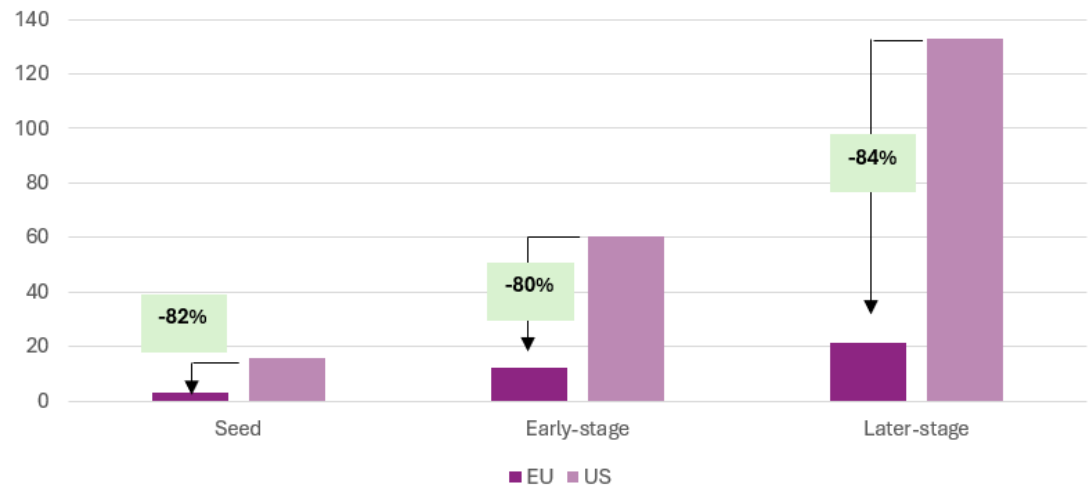
Figure 4. VC funds raise in the EU and the US between 2016 - 2024, by bucket size



Source: European Commission, based on PitchBook data, as of 11 February 2025.

The VC investment gap between the EU and the US remains significant across all growth stages and is particularly pronounced for later-stage financing. Despite some improvement over the last years, the amount of venture capital raised in the EU remains significantly smaller than in some other jurisdictions, particularly the US. Across the company growth cycle, there is about 80-84% less capital available (Figure 5). In 2024, seed stage and early-stage investments in the EU were about 82% and 80% lower than in the US, respectively. The largest gap is observed for growth stage financing, for which the EU's performance was 84% lower than in the US, with a total amount of later-stage VC investment of USD 21.3 billion against about USD 133 billion (Figure 5).

Figure 5. VC invested in the EU and the US in 2024, by deal type



Source: European Commission, based on PitchBook data, as of 11 February 2025.

There is overwhelming evidence of a market gap for larger financing rounds to scaleup companies in the EU. For funding rounds above EUR 50 million, there are at least seven times more funds in the US than the EU, and the majority of the capital for such rounds comes from non-EU investors creating a risk of relocation and loss of economic security[32].

The EIC Fund has been successful in supporting early-stage startups with over 270 investments, catalysing investment rounds with four times the amount of the EIC Fund investment. However, the EIC Fund is not able to make larger investments needed for scale ups. The current limit is EUR 30 million per company, introduced under the STEP regulation. The analysis of the EIB, in its role as investment adviser to the EIC Fund, has identified approximately 40 companies in the current portfolio that will require further investment rounds of above EUR 50 million euro, and this number will grow over time. The Commission proposal to increase the budget of the EIC by EUR 2.7 billion as part of the mid-term review of the Multiannual financial framework was rejected by the co-legislators.

Invest EU has instruments to meet the needs for debt financing, but not direct equity financing. The indirect equity financing managed by EIF supports the investment strategies of private fund managers, and therefore does not allow the EU to steer the strategy towards technologies that are critical for economic security or to put in place safeguards in investment agreements or through the selection of co-investors to mitigate the risks of the technology and company being acquired or relocating. Experience, including from the European Tech Champions Initiative that supports larger private funds, shows that the private fund managers limit their exposure to the higher risk, longer term investments in technologies critical for economic security (e.g. quantum, semiconductors, AI, biotech, space, etc).

IPR backed financing is also underdeveloped in Europe. Startups and scaleups that achieve not only successful protection but also successful valuation of their IPR rights, are considerably more likely than other startups and scaleups to obtain financing from investors and are also more likely to successfully exit via an initial public offering or a sale to another company. A European Union Intellectual Property Office (EUIPO) survey revealed that only 25% of medium-sized IPR owners had had their intangible assets professionally valued. This figure drops even lower to 20% for micro and small-sized entities. Among those SMEs that owned IPRs, only 13% had attempted to use them to access finance.[33]

State Aid rules

Scaling up a startup requires significant investment in technology, marketing, and talent. However, public funding often focuses on early-stage startups, leaving scaleups without comparable support.[34]

To prevent market distortions and/or a subsidies race in the internal market, the EU's State aid framework sets rules on both the type and amount of financial assistance governments can provide to startups with varying thresholds depending on the aid category. The de minimis rule allows Member States to support companies up to EUR 300,000 each over three years without conditions. Under the General Block Exemption

[32] European Investment Bank – The scaleup gap – Financial market constraints holding back innovative firms in the EU
[33] EUIPO. Intellectual property scoreboard 2019. European Union Intellectual Property Office (EUIPO). Available at: euipo.europa.eu/ohimportal/en/web/observatory/sme-scoreboard
[34] EU Startup Nation Standard https://digital-strategy.ec.europa.eu/en/policies/startup-europe

Regulation (GBER), the aid intensity is capped at specific percentages of eligible costs or maximum amounts of aid per project/per undertaking, meaning startups may receive partial support for R&D, environmental projects, or regional development. Article 22 of GBER facilitates the granting of aid to startups in different forms and with few conditions (e.g. up to EUR 500,000 in grants and even higher amounts for companies in assisted regions or for innovative companies). Larger aid packages often require prior notification and approval from the European Commission. Large-scale investments in sectors such as deep tech, clean tech, and biotech can now, under the recently revised and new State aid frameworks, receive support based on the funding gap methodology thereby incentivising startups to undertake such large investments. However, stakeholders perceive State aid rules as presenting constraints that make EU-based startups less competitive compared to those in countries with more flexible funding mechanisms, pointing to the need for more information and training on State aid.[35]

3.2. Key Barriers

3.2.1 The structure of the European financial market and the limited role of institutional investors

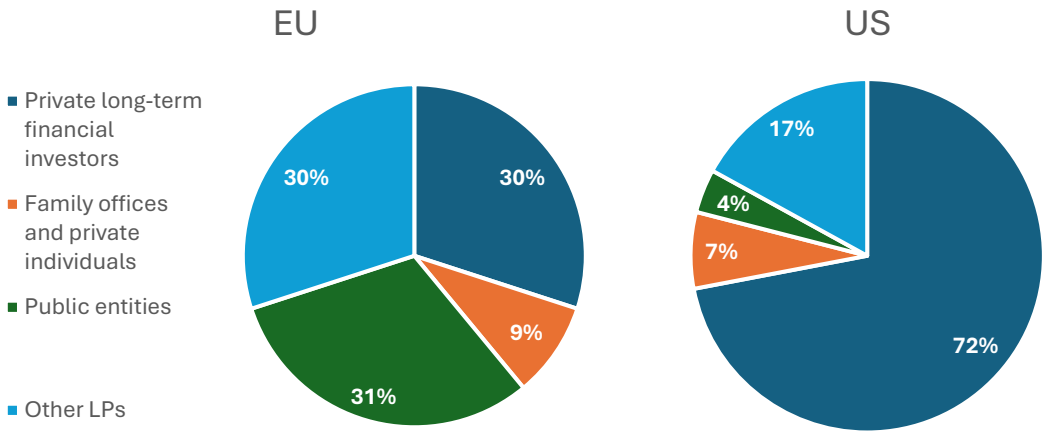
The small size of the EU VC market can be attributed to many factors, including both the characteristics of the European financial sector and to European household financial behaviour. The dominant form of financing in the EU is bank-based financing (such as loans), which are not suitable for high-growth companies. This results in capital markets remaining fragmented and underdeveloped. Bank assets in the EU totals to 300% of GDP, compared to the 85% in the US. [36] Furthermore, household financial assets (e.g., currency and deposits, insurance, private pensions, equity) amount to only 2.3 times the Union's GDP, whereas the same figure in the US is more than 5 times US GDP.[37]

Venture and growth capital funds, as key financing vehicles for EU startups and scaleups, struggle to attract capital from institutional investors. Between 2013 and 2023, private long-term financial investors in the EU accounted for only 30% of the VC funding, compared to 72% in the US (Figure 6). The difference is particularly pronounced for pension funds (7% in the EU vs. 20% in the US).[38]

Public funding is a major component of the financing made available to the EU's startups and scaleups, either directly or through funds of funds scaling up venture and growth capital funding. Between 2013 and 2023, public entities played a more prominent role in the EU, providing 31% of total VC raised, against the 4% reported in the US (Figure 6).[39]

[35] European Commission – State Aid and Competition Policy https://competition-policy.ec.europa.eu/state-aid_en
[36] EIB (2024), The scale-up gap: financial market constraints holding back innovative firms in the European Union, European Investment Bank, https://data.europa.eu/doi/10.2867/382579
[37] EIB (2024), The scale-up gap: financial market constraints holding back innovative firms in the European Union, European Investment Bank, https://data.europa.eu/doi/10.2867/382579
[38] France Digitale (2024), Unlocking investments for competitiveness: How can institutional investors boost the European innovation ecosystem?
[39] IMF (2024), Stepping Up Venture Capital to Finance Innovation in Europe. IMF Working Paper No. 2024/146, https://ssrn.com/abstract=4904562 or http://dx.doi.org/10.5089/9798400282669.001

Figure 6. Source of VC funds by investor type (average % of total VC raised), 2013-2023



Source: IMF (2024).

3.2.2. Market fragmentation and the role of foreign investors

Another compounding factor is the high degree of fragmentation of the EU's smaller capital pools across national borders. Institutional investors in the EU appear to be driven to some degree by a home-country bias when making investment decisions. This can be due to unfamiliarity with foreign VC firms or unwillingness to sustain the necessary screening costs and due diligence practices. [40] This fragmentation further concentrates already limited resources into national markets, thereby reducing the capital available for cross-border VC funds and making it harder for European tech companies to raise funds from larger investors.

The level of cross-border investments remains low. Between 2007-2020, cross-border VC investments within Europe accounted on average for only 23.1% of VC inflows[41]. In 2023, cross-border VC investments within Europe amounted to 3.6 billion, significantly below the size of domestic VC flows.[42] Besides GDP, market capitalisation and distance, the quality of institutions and especially the degree of global financial integration do play a role in shaping cross-border VC flows.[43]

Fragmentation and lower growth perspectives push innovative companies to seek financing outside Europe. This tendency has important economic costs both in terms of entrepreneurial brain drain and missed opportunities for the local ecosystem. If on the one hand, firms relocating abroad can benefit from the opportunity to tap into a wider pool of capital, on the other hand their relocation reduces the potential positive spillovers for other companies in the ecosystem. [44]

Foreign VC investments in European-based firms[45], especially from the US, have been increasing since 2016. In terms of number of deals, the participation of non-

[40] IMF (2024), Stepping Up Venture Capital to Finance Innovation in Europe. IMF Working Paper No. 2024/146, https://ssrn.com/abstract=4904562 or http://dx.doi.org/10.5089/9798400282669.001

[41] Asdrubali P., "Patterns of Cross-Border Venture Capital Flows in Europe", DG ECFIN Discussion Paper 195, November 2023 https://economy-finance.ec.europa.eu/publications/patterns-cross-border-venture-capital-flows-europe_en

[42] InvestEurope (2023), Investing in Europe: Private Equity Activity in 2023.

[43] Asdrubali P., "Patterns of Cross-Border Venture Capital Flows in Europe", DG ECFIN Discussion Paper 195, November 2023 https://economy-finance.ec.europa.eu/publications/patterns-cross-border-venture-capital-flows-europe_en

[44] EIB (2024), The scale-up gap: financial market constraints holding back innovative firms in the European Union, European Investment Bank, https://data.europa.eu/doi/10.2867/382579

[45] EU plus the UK.

European foreign investors increased from approximately 16.6% in 2008 to 23.4% in 2022. In terms of investment volume, foreign shares increased from 32.6% to 42.4% over the same period.[46]

Furthermore, scaleup companies in the EU are more likely to relocate than the US and the UK scaleups. 15% scaleup companies founded in the EU have relocated, against the 9% observed in the US and the 12% in the UK. [47] While US scaleups tend to relocate mostly within the US, 74% of the relocation involving EU companies targeted regions outside the Union. [48] Additionally, between 2008 and 2021, 40 out of the 147 unicorns companies founded in Europe have relocated their headquarters abroad (mostly to the US), whereas the number of foreign scaleups deciding to move their operations in Europe is significantly limited[49]. This suggests that lower levels of VC finance in Europe are not only a result of smaller-sized VC market, but also reflect lower level of demand for this type of finance.[50]

3.2.3. Limitation of exit possibilities

The volume of exits in Europe has significantly grown in the last decade. The total value of Initial Public Offerings (IPOs) in Europe has increased to USD 321 billion, as compared to the USD 100 billion reported in the previous decade. Nevertheless, exits remain primarily concentrated in a few countries.[51]

Additionally, the presence of exit routes for investors in the EU is still limited as compared to the US. Public offering represents only 10% of these exist routes, against the 29% of sale to another equity firm, or 28% of trade sale.[52] In general, the EU only accounts for 11% of the global IPOs, as compared to 38% in the US or 18% in China.[53][54] This gap is even more pronounced when considering strategic technologies, such as those in the clean energy domain.[55]

Over the past decade, around 130 European companies moved to the US stock market.[56] Nevertheless, these companies account of only 2% of the total number of listed companies in Europe, and 4% of the total value of European stock markets. Most of European companies, thus, decided to list domestically. [57]

[46] G Testa, C Johanyák, N Zhen, R Compañó, What attracts foreign venture capital capitalists to invest in EU regions? 2025 forthcoming

[47] EIB (2024), The scale-up gap: financial market constraints holding back innovative firms in the European Union, European Investment Bank, https://data.europa.eu/doi/10.2867/382579

[48] EIB (2024), The scale-up gap: financial market constraints holding back innovative firms in the European Union, European Investment Bank, https://data.europa.eu/doi/10.2867/382579

[49] OECD (2023), "Grow and Go? Retaining Scale-ups in the Nordic Countries", OECD Regional Development Papers, No. 51, OECD Publishing, Paris, https://doi.org/10.1787/9be5339d-en.

[50] Draghi (2024), The future of European competitiveness.

[51] Atomico (2024), State of the European Tech 2024.

[52] InvestEurope (2024).

[53] European Commission (2022), SWD(2022) 762 final.

54 Letout, S. and Georgakaki, A., Role of corporate investors in the funding and growth of clean energy tech ventures, European Commission, Brussels, 2024, JRC135443.

[55] Letout, S. and Georgakaki, A., Role of corporate investors in the funding and growth of clean energy tech ventures, European Commission, Brussels, 2024, JRC135443, https://publications.jrc.ec.europa.eu/repository/handle/JRC135443

[56] W Wright, J. Thornhill, C. Breen and M. Hames (2025). A reality check on international listings. Analysis of UK and European companies that have moved their primary listing to the US market over the past decade, HSBC Global Research.

[57] W Wright, J. Thornhill, C. Breen and M. Hames (2025). A reality check on international listings. Analysis of UK and European companies that have moved their primary listing to the US market over the past decade, HSBC Global Research.

Nearly 80% of the companies that move are typically global in nature and often from tech and biotech sectors. [58] As an example, half of the European companies that decided to go public in the US were biotech firms, while the IPOs of biotech companies in Europe accounted for only 4%. This suggests that Europe is losing some of its most dynamic companies to the US. [59]

Nevertheless, the common narrative according to which the US market is more attractive due to its higher valuations and degree of liquidity can be misleading. The valuation gap between Europe and US stock markets is currently over 30%.[60] However, this apparent premium disappears once adjusted for the fact that US companies tend to have higher growth expectations and stronger profitability. The same applies to the gap in liquidity, once differences in market structure and trading data are accounted for. [61] This suggests that the besides the US pull, the real challenge for Europe remain its internal weaknesses, including the fragmentation of its capital and equity markets.

