Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

Article

University venture capital in Europe and North America: Evidence, models, and EU policy implications

Thomas Crispeels[1], Emiel De Buyser[1], James P. Gavigan[2], and Ramón Compañó[2].

[1] Vrije Universiteit Brussel, Brussels Entrepreneurship and Innovation Lab. Belgium.
[2] European Commission, Joint Research Centre. Spain.

Abstract

In response to the funding gap encountered by many University Spin-Offs (USOs), universities establish their own university venture capital (UVC) structures. These early-stage investors are increasingly seen by policymakers as tools for institutional and regional development and for improving the pipeline of high-potential deep tech startups. In this article, we provide key insights and guidance to policymakers and researchers investigating the development of UVC as an instrument to increase the importance of USOs in the startup economy. We start by defining the concept of UVC and by critically assessing its role and evolution in the innovation-driven economy. We then present an overview of different models of UVC and discuss the results of a benchmark exercise of the current European and North American UVC landscape. We then highlight the current EU policy context and identify ways forward to develop UVC, and we present a research agenda on the topic.

Key words

University venture capital, technology transfer, public policy, spin-offs.

Extra information

This research is partly funded by the European Commission CT-EX2025D1116136-101-scope 10643 University Venture Capital in Europe – Comparative Trends and Policy Issues.

Introduction

Policy and innovation context: the university spin-off gap

Over the past few decades, universities have expanded their roles beyond teaching and research to embrace a "third mission" centered on generating societal impact through innovation and technology transfer [1]. Transferring economically exploitable knowledge to the productive sector, creating in the process new products, services, and high-quality jobs, is part of this third mission. This makes universities key players in innovative entrepreneurial ecosystems and often involves universities creating knowledge-based startups: university spin-offs (USOs). USOs are startups which spin out from universities aiming to commercially exploit research results, expertise and inventions developed within a university setting. USOs play a vital role in

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

fostering economic growth, creating high-skilled jobs and driving technological progress [2], [3], [4] and they create benefits for universities, increasing attractiveness and enhancing their education and research missions. Of particular interest are those spin-offs commercializing scientific breakthroughs in deep technology domains, such as life sciences, artificial intelligence and advanced materials.

In the past five years, EU-27 spin-offs created 1.4 million jobs and raised 24bn EUR of investment, with the highest growth rates in deep tech [5]. The creation of USOs has always been high on the public policy agenda. However, the number of USOs has remained below expectations, as has the potential for most European universities. In fact, the top 30 European universities generate half of all the university spin-offs in Europe, indicating a huge untapped potential in European universities [5]. Furthermore, the number of spin-offs produced per million inhabitants varies widely across Europe, indicating large national and regional differences in policy frameworks, entrepreneurialism, and support for academic entrepreneurs. These findings indicate a real need for science-driven policy and ecosystem development, as well as capacity building in Europe when it comes to translating world-class research into university spin-offs.

"High-tech innovation clusters typically develop around world-class higher education institutions. In the EU, the scarcity of these institutions and the weak interaction between universities and businesses hinder technology transfer, innovation capacity, and ultimately economic growth." [Draghi 2024]

University venture capital as part of the solution

Recognising their potential, policy makers and universities have developed a comprehensive support infrastructure, including technology transfer offices, incubators, accelerators, pre-incubation programmes, and entrepreneurial training… to nurture the development of these spin-offs [6], [7]. Despite these efforts, USOs often encounter significant barriers in accessing early-stage investments by Business Angels and Venture Capitalists (VC). Their dependence on intangible assets, early-stage technologies, and the absence of a commercial track record make it difficult for investors to evaluate their viability [8], [9]. This information asymmetry leads to a persistent *funding gap*, as traditional VC firms tend to favour more mature ventures with clearer market potential. According to a recent report, "Spin-offs: Reinforcing a Vector of Value Creation for EU-27" [EC 2025a], 23% of deep tech startups in Europe, which are university spin-offs, account for just 11% of total deep tech valuations, suggesting a gap in scaling compared to non-spin-off deep tech startups. Public grants and university-based programmes help to some extent, but they are often insufficient to propel spin-offs toward sustainable growth and further investment [10].

