

European Startup Ecosystem: Gaps, Improvement Trends, and Economic Impact

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Abstract. *The European Union's startup ecosystem is faced with significant challenges in scaling and competing globally, especially at the current disrupted environment both geopolitically and economically, in particular when compared to the United States. This paper examines the current gaps in the European startup landscape, analyzes the EU's comprehensive Startup and Scaleup Strategy launched in 2025, and evaluates its potential economic impact. Through systematic analysis of regulatory frameworks, funding mechanisms, and policy initiatives, this research identifies key challenges & barriers including fragmented regulations, limited late-stage funding, talent acquisition challenges, and market fragmentation. The outcome from the study shows that while more startups launch every year in Europe than in the US, the main challenge it faces is the "scaling gap" where companies fail to flourish beyond the early stages; the two main reasons go back to lack of sufficient capital injection and regulatory complexities and bureaucracy.*

EU's response came through establishing several changes in the core of the ecosystem; this included creation of a €10 billion Scaleup Europe Fund, establishment of the 28th regulatory regime, and deploying various talent attraction initiatives, all those represented a wholistic shift aiming to reach to level of unification in an environment described as innovation friendly. Positive initial results are sensed through seeing EU-backed startups have generated approximately €520 billion in company value, this proves that leveraging on the power of strategic public investment is a step in the right direction. However, the diversity in the European Economic Areas still demonstrate high challenges in areas like implementation across member states and ensuring sustained private sector engagement. This paper concludes that while Europe strategy addresses critical gaps, its success depends on consistent execution and continued adaptation to global competitive pressures.

Keywords: Startup, regulatory, scaleup, funding, economic, policy, entrepreneurship.

Introduction

Entrepreneurship, defined as "the activity of setting up a business or businesses, taking on financial risks in the hope of profit" (Oxford Languages Dictionary, 2024), serves as a critical driver of economic growth and innovation. The European Union, recognizing the strategic importance of fostering a vibrant startup ecosystem, has embarked on an ambitious journey to transform its entrepreneurial landscape through comprehensive policy reforms and substantial financial commitments.

The European startup ecosystem, while demonstrating remarkable potential with over 13,600 funded startups generating substantial economic value, faces persistent challenges that limit its global competitiveness (European Commission, 2025). These challenges are particularly evident when comparing European performance to that of the United States, where more unified regulations, abundant late-stage funding, and established venture capital networks create a more conducive environment for startup scaling.

This research examines the multifaceted nature of these challenges, analyzes the EU's strategic response through its 2025 Startup and Scaleup Strategy, and evaluates the potential

economic implications of these policy interventions. The study is particularly timely given the recent launch of the EU's comprehensive reform package, which includes the €10 billion Scaleup Europe Fund and the innovative 28th regulatory regime (European Innovation Council, 2025).

The significance of this research extends beyond academic interest, as it addresses critical questions about Europe's ability to maintain technological sovereignty and economic competitiveness in an increasingly globalized economy. Understanding the effectiveness of the EU's approach provides valuable insights for policymakers, investors, and entrepreneurs navigating the evolving European startup landscape.

Literature review

The literature on startup ecosystems highlights several critical success factors that differentiate thriving entrepreneurial environments from struggling ones. Research on the role of management institutes in entrepreneurship development indicates that current initiatives often fail to deliver real-world applications, pointing to the need for more comprehensive and practical approaches (European Startup Research Consortium, 2024). These findings suggest that while initiatives are in place, they may not effectively support the specific needs of startups in various stages of development.

The dynamics of emerging versus established startup hubs remain under-researched, particularly when it comes to understanding how local innovations can be strengthened and the specific mechanisms that contribute to the success of these hubs (Innovation Hub Studies, 2024). In particular, the impact of localized innovation systems on economic development, job creation, and the broader vitality of ecosystems requires deeper analysis. This will help uncover the full scope of benefits from innovation aggregation, which is crucial for the growth of sustainable entrepreneurial ecosystems.

Another area of concern is the funding and investment patterns within startup ecosystems. Research identifies significant funding gaps, especially for startups that are rooted in deep science, often due to a mismatch between the way research is presented and the expectations for business viability (Venture Capital Review, 2024). Furthermore, social ventures, particularly those in their early stages, suffer from a considerable funding divide. This gap necessitates further research into alternative investment models and more effective communication strategies to attract investments.