3.2.4. Missing framework conditions to bolster intellectual property rights (IPR) backed finance

Various barriers hamper startups and scaleups to obtain IPR backed finance. As a result, startups and scaleups across the EU face difficulties to use their IPR as a collateral to secure more financing from financial investors. IPR is generally very difficult to value and such value can oscillate, complicating its use by lenders.

Unlike in the other parts of the world, **there is a lack of public financial guarantees to banks and other financial institutions engaging in lending to startups that have no 'hard collateral' to provide**, because their assets are mostly intangible. There are no clear incentives or training for banks and other institutional investors to engage in IPR backed financing in line with sound financial management principles. There is no trustworthy widely accepted approach for IPR valuation nor model templates on how to apply it. IPR valuation can be costly. Small companies make only limited use of reporting IPR in annual accounting / financial reports.

[58] W Wright, J. Thornhill, C. Breen and M. Hames (2025). A reality check on international listings. Analysis of UK and European companies that have moved their primary listing to the US market over the past decade, HSBC Global Research.
[59] W Wright, J. Thornhill, C. Breen and M. Hames (2025). A reality check on international listings. Analysis of UK and European companies that have moved their primary listing to the US market over the past decade, HSBC Global Research.
[60] W Wright, J. Thornhill, C. Breen and M. Hames (2025). A reality check on international listings. Analysis of UK and European companies that have moved their primary listing to the US market over the past decade, HSBC Global Research.
[61] W Wright, J. Thornhill, C. Breen and M. Hames (2025). A reality check on international listings. Analysis of UK and European companies that have moved their primary listing to the US market over the past decade, HSBC Global Research.

4. FAST MARKET UPTAKE AND EXPANSION

4.1. Current landscape and challenges

European startups and scaleups play a crucial role in driving innovation and economic growth. However, their ability to expand their customer base is often hindered by structural challenges, making it difficult to scale effectively compared to their counterparts in the US or China.

One of the most significant hurdles is the operational readiness of potential customers, particularly in traditional industries. Many businesses lack the expertise or investment capacity to integrate innovative solutions. Additionally, industrial modernisation has progressed unevenly across Europe, with certain regions facing greater difficulties in adapting to new technologies. Addressing these constraints is essential to ensuring the competitiveness of European startups and fostering a dynamic innovation ecosystem.

At the same time, startups and scaleups in Europe also face challenges in accessing international markets. The EU SME strategy adopted in March 2020 underlined the importance of harnessing the benefits of global markets. Accessing markets outside the EU, be it in countries with whom the EU has a trade agreement, countries associated to Horizon Europe, neighbouring regions, or global innovation hubs, comes with great opportunities for EU startups and scaleups, such as expanding their customer base, diversifying their sources of supply and thus making them less vulnerable to economic shocks and more competitive in domestic and international markets alike.

Access to international markets can be an enabler for startups to scaleup to become global players. The internationalisation of EU innovative companies in turn contributes to productivity gains and competitiveness. Nevertheless, the uptake of opportunities created by the EU's trade agreements by startups and scaleups notably are not fully exploited and should be improved.

Significant opportunities for startups and scaleups do exist in other global players markets such as the US, and Latin America. In the US, European startups can have access to a wide range of opportunities due to the country's large consumer base, innovation-driven economy, and business-friendly policies. With over 330 million consumers and a high demand for cutting-edge solutions, the US provides an attractive environment for startups across industries such as technology, healthcare, fintech, and sustainability. SelectUSA attracts and helps foreign companies and investors enter the U.S. market. Latin America presents significant opportunities for European startups due to its large and rapidly growing digital economy, increasing demand for innovative solutions, and improving business environments. **Other regions offering growing markets across different sectors are India and Canada.** India has a large and rapidly growing market with increasing demand for innovative solutions in sectors like clean energy, health tech, AI, and deep tech. Canada, that recently became a Horizon associated country, would be a natural destination for turning Horizon Europe research output into business operations for the benefit of EU and Canadian startups alike. The Chinese market potentially offers huge opportunities for startups and scaleups to grow. Many European companies already operate there. But there are significant risks to be managed and pitfalls to be avoided.

Important opportunities also come from collaborations with corporates. The collaboration between startups and corporates is a critical driver of innovation and

economic growth. However, in Europe, this collaboration remains underdeveloped compared to regions like the US and Asia.

Corporate partnerships are not merely a source of funding for startups but also play a critical role in facilitating market access, establishing credibility, and enabling scalable growth. According to a McKinsey survey conducted in the DACH region, 87% of startups perceive corporates as a key channel for market entry[62]. An equally high percentage (87%) believe corporate partnerships act as a signal to investors and the market, while 79% consider corporates as potential future customers. Additionally, 58% of startups look to corporates for valuable market insights, whereas only 52% prioritize them for financing. Startups tend to value revenue from customers over grants, demonstrating a preference for sustainable business growth over reliance on external funding.

Figure 7. Startups are Key for Corporate Innovation

Source: McKinsey 2021: Startup-corporate collaboration: you can't buy love

Corporates, on the other hand, stand to benefit significantly from startup collaborations, particularly in terms of innovation. While 75% of corporates and startups acknowledge the importance of cooperation, 72% of startups express dissatisfaction with their corporate engagements. This disconnect is further exacerbated by the fact that fewer than 1% of startup projects submitted to corporates make it to market. One major hindrance is the corporate procurement process, which is often not startup-friendly.[63] The risk averse nature of large corporate procurers and the bureaucratic and complex nature of these procedures makes it difficult for startups to access private-sector contracts, further limiting their growth potential.

62 Henz, T., & Sibanda, T. (2020). *You can't buy love: Reimagining corporate–startup partnerships in the DACH region*. McKinsey & Company.

63 Mind the Bridge. (2024). *The Open Innovation Imperative: Adapting to Stay Competitive – Evolve or Be Extinct Season 2024*

Collaboration between startups and established companies is crucial for enhancing the competitiveness of existing European businesses in a rapidly evolving global market. Startups bring fresh ideas, innovative technologies, and agile business models that help corporates stay ahead of industry trends and adapt to changing consumer demands. Given that European companies are growing more slowly than their counterparts in North America and Asia Pacific, fostering closer ties with startups is essential to drive economic growth, create jobs, and ensure long-term sustainability in a highly competitive global economy.[64]

Despite the growing startup ecosystem in Europe, the engagement between startups and corporates is limited, hindering the potential for mutual growth and innovation. Despite some improvements in the number of corporate-startup engagements, the quality and effectiveness of these partnerships remain suboptimal. Various reports highlight the underlying issues contributing to this gap. Only 20% of European corporates actively engage with startups, in stark contrast to 50% in the US.[65] Moreover, European corporate venture capital (CVC) investment accounts for only 15% of total venture capital funding, compared to 30% in the US.[66] Many European startups, recognizing the limited engagement from their local corporate landscape, seek partnerships outside the EU, particularly with US and Asian companies.[67] [68]

Further compounding this issue is the investment imbalance, where EU corporates allocate more funds to US startups than to European startups.[69] Structural barriers also play a role, as Europe lacks a robust base of emerging corporates that are naturally inclined to collaborate with startups.[70] [71]

The development of a European GovTech[72] Single Market, where European GovTech startups and scaleups can engage in a technology-based cooperation with the public sector, represents a significant opportunity to support the digital transformation of the public sector. Influencing factors, common requirements and recommendations supporting the development of cross-border, interoperable GovTech practices in Europe have been identified recently by a JRC study.[73]

Public procurement represents another important tool to drive innovation and market growth for startups and scaleups. It has increasingly been recognized as a strategic instrument to stimulate innovation and accelerate market access for startups and scaleups across the European Union. As public procurement spending amounts to 17%-19% of GDP[74] (€3000 Bn), public procurement of R&D and public procurement of

[64] Accenture, 2023
[65] SEP, 2022
[66] Dealroom, 2022
[67] Tech.eu, 2021
68 Letout, S. and Georgakaki, A., Role of corporate investors in the funding and growth of clean energy tech ventures, European Commission, Brussels, 2024, JRC135443.

[69] Fako, (2024).
[70] Draghi, (2024).
71 Letout, S. and Georgakaki, A., Role of corporate investors in the funding and growth of clean energy tech ventures, European Commission, Brussels, 2024, JRC135443.

72 ”GovTech” refers to technology-based cooperation between public and private sector actors supporting public sector digital transformation. This is defined in Article 2 of the Regulation (EU) 2024/903 (Interoperable Europe Act), which provides a gender gaplegislative base for embedding new GovTech activities and scaling them across Member States.

[73] https://publications.jrc.ec.europa.eu/repository/handle/JRC139723
[74] This includes all public procurements, both those by public authorities, utilities and defence procurers.

innovative solutions ("innovation procurement") has great potential to stimulate economic growth and strengthen EU competitiveness. By modernising public services, it can improve the quality and efficiency of public services while also boosting the growth of EU industry. It can also help combat relocation of companies to other parts of the world and help stimulate more private investment in research and innovation in Europe by bringing the necessary market demand to pull research out of the lab into the market. By acting as an early and reliable buyer, public entities can de-risk innovative ventures, encourage technological breakthroughs, and promote competitive ecosystems.

Public procurement remains an underused tool for supporting startups and scaleups in Europe. Innovation procurement accounts for just 10% of total public procurement across the EU—well below levels in the United States (20%) and South Korea (25%). Particularly limited is the EU's investment in R&D procurement (0.5% compared to South Korea's 5%), reducing opportunities for emerging firms to scale through public contracts and pushing many to seek opportunities in third countries. The underperformance and underutilisation of EU innovation procurement could also push EU startups and scaleups participate in innovation procurement in third countries rather than selling their products on the EU market.

However, despite its transformative potential, existing procurement frameworks often remain overly rigid, risk-averse, and burdensome, posing significant barriers to the participation of emerging firms—particularly those lacking administrative capacity or prior public sector experience.[75] [76] Recent research highlights issues such as a lack of pre-commercial procurement schemes, insufficient use of innovation-friendly criteria, and limited procurement literacy among startups as critical bottlenecks.[77] [78] [79] [80] [81] [82] Following the Draghi, Letta and Court of Auditors reports, a group of experts appointed by the Commission has analysed the barriers for companies to bring their innovative solutions to the public procurement market and has developed specific recommendations for EU action, based on analysis of how EU Member States and other parts of the world are stimulating innovation procurement[83].

Access to market for the products and services developed by startups and scaleups might also be affected by anticompetitive mergers or acquisitions. The risk that a merger or an acquisition reduces competition, and that innovative products and services are discontinued, thereby negatively impacting innovation and consumers in general is

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[75] Quas, A., Mason, C., Compañó, R., & Testa, G. (2022). The scale-up finance gap in the EU: Causes, consequences, and policy solutions. European Management Journal. https://www.sciencedirect.com/science/article/pii/S0263237322000950

[76] Mansi, E., & Manta, O. (2024). The Impact of Globalization on Innovative Public Procurement: Challenges and Opportunities. Administrative Sciences, 14(4), 80. https://www.mdpi.com/2076-3387/14/4/80

[77] Zabala-Iturriagagoitia, J.M. (2022). Fostering regional innovation, entrepreneurship and growth through public procurement. Small Business Economics. https://link.springer.com/article/10.1007/s11187-021-00466-9

[78] Pardo-del-Val, M., & Cerver-Romero, E. (2024). From startup to scaleup: Public policies for emerging entrepreneurial ecosystems. Journal of the Knowledge Economy. https://link.springer.com/article/10.1007/s13132-024-02175-6

[79] De Coninck, B., Viaene, S., & Leysen, J. (2018). Public procurement of innovation through increased startup participation: The case of Digipolis. https://repository.vlerick.com/handle/20.500.12127/5896

[80] Reypens, C., Delanote, J., & Rückert, D. (2020). From Starting to Scaling: Supporting European Startups and Scaleups. Nesta Report. https://media.nesta.org.uk/documents/From_Starting_to_Scaling.pdf

[81] Van Winden, W., & Carvalho, L. (2019). Intermediation in public procurement of innovation: Amsterdam's startup-in-residence programme. Research Policy, 48(6), 1331–1344. https://www.sciencedirect.com/science/article/pii/S0048733319301040

[82] Merisalo, M., Pihlajamaa, M., & Valovirta, V. (2023). From scattered benefits to societal impacts: scaling solutions of public procurement of innovation. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4508704

83 Bringing down legal barriers for innovation procurement - European Commission: https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/new-european-innovation-agenda/innovation-procurement/eu-policy-initiatives-innovation-procurement/bringing-down-legal-barriers-innovation-procurement_en

well-documented. While merger control was traditionally focusing on product/price competition between rivals, ongoing research, recent case practice has focused on other parameter of competition including quality and innovation. Retrospective analysis, continue to highlight new instances involving loss of innovation competition due to merger and acquisitions. As a part of these concerns, a "killer acquisition" is considered to take place when an incumbent firm acquires an innovative, often nascent, rival with the specific purpose of terminating its innovation activity and therefore to pre-empt future competition.[84]

In a broader sense, killer acquisitions might also include acquisitions where the main purpose of the acquirer is not to terminate the activity of the acquired firm, but rather to control it (for example, by changing the scope, changing the timeline, etc). The ultimate goal would be to reduce competition constrains of the acquired firm.[85]

While the killer acquisitions phenomenon might be relatively limited – a handful of cases per year – its impact on competition is rather significant. Indeed, while the materialisation of a harm to competition will depend on a number of factors, notably the presence or not of alternative innovative firms on the market, killer acquisition may lead to reinforcing the incumbent company in a way that will be unmatchable by other players active on the market, leading to monopoly or very strong dominance of one or several players.

Recent studies estimate that killer acquisitions occur in relatively sporadic, yet not negligible, number of instances. For example, Cunningham et al. estimates that in the pharma sector 5.3% to 7.4% of all acquisitions considered in its study may relate to killer acquisitions. A study recently published by the European Commission considered more than 240 transactions in the pharma sector occurring between 2014 and 2018, and concluded that 89 transactions, or around 18 per year on average, would 'deserve further scrutiny' without being able to demonstrate (due to the lack of evidence publicly available) if any of these transactions classifies as a killer acquisition.

4.2. Key Barriers

4.2.1. Infrastructure and market demand constraints

Outdated or unevenly developed infrastructure in Europe limits startups' ability to deliver innovative solutions at scale. OECD and EIB reports[86] highlight that certain industrial clusters in Europe, particularly in manufacturing-intensive sectors, face modernization gaps. Legacy facilities reduce efficiency and hinder the adoption of new production technologies. Additionally, the Digital Economy and Society Index (DESI)[87] highlights disparities in high-speed broadband availability, notably in rural areas, affecting startups dependent on cloud computing, AI, and digital services.

Gaps in infrastructure investment hinder industrial competitiveness, especially in strategic sectors with funding needs exceeding available financing.[88] As an example, the AIDRES project[89] underscores that decarbonization efforts require substantial

[84] Cunningham, C., Ederer, F., & Ma, S. (2021). Killer acquisitions. Journal of Political Economy, 129(3), 649-702.
[85] OECD (2020), Start-ups, Killer Acquisitions and Merger Control, www.oecd.org/daf/competition/start-ups-killer-acquisitions-and-merger-control-2020.pdf
[86] European Investment Bank (EIB) – Scale-up Gap Report https://digital-strategy.ec.europa.eu/en/library/scaleup-gap-report
[87] Digital Economy and Society Index (DESI) – European Commission https://digital-strategy.ec.europa.eu/en/policies/desi
[88] Reports from the European Investment Bank (EIB)
[89] AIDRES Final Report – Assessment of renewable energy demand in industrial decarbonization https://op.europa.eu/en/publication-detail/-/publication/

investments in renewable energy and industrial adaptation. For startups in cleantech, manufacturing, and energy solutions, infrastructure constraints remain a limiting factor.