In response to this challenge, universities have begun to establish their own venture capital structures, commonly known as university venture capital funds (UVCs). UVCs are investment vehicles directly connected to a parent university, which invest equity capital in early-stage companies, especially those emerging from university research [11], [12].

Research and policy gaps

UVC plays a unique role in addressing market failures affecting a vital category of deep-tech ventures in the European startup economy. UVCs can (1) act as hubs to provide capital, infrastructure, and network support; (2) span boundaries to overcome regional fragmentation through alliances; (3) better align USOs with private investor expectations; and (4) act as

instruments for regional and institutional development. As such, UVC initiatives and associated spin-off ecosystems are crucial to turning academic research into scalable business, and so are important focal points for EU R&I actions such as the lab-to-unicorn initiative of the EU's May 2025 "Startup and Scaleup Strategy"[13].

Objectives of the article

In this article, we provide key insights and guidance to policymakers for which the development of UVC could be a focus of policy support for USOs as a key enabler of the startup economy. To develop an effective UVC instrument, EU policymakers should have access to a thorough understanding of the UVC concept and the global landscape of the phenomenon. They also need to know of the trade-offs faced when developing UVC instruments, the effects of choices made on institutions and regions. They also need to take into account how best to integrate UVC instruments into broader support structures and entrepreneurial ecosystems.

To this end, we start by defining the concept of UVC and by critically assessing its role in the innovation-driven economy. We then present an overview of different models of UVC and provide a snapshot of the current European and Northern American UVC landscape. We then highlight the current EU policy context and identify ways forward to develop, research and support the European UVC landscape.

Positioning in the literature

Our article brings together different research strands at the nexus of literature on the entrepreneurial university, entrepreneurial finance and public policy for innovation. Regarding the literature on entrepreneurial universities, we extend the traditional focus on technology transfer offices, academic entrepreneurs, incubators and USOs, to scrutinise how UVCs are employed to institutionalise the universities' role in the entrepreneurial ecosystem beyond their organizational boundaries. We add to the understanding of UVC as a separate phenomenon in entrepreneurial finance and present a first comparative UVC dataset for Europe and North America, which leads to systematic evidence and a policy-oriented typology of UVC. By tackling the underexplored topic of UVC, we also blur the boundaries between public, private and academic investment and provide a framework for integrating UVC into organisational, regional, and EU research and innovation strategies.

University venture capital

Definition and goals

Within this broader 'third mission' of universities [1], [14], UVCs have emerged as one of the most direct instruments to bridge academic innovation and market commercialisation. UVCs – also referred to as university-affiliated funds, university seed funds, or university spinout funds – are investment vehicles either directly managed by one or more partner universities or operated through affiliated entities. These funds typically invest equity in early-stage ventures emerging from within the university ecosystem or based on university research, often founded by faculty, researchers, or students. Unlike traditional venture capital, which primarily seeks financial returns, UVCs pursue dual objectives [12], [15]:

- To nurture startups aligned with the university's research strengths and institutional mission.
- To reinvest returns into broader technology transfer and innovation infrastructures.

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

In addition to their funding role, UVCs act as powerful institutional signallers in entrepreneurial ecosystems. By offering early-stage capital and formal backing, UVCs certify the credibility and quality of university spin-offs (USOs) to external investors, thereby reducing informational asymmetries [8], [16]. This endorsement can be critical in enhancing a USO's attractiveness to traditional venture capitalists and other stakeholders, who may interpret UVC involvement as a form of rigorous screening and institutional validation.

We distinguish four types of Venture Capital: Private Venture Capital, Corporate Venture Capital, Government Venture Capital and University Venture Capital. Compared to Government VC, UVCs focus specifically on USOs, and may or may not necessarily line up with broader public goals like job creation or strategic technology priorities. At the same time, a voice of caution has to be expressed: the UVC's support for early-stage spin-offs may lead to private VC withdrawing from high-risk ventures, focusing more lower risk investments. In other words, the well-intentioned mission of UVC might end up squeezing out private investment, a phenomenon occurring in the case of Government VC [17], [18].