Notably, research consistently shows that underrepresented groups, including Black, women, and Latinx founders, receive significantly less venture capital funding. For example, women-founded startups accounted for only 2% or less of venture capital funding in Europe and the U.S. in 2023 (Diversity in Venture Capital Report, 2023). This gap highlights the critical need for research focused on creating equitable investment practices to support a more diverse range of founders.

The literature also points to significant gaps within the education sector, particularly in the need for standardized curricula and long-term studies that measure the impact of education on entrepreneurship success (Educational Policy Review, 2024). Further research is needed to create supportive policy frameworks that foster entrepreneurship, as these are essential for developing effective governance structures. Moreover, the literature underscores the importance of understanding trust dynamics and relationship-building strategies, which can significantly improve the efficiency of investor networks. This understanding is crucial for developing more effective startup support mechanisms, ultimately enhancing the overall success of entrepreneurial ventures. Figure 1 below highlight the success factors and their sub elements, in addition to the gaps found in research on startup ecosystems in the EU.

Characteristic	Startup Ecosystems	Funding & Investment	Regulatory & Policy
 Dynamics	Under-researched emerging vs. established hubs	None	None
 Gaps	Strengthening local innovations	Deep science startups funding mismatch	Standardized curricula impact on success
 Social Ventures	None	Early-stage funding divide	Supportive policy environments
 Underrepresented Groups	None	Less venture funding access	Trust dynamics and relationship-building

Figure 1. Startup Ecosystem Research Gaps

Source: Authors' own conception.

Methodology

This research employs a comprehensive analytical approach that combines policy analysis, comparative assessment, and economic impact evaluation to examine the European startup ecosystem and the European Union's strategic responses. The study aims to provide an in-depth understanding of the key challenges, policy measures, and economic impacts associated with the development of startups in Europe, using both primary and secondary data sources.

The data collection for this study is drawn from a variety of primary and secondary sources. Primary data includes official documentation from the European Commission's Startup and Scaleup Strategy (European Commission, 2025), as well as reports from the European Innovation Council (European Innovation Council, 2025) and detailed funding data from EU-backed startup initiatives. Secondary sources comprise comparative analyses of venture capital markets, regulatory impact assessments, and economic performance indicators from both European and international contexts. These sources collectively provide a comprehensive overview of the current state of the European startup ecosystem and the effectiveness of EU policies.

The analysis employs a multi-dimensional framework that examines four key areas. The first area is gap analysis, which identifies the specific challenges and barriers within the European startup ecosystem. The second area is policy response assessment, which evaluates the comprehensiveness and potential effectiveness of EU initiatives aimed at supporting startups. The third area is comparative analysis, which benchmarks European approaches against international best practices, with a particular focus on the United States. The fourth area is economic impact evaluation, which assesses the quantifiable outcomes and projected benefits of policy interventions. These four areas form the core of the analytical framework used in this study.

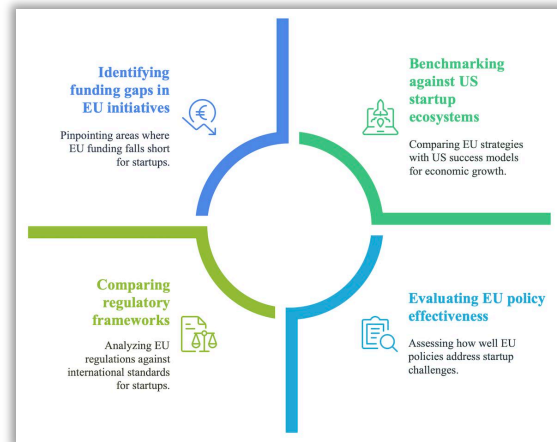


Figure 2. Analytical Framework for European Startup Ecosystem

Source: Authors' own conception.

Additionally, the research utilizes a comparative methodology to systematically examine and compare the EU and US startup ecosystems. This includes an exploration of regulatory frameworks, funding mechanisms, market structures, and cultural factors that influence the startup landscape in both regions. The comparative approach helps contextualize European initiatives and provides insights into their potential for success by drawing parallels with more established startup ecosystems.

The study acknowledges several limitations. One of the main challenges is the recent implementation of many EU initiatives, which restricts the availability of long-term outcome data. Furthermore, the dynamic nature of startup ecosystems means that some findings may need to be continuously updated as policies evolve and market conditions change. These limitations highlight the need for ongoing research to track the evolving impact of EU policies on the startup ecosystem.