As the importance of AI continues to grow, startups delivering AI models depend greatly on access to massive compute power. In this context, the Commission announced in December 2025 the creation of 13 AI Factories, with funding of EUR 10 billion, co-financed by the EU and the Member States. The AI Factories upgrade EuroHPC supercomputers to deliver computing capacity for AI. The AI Factories will be accessible to European startups to support them in the training and large-scale development of general-purpose and trustworthy AI models. These AI Factories will be reinforced by AI Gigafactories, announced by President von der Leyen at the AI Action Summit in Paris in February 2025. The ambition and direction of these initiatives were further consolidated in the newly adopted *AI Continent* Communication, which outlines a comprehensive vision for Europe's leadership in AI, including actions to support startups across the entire AI value chain. Moreover, RAISE (the European AI Research Council) will support excellent laboratories at the cutting edge of AI science as a basis for connecting with the deep-tech ecosystem to guide startups. Despite the scale of these public investments, these infrastructures do not approach the compute power provided by hyperscalers in the US.

Furthermore, many industries remain cautious in adopting new technologies, creating significant barriers to market access for startups. The European Commission's SME Strategy highlights pronounced sector-specific readiness gaps, with uneven progress in digital transformation across industries. This affects particularly the adoption of technologies related to AI, automation, and data-driven processes. The Commission has launched a Europe wide network of over 150 European Digital Innovation Hubs to foster adoption of digital technology by SMEs[90].

This lag in technological readiness, combined with slow adoption cycles where customers demand extended validation periods, make sales timelines longer and creates delays in revenue generation for startups. Traditional industrial players often prefer established suppliers, perceiving startups as riskier partners due to concerns about implementation challenges and long-term continuity. As a result, startups frequently struggle to break into entrenched industrial networks, limiting their ability to scale efficiently.

Moreover, weak collaboration between startups and established firms (see section 4.2.3) compounds these market entry challenges. Findings from the *Beyond Fragmentation*[91] study emphasize the lack of robust engagement mechanisms necessary to foster co-development and innovation between the two groups. Startups attempting to integrate into industrial value chains often encounter difficulties meeting complex supply chain standards, certifications, and regulatory requirements, which are rarely designed with early-stage ventures in mind. While models like innovation labs, co-creation platforms, and technology partnerships offer potential pathways for collaboration, their adoption remains fragmented and underdeveloped across many sectors. Strengthening these structured integration models is essential for enabling startups to effectively contribute to industrial transformation, while overcoming systemic barriers to growth.

4.2.2. Limited access to non-EU markets

Innovative companies often lack awareness about the existence and benefits of the trade agreements the European Union has in force with over 75 partners. EU trade

[90] European Commission: Joint Research Centre, De Nigris, S., Kalpaka, A. and Nepelski, D., Characteristics and regional coverage of the European Digital Innovation Hubs network, Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/590526, JRC134620.

[91] https://digital-strategy.ec.europa.eu/en/library/beyond-fragmentation-connecting-europes-startup-ecosystems-growth-and-innovation

agreements eliminate tariff and non-tariff barriers and set a predictable, comprehensive regulatory framework for our startups. They give preferential access to new markets and make our startups and scaleups more competitive thanks to simplified technical, legal and customs procedures. In addition, EU trade agreements help startups and scaleups become more resilient as they will be able to diversify and secure their sources of supply. EU trade agreements also set up institutional mechanisms (such as sectoral groups or committees) to detect problems in the implementation of the agreements and discuss solutions. However, despite continuous and increasing efforts by the Commission, awareness levels about EU trade agreements, remain relatively low among small companies, including startups and scaleups. This results in missed opportunities twofold: on the one hand startups and scaleups miss on the opportunity to grow their business on international markets, become more competitive and diversify their sources of supply; on the other hand, data shows that companies trading with such trading partners do not always make use of the preferential tariffs, thus missing on duty savings. For example, thanks to tariff elimination under trade agreements, in 2023, EU exporters saved around 650 million euro (duty savings) when exporting to Canada whereas around 365 million euros represented foregone duty savings. For UK, in 2023, the figures were around 7.3 billion euros (duty savings) and 563 million (duty foregone) respectively.[92]

The lack of adequate intellectual property (IP) protection poses a significant challenge for EU startups seeking to expand internationally. Without adequate preparation, legal advice, and institutional support, these companies risk losing their proprietary knowledge and technological edge to non-EU competitors. In some third markets, particularly China, weak enforcement of IP protection remains a concern despite formal regulations meeting international standards. This is often attributed to vague legal definitions, inconsistent implementation, and practices such as forced technology transfer (FTT), limitations on transferring IP back to EU headquarters, and insufficient protection of trade secrets.

In other regions—such as Africa, the Mediterranean, and Latin America—IP-related risks are generally lower but remain persistent. To improve conditions for innovation and technology deployment in these regions, and particularly to support EU startups and technology providers engaging internationally, further efforts are needed to: a) promote voluntary, mutually agreed technology transfer; b) strengthen local IP governance and enforcement frameworks; c) support universities and research centres in these regions in developing sound IP policies; and d) facilitate market uptake of innovative solutions through joint initiatives in areas such as logistics, renewable energy, sustainable agriculture, circular economy, health technologies, and green hydrogen.

4.2.3. Lack of collaborations between startups and corporates

One of the primary barriers to effective collaboration is the lack of engagement from top executives (CEOs, Boards) in corporates. Without strong leadership support, initiatives to work with startups often lack the necessary resources and strategic focus. This is compounded by the fact that many corporates do not have dedicated open innovation units, or these units are not directly reporting to the CEO, leading to a disconnect between innovation efforts and corporate strategy.

Additionally, cultural differences between startups and corporates often lead to frustration and misalignment. Startups operate in a fast-paced, risk-taking environment, while corporates typically seek short-term, low-risk solutions. This mismatch in

[92] Report on EU trade policy's implementation and enforcement (see further resources: preference utilisation and duty savings on EU exports)

expectations and working styles results in a low success rate for collaborative projects. According to McKinsey, less than 1% of startup projects submitted to corporates make it to the market, further discouraging engagement.

Lack of innovation incentives within corporates also hinders their willingness to engage with startup companies. Corporates often lack internal incentives to drive innovation, particularly within business and procurement units. Private procurement processes are notoriously difficult for startups to navigate, with high initial qualification efforts and scepticism about the reliability of startups. Additionally, corporate innovation departments are frequently disconnected from procurement departments, creating further barriers to collaboration.

In this regard, the time required to progress from initial contact to a proof-of-concept (PoC) and ultimately to full-scale implementation poses a critical barrier to startup-corporate or startup-public sector collaborations. Studies have found that on average, it takes 6 months to develop a PoC, and a further 6 to 18 months to move into full implementation, particularly within large organizations and public institutions. This elongated timeline is problematic for startups, which typically operate under tight resource constraints and require rapid validation and revenue generation to survive.[93] [94]

Furthermore, procurement processes present another significant challenge. Startups face excessive barriers when trying to qualify for corporate procurement, as the initial effort required is often too high for small companies to sustain. In addition, the misalignment in expectations and timelines between corporates and startups exacerbates the issue. Startups typically need rapid implementation to survive, whereas corporate decision-making and procurement cycles are notoriously slow.

4.2.4. Limited access to innovation procurement

A major reason for the slow uptake of innovation procurement in the public sector in Europe is the lack of strategic planning. Other parts of the world have clear strategic plans, often with mandatory targets, that mobilise innovation procurement including for specific strategic technologies. Anchoring innovation procurement in R&I policies, including those for strategic technologies, is therefore key for Europe to compete with other leading economies in the world. However, the 2015 ERAC advisory committee of the European Council's opinion[95] to create EU and national action plans for innovation procurement has not been fully implemented yet. EU wide benchmarking also shows that research and innovation program support for innovation procurement is growing but still limited and only few Member States have incorporated innovation procurement as a strategic objective in their R&I policies for strategic technologies.

[93] Onetti, A. (2019). Turning open innovation into practice: Trends in European corporates. Journal of Business Strategy.
[94] Haarmann, L., Machon, F., Rabe, M., & Asmar, L. (2023). Venture Client Model: A Systematic Literature Review. Proceedings of the European Conference on Innovation.
95ERAC Opinion on Innovation Procurement, June 2015: https://data.consilium.europa.eu/doc/document/ST-1209-2015-INIT/en/pdf

A lack of financial incentives for public buyers is also a reason that is holding back innovation procurement in Europe. Existing solutions are typically cheaper than innovative ones, as the latter are not produced at large scale yet. [96] [97] [98] [99] [100] [101]

Furthermore, procurement procedures frequently do not accommodate emerging technologies, leading to exclusionary tender conditions that reinforce the status quo.

Overspecification in tender documents remains a significant barrier to innovation. Public buyers often reuse specifications from previous procurements, which tend to favour established solutions. By prescribing specific outcomes rather than defining the problem to be solved, such practices limit the ability of suppliers with innovative alternatives to compete.

Additionally, public procurement is often highly decentralized, with different agencies and regions setting their own requirements. The EU public procurement directives are also transposed in different ways across the 27 EU Member States. This fragmentation makes it difficult for startups to scale solutions across different markets, sectors and borders.[102] [103] [104] [105]

Identifying innovation procurement opportunities remains challenging for innovative companies. Although public buyers can flag relevant tenders as "innovation procurements," this option is underused in practice, making it particularly difficult for smaller firms to navigate the vast volume of annual tender notices. Public buyers often design their calls for tenders without fully exploring market capabilities, particularly regarding innovative solutions.

EU procurement rules enable preliminary market consultation[106] to assess available options before drafting tenders, yet this practice remains underutilized. As a result, tender specifications tend to be highly prescriptive, limiting opportunities for novel approaches. While direct interactions with individual bidders are regulated to ensure fairness and

96 Edler, J., & Georghiou, L. (2007). Public procurement and innovation—Resurrecting the demand side. Research Policy, 36(7), 949–963.

97 Georghiou, L., Edler, J., Uyarra, E., & Yeow, J. (2014). Policy instruments for public procurement of innovation: Choice, design and assessment. Technological Forecasting and Social Change, 86, 1–12.

98 Manika, S. (2020). Mechanisms for innovative-driven solutions in European smart cities. Smart Cities, 3(2), 183–199.

99 Uyarra, E., Edler, J., Garcia-Estevez, J., Georghiou, L., & Yeow, J. (2014). Barriers to innovation through public procurement: A supplier perspective. Technovation, 34(10), 631–645.

100 Iossa, E., Biagi, F., & Valbonesi, P. (2018). Pre-commercial procurement, procurement of innovative solutions and innovation partnerships in the EU: Rationale and strategy. Economics of Innovation and New Technology, 28(5), 463–484.

101 Suresh, K. (2022). Analysing Incentive Issues and Failures in Innovation Procurement. SSRN Electronic Journal.

102 L. Rubini, M. Andov, and A. Biondi, Regulating for a Sustainable and Resilient Single Market: Challenges and Reforms in the Areas of State Aid, Competition, and Public Procurement Law (Brussels: European Trade Union Institute, 2023)

103 M. Andhov, A. Biondi, and L. Rubini, "Regulating for a Sustainable and Resilient Single Market: Challenges and Reforms in the Areas of State Aid, Competition, and Public Procurement Law," ETUI Research Paper (2023)

104 P. C. Gomes, EU Public Procurement and Innovation: The Innovation Partnership Procedure and Harmonization Challenges (Cheltenham: Edward Elgar Publishing, 2021)

105 G. M. Racca and C. R. Yukins, eds., Joint Public Procurement and Innovation: Lessons Across Borders (Cheltenham: Edward Elgar Publishing, 2020)

[106] Article 40 of Directive 2014/24/EU

transparency, broader engagement with the innovation ecosystem—including research institutions, industry stakeholders, and networks—is essential. Strengthening the use of preliminary market consultations that engage all these actors would help public buyers identify emerging technologies, leverage procurement (i.e. specify the problem that needs to be solved and not the solution) and refine procurement strategies to maximize value and impact.

Thus, public buyers often prioritise vendors with proven track records to minimize perceived risks. Startups and scaleups, and more specifically European Startups and scaleups, struggle to enter public procurement markets due to a strong preference for established firms that can show prior customer references, even when prior customer references on existing solutions do not provide any guarantees for being able to deliver totally new innovative solutions. This results in limited competition and a lack of opportunity for newer, innovative companies.

Public procurement frameworks tend to focus on short-term cost savings rather than long-term value. This disadvantages startups offering innovative solutions that may have higher initial costs but provide greater long-term benefits in terms of sustainability, efficiency, or improved service quality. The emphasis on cost over quality often results in suboptimal procurement outcomes and discourages investment in innovation. **Furthermore, startups and scaleups often struggle with the financial requirements associated with public procurement**. Late payments, high upfront costs due to underutilisation of pre-financing, and excessive demands for indemnity guarantees/insurances create liquidity challenges. Many small companies are unable to participate in tenders simply because they cannot afford to cover the costs of project execution while awaiting payments. Additionally, public authorities often demonstrate a preference for companies with a stable turnover for several years without allowing startups to prove their financial capacity through other ways (e.g. proof of venture capital or bank investments**).** This favours the selection of well-established suppliers, making it difficult for new entrants to secure contracts.

The widespread use of static contracts in public procurement limits innovation during contract execution. Suppliers are typically required to deliver the originally agreed solution for the full contract term, even in multi-year agreements, leaving little room to integrate technological improvements or cost-saving innovations. Value engineering clauses—which allow updates to solutions and incentivise continuous improvement—are commonly used in other parts of the world but remain underutilised in the EU.

Intellectual property rights pose a significant challenge for both startups and public buyers. Frequently, procurement contracts oblige companies to fully transfer their IP rights. While there are specific cases where such a requirement is warranted-for instance, when open access obligations mandate the publication of procurement results, or where commercialisation is restricted due to security, confidentiality, or similar considerations-these instances are relatively rare.

In most situations, however, there is little justification for requiring suppliers to relinquish all IP rights. This practice can deter startups from engaging in public procurement, as it limits their ability to safeguard and commercialise their innovative solutions. Such requirements can discourage startups from participating in public procurement, as they limit the ability to protect and commercialise their innovations. At the same time, public authorities must ensure that procured solutions remain adaptable over time. Without owning the IP, they may fear becoming dependent on the original supplier for updates or maintenance—commonly referred to as vendor lock-in.

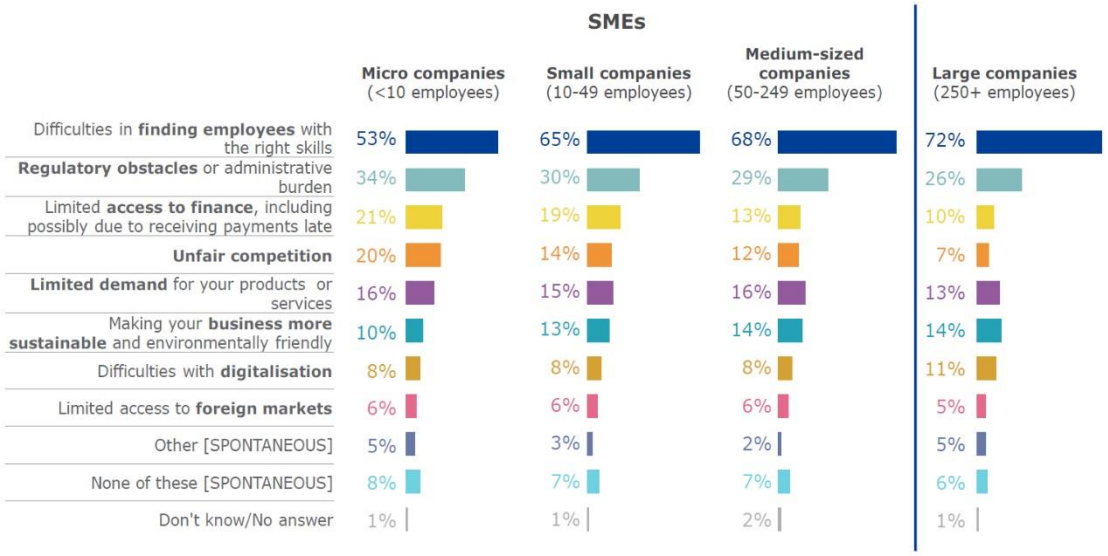
Limited access to innovation-driven public procurement is closely linked to the lack of testing opportunities for new solutions before purchasing. Public buyers often rely on traditional providers because they lack opportunities to test innovative solutions from new suppliers. Without proper testing frameworks, they face uncertainty and risk when considering alternatives, leading them to stick with familiar vendors. This limits competition, innovation, and cost-efficiency, as promising new solutions are often overlooked.

5. SUPPORT FOR THE BEST TALENT IN EUROPE

5.1. Current landscape and challenges

European companies are facing significant skills shortages, similar to other advanced economies. Skills shortages represent a main problem for the smallest to mid-sized companies in the EU, being identified as such by 53% of micro companies, 65% of small companies and 68% of medium-sized companies.[107]

Figure 13. Eurobarometer results



Three quarters (74%) of SMEs in Europe say they face skills shortages for at least one job role in their company. Also, nearly 4 in 5 companies say in the survey it is generally difficult for them to find workers with the right skills, and more than half of them (53%) find it difficult to retain skill.[108]

Figure 14. Difficulties in staff recruitment for SMEs – Eurobarometer survey

The lack of appropriate workforce skills weighs on companies' performance and ability to invest. According to an EIB survey, the inability to recruit an appropriately

107 Flash Eurobarometer 537, SMEs and skills shortages, November 2023

108 Flash Eurobarometer 529, European Year of Skills: Skills shortages, recruitment and retention strategies in small and medium-sized enterprises, Septe,ber 2023

skilled workforce has ranked among the most important obstacles to long-term investment (81%), just after high energy costs, and before uncertainty concerning the future. Improving the supply of skills among the workforce could unlock long-term investment and help to promote the EU's overall competitiveness. [109]

Available human capital with STEM skills applicable to development and deployment of innovative technologies is of high quality but limited quantity compared to other blocs. Talent is in fact more limited with the EU, with only 203 ICT graduates per million habitants, compared to 335 per million in the US. Similarly, the EU has only 845 STEM graduates per million inhabitants per year compared to 1,106 in the US[110] [111] .

Challenges persist with remote cross-border work in Europe. 59% of startups across Europe have distributed teams, a percentage that goes up to 78% for the engineering teams. [112] While remote cross-border work has become typical feature for tech startups, it furthered as a mainstream trend during and following the COVID 19 pandemic. This new model of working prevents regional brain drain and enables innovative startups to tap into the wide pool of European talents, while minimizing costs and offering attractive work conditions. At the same time, remote cross border work creates significant challenges ranging from healthcare, social security.

The EU is experiencing brain drain as talented individuals leave for other non-EU destinations offering more and better employment opportunities. Attracting and retaining talents is critical for Europe's economic resilience, innovation capacity, strategic independence, and societal welfare. In the next decade, Europe may face highly skilled workers shortages, if it does not create a favourable environment for attracting and retaining talents.

The EU fails to attract highly skilled migrants from abroad. In 2022, 3.5 million first-time residence permits were issued in the EU, 1.2 million of which were for employment purposes. One of the ways for highly qualified workers from outside the EU to live and work in an EU country is to obtain an EU Blue Card. Across the EU, the total number of EU Blue Cards granted to non-EU citizens rose from 24,305 in 2017 to 52,127 in 2019. It then fell to 50,234 in 2020 and increased again to 67,730 in 2021 (by more than 35%) and to 81,851 in 2022 (by more than 21%). The majority of EU Blue Cards were issued in four Member States: Germany (63,242, 77.3% of the total), Poland (4,831, 6.0 %), Lithuania (3,924 or 4.8 %) and France (3,876, 4.7 %). As part of the November 2023 Skills and Talent Mobility Package, the Commission put forward a set of measures to attract, retain and maximize foreign talent, notably a proposal for a Regulation establishing an EU Talent Pool as well as a Recommendation on the recognition of qualifications of third-country nationals, which sets out additional measures to reduce the barriers to international recruitment and to ensure that third-country nationals can make full use of their skills and qualifications in Europe.[113]

Europe has become one of the important exporters of talent and is struggling to attract and retain talent in highly skilled occupations. Migration (both inward and

109 Draghi, (2024).

110 European Commission. (2022). Digital Economy and Society Index (DESI) 2022

111 OECD. (2022). Education at a Glance 2022: OECD Indicators

112 Sequoia's interactive guide to Europe 'size technical talent (2024)

113 Draghi, (2024).

outward) has a significant impact on the size, composition and skills of the EU's workforce, and as such it has been an important factor in reducing labour shortages. And whereas migrant workers are almost 9 percentage points more likely to work in occupations with persistent shortages than workers born in the EU, currently these workers are primarily employed in low-skilled occupations. The tech talents sector is particularly vulnerable, with the latest figures showing negative net migration for this segment[114]

The European Migration Network (EMN), in collaboration with the OECD, has compiled an overview of innovative approaches taken by 21 EMN Member Countries to attract foreign talent between 2021 and 2024[115]. The report identifies high value-added economic sectors targeted for foreign talent recruitment, including healthcare, ICT, manufacturing, research, and financial services. It also highlights the growing importance of third-country nationals in filling labour market gaps, particularly in the context of global competition for skilled workers.

Fifteen EMN Member Countries have introduced new policies and initiatives, ranging from fast-track visa procedures to financial incentives, and targeted recruitment efforts. Countries have also leveraged EU-funded programmes, initiatives such as Talent Partnerships with partner countries, or legal instruments such as the revised EU Blue Card Directive, to enhance mobility pathways. Several national websites and job platforms have been developed to connect third-country professionals with job opportunities. Additionally, some countries are implementing skills validation programs and pre-arrival support to ease migration and integration challenges.

Challenges persist, particularly regarding bureaucratic complexities, qualification recognition, and stakeholder coordination. Ten EMN Member Countries actively monitor their initiatives, with some having completed formal evaluations. The OECD Indicators of Talent Attractiveness (ITA) provide a benchmarking framework, ranking New Zealand, Sweden, Switzerland, Australia, and Norway as the most attractive OECD destinations for highly skilled workers.

5.2. Key Barriers

5.2.1. Skills shortages and mismatches

There is an acute shortage of individuals with specialist skills, **especially proficient in emerging technologies and with the right technological skills**, i.e., nearly four out of five SMEs in the EU report difficulties in finding workers with the right skillset. Startups and scaleups also face difficulties in finding workers with the right skills, such as advanced digital skills.[116] Other challenges include skills portability and deficit in managerial and soft skills, which are key to leading successful startups and scaleups.

Skills gaps impact investment decisions. The EIF and the WorkInHealth Foundation, established by EIT Health, released a joint report on these gaps in Europe's health industry.[117] Using insights from the EIF VC Survey, the report enhances understanding of skills needs in the sector. It highlights that management teams are a crucial investment criterion for VCs in health and biotech, noting the significance of both hard and soft skills. The survey identifies leadership and people management, industry knowledge, and commitment as the top soft skills for management teams in VC portfolio companies. Skills

[114] Atomico (2024), State of the European Tech 2024
[115] EMN – OECD joint Inform – New and Innovative ways to attract foreign talents in the EU, (2025).
[116] European Commission (2025), Communication on The Union of Skills, COM(2025) 90 final.
117 EIT Health and EIF, Addressing skills needs in the European Health sector, Skills gaps, solutions, and strategies for VC-startup cooperation, July 2024

gaps also exist within investor teams, with leadership and people management skills ranking as a top priority for health-focused fund managers.

5.2.2. Issues related to social security

There is a comprehensive EU legal framework in place to ensure that workers and citizens do not lose their social security protection when they move across borders. However, the national social security systems are not harmonised and instead of a single social security regime, there is a system of coordination to ensure that the social security rights of people moving around in the EU are protected. The rules identify which national legislation is applicable to the mobile person concerned, and which country is responsible for collecting the contributions and for paying the benefits. In principle, persons are subject to the social security legislation of the country where they work.

Under EU rules, workers active in two or more countries are generally insured in their country of residence if they carry out a 'substantial part' of their work there - defined as at least 25% of working time and/or remuneration, though other factors may also be considered. This rule applies to telework. A new multilateral framework agreement on cross-border telework, signed by several (but not all) Member States[118], allows up to 50% of telework from the country of residence without changing the applicable social security. However, if a worker performs their duties permanently from one Member State, social security contributions are due there.

Cross-border remote workers are particularly impacted by these various rules and guidelines, face administrative burdens (e.g. coordinating between two social security administrations of two different Member States), **as well as potential costs**. In addition, nearly 20% of employers with employees teleworking from other countries reported experiencing related administrative difficulties, related to taxation (30.15%), followed by difficulties related to social security (27.2%) and other (unspecified) contractual issues. [119]

5.2.3. Taxation challenges in Employee stock options (ESO)

Startups often do not have sufficient cash flow to offer competitive wages, and they use Employee Stock Options (ESOs) to attract the best talent. From a tax perspective however, the level of complexity and administrative burden increases with the use of ESOs in situations where the startup or scale up either employs people in various Member States and/or expands its activities across borders cross border, as their tax treatment is not harmonised across EU. The most impactful differences are the timing of taxation (sometimes taxation occurs at various stages of the stock option lifecycle), and classification of income received from ESOs.

Another issue related to ESOs is the **valuation of the income/gain realised by the employee**. Apart from the taxation arising due to the sale of ESOs, where the gain can be calculated from the sale price, it is often difficult to establish what is the taxable base for ESOs and this may vary between Member States. At exercise, normally ESOs are taxed on the difference between the fair market value of the share and the exercise price of the share granted by the ESOs. However, if the company is not yet publicly traded, the establishment of the fair market value may be burdensome.

5.2.4. Limited career mobility for academics

Europe has become home of 35 000+ early-stage companies, with additional 3400 tech companies being in their growth stage. The growth of the European tech startup scene

118 Framework Agreement on the application of Article 16 (1) of Regulation (EC) No. 883/2004 in cases of habitual cross-border telework

119 Letta Report 2024

was followed by the European tech workforce, which increased up to 3.5 million in 2024, indicating a 24% compounded annual job market growth rate, putting Europe's growth on par with the US[120]. In parallel, the number of full-time equivalent researchers in the EU increased by more than 45% and reached 2.15 million in 2023. [121]

Yet, the competition for highly qualified talents remains fierce, in part due to untapped academic potential and lack of sufficient mobility between academia and startups. The drivers of this problem can be found in the:

- Resistance to change, lack of flexible career options and bridging services between research and industry and/or diverse professional career paths for PhD holders[122];
- Low level of integration of researchers into innovation "clusters" – networks of universities, startups, large companies and venture capitalists[123];
- Fragmented national legal and organizational frameworks for establishing academic spin offs, with various diverging IP practices and legal regimes[124].
- The European tech-talent landscape is increasingly complex to navigate for founders and recruiters. It's home to world-leading universities and nearly 3 million engineers, but talent is more distributed than ever. With remote work, startups are increasingly recruiting from across the region.

5.2.5. Gender gap in technology in the EU

As of 2023, **most capital investment in tech startups is still dominated by all-men founding teams**, accounting for 82 % of all investments. Mixed gender founding teams receive 15 % of the funding, while all-women teams receive only 3 %, representing a marginal increase of 1 percentage point (pp) since 2019.[125] Women are underrepresented in Deep Tech startups, with less than 25% of these startups having at least one woman on their founding teams.[126]

Differences across stages of startup maturity reveal a healthier distribution at the pre-seed stage, with 8 % of funding going to women-led teams and 21 % to mixed teams. These shares decrease significantly in subsequent stages of fundraising. Rankings of universities by the numbers of women founders and startups established, together with the amount of capital raised, identifies 49 universities where most women founders of startups with advanced degrees are based, 11 of which are in Europe (eight in the UK). Cambridge, Oxford, the London School of Economics (LSE), HEC Paris, and Imperial College London stand out as institutions where most women founders with advanced degrees originate. [127]

Women-founded scaleups demonstrate high value growth but are still underrepresented in terms of overall scale up value. Women-founded scaleups have surpassed the European average in value growth since 2017, increasing their value nearly sevenfold and growing 1.2 times as fast as their competitors over the past five years. Most of this value (73 %) is concentrated in the UK, France, and Germany, where women-

120 State of European Tech2024, Atomico Report

121 The figures indicate increase between 2013 and 2023, from 1.48 to 2.15 million. Data available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=R%26D_personnel#Doctoral_students

122 Knowledge ecosystems in the new ERA Talent circulation and intersectoral mobility: Analytical report with a mapping of talent mobility and causes of brain drain, European Commission

123 Draghi Report 2024

124 Research-based spin-off creation: VIADUCT Interregional Analysis Report 2024

125 European Commission: Directorate-General for Research and Innovation, She figures 2024 – Policy report, Publications Office of the EU, 2025

126 EIB, EIF and EIT, Women Founders in European Deep Tech Startups. Main findings report, November 2024.

127 idem

founded scaleups represent around 12 % of the overall scaleup value. In contrast, Finland, Italy, and Portugal exhibit slightly more diverse distribution in their ecosystems.[128]

Women-led startups receive significantly less funding. In 2020-2021, only 20% of companies funded by the European Innovation Council (EIC) Accelerator had a woman as leader. Women represented 24% of leadership in EIC Pathfinder projects and over 30% of researchers in EIC-funded projects were women.

As **women remain significantly underrepresented in leadership positions within the innovation and startup ecosystem**, particularly in deep tech and high-growth sectors, the European Innovation Council (EIC) Women Leadership Programme was introduced to tackle these challenges, offering mentorship, training, and networking opportunities. Since its launch, it has supported over 250 female entrepreneurs and researchers, equipping them with the skills and connections needed to scale their ventures. However, its current scope is limited to EIC beneficiaries, excluding a vast number of women leading innovative projects funded by Horizon Europe.[129]

In 2022 the European Institute of Innovation and Technology (EIT) adopted the EIT Gender Equality Plan. Since then, gender mainstreaming actions, and women projects, brought increase in women's participation in all core areas of operations, across the EIT Community. Participation targets indicated in the EIT Gender Equality Plan (GEP) 2022-2024, were met or exceeded (2023 reporting): 25.20% women CEO/Owners of startups created of/for innovation (GEP target:25%); 26.90% women CEO/Owners of supported startups and scaleups (GEP target:25%), 45.05% women among graduates from the EIT-labelled education programmes(GEP target: 40%), and more than 40% women in decision making positions across the EIT Community. The EIT Supernovas/Women2Invest programme supported +110 female-led startups that attracted €40Mn investments. The EIT helps connecting the European Innovation Council's Women Leadership Programme to the EIT network and in 2024 the EIT joined forces for the second time with the EIC to organise the European Prize for Women Innovators.[130]

Gender diversity remains equally a challenge within venture capital firms, particularly among general partners (highest decision-making positions). Studies show that women general partners are inclined to invest in women-led teams, suggesting that increasing the number of women in general partner roles could boost funding for mixed and women-only founding teams. However, the current representation of women among general partners is at just 16 %. [131]

Gender gap exists also in perceptions of the EU tech ecosystem. There are stark contrasts in experiences, particularly among women, with a majority (55 %) expressing a lack of belief in equal treatment compared to only one-third (31 %) of men. [132]

5.2.6. Gender gap in intra-European talent mobility (geographical)

Overall, the international mobility of women and men during Doctoral-level studies exhibits minimal differences, with a gap of approximately 1 percentage point or less in

128 European Commission: Directorate-General for Research and Innovation, She figures 2024 – Policy report, Publications Office of the EU, 2025

129 idem

130 European Institute of Innovation and Technology (EIT) (2024), EIT Gender Equality Plan 2024 Implementation Report

131 European Commission: Directorate-General for Research and Innovation, She figures 2024 – Policy report, Publications Office of the EU, 2025

132 European Commission: Directorate-General for Research and Innovation, She figures 2024 – Policy report, Publications Office of the EU, 2025, https://data.europa.eu/doi/10.2777/934401

most countries. However, despite similar mobility rates, gender disparities emerge in relation to the length of stay, with a women-to-men ratio of 0.48 in the EU, indicating that women tend to have shorter research stays. This phenomenon can be attributed to women researchers' caregiving responsibilities, such as family obligations and single parenthood, which often limit their mobility to short-term research visits.[133]

Additionally, traditional gender expectations, including the historical tendency for women to follow their partners rather than vice versa, also influence women's decisions regarding international mobility. This trend is consistent across all EU Member States, with women-to-men ratios ranging from 0.38 in Luxembourg and Hungary to 0.61 in Croatia and Portugal, highlighting the need for targeted support to address these gender disparities.[134]

133 European Commission: Directorate-General for Research and Innovation, She figures 2024 – Policy report, Publications Office of the EU, 2025

134 European Commission: Directorate-General for Research and Innovation, She figures 2024 – Policy report, Publications Office of the EU, 2025, *https://data.europa.eu/doi/10.2777/934401*

6. ACCESS TO INFRASTRUCTURE, NETWORKS AND SERVICES

6.1. Current landscape and challenges

Research Infrastructures (RIs) are facilities that provide specialized resources and services primarily for research communities. They typically consist of large-scale laboratories with significant operating budgets, although some RIs exist entirely in digital form, such as archives for the social sciences.