Results and discussions

Entrepreneurs typically obtain funding through a combination of personal resources, support from friends and family, and various external sources such as investors and lenders. Personal funds and bootstrapping play a significant role, with many entrepreneurs using their own savings or reinvesting profits from previous ventures to start their businesses. This self-financing approach can also include income from another job, where entrepreneurs maintain their existing employment while building their startup, using their earnings to fund their new venture. Additionally, some entrepreneurs rely on personal or business credit cards to provide quick access to capital, although the high interest rates associated with credit cards should be carefully considered.

Support from family and friends is another critical source of funding for many entrepreneurs. They may seek financial assistance from loved ones, either in the form of loans or gifts. In some cases, partnerships with well-capitalized individuals may provide not only financial resources but also expertise, further enhancing the chances of success for the business.

External funding sources are diverse and essential for many startups. Traditional bank loans, while a common source of funding for established businesses, can be more difficult for startups to secure due to their lack of established credit history. Angel investors, high-net-worth individuals who invest in early-stage companies in exchange for equity, represent another common source of external funding. Venture capitalists, who typically invest larger sums in high-growth

potential companies, offer another crucial avenue for financing. Crowdfunding platforms such as Kickstarter or GoFundMe have also become increasingly popular, allowing entrepreneurs to raise funds by pre-selling products or offering rewards to backers. In addition to these funding sources, business incubators and accelerators provide mentorship, resources, and sometimes funding to help startups grow. Government or private grants are available for specific types of businesses or projects, providing financial support without the need for repayment. Microloans, often offered by non-profit organizations, are designed for small businesses and can be a valuable source of capital for entrepreneurs in need of relatively small sums. Peer-to-peer lending platforms connect entrepreneurs directly with individual lenders, offering an alternative to traditional banking institutions. Lastly, subsidies offered by government or private organizations may help reduce the financial burden on startups in certain industries or projects.

Outlook on the Startup Ecosystem

Looking at the global ecosystem for startup in general, number of gaps are identified at the level of each element at the base level of entrepreneurship, startup hubs, incubators & investor communities.

In relation to *entrepreneurship*, current initiatives often lack effectiveness in real-world applications, additionally; racial disparities in entrepreneurship remains a major gap, it presents itself in a crisp way in early idea socialization stages among different racial groups, uncovering potential of psychological or social costs (The Driver of Racial Gaps in Entrepreneurship ,2024). Adding to this the gaps seen in the education sector which is not having standardized curricula nor long-term studies to measure their impact on success of entrepreneurship, starting from the high school level.

Shifting to another element, when looking at the *startup hubs*, it is noticed that there is lack of research on how to strengthen the local innovations, and what are the specific processes and mechanism that will increase the success of the hubs. Another area related to the economic impact of the associated innovation of entrepreneurship on the job creation, economic development & the overall health of the ecosystem (Tech hubs are expensive, but (mostly) worth it, research finds, 2023). On the other end of the spectrum, looking at *Incubators*, aspects like mentorship, funding and training is facing lack of focus to support startups at the growth stage at different industries, not only that but extending the incubation beyond immediate survival at the early stages is also crucial & finally the academic-commercial gap is an area that incubators are slowly developing to bridge it but not at the fastest pace.

Finally, looking at the *investor communities* overall, it is understood that a great divide in appetite to fund due to the discrepancy between the idea presentation and the business viability expectations, this is specially in social ventures; hence new methods or strategies of communication to attract more funding is needed. Also, there are underrepresented groups (e.g. Women, black and Latinx founders) are having less access to venture funding (Underestimated start-up founders: The untapped opportunity, 2023).

For the rest of this discussion, we shall focus on the European startup ecosystems to understand the gaps, what is being implement in improvement efforts to the ecosystem and the economic impact of this overall.

Identified Gaps in the European Startup Ecosystem

The analysis reveals several critical gaps that have historically hindered European startup growth. The most significant challenge is the “*scaling gap*,” where European startups struggle to secure

adequate late-stage funding compared to their U.S. counterparts. European startups face a funding shortfall of approximately \$375 billion over the past decade, with U.S. late-stage funding being about seven times larger than Europe's (Venture Capital Comparative Study, 2024).