The EU supports RIs through the Framework Programme (FP), funding specific activities rather than their construction or operational costs. This support includes:

- Transnational access funding, primarily for scientists, always based on the criterion of scientific excellence.
- Assistance in the early implementation phase of new RIs.
- Joint development of technologies to enhance infrastructure capabilities.
- Promotion of FAIR (Findable, Accessible, Interoperable, and Reusable) data principles to improve data accessibility.

Although EU funding represents only a small fraction of the overall RI budget, it plays a critical role in enabling non-core activities that national funding often does not support. This flexible, low-restriction funding allows RIs to pursue innovation-driven initiatives, including enhancing access for startups and scaleups. By strategically directing this support, the EU can align RIs with broader European priorities, fostering greater industry collaboration and technological advancement.

To enhance European competitiveness, the EU has actively encouraged closer collaboration between RIs [135] and industry. This initiative has been widely welcomed by RIs, with 72% already offering services to industry, such as test-beds, pilot lines, demonstrators, and testing facilities. Moreover, 92% of these RIs plan to expand their industry-facing activities. However, even among the most industry-integrated RIs, industrial collaboration accounts for only a small share of their revenue—just 4% of RIs report that more than 20% of their income comes from industry partnerships, with most generating significantly less.

RIs serve as facilities where existing startups and scaleups access cutting-edge technology to conduct experiments (linear approach to RI access). However, this model has inherent limitations. Since RI technologies are at the forefront of research, their users are typically already deeply engaged with these facilities and possess a high level of technical expertise. This means that startups coming in from the outside often struggle to integrate unless they have prior knowledge of the RI's capabilities. Despite these challenges, for highly specialized deep-tech startups, gaining access to the right RI can be transformative. Identifying an appropriate RI and securing a simplified access pathway can significantly accelerate product development and technological validation.

Beyond the linear approach—where startups access RIs as external users—the more effective model is for startups to embed themselves within RI ecosystems, fostering ongoing collaboration. RIs generate high-potential research and technological breakthroughs not just through the experiments conducted within their facilities but also through the advanced R&D that goes into developing their cutting-edge equipment. These

[135] European Strategy Forum on Research Infrastructures. (2024). *ESFRI Report on Access to Research Infrastructures and Charter on Access to RIs*. Zenodo. https://doi.org/10.5281/zenodo.10555986;
European Strategy Forum on Research Infrastructures. (2023). *Survey Report on Cooperation of ESFRI Research Infrastructures (Landmarks) with Industry*. Zenodo. https://doi.org/10.5281/zenodo.8383568

innovations frequently have strong spin-off potential, and RIs can play a key role in supporting startups at the earliest stages, helping them overcome the "valley of death" in innovation financing.

Startups engaging with RIs benefit from more than just access to specialized equipment—they also become part of a broader industrial ecosystem, gaining exposure to: Suppliers, manufacturers, and logistical partners that support RI operations; potential customers and commercial collaborators within the RI's network; a "seal of excellence" from their association with world-class scientific institutions, which significantly strengthens their position when seeking venture capital investment.

Additionally, RIs employ some of the world's top scientific and engineering talent, who compete at the global level and train the next generation of researchers. However, these experts often lack the entrepreneurial mindset required to commercialize research effectively. RIs do not sufficiently integrate commercialization training, meaning that many breakthrough discoveries never reach market potential.

In general, startup ecosystems foster a culture of competitive collaboration, interdependencies, and value chain integration, providing essential resources that enhance a startup's chances of success. These resources typically include policymakers, accelerators, incubators, coworking spaces, educational institutions, funding networks, and industry partners. For entrepreneurs, selecting the right location to launch and scale their business is thus crucial, as different regions offer unique advantages and challenges depending on the startup's specific needs.

Two key sources of support for startups and scaleups are the Enterprise Europe Network (EEN) and European Cluster network.

The EEN is an SME-support programme launched by the European Commission in 2008. It is financed through the EU Single Market Programme and is implemented through grant agreements with business support organizations on the ground.

The EEN helps stimulate demand for innovation, improve market access for new solutions, and support SMEs, start-ups, and scale-ups in competing with established players. With nearly 600 business support organizations in 57 countries in the EU and beyond, the EEN provides free-of-charge tailored support to SMEs by facilitating innovation management, access to finance, connecting businesses with international partners, and offering expert advisory services to e.g. navigate regulations, secure intellectual property rights, and leverage EU-funded programmes (including Horizon Europe). A key focus of the EEN is supporting research and innovation in SMEs, including start-ups and scale-ups. It does so by providing services like innovation audits and strategy, advice on intellectual property rights, technology and innovation brokerage services, advice on technology marketing, support in accessing EIC funding opportunities.

Since 2017, the EEN has included dedicated Scale-up Advisors, supporting SMEs and startups in their rapid growth phase, both on access to finance and on innovation support.

Clusters are regional ecosystems of related industries and competences featuring a broad array of inter-industry interdependencies. There are more than 1500 cluster organisations registered at the European Cluster Collaboration Platform of the European Commission, covering all industrial ecosystems.

One of the main strengths of clusters is their role in supporting innovation and development and uptake of new technologies within their ecosystems, by pooling of resources through trust-based collaboration of their members. The impact of clusters on industrial competitiveness has been demonstrated by a number of indicators, such as the level of business R&D investments, number of patents, employment in knowledge-intensive sectors, birth of enterprises, and a variety of economic outcomes, such as GDP and productivity (ECCP Cluster Panorama 2024).

Clusters deliver a number of bespoke services to their members tailored to the specific needs of their ecosystems such as technology transfer, support of innovative start-ups, support for scale up, trainings for upskilling and reskilling, access to finance, internationalisation, etc.

Technology Centres are public or private organisations carrying out applied research and close-to-market innovation (Technology Readiness Levels TRL 3 to 8, not necessarily the whole range) in digital, green and other advanced technologies.

Technology Centres typically provide the following services to SMEs: access to technology expertise and facilities for validation, demonstration / proof of concept / lab testing, prototype development and testing, pilot production and demonstration/ pilot lines / pre-series, product validation / certification.

Founders recognise the critical role of an environment that nurtures innovation, collaboration, and support in scaling their businesses. The StepStartUps Study: Beyond Fragmentation – Connecting Europe's Startup Ecosystems for Growth and Innovation[136] found that 33% of founders who relocated cited the lack of a strong startup ecosystem and entrepreneurial culture as their primary motivation.

Beyond ecosystem strength, cost considerations are another major driver of relocation, with 27% of founders citing value for money as the most decisive factor. Funding availability (24%) is also a key reason, highlighting the significant role of financial accessibility in startup location decisions. In contrast, talent availability and business regulations are mentioned less frequently as relocation drivers[137].

Among the critical enablers of startup growth, accelerators play a pivotal role in bridging ecosystem fragmentation and fostering regional connectivity. These structured programs provide early-stage, high-growth companies with access to education, mentorship, and financing, typically running for three to six months.

Over time, an increasing number of startup founders have relocated specifically to participate in accelerator programs. While the rise of virtual programs in 2022 led to a slight increase in same-city participation, most founders continue to move between cities, with one-quarter of startups even enrolling in accelerator programs in different countries.

This growing founder mobility underscores the role of accelerators as connectors across startup ecosystems. By offering structured mentorship, funding opportunities, and

136 https://digital-strategy.ec.europa.eu/en/library/beyond-fragmentation-connecting-europes-startup-ecosystems-growth-and-innovation#:~:text=StepUp%20Startups%27%20report%20examines%20fragmentation%20in%20Europe%E2%80%99s%20startup,to%20boost%20collaboration%2C%20talent%20mobility%2C%20and%20funding%20access.

137 Krämer, J., Herrmann, A., & Dowling, M. (2022). *Startup Heatmap Europe Report 2022: The Latest Trends in Startup Hubs and Founder Mobility*. Startup Heatmap Europe.

networking access, accelerators play a key role in reducing geographic barriers and fostering cross-border startup growth in Europe.

Indeed, a significant number of startups in accelerator programs originate from outside the region where the accelerator is based (Figure 15).[138] This emphasizes the role of accelerators as cross-border interconnectors, helping startups expand beyond their immediate markets. Notably, over one-third of mobile startups choose accelerator programs in a different country, further demonstrating the importance of accelerators in facilitating international startup mobility and ecosystem integration.

Figure 15. Mobility of Accelerator Participants

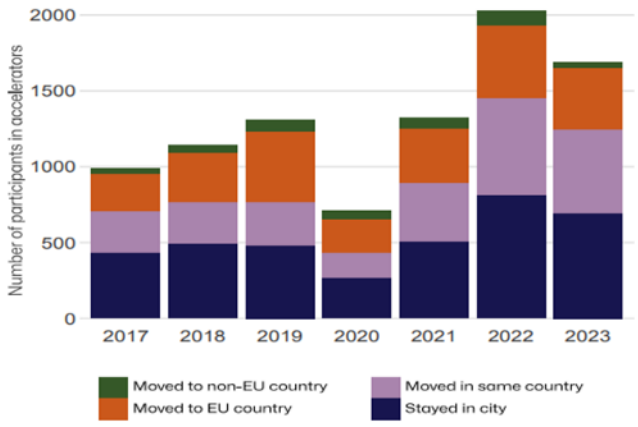


Figure 11. Mobility of accelerator participants
Source: Own calculations based on Startup Heatmap List 2017-2023

Source: European Startup Ecosystem Report, 2023

Furthermore, as data generation expands beyond human activity to connected devices and automated systems, data accessibility and findability are becoming increasingly complex. In less than a decade, global data volume has increased fivefold, rising from 33 zettabytes in 2018 to an estimated 175 zettabytes by 2025. This unprecedented surge in data generation has propelled the value of the EU data economy from EUR 301 billion (2.4% of EU GDP in 2018) to a projected EUR 829 billion in 2025.[139]

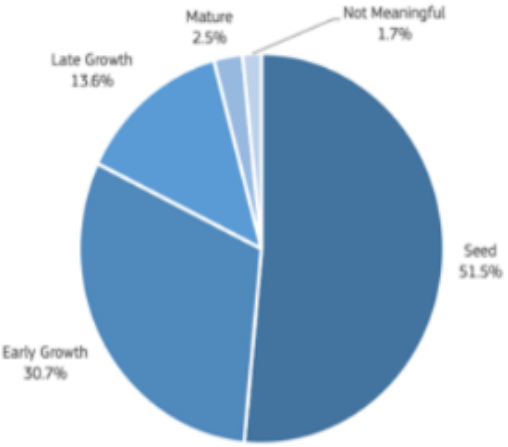
Figure 16. Projected Figures 2025

Source: A European Strategy for Data, 2020

[138] Findings from the StepStartUps Study
[139] European Strategy for Data, COM (2020) 66 final

A closer look at EU data companies[140] reveals that the majority are startups and scaleups, with 48.6% employing fewer than 10 people. Most are still in the seed stage (Figure 17), and their distribution across the 27 EU Member States remains highly uneven.[141] Yet, 108 out of 4,327 data companies have reached a valuation of at least EUR 100 million, a 14% increase compared to 2021-2023.[142] These figures underscore the immense, yet largely untapped, potential of Europe's data-driven businesses.

Figure 17. Distribution of data companies by development stage, 2023



Source: Analysis by the authors based on Dealroom's database of start-ups and scale-ups

Source: European Data Market study 2024–2026.

Without fully leveraging its existing data resources, expertise, and startup ecosystems, the EU risks allowing other global players to capitalize on this economic potential, weakening its **strategic position in the global digital economy**[143]**.** To address these challenges, the EU adopted its Data Strategy in 2020, aiming to facilitate seamless data flows across sectors, borders, and stakeholders—including businesses, researchers, and public authorities. The strategy's goal is to create a single European market for data, enhancing accessibility and interoperability across industries. Work is already underway to develop common European data spaces across 14 sectors[144].

6.2. Key Barriers

6.2.1. Limited access to research and technology infrastructures

For many innovative startups, finding and accessing highly specific RI services is a major hurdle. Developing the necessary connections can take years and often requires dedicated staff to navigate complex institutional structures. Most companies have no clear entry point when searching for available services, leading to an overreliance on informal, ad hoc collaborations built through personal networks.

[140] Data companies are organisations that are directly involved in the production, delivery, and/or usage of data in the form of digital products, services, and technologies.
[141] European Data Market study 2024–2026 , CNECT/LUX/2023/OP/0043, available at: https://ec.europa.eu/newsroom/repository/document/2024-47/D41_First_EU_Data_Landscape_Report_FINAL_CzCIBGPmPsorKyihsfJsG5kJo8c_110109.pdf
[142] European Data Market study 2024–2026
[143] Letta, (2024).
[144] https://digital-strategy.ec.europa.eu/en/policies/data-spaces

Furthermore, despite the willingness to engage with RIs, two primary barriers hinder effective collaboration: limited visibility of available services and complex and fragmented access mechanisms. On the one hand, many startups and companies are unaware of the specific resources and facilities offered by RIs. On the other hand, complex and heterogeneous legal frameworks, particularly concerning intellectual property rights (IPR), can also create barriers to straightforward partnerships. To bridge this gap, EU-funded projects like LEAPS-INNOV[145] and Calypso+[146] have played a crucial role in bringing RIs and industry together to co-develop and commercialize new technologies.

6.2.2. Limited access to data and fragmented support mechanisms

Navigating the complexity of data accessibility is particularly challenging for startups and scaleups, which often lack the financial, administrative, and technical resources to navigate the fragmented data landscape. Many struggle to identify, access, and integrate relevant datasets due to a lack of standardized frameworks and interoperability across sectors.

Data spaces, platforms, and marketplaces have the potential to unlock the value of data for startups, yet fragmentation remains a major barrier. Despite recent efforts to establish European, national, and regional data initiatives, data remains siloed across different sectors, domains, and levels of governance. Additionally, variations in culture, communication, and operational methods among stakeholders further complicate access, creating delays and inefficiencies in leveraging data-driven innovation.[147]

The highly diverse nature of data sources (ranging from public and private entities to academic institutions) results in significant disparities in access regimes. Differences between personal and non-personal data regulations, national legal exceptions, and ambiguous interpretations of EU-level data policies contribute to inconsistent access frameworks. Furthermore, many national public administrations lack the capacity or expertise to designate[148] and manage coherent national data bodies, adding another layer of complexity for startups seeking cross-border access[149].

Europe's fragmented data governance and regulatory approaches put EU companies at a disadvantage compared to the US and China. In the US, the private sector drives large-scale data aggregation, enabling businesses to build vast, unified datasets for innovation. Meanwhile, China's centralized institutions facilitate a more coordinated data strategy[150], further accelerating AI and big data-driven advancements. Without a more integrated and efficient data access model, European startups risk falling behind in the global data economy.

Market fragmentation can not only pose a challenge to startups' operational scaling, but also hinder them in acquiring the resources necessary to develop their business. During the early stage of their lifecycle, startups are particularly vulnerable and thus need targeted support.[151] Currently, startups and scaleups in the EU face fragmented and complex support systems, developed without coordination by Member States, regional authorities and public financing institutions. Furthermore, the European level services are numerous and often require consulting support to find a way among a variety of rules and narrow or counterintuitive eligibility criteria. In its 2025 Communication 'The road to the

[145] https://cordis.europa.eu/project/id/101004728
[146] https://cordis.europa.eu/project/id/730872
[147] Jøranli I and Breunig K (2024), Unlocking data's potential: navigating the challenges of data driven innovation for startups, Measuring Business Excellence, Vol 28, No 3/4 2024,Emerald Publishing
[148] See: https://digital-strategy.ec.europa.eu/en/news/commission-calls-10-member-states-comply-data-governance-act
[149] See Second report on the application of the GDPR, COM(2024) 357 final and Draghi Report 2024 (part B, p319)
[150] Draghi, (2024).
[151] Draghi, (2024).

next multiannual financial framework', the European Commission points out that there are today more than 30 tools providing technical assistance and support options, with scope for simplification and eliminating overlaps. A true single point of entry for beneficiaries to all EU funding and advisory services in the next financial framework could facilitate access for beneficiaries.

6.2.3 Access to knowledge and knowledge valorisation

Efficient intellectual assets management and IP valorisation are key to accelerate the uptake of innovative solutions and to develop new technologies, products, and services to address the most pressing societal challenges.

In today's knowledge economy, intangible assets including IP account for 80 to 90% or more of the business assets of an enterprise. At the startup level, IP could reach almost 100%[152].

The role of IP for startup success, particularly for academic spin-offs, is highlighted by recent studies[153].

A joint study by the EU Intellectual Property Office (EUIPO) and the European Patent Office (EPO)[154] confirms earlier empirical studies and stresses that startups with registered IP have more than twice the likelihood than other startups to obtain seed-stage funding and up to 6.1 times higher chances to obtain early-stage funding. The odds of successful exit are doubled in case of IP registration and tripled by applying for both patents and trademarks.

Patents are particularly relevant for technology focused startups for example in the fields of biotechnology, pharmaceuticals/life sciences and engineering. Patents signal to stakeholders that the startup is worth investing and they weight on the negotiating table vis-à-vis investors and large corporations[155].

Startups can leverage their IP rights to grow and expand by licensing in and out, establish partnerships, and prevent others from imitation, therefore securing high profit margins.

However, startups face significant challenges in the management of their intellectual assets, including: lack of IP knowledge, lack of strategic approach, no dedicated budget and limited capacities[156].

6.2.4. Weak commercialisation of results/academic inventions

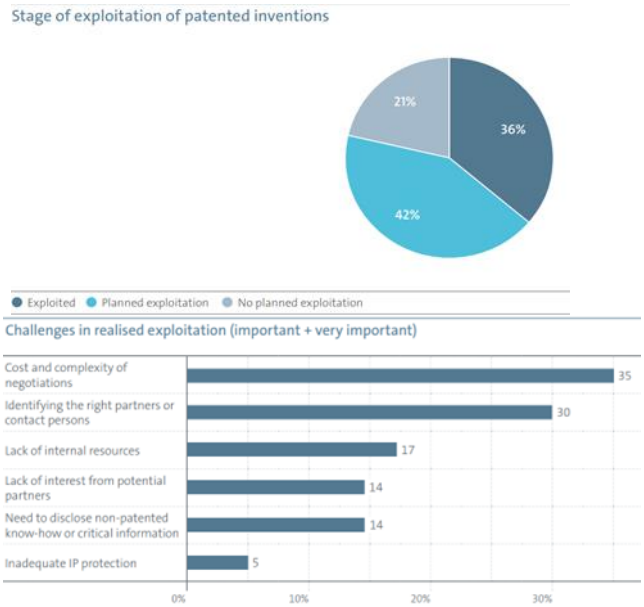
More than 10% of all patents filed at the EPO by European applicants in 2019 originated in universities[157]. However, only a third of the inventions patented by universities and research organisations are commercially exploited[158]. Hurdles in the commercialisation process also relate to **burdensome negotiation processes**, **weak interaction between**

152 Bader and Süzeroğlu-Melchiors (2023), Intellectual Property Management for Start-ups, p. 111.
153 EPO (2023), Patents, trade marks and startup finance: Funding and exit performance of European startups; SPRIND (2023) "Policy Paper IP-Transfer", UK government (2023) "Independent Review of University Spin-out Companies".
154 EPO (2023), Patents, trade marks and startup finance: Funding and exit performance of European startups.
155 There is clearly a positive relationship between patenting startups' innovations and economic performance. As also explained in a joint study published by the European Patent Office (EPO) and the EU Intellectual Property Office (EUIPO), fewer than 9% of European SMEs rely on protected IP rights, but this subset of companies appears to generate 68% higher revenues per employee than SMEs without IPR portfolios. EPO and EUIPO (2021), Intellectual property rights and firm performance in the European Union, Firm-level analysis report; EPO (2023), Patents, trade marks and startup finance: Funding and exit performance of European startups. See also Zhangabylov et al. 2022, Häussler et al. 2012.

156 Bader and Süzeroğlu-Melchiors (2023), Intellectual Property Management for Start-ups.
157 EPO (2024), The role of European universities in patenting and innovation, p. 11.
158 EPO (2020), Valorisation of scientific results; Draghi report.

universities and industry and the **lack of incentives for researchers to become entrepreneurs**[159].

Figure 18: Stage of exploitation of patented inventions



Source: EPO (2020), Valorisation of scientific results

The participation of university researchers, university spinoffs or startups that commercialise scientific results in standardisation and certification bodies is extremely low [160]. Only very few universities in Europe have a standardisation / certification strategy that clearly spells out when and how in the research and innovation process engagement with standardisation and certification will be pursued. There is a lack of training, support, financial and career incentives for academic researchers to engage in these types of activities, while only 0.004% of EU higher education institutes offer courses about standardisation[161]. Secondments of academic researchers to high tech startups to help with standardisation of scientific research results are still rare.

6.2.5. Lack of resources and skills of knowledge and technology transfer offices (TTOs)

Knowledge and technology transfer offices are crucial to support researchers with the management of their IP and business plan. This notwithstanding, TTOs are often understaffed, lack the necessary expertise and financial resources and struggle to effectively act as intermediaries between researchers and the private businesses sector.[162]

The European TTOs landscape largely differs across regions. In southern and eastern Europe, up to 85% of the exploitation of patented inventions is taken care of by TTOs with three or fewer commercialization experts. This proportion drops to 60% in Germany and to 43% in the rest of northern and western Europe. A majority of patented inventions from northern and western Europe (excluding Germany) are exploited by TTO with more than three commercialisation experts[163].

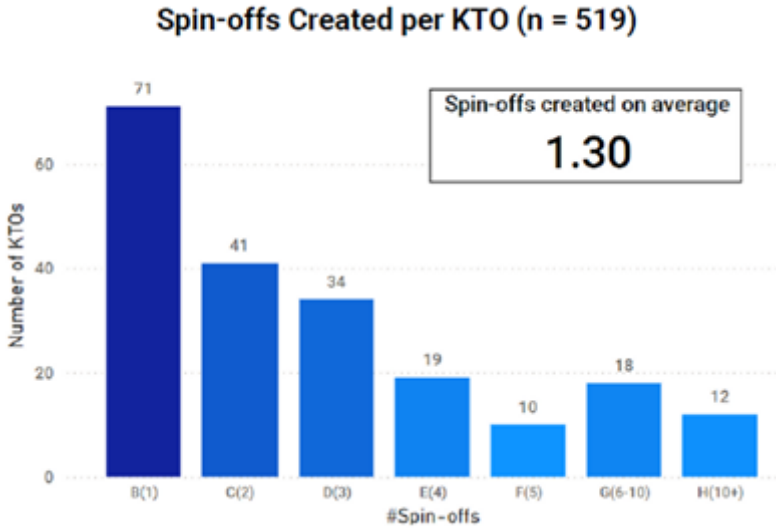
159 EPO (2020), Valorisation of scientific results; Draghi report (2024), p. 240, 241, 244.
160 https://www.anec.eu/images/Publications/Access-Study---final-report.pdf

161 EU funded projects like EduStand4EU aim to increase that to 2% (500 times increase) which will result in 100 additional small companies with 300 professionals and 1,000 researchers trained annually.

162 EPO (2020), Valorisation of scientific results, p. 42; Draghi report (2024), p. 241.
163 EPO (2020), Valorisation of scientific results, p. 49.

Variability across TTOs concerns also performance in entrepreneurial activity. The 2023 Annual Survey conducted by ASTP on 577 TTOs shows that in the year of reference, the majority of European TTOs did not create any academic spinoffs, and half were not being involved in startup creation. Out of the 205 TTOs having declared spinoff activity, only 30 were responsible for more than 40% of the total 677 spinoffs created.[164]

Figure 19: Distribution of TTOs per spinoffs created



Source: ASTP Annual Survey. Financial Year 2021 (2023)

6.2.6. Fragmented university support for startup creation

The Draghi Report points out that "High-tech innovation clusters typically form around first-class higher education institutions. A lack of these institutions in the EU and weak interaction between universities and businesses limit technology transfer, innovation capacity and ultimately economic growth".

The Redstone University Startup Index, May 2024 looks at how efficient European Universities are in terms of their budget utilization for startup creation.

The study analysed 457 universities in 34 countries with a combined annual budget of almost €170 billion. The study also looks at the startup creation performance of German Research Institutes (Fraunhofer, Max Planck, DLR). Annually, European universities create 7.500+ startups through alumni founders and spinoffs, with an average of 6.6 startups per €100 Mn budget. The top 10 universities create 38.2 startups for the same amount.

There is a significant disparity in the effectiveness of universities in creating economic and societal value, with differences up to 100x. Some universities create the same value with €2 million as others do with €200 million.

The study claims that if the universities performed at full potential, 150K+ additional startups could be created in the European Market over 10 years.

Business schools can often be more efficient than non-business schools because they operate with leaner infrastructures and don't require extensive research facilities like those

164 ASTP (2023), Annual Survey. On the European Knowledge Transfer. Landscape Financial Year 2021.

in medicine or biotech. They foster an entrepreneurial mindset and industry connections, focusing on business and startups. In contrast, larger universities with integrated business schools have broader aims, which may prevent them from achieving the same startup efficiency as standalone schools. A city's concentration of efficient universities and high budgets can also boost its startup ecosystem as the cases of Paris and London.

6.2.7. Limited financial and non-financial commercialisation incentives for researchers

Rewarding faculty members involved in the commercialisation of research results and spin-off creation increases their propensity to contribute more to spinoff formation and knowledge transfer activity[165]. In addition, the likelihood and degree of commercial success stemming from licensing agreements increases with inventor engagement[166]. However, the current framework for the management and commercialization of academic results lacks the appropriate incentives. Universities have strong incentives to increase their publication impact, but not their commercialisation outcomes167. For instance, often researchers cannot fully appropriate royalties from licencing IPRs.[168] Moreover, researchers' assessments do not adequately reward multi-track careers.[169]

Finding the right mix of financial rewards (including appropriate equity and revenue sharing), careers advancement incentives, and non-monetary incentives such as recognition and contractual flexibility is key to encourage participation of academics in entrepreneurial activities.[170]

6.2.8. Hurdles for spinoff/startups access to IP and knowledge

As mentioned, IP is a core asset for a spin-off's founding and development process. However, founding a spin-off based on scientific discoveries might confront researchers with a paradoxical situation: establishing the business without owning a core asset, the IP. In fact, although the researcher might have solely or jointly contributed to the development of an invention, in most EU countries universities have the right to own and manage university inventions, following the US model. Thus, spin-offs must find an agreement on how to access this critical asset. Spinoffs often lack the financial resources to acquire IP at market rates, especially during the critical early stages of company development. Also, the negotiations between universities and spinoffs can be uncertain and take a long time, creating additional risks dissuading companies from engaging in collaborative research with universities.

Hurdles for valorisation of results and public-private collaboration on research projects due to incompatibilities in industry-academia IPR policies and issues in the existing copyright framework

Regarding industrial property rights, industry-academia collaboration is still hampered by conflicts over who will own the IPR that results from the collaboration (industry wants to own all IPR to commercialise their products171, which makes it difficult for industry to

165 Odei, M. A., & Novak, P. (2022). Determinants of universities' spin-off creations. *Economic Research-Ekonomska Istraživanja*, *36*(1), 1279–1298.

166 Ajay Agrawal (2006), Engaging the Inventor: Exploring Licensing Strategies for University Inventions and The Role of Latent Knowledge, Strat. Mgmt. J., 27: 63–79.

167 Challenges in academic commercialisation: a case study of the scientists' experiences

168 Identifying (the right) partner is a major issue for the exploitation of UNI/PRO patented inventions and engaging with industry research partners is essential for the commercialisation of inventions. EPO (2020), Valorisation of scientific results, p. 43.

169 Draghi report (2024), p. 241.

170 WIPO (2024). Incentives in Technology Transfer. OECD (2019), University-Industry Collaboration. New Evidence and Policy Options.

171 Establishing successful university–industry collaborations: barriers and enablers deconstructed

collaborate with academic researchers from universities require all IPR ownership of academic research to be allocated to the university). Linked to that are also disagreements about delaying publication of results to prioritise protection of IPR in favour of later commercialisation 133 (academics have more incentives for publication than for commercialisation).

However. there are also issues with copyright. Current research provisions in the EU copyright acquis – Article 5(3)(a) Information Society Directive and Articles 6(2)(b) and 9(b) Database Directive – set forth the requirement of use for a "non-commercial purpose". The same limitation applies to national legislation on secondary publication right in four out of the six member states, which have introduced secondary publication right. According to a recent study commissioned by the European Commission, this focus on a non-commercial character of the research use causes legal uncertainty (researchers who collaborated with industry refrain to use copyright-protected resources) and hinders public-private collaboration.[172]

7. CROSS-CUTTING ISSUES

7.1. Current landscape and challenges

Cultural & Media Perceptions of Entrepreneurship (including attitudes to risk)

Startups do not emerge in a vacuum—they are shaped, nurtured, and often constrained by cultural narratives, public sentiment, and media discourse. A comparative analysis of the European Union and the United States reveals persistent and evolving differences in how startups are viewed and talked about, reflecting divergent societal values and systemic structures. While the United States fosters an environment where entrepreneurship is idealized and publicly celebrated, the European landscape remains more cautious, policy-bound, and institutionally framed.

The dominant narrative in the United States positions entrepreneurs as cultural icons—risk-takers, disruptors, and economic saviours. Media platforms such as TechCrunch, Forbes, and Wired are instrumental in shaping these perceptions. Aldrich & Ruef (2018)[173] argue that such glamorization creates a "mythology of entrepreneurship," with media narratives emphasizing unicorns and venture capital success stories rather than the day-to-day grind of small business creation.

By contrast, European media has traditionally been more conservative in its framing. Raible (2016)[174] and Wakkee et al. (2014)[175] note that failure is portrayed as a personal shortcoming, not a learning experience. Media outlets are more likely to report on regulatory challenges or economic constraints than on founder triumphs.

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172 European Commission: Directorate-General for Research and Innovation (2024), *Improving access to and reuse of research results, publications and data for scientific purposes – Study to evaluate the effects of the EU copyright framework on research and the effects of potential interventions and to identify and present relevant provisions for research in EU data and digital legislation, with a focus on rights and obligations*.

173 Aldrich, H.E., & Ruef, M. (2018). *Unicorns, Gazelles, and Other Distractions*. Academy of Management Perspectives.

174 Raible, S. E. (2016). *Entrepreneurship Ecosystems: A Comparison of the United States and Germany.* Bosch Alumni Network.

175 Wakkee, I., Dorrestein, F., & Englis, P. (2014). *The Stigmatization of Bankrupt Entrepreneurs in Dutch Newspapers.* Journal of Small Business.

This divergence intensified during the COVID-19 crisis. Kuckertz et al. (2020)[176] found that U.S. coverage emphasized startup resilience, pivoting, and innovation in adversity, while European outlets spotlighted systemic vulnerability and the need for state support.

The perception of failure is a core differentiator. In the U.S., business failure is seen as a stepping stone. Friedman & Aziz (2012)[177] and Global Entrepreneurship Monitor data confirm that American entrepreneurs experience higher public tolerance for risk and failure. Entrepreneurs often reappear in new ventures, sometimes with stronger reputations.

In Germany, however, failure remains socially stigmatized. Kuckertz, Berger & Prochotta (2020)[178] argue that failure is still considered morally or personally deficient—an attitude reinforced by German media narratives.