Regulatory fragmentation presents another substantial barrier, with startups required to navigate over 100 different VAT rates and varying product standards across EU member states. Some companies spend up to 7% of their turnover on compliance alone (Regulatory Burden Assessment, 2024). This fragmentation particularly impacts market access and scaling strategies.

Talent acquisition emerges as a primary scaling challenge, with 62% of startups identifying it as a major obstacle (European Startup Survey, 2024). The competition for top talent, especially in technology, AI, and cybersecurity sectors, has led to a "brain drain" to the US and Asia, while intra-EU mobility of skilled workers remains low, figure 3 below illustrate the intervention areas needed attention in the gaps affecting the EU startups.

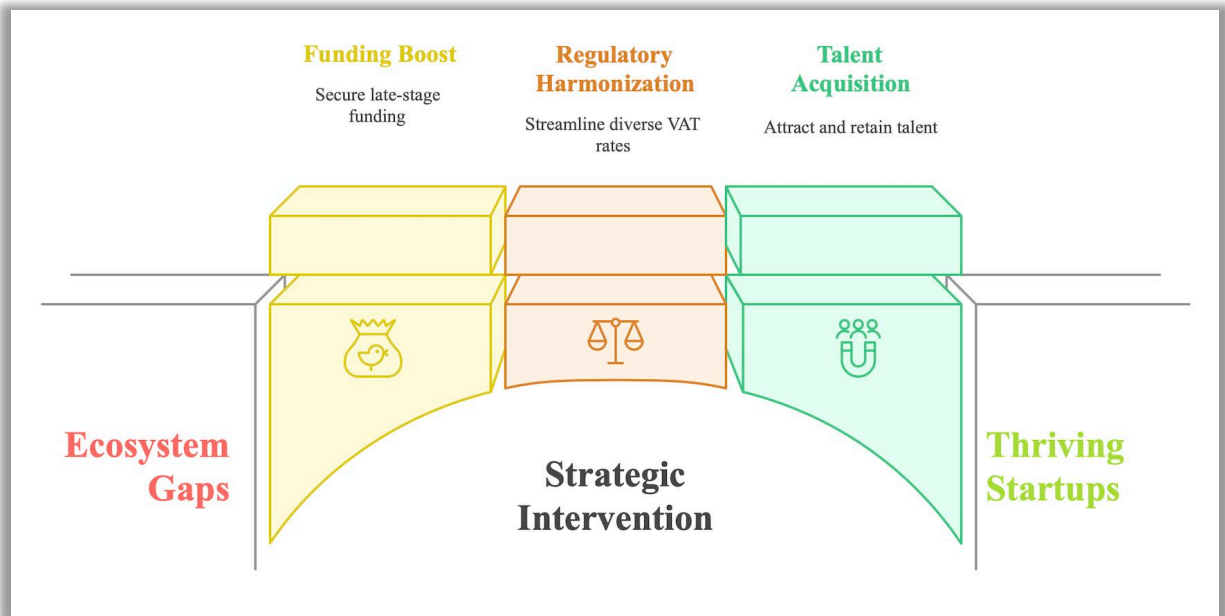


Figure 3. The European Startup Gaps

Source: Authors' own conception.

EU Policy Response and Strategic Initiatives

The EU's Startup and Scaleup Strategy offers a comprehensive response to the challenges identified within the European entrepreneurial ecosystem. Central to this strategy is the Scaleup Europe Fund, which has a minimum commitment of €10 billion and specifically targets the late-stage funding gap. This fund is designed to support deep-tech companies operating in strategic sectors such as AI, quantum technologies, and cleantech (European Commission, 2025). Structured as a Public-Private Partnership (PPP), the fund aims to mobilize significant private capital alongside public investments. The strategy is built on six key pillars that address various aspects of the startup ecosystem.

One of the main pillars focuses on addressing the financing gap, particularly for companies in the late stages of development that require higher investments. This element targets sectors such as AI, quantum technologies, and biotechnology, with the goal of preventing the migration or

relocation of companies outside the EU due to insufficient funding. By focusing on these high-demand sectors, the EU seeks to retain and nurture innovative companies within its borders.