A major reason for these differing perceptions lies in the structure and function of the media. In the U.S., entrepreneurial media outlets serve as amplifiers, often working hand-in-hand with founders to shape public image and attract funding (Bruno & Nielsen, 2012)[179]. Startups use media not just for visibility, but as a component of their strategy—crafting narratives that align with investors and audiences.

In the EU, startups tend to rely more on institutional legitimacy. Porlezza & Splendore (2018)[180] show that European entrepreneurial journalism projects emphasize credibility, objectivity, and alignment with public service rather than disruptive potential.

One of the more recent developments post-2018 is the emergence of social media as a parallel narrative engine, especially in Europe. Pakura & Rudeloff (2023)[181] find that German startups are increasingly bypassing traditional gatekeepers to build their reputations directly on platforms like LinkedIn and Twitter. However, American founders remain significantly more adept at building personal brands that translate into capital and public support.

This trend represents a narrowing of the visibility gap but not yet a cultural convergence.

A big data analysis by von Bloh et al. (2020)[182] revealed stark differences in the frequency and breadth of entrepreneurship coverage. U.S. media ecosystems produce exponentially more startup-related content across various cities, while EU coverage is heavily centralized in a few innovation hubs like Berlin, Paris, and Stockholm.

In terms of gender representation, Global Women's Entrepreneurship Report (2019)[183] shows that American media are more likely to feature and promote women founders. Europe lags behind, both in public perception and media representation, although state policies are beginning to address this imbalance.

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176 Kuckertz, A. et al. (2020). Startups in Times of Crisis. Journal of Business Venturing Insights.

177 Friedman, B. & Aziz, N. (2012). Entrepreneurial Attitudes: Turkey vs. US. International Journal of Business.

178 Kuckertz, A., Berger, E.S.C., & Prochotta, A. (2020). Misperceptions of Failure. IJEBR.

179 Bruno, N., & Nielsen, R. (2012). Survival is Success. Oxford Internet Institute.

180 Porlezza, C., & Splendore, S. (2018). Crowdfunded Journalism. Entrepreneurial Journalism (Taylor & Francis).

181 Pakura, S., & Rudeloff, C. (2023). Branding via Social Media PR. Journal of Small Business & Entrepreneurship.

182 von Bloh, J. et al. (2020). News Data for Entrepreneurship Research. Small Business Economics.

183 Global Women’s Entrepreneurship Report (2019). Smith College.

Using topic modelling on news databases, Savin et al. (2023)[184] confirmed a sharp divergence in the framing of startups:

- U.S. discourse emphasizes disruption, tech, finance, and exits.
- EU narratives revolve around sustainability, social impact, policy alignment, and long-term employment.

This reinforces an ongoing trend where American entrepreneurship is cast in individualistic, opportunistic terms, while European entrepreneurship is viewed through a systemic, policy-based lens.

Education and policy framing also shape media narratives. Wilson (2008)[185] noted the gap in entrepreneurship education between U.S. and EU universities. While this has narrowed, European media still reflect a view of startups as policy tools rather than cultural icons. Cicchiello (2019)[186] found that even crowdfunding—widely used for publicity in the U.S.—is seen more as a financial workaround in the EU.

While both the EU and U.S. recognize entrepreneurship as a growth engine, their cultural storytelling, media ecosystems, and public sentiment take vastly different paths. In the U.S., entrepreneurs write their own narratives—fast, loud, and public-facing. In Europe, they are still often expected to fit into pre-approved institutional moulds.

As digital platforms evolve and younger generations engage with entrepreneurship through new lenses, these distinctions may soften. For now, they remain deeply ingrained and highly consequential.

184 Savin, I. et al. (2023). *Topic-Based Classification of Startup Trends*. Small Business Economics.

185 Wilson, K.E. (2008). *Entrepreneurship Education in Europe*. SSRN.

186 Cicchiello, A.F. (2019). *Crowdfunding & Policy Framing in the EU*. JEPP.

Annex 1: Synopsis Report of Stakeholder Consultation

1. Introduction

The public consultation on the EU Startup and Scaleup Strategy aimed at gathering diverse stakeholder insights to inform the development of a robust and effective strategy for enhancing the framework conditions for startups and scaleups across the European Union. The Call for Evidence, which was open for 4 weeks (17 February 2025 – 17 March 2025), attracted a substantial number of responses, 589, from a wide array of stakeholders spanning 36 countries, reflecting the broad interest and varying perspectives on the challenges and opportunities faced by startups and scaleups in Europe.

The responses came from a diverse set of stakeholders, including 172 companies or businesses, 111 business associations, 108 EU citizens, and 47 academic or research institutions. Non-governmental organizations (NGOs) contributed 37 responses, while public authorities and trade unions provided 36 and 10 responses, respectively. Notably, the consultation also received input from non-EU citizens and consumer organizations, illustrating the broad relevance of the EU Startup and Scaleup Strategy.

Geographically, the consultation saw the highest participation from Belgium with 115 responses, followed by the Netherlands and Germany, each contributing 64 responses. Other significant contributions came from Italy, France, Sweden and Spain, among others. The feedback was predominantly in English, accounting for 524 submissions, with additional insights provided in languages such as German, Italian, French and Spanish.

The consultation also highlighted the varied company sizes involved, ranging from micro-enterprises (171) to large companies with 250 or more employees (104). This diversity in stakeholder representation underscores the multifaceted nature of the startup ecosystem and the need for a comprehensive strategy that addresses the unique needs of different entities within it.

In addition to the 589 responses submitted through the Call for Evidence, a total of 26 contributions were made outside of this process. These contributions are not reflected in the visualisations illustrated below but are included in the identified hurdles and actions of this synopsis report.

Through this extensive consultation, the European Commission aimed to capture a wide spectrum of viewpoints to ensure that the EU Startup and Scaleup Strategy is both inclusive and reflective of the current landscape, ultimately fostering a more conducive environment for innovation and growth in the EU.

1.1. Responses by Type of Respondent (Call for Evidence)

User Type	Count	Percentage

Company/business	172	29.2%
Business Association	111	18.8%
EU Citizen	108	18.3%
Other	53	9.0%
Academic/Research Institution	47	8.0%
NGO (Non-governmental organisation)	37	6.3%
Public authority	36	6.1%
Non-EU Citizen	14	2.4%
Trade Union	10	1.7%
Consumer Organisation	1	0.2%

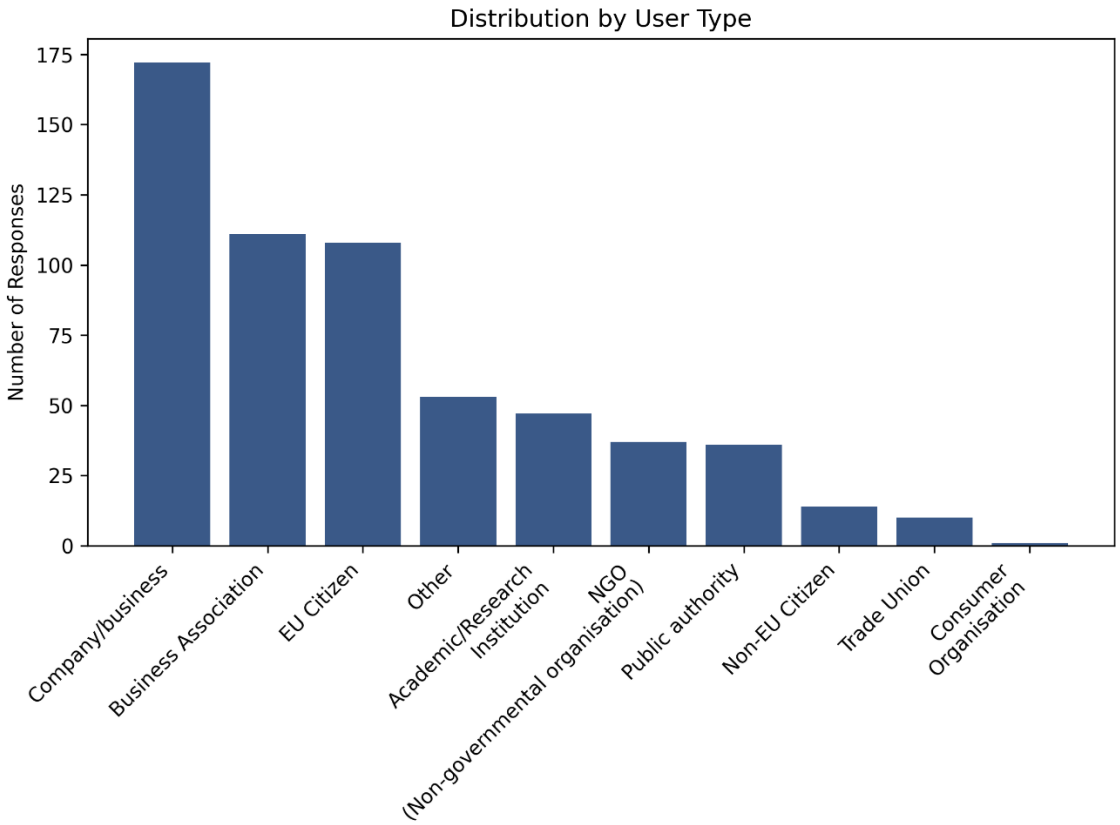
1.2. Responses by Country (Call for Evidence)

Responses were received from 36 countries. Top countries:

Country	Count
Belgium	115
Netherlands	64
Germany	64
Italy	51
France	43
Sweden	27
Spain	27
Poland	21
Finland	20
Portugal	19

Figures (Call for Evidence)

1.1. Distribution of responses by user type



2.2 Responses by Country

2.3. Call for Evidence questions

Stakeholders are invited to reply to the following questions.

1. Do you agree that startups and/or scaleups face the hurdles identified in this document (access to finance, regulatory and bureaucratic burdens and fragmentation, access to markets, access to talent, and access to infrastructure, knowledge and services)?
2. Are there any additional hurdles faced by startups and/or scaleups?
3. What actions do you think the EU and/or its Member States should take to address these hurdles?

2. ANALYSIS OF RESPONSES

2.1. Access to Finance

Overview

The Access to Finance area reveals a complex landscape where stakeholders from various sectors, including business associations, NGOs, and academic institutions, converge on the critical challenges faced by startups and scaleups in Europe. The primary hurdles identified include limited access to venture capital, fragmented capital markets and under-developed secondary markets. Stakeholders consistently emphasise the need for a more integrated and supportive financial ecosystem to enable startups to scale effectively. The proposed actions to address these hurdles are diverse, ranging from the creation of pan-European venture capital funds, harmonisation of regulation to the development of secondary markets. These actions are seen as essential to fostering a more conducive environment for investment and growth across the EU.

3.1.2. Hurdles Identified

A recurring theme in the feedback is the limited access to venture capital, particularly in the later stages of funding. Stakeholders highlight the structural limitations of Europe's venture capital landscape, which is less developed compared to the US and China. One business association from Italy noted that the EU accounts for just 5% of global venture capital funds raised, compared to 52% in the US and 40% in China. Certain stakeholders find that this disparity is further exacerbated by the fragmented nature of capital markets across the EU, which reduces liquidity and makes it challenging for startups to attract long-term investments. It is said by some stakeholders that this gap is particularly pronounced in capital-intensive sectors such as deep tech and biotech, where long development cycles and high-risk profiles deter traditional investors.

Access to finance is further hindered by the limited participation of institutional investors, such as pension funds, in venture capital markets. Several stakeholders have pointed out that European pension funds control vast assets but invest only a small fraction in venture capital, limiting the availability of growth capital for startups. A business association from Germany highlighted this issue pointing to the fact that European pension funds have assets of over a trillion euros but are limited in their investments in technology startups.

Additionally, the bureaucratic and administrative burdens associated with accessing public funding are seen as significant obstacles. The lengthy and complex application processes deter many startups from seeking EU funding, as noted by a company from Sweden who expressed that the complexity and lack of transparency in identifying and accessing EU funding opportunities creates further obstacles. This issue is compounded by the lack of

tailored financial instruments that align with the dynamic nature of startups, which often require rapid deployment of funds to seize market opportunities.

Another critical hurdle is the lack of a well-developed secondary market, which limits liquidity and exit opportunities for investors. The absence of a unified stock market framework further complicates the situation, as noted by a business association from Italy which put forward that European markets which account for over 200 trading venues should aim at establishing a unified stock market framework.

The regulatory landscape is another significant barrier in the context of access to finance, with stakeholders highlighting the complexity and inconsistency of regulations across EU member states. This fragmentation not only discourages cross-border investments and scaling efforts. A company from the Netherlands emphasised that inconsistency of regulations and complexity across EU Member States increases operational costs and slows down expansion. This sentiment is echoed by many stakeholders who argue that a more harmonised regulatory framework is essential to facilitate growth and attract international investors.

3.1.3. Actions Identified

To address these challenges, stakeholders have proposed a range of actions aimed at enhancing access to finance for startups and scaleups. A common suggestion is the creation of a more integrated and supportive venture capital ecosystem, with several stakeholders advocating for the establishment of pan-European venture capital funds.

Another proposed solution is to increase the involvement of institutional investors in venture capital markets. Stakeholders have recommended policy changes to incentivise pension funds and insurance companies to allocate more capital to high-growth sectors. In this context, some stakeholders emphasise the need to unlock EU institutional investments, including insurers, banks, and pension funds to boost the availability of growth capital.

In addition to these structural changes, stakeholders have highlighted the importance of streamlining public funding processes to make them more accessible to startups. Simplifying application procedures and reducing administrative burdens are seen as essential steps to encourage more startups to seek EU funding. A company from the Netherlands underlined simplifying the EU funding process, reducing unnecessary complexity to facilitate access to financial resources.

Tax incentives are also seen as a crucial tool to stimulate investment. Certain stakeholders advocated for support tax incentive schemes for angel investment and cross-border investment. This sentiment is echoed by other stakeholders who highlight the need for fiscal measures to attract both domestic and international investors.

The development of secondary markets is also prioritised as a means to enhance liquidity and provide exit opportunities for investors. A business association from Italy suggested that the secondary markets in the EU must be developed in a way to provide liquidity for early investors. This action is seen as critical to attracting more substantial investments and enabling startups to scale effectively.

Regulatory reforms are also seen as crucial to improving access to finance. Stakeholders have called for the harmonisation of regulations across member states to reduce

compliance costs and facilitate cross-border investments. Several stakeholders suggested that harmonising business law at European level to enable a more seamless internal market. This would not only simplify the regulatory landscape but also enhance the attractiveness of the EU as a destination for global investors.

The feasibility and potential impact of these proposed actions vary, with some stakeholders expressing concerns about the implementation challenges. For instance, while the idea of a pan-European venture capital fund is widely supported, there are questions about how such a fund would be structured and governed to ensure equitable access across member states. Similarly, regulatory harmonisation is seen as a complex undertaking that requires careful coordination among national governments.

Overall, the feedback underscores the need for a comprehensive and coordinated approach to improving access to finance for startups and scaleups in the EU. By addressing the identified hurdles and implementing the proposed actions, the EU can create a more conducive environment for innovation and growth, ultimately enhancing its global competitiveness.

3.2. Regulatory and Bureaucratic Burdens

3.2.1 Overview

The regulatory and bureaucratic burdens faced by startups and scaleups in the EU are multifaceted and deeply entrenched, as evidenced by the feedback from various stakeholders. These burdens are primarily characterised by fragmented regulations across member states, complex compliance requirements and a lack of harmonised frameworks that hinder the seamless operation and growth of startups across the EU. Stakeholders, including business associations, companies, and academic institutions, consistently highlight these issues, emphasising the need for a more unified and streamlined regulatory environment. The challenges are compounded by the diverse regulatory landscapes in different member states, which create significant barriers to market entry and expansion for startups and scaleups. The proposed actions to address these hurdles focus on regulatory harmonisation and simplification of compliance processes.

3.2.2. Hurdles Identified

The regulatory and bureaucratic burdens faced by startups and scaleups in the EU are primarily driven by the fragmentation of regulatory frameworks across member states. This fragmentation creates a complex and often contradictory landscape that startups must navigate, leading to increased compliance costs and administrative burdens. Stakeholders noted that the fragmented regulatory landscape in the EU with 27 national regimes of company law, insolvency law, and taxation creates significant barriers to scaling. This sentiment is echoed by a company in France, which highlighted the complex and time-consuming regulatory and compliance procedures that delay market entry and place an extra burden on young companies.

Moreover, the feedback indicates that the regulatory environment is often not conducive to the needs of startups and scaleups. Many stakeholders have expressed concerns that existing regulations are overly restrictive and not tailored to the unique challenges faced by these companies. For example, one stakeholder noted that startups have difficulties understanding the complexity of the applicable legislation for bringing new products to the

market. This sentiment is shared by others who argue that the regulatory framework needs to be more flexible and supportive of innovation.

The lack of a unified regulatory framework is particularly challenging for startups operating in highly regulated sectors such as biotechnology, energy, and digital technologies. A business association in Belgium pointed out that biotech companies accessing EU markets face a fragmented and inconsistent regulatory framework, which creates delays and hampers access to the EU Single Market. Similarly, it was emphasised the need for streamlined permitting and standardized licensing processes for frontier technologies to remove uncertainty and accelerate deployment.

The complexity of regulatory requirements is further exacerbated by the lack of full harmonisation in areas such as intellectual property (IP) protection, taxation, and labour laws. A company in the Netherlands highlighted that divergent tax, legal and banking rules complicate scaling across the EU. This lack of harmonisation not only increases operational costs but also discourages cross-border investment and collaboration. Further, a business association in France noted that the fragmentation of European tax regimes creates a major barrier to the growth and development of scaleups.

3.2.3 Actions Identified

To address the regulatory and bureaucratic burdens faced by startups and scaleups, stakeholders have proposed a range of actions aimed at harmonising and simplifying regulatory frameworks across the EU. A common theme among the proposed actions is the need for a 28th regime or a unified legal framework that would provide a consistent set of rules for startups and scaleups across all member states. A business association in Belgium suggested that establishing a dedicated 28th regime to harmonise essential regulatory standards across the Union would simplify the establishment or relocation of startups anywhere within the EU. This sentiment is echoed by many others who emphasise the need for a more unified and predictable regulatory environment.

In addition to harmonisation, stakeholders emphasise the importance of simplifying compliance processes to reduce administrative burdens. A company in France proposed streamlining regulatory processes to reduce financial risks and attracting more investors to the region. Similarly, a business association in Germany recommended simplifying and harmonising EU rules to foster a more agile regulatory environment.

The establishment of regulatory sandboxes is another proposed action to support innovation and entrepreneurship. A company in Germany suggested expanding and harmonising sector-specific regulatory sandboxes to allow startups to assess innovations in a controlled environment. This sentiment is echoed by others who believe that this approach would provide startups with the flexibility to experiment with new business models and technologies without being constrained by existing regulations. Similarly, additional forms of experimentation might be considered to enable regulatory learning more generally.[187]

[187] This approach has been first proposed in EC (2022) "Regulatory learning in experimentation spaces", JRC Science for Policy Brief (https://publications.jrc.ec.europa.eu/repository/handle/JRC130458), and has been taken up and extended in EC (2023) "Regulatory learning in the EU", Commission Staff Working Document, SWD(2023) 277/2 final.

Furthermore, stakeholders advocate for the creation of a pan-European digital platform to facilitate access to regulatory information and support services. A business association in Belgium proposed creating a single online portal where startups can access all the information and services they need to operate in the EU. This platform would serve as a one-stop shop for startups, providing them with the resources and guidance needed to navigate the complex regulatory landscape.

Overall, the proposed actions reflect a strong consensus among stakeholders on the need for regulatory harmonisation, simplification of compliance processes and the establishment of supportive mechanisms to foster innovation and entrepreneurship. By addressing these regulatory and bureaucratic burdens, the EU can create a more conducive environment for startups and scaleups to thrive and compete on a global scale.

3.3. Access to Markets

3.3.1. Overview

The Access to Markets area presents a complex landscape of hurdles and proposed actions, reflecting the diverse perspectives of stakeholders across the EU. Stakeholders, including companies, business associations, NGOs, and public authorities, consistently highlight the challenges posed by access to markets, particularly through procurement. These hurdles are intricately linked to the proposed actions, which emphasise streamlined administrative processes and enhanced public procurement opportunities. The feedback reveals a shared understanding among stakeholders that addressing these issues is crucial for enabling startups and scaleups to thrive in the EU market.

3.3.2. Hurdles Identified

A significant hurdle identified by stakeholders is public procurement where startups face significant challenges. Despite the potential opportunities it offers, participation in public procurement processes remains low due to complex application procedures and stringent financial requirements. This sentiment is echoed by several stakeholders who emphasise the need for more startup-friendly procurement policies that reduce administrative barriers and encourage innovation.

The lack of harmonised standards and certifications across member states further complicates market access for startups. This issue is particularly pronounced in sectors such as cybersecurity, where companies must navigate different national standards and certifications, increasing costs and slowing down growth. A stakeholder from Belgium pointed out that cybersecurity startups face complex and diverse regulatory frameworks across Europe, requiring them to navigate different national standards and certifications. This regulatory diversity not only hampers innovation but may also place European startups at a disadvantage compared to their international counterparts.

Another major hurdle is the lengthy and cumbersome approval processes that startups must navigate to bring new products and services to market. The feedback highlights that these processes are often slow and resource-intensive, creating a significant unjustified barrier to innovation. For instance, one stakeholder remarked that the timeline foreseen from submission to final decision - can substantially and unduly delay the implementation of projects. This delay is said to not only hampers the ability of startups to compete effectively

but also discourages them from pursuing innovative projects in the EU that require regulatory approval.

Additionally, the slow pace of regulatory adaptation and the preference for incumbent solutions in procurement structures create significant barriers to market entry for innovative, software-driven technologies. A stakeholder from Belgium noted that the slow pace of regulatory adaptation and procurement structures that favour incumbent solutions over innovative, software-driven technologies create a significant barrier to market entry. This highlights the need for a more dynamic regulatory environment that supports the deployment of cutting-edge technologies.

3.3.3. Actions Identified

To address the hurdles identified, stakeholders propose a range of actions aimed at creating a more conducive market environment for startups and scaleups.

Enhancing public procurement processes to be more inclusive of startups is another widely supported action. Stakeholders propose the introduction of innovation procurement quotas and the promotion of more startup-friendly procurement policies that prioritise innovative solutions. A stakeholder from Belgium emphasized the importance of leveraging public procurement to support startup growth through the use of strategic purchasing power to promote European industry by mandating European participation in procurement processes. This approach should not only foster innovation but also strengthen the competitiveness of European startups.

Furthermore, stakeholders advocate for the establishment of sector-specific incubators and accelerators to support startups in navigating market entry challenges. These initiatives would provide mentorship, expert advice and access to essential resources, helping startups grow in diverse markets. In this context, a stakeholder from Belgium proposed the creation of a European network of sector-specific incubators and accelerators to support startups and scaleups. Such a network would facilitate knowledge exchange and collaboration, enhancing the market readiness of startups.

Streamlining approval processes is also a key area of focus for stakeholders. Many have called for faster and more efficient approval mechanisms to reduce the time and cost associated with bringing new products to market. One stakeholder remarked that making the authorisation process smoother and quicker is an absolute necessity. This call for streamlined processes is supported by others who argue that reducing bureaucratic hurdles is essential for fostering a more dynamic and competitive startup ecosystem.

Overall, the proposed actions reflect a strong consensus among stakeholders on the need for streamlined procurement processes and targeted support for startups. These measures are seen as essential for creating a more integrated and competitive market environment that enables startups and scaleups to thrive in the EU.

3.4. Access to Talent

3.4.1. Overview

The issue of access to talent is a multifaceted challenge that affects startups and scaleups across the EU. Stakeholders from various sectors, including businesses, academic

institutions, and public authorities, have highlighted the critical need for a more streamlined and supportive environment to attract and retain skilled professionals. The hurdles identified include complex administrative requirements, fragmented regulatory landscapes and insufficient support for creating an entrepreneurial culture. Proposed actions to address these challenges focus on simplifying visa processes, harmonising regulations and enhancing educational and training programs to better align with industry needs.

3.4.2. Hurdles Identified

The hurdles related to access to talent are deeply intertwined with regulatory and bureaucratic complexities. A significant concern is the administrative burden associated with hiring skilled workers from outside the EU. Lengthy visa procedures and the lack of mutual recognition of qualifications across member states create barriers that hinder the mobility of talent. One stakeholder noted that the lengthy visa procedures for non-EU talent make it difficult for startups to recruit globally, limiting their ability to scale efficiently. This sentiment is echoed by others who emphasise the need for a unified approach to streamline these processes.

Another critical issue is the shortage of skilled professionals in key sectors such as technology and engineering. The responses reveal a persistent gap in the availability of talent, which is exacerbated by the competition from larger companies and other countries. A stakeholder from Belgium highlighted the skills shortage as a major barrier, noting that the machine tool industry faces a significant shortage of skilled professionals, particularly in mechanical and electrical engineering, automation, robotics, and IoT. This shortage is not only a challenge for startups but also a threat to the broader innovation ecosystem in Europe.

Cultural and structural barriers also play a role in limiting access to talent. The lack of an entrepreneurial culture in some regions, coupled with a risk-averse mindset, discourages individuals from pursuing careers in startups. According to some stakeholders, this is particularly evident in countries like Italy, where stakeholders have pointed out the lack of entrepreneurial culture and a risk-taking mindset as significant hurdles. Additionally, gender disparities and the underrepresentation of women in leadership positions further compound the challenges of attracting diverse talent pools.

The fragmentation of regulatory frameworks across the EU is another hurdle that complicates talent acquisition. Different labour laws, tax systems and stock option policies across member states create inconsistencies that make it difficult for startups to offer competitive compensation packages. A stakeholder from Estonia noted that European startups struggle to hire employees from other EU member states due to differences in labour laws and tax systems. This fragmentation not only affects the ability to attract talent but also limits the potential for cross-border collaboration and innovation.

3.4.3. Actions Identified

To address the challenges related to access to talent, stakeholders have proposed a range of actions aimed at creating a more conducive environment for attracting and retaining skilled professionals.

One of the most widely supported actions is the simplification of visa and work permit processes. Stakeholders advocate for the introduction of an EU-wide startup visa that would streamline the process and make it easier for startups to recruit international talent. One stakeholder put forward that a fast-track EU-wide tech visa would allow companies to recruit top talent globally.

Harmonising regulations across member states is another key action that has garnered broad support. By creating a unified legal framework, the EU can reduce the complexity and administrative burden associated with hiring talent across borders. This would involve aligning employment and stock option rules to make it easier for startups to offer competitive compensation packages. Some stakeholders emphasised that the need for a harmonised stock options regime across the EU to facilitate talent mobility and retention.

Enhancing educational and training programs to better align with industry needs is also seen as a crucial step in addressing the talent gap. Stakeholders have called for increased investment in vocational education and training (VET) programs, particularly in fields like technology and engineering. This would help develop a pipeline of skilled professionals who are equipped to meet the demands of the startup ecosystem. One stakeholder from Belgium noted that vocational education should be modernised to align with Industry 4.0 requirements.

In addition to these actions, stakeholders have highlighted the importance of fostering an entrepreneurial culture and promoting diversity within the startup ecosystem. This includes initiatives to support underrepresented groups, such as women and migrants, and to create a more inclusive environment that encourages diverse talent to thrive. A stakeholder from Austria suggested the launch of entrepreneurial education programs specifically targeting women and young entrepreneurs as a way to address these disparities.

Overall, simplifying visa processes and harmonising regulations would not only make it easier for startups to attract talent but also enhance the overall competitiveness of the European innovation ecosystem. By investing in education and promoting diversity, the EU can build a more resilient and dynamic workforce that is capable of driving innovation and growth. As stakeholders have emphasised, these actions are essential for ensuring that Europe remains an attractive destination for top talent and a leader in the global startup landscape.

3.5. Access to Infrastructure, Knowledge and Services

3.5.1. Overview

The feedback from stakeholders regarding access to infrastructure, knowledge and services reveals a complex landscape of challenges and proposed solutions. Stakeholders from various sectors, including business associations, academic institutions, and NGOs, consistently highlight the critical role of infrastructure and knowledge access in fostering innovation and growth for startups and scaleups. The hurdles identified include limited access to research facilities, fragmented support services and insufficient knowledge transfer mechanisms. Proposed actions to address these challenges emphasise the need for harmonised regulatory frameworks, enhanced collaboration between academia and industry and improved funding mechanisms to support infrastructure development and knowledge dissemination.

3.5.2. Hurdles Identified

A recurring theme in the feedback is the limited access to research and technology infrastructure, which is a significant barrier for startups and scaleups. Stakeholders from various sectors, including business associations and academic institutions, highlight the challenges in accessing specialised facilities and services necessary for innovation. This challenge is particularly pronounced in sectors requiring specialised facilities, such as deep tech and biotechnology. For instance, one stakeholder from a business association in Belgium noted that access to specialized industrial facilities such as CNC labs, robotics testing centres and 3D printing hubs is essential for startups. This sentiment is echoed by other stakeholders who emphasise the need for better access to infrastructure to support the commercialisation of innovations.

The issue of limited access to research and technology infrastructure is particularly pronounced for deep-tech and high-tech startups. Companies in Sweden and Finland highlight the scarcity of specialised facilities and the high costs associated with accessing existing infrastructure, which impede innovation and growth. This challenge is compounded by the lack of awareness and understanding of available resources, as noted by stakeholders from academic institutions in Austria and Belgium, who emphasise the need for better integration and visibility of research and technology infrastructures.

The fragmentation of support services and the lack of coordination among different initiatives are also identified as major hurdles. An academic institution from the Netherlands pointed out that the limited - and often challenging - collaboration pathways between the academic and entrepreneurial sectors represent another critical barrier. This fragmentation leads to inefficiencies and missed opportunities for startups to leverage existing resources effectively. The feedback suggests that a more integrated approach to service provision, with clear pathways for collaboration and knowledge transfer, is essential to overcome these challenges.

Another significant hurdle is the difficulty in accessing knowledge and support services, which are crucial for the commercialisation and scaling of innovations. Stakeholders express concerns about the limited availability of mentorship and networking opportunities, which are essential for startups to navigate complex business landscapes and access new markets. The lack of coordinated support for small and micro-enterprises further exacerbates this issue, as these businesses often struggle to access the necessary resources and guidance to succeed.

The feedback also highlights the challenges associated with intellectual property (IP) management and protection. Stakeholders from various sectors, including business associations and companies, point out that the complexity and cost of securing IP rights deter many startups from pursuing innovation. This issue is particularly acute for technology-driven sectors, where the protection of innovations is critical for attracting investment and ensuring competitiveness.

The lack of a unified framework for accessing infrastructure and services across the EU is also a critical issue. Stakeholders note that the existence of 27 distinct national regulatory frameworks hinders the ability of startups to access the necessary infrastructure and services to scale effectively across borders.

3.5.3. Actions Identified

To address the identified hurdles, stakeholders propose a range of actions aimed at enhancing access to infrastructure, knowledge, and services.

A common theme in the feedback is the need for a more coordinated and integrated approach to infrastructure and service provision. Some stakeholders advocated for the establishment of a unified framework that facilitates access to research facilities and support services across the EU. This includes the development of centralised platforms that provide information on available resources and streamline access to essential services. Additionally, the creation of regional innovation hubs and incubators is proposed to provide startups with access to essential resources and support services. Stakeholders propose the development of shared facilities and testbeds that startups can access to validate and scale their technologies.

Stakeholders emphasise the importance of enhancing collaboration between academia, industry and startups to improve knowledge transfer and commercialization. Academic institutions in Austria and Belgium suggest the creation of dedicated programmes that foster partnerships between universities and businesses, enabling startups to leverage academic research and expertise. Stakeholders highlight the need for targeted funding for university-startup collaboration and support for technology transfer initiatives to develop deep-tech startups and create knowledge-sharing and mentorship networks.

To address the challenges associated with IP management, stakeholders propose the implementation of streamlined and cost-effective IP protection mechanisms. Overall, the proposed actions reflect a comprehensive approach to addressing the challenges faced by startups and scaleups in accessing infrastructure, knowledge, and services. By fostering collaboration, improving regulatory frameworks, and enhancing access to resources, the EU can create a more supportive environment for innovation and growth.