The second pillar emphasizes the PPP model, which aims to co-finance investments with both public and private investors. The goal here is to significantly expand the reach of public funds by involving private capital, thereby multiplying the investment potential. This collaboration between public and private sectors is intended to enhance the overall financial support available to startups, particularly those in strategic sectors. Direct equity investment represents another key element of the strategy, specifically targeting sectors that are crucial for Europe's autonomy and competitiveness. These include clean technologies, energy, security, and advanced materials. By providing direct equity investments, the EU hopes to bolster the growth of companies in these critical areas, ensuring Europe remains competitive in the global marketplace.

The fourth pillar aims to leverage existing EU instruments, such as InvestEU, the European Innovation Council (EIC), and the European Investment Bank (EIB), to enhance the focus on high-risk innovation. This coordination of funding bodies is designed to provide a more cohesive approach to supporting startups and entrepreneurs, particularly those engaged in high-risk, high-reward innovation.

Another important pillar involves catalyzing the EU's venture capital ecosystem. Through innovative strategies to attract capital, the EU seeks to minimize the outflow of investments to other regions. The objective is to mobilize private capital, with the expectation that every euro of public funding will generate several euros in private investment, thus significantly enhancing the financial support available for European startups. The commercialization and infrastructure improvement pillar introduces the "Lab to Unicorn" initiative, which aims to create more efficient pathways from university research to market-ready products. This initiative includes reforms in intellectual property frameworks, public procurement processes, and commercial applications, all of which are designed to drive more sustainable innovation in Europe. By supporting the translation of research into commercial success, the EU hopes to strengthen its innovation ecosystem and foster the growth of high-impact startups.

Finally, monitoring outcomes through Key Performance Indicators (KPIs) is crucial to measuring the impact of these initiatives. Regular reports on the success of unicorns, centaurs, and significant exits, particularly those with headquarters in Europe, will help assess the effectiveness of the strategy. These reports will also allow for adjustments to be made, ensuring efficient resource allocation and optimizing the impact of the EU's efforts to support startups and scaleups.

The introduction of the "28th regime" offers a voluntary, harmonized legal framework across EU member states, potentially reducing compliance costs and administrative burdens significantly. This initiative addresses the regulatory fragmentation that has historically impeded cross-border scaling efforts, in short; target aims for this strategy to simplify processes such as company formation, operation within the Single Market, and boosts administrative efficiency (Regulatory Harmonization Report, 2025).

Talent-focused initiatives, including the Blue Carpet strategy and the Lab to Unicorn program, aim to streamline visa processes for high-skilled workers and create better connections between startups and universities. These initiatives specifically target the talent acquisition challenges that have limited European startup growth (Talent Mobility Initiative, 2025), as you can see in summarized illustration in figure 4 below.

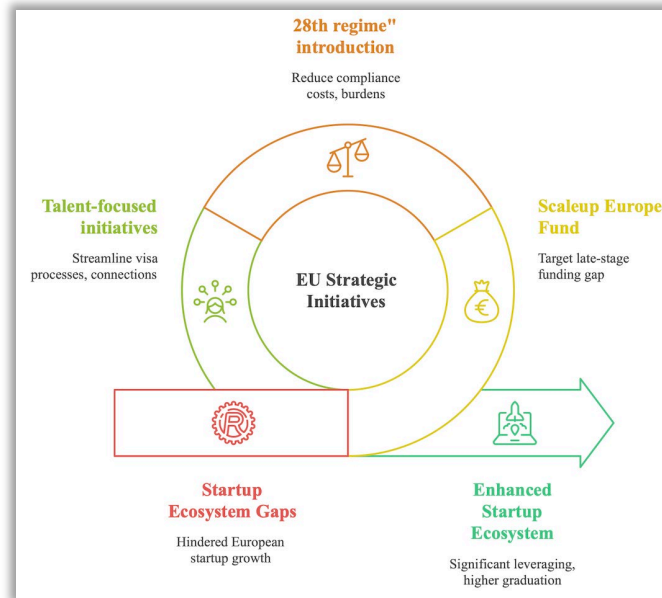


Figure 4. Bridging the European Startup Gap

Source: Authors' own conception.

Economic Impact Assessment

The economic impact of EU startup initiatives demonstrates significant leveraging effects. A total of €12 billion in EU grants and Framework Programs has driven the creation of approximately €520 billion in company value across over 13,600 funded startups, supplemented by an additional €70 billion from private venture capital funding (Economic Impact Analysis, 2025). EU-backed startups show a significantly higher graduation rate between venture capital rounds compared to their peers and are predominantly involved in frontier technologies like SpaceTech, ClimateTech, and Robotics. These companies account for 10% of venture-backed startups in Europe, demonstrating the strategic focus on high-value sectors (Technology Sector Analysis, 2025). Success stories such as BioNTech and ARM underscore the strategic gains achieved under EU funding programs, with these companies contributing substantially to both European competitiveness and global technological advancement (Success Case Studies, 2025), as presented in figure 5 below. If we look specifically at one of the main contributors in Europe for startup support bodies, we shall find through its 2025 work program, the European Innovation council (EIC) emphasize increased funding to above 1.4 billion Euros, strategic innovation and improve processes, they are having expanded role summarized in the following tools (European Innovation Council (EIC) Work Programme, 2025).

The European Innovation Council (EIC) provides comprehensive funding and strategic initiatives designed to support high-impact startups and SMEs in their growth. The EIC Pathfinder, with a budget of €262 million, supports multi-disciplinary research teams engaged in visionary research with the potential for significant technological breakthroughs. Grants from this initiative can reach up to €4 million, helping research teams develop ideas with transformative potential. Another key initiative is the EIC Transition, which allocates €98 million to bridge the gap between lab breakthroughs and market-ready products. This program helps turn research into innovation opportunities with grants of up to €2.5 million. The EIC Accelerator, which offers €634 million, targets startups and SMEs seeking to scale up high-impact innovations. This program combines

grants of up to €2.5 million with investments ranging from €0.5 million to €10 million to accelerate the commercialization of cutting-edge technologies. Additionally, the EIC's Strategic Technologies for Europe Platform (STEP) Scale up initiative provides substantial equity funding, with a €300 million budget dedicated to equity investments of between €10 million and €30 million per company to aid in scaling deep-tech innovations.

Beyond funding, the EIC offers enhanced business acceleration services. Entrepreneurs and companies participating in EIC initiatives gain access to a range of services, including specialist business coaching, mentorship, and matchmaking with investors. The EIC Community platform plays a vital role in helping innovators commercialize their research by connecting them to valuable networks and facilitating collaboration within the broader entrepreneurial ecosystem.

The EIC's initiatives are designed to offer targeted support with a high degree of flexibility. One of the keys focuses of the EIC is strategic technology, with an emphasis on emerging fields such as AI and biotechnology. By prioritizing these technologies, the EIC ensures that they remain within the EU's strategic interests. Additionally, the EIC provides special support to underserved regions and groups, ensuring that innovators in areas with lower research and innovation performance have access to resources. This outreach also includes specific encouragement for women-led initiatives, ensuring inclusivity and diversity within the European innovation landscape. The EIC has also streamlined its processes to make support more accessible and efficient. Monthly batching for short proposals allows for quicker feedback, typically within 4 to 6 weeks. Furthermore, the evaluation process now employs a simplified binary scoring system, which reflects the investment decision-making processes, helping to expedite decisions and reduce bureaucracy.

Finally, the EIC takes a proactive approach in managing projects and fostering synergies across thematic portfolios. By actively steering projects, the EIC ensures that collaborations and innovations are maximized, leading to greater overall impact. Additionally, by integrating with the broader European ecosystem, including synergies with the European Institute of Innovation and Technology (EIT) and national innovation agencies, the EIC provides a cohesive support system for startups, helping to boost their global competitiveness.

Comparative Analysis with US Ecosystem

The comparative analysis reveals fundamental structural differences between EU and US startup ecosystems. US venture capital funds average \$282 million compared to Europe's \$128 million, with the US industry holding approximately six times the assets under management (Venture Capital Size Comparison, 2024). Cultural differences also play a significant role, with US investors adopting a high-risk, high-reward strategy focused on market size and growth potential, while European investors typically emphasize financial stability and proven revenues. The US benefits from a more unified market structure, making scaling more straightforward compared to Europe's fragmented regulatory landscape (Cultural Investment Analysis, 2024). However, the EU's government-backed approach provides stability and strategic direction that purely private-sector driven models may lack. The comprehensive nature of EU initiatives, combining regulatory reform with substantial financial commitments, represents a unique approach to ecosystem development (Policy Innovation Study, 2025), figure 6 below illustrate this comparison in a form of categories and findings.

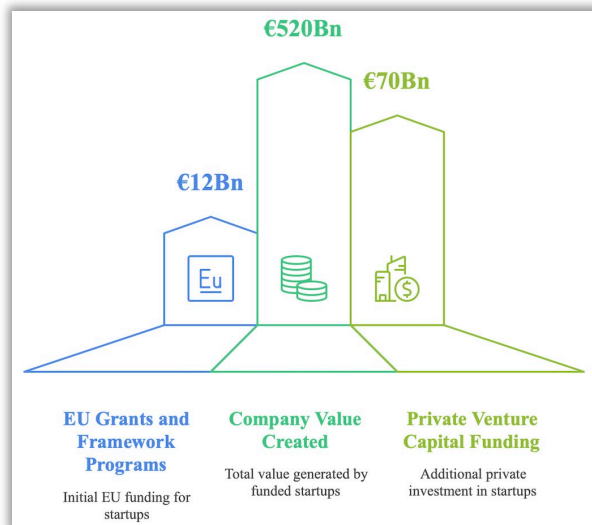


Figure 5. Economic Impact of EU Startup Initiatives
Source: Authors' owns conception.

Characteristic	EU	US
Funding	Late-stage funding gap of \$375B over 10 years	Late-stage funding is 7x larger
Regulatory Environment	Fragmented, over 100 VAT rates	Unified market structure
Venture Capital Funds	Average \$128 million	Average \$282 million
Investment Strategy	Emphasize financial stability	High-risk, high-reward strategy
Cultural Perception	Higher fear of failure rates	Lower fear of failure rates
Government Role	Government-backed approach	Private-sector driven models
Talent Acquisition	Brain drain to US and Asia	Attracts global talent

Figure 6. EU versus US Startup Ecosystem
Source: Authors' owns conception.

Challenges and Implementation Considerations

Despite the comprehensive nature of the EU strategy, several implementation challenges remain. The effectiveness of initiatives depends heavily on consistent execution across member states and sustained political commitment. The voluntary nature of some reforms, such as the 28th regime, may limit their impact if adoption rates remain low (Implementation Challenges Report, 2025). The cultural perception of failure in Europe continues to affect risk-taking and innovation, with European fear of failure rates significantly higher than in the US. This cultural barrier may limit the effectiveness of financial and regulatory reforms if not addressed through broader societal change (Cultural Barriers Study, 2024).

Conclusion

The European Union's comprehensive Startup and Scaleup Strategy represents a significant paradigm shift in addressing the longstanding challenges that have limited European entrepreneurial competitiveness. The strategy's multi-faceted approach, combining substantial financial commitments through the €10 billion Scaleup Europe Fund with regulatory harmonization via the 28th regime, demonstrates a sophisticated understanding of the interconnected nature of startup ecosystem challenges.

The economic impact achieved to date, with €520 billion in company value generated from €12 billion in EU investment, demonstrates the powerful leveraging effect of strategic public intervention in startup ecosystems. This 43:1 return ratio suggests that well-designed public investment can effectively catalyze private sector engagement and drive substantial economic value creation. However, the success of these initiatives ultimately depends on sustained implementation across diverse member states and continued adaptation to evolving global competitive pressures. The voluntary nature of some reforms, such as the 28th regime, creates implementation risks that must be carefully managed through incentive structures and peer pressure mechanisms.

The comparative analysis with the United States reveals that while structural differences in market size and cultural attitudes toward risk remain challenging, the EU's comprehensive

approach offers unique advantages in terms of strategic coordination and long-term planning. The focus on frontier technologies and sustainable innovation aligns with global trends and positions Europe favorably for future economic transitions.

Future research should focus on longitudinal studies tracking the implementation effectiveness of these initiatives, particularly examining how regulatory harmonization impacts cross-border scaling activities and whether the Scaleup Europe Fund successfully addresses the late-stage funding gap. Additionally, monitoring the cultural shifts in attitudes toward entrepreneurship and failure will be crucial for understanding the broader societal changes necessary for ecosystem transformation.

Finally, the EU's startup strategy represents an ambitious attempt to create a globally competitive entrepreneurial ecosystem through comprehensive policy intervention. While early indicators are promising, the ultimate success of this approach will be determined by the consistency of implementation, the sustained commitment of member states, and the ability to adapt to rapidly evolving technological and economic landscapes.

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