The governance of UVCs

UVCs are often established as limited partnerships, and their structure and operations vary significantly depending on ownership and funding sources. Funding sources influence the scope and strategic orientation of UVCs. Those receiving external or governmental funds alongside university capital frequently operate beyond their affiliated university, adopting broader and more traditional investment mandates [12], [15].

The organizational structures and governance models of UVC funds are highly diverse, shaped by regional innovation ecosystems, institutional goals, and funding sources. Many early UVCs were embedded within university technology transfer offices, but over time, they have evolved into more professionalized entities. Today, UVCs are often structured as limited partnerships, where the university typically acts as a key limited partner, while external venture capital professionals manage day-to-day operations [12]. Prominent examples include Imperial Innovations (Imperial College London), ARCH Development Partners (University of Chicago), and Sopartec SA (Université Catholique de Louvain). More recent innovations include student-managed funds and co-investment models involving alumni or private sector actors [19]. Croce et al. [12] notice a standard trajectory where UVCs often emerge as university-managed vehicles and evolve towards a more classic VC model (limited partnership). Anecdotical evidence also points towards a gradual widening of the scope of target projects and evolution towards a more commercial logic and strategy.

These structural differences produce a wide spectrum of strategic orientations. UVCs may be driven by varying objectives depending on ownership and funding sources. Some funds emphasize societal impact and long-term financial sustainability, aiming to support startups that align with university missions while ensuring reinvestment capacity. Others are more commercially focused, targeting ventures with high growth and scaling potential to maximize financial returns and attract follow-on private investment [15]. Governance arrangements often reflect these strategic priorities. Dual-objective UVCs typically feature shared decision-making between academic representatives and professional investors, blending academic insight with market-oriented expertise. In contrast, profit-driven UVCs tend to be dominated by professional investors who prioritise commercial viability, scalability, and return on investment.

Reflecting these varied objectives, UVC governance can be mapped along two key dimensions: management structure and organizational entity type. Regarding management structure,

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

academic-led UVCs are integrated into university governance, following a more academic logic. Professionally managed UVCs, led by venture capital experts, prioritize commercial logic. Mixed-management models combine academic and professional oversight, balancing societal goals with financial sustainability. Regarding entity type, UVC firms are institutional entities, like holding companies, managing multiple investments, while UVC funds are individual investment vehicles, typically structured as limited partnerships or seed funds. Some universities operate both a firm and affiliated funds, providing flexibility in governance and investment strategies.

As such, in Table 1 we categorize UVCs along two key governance dimensions: the management structure—ranging from university-led to professional investor-led—and the organizational entity type—firm, fund, or a combination of both. The intersection of these dimensions yields seven observed UVC models across Europe. Table 2 provides an overview of how these models vary in strategic orientation. Academic-oriented UVCs focus on societal and research impact while commercially oriented structures prioritize financial returns.

Table 1: University venture capital models. Own set-up.

		UVC Management		
		University	Mixed	External
Organizational Entity	UVC firm	University UVC firm	Mixed UVC firm	*not observed*
	UVC fund	*not observed*	Mixed UVC fund	External UVC fund
	Both	Dual university UVC	Dual mixed UVC	Dual external UVC

The European UVC landscape

To assess the case for and against acting, policy makers should have as comprehensive as possible baseline data and analyses of the UVC landscape in its wider context - how many and what types of UVCs exist? Where are they located? What are their investment focuses or success rates? What trends are at play? What difficulties do UVCs face? How are they articulated with other means of venture support and other missions of universities? Etc..

Without a solid understanding of the landscape and its dynamics, it is hard to discern whether and when to act and, if so, how to design effective measures to support UVCs or quantify their impact compared to, or in concert with, other types of private or public innovation financing.

Careful examination of the UVC landscape reveals more variability and complexity than the simple picture in the introduction of how UVCs typically work implies. For instance, the overlapping but distinct roles of UVC, private VC, and governmental VC call for a clear understanding of their interplay and for a nuanced approach to any policy considerations.

The systematic collection and presentation of UVC data in this article and follow-up research, aims to help in this regard.

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

Table 2: Overview of dominant strategic orientations across UVC models

UVC Model	Primary Control	Typical Investors	Investment Focus	Strategic Orientation
University UVC Firm	University	University	Own USOs	Academic / societal
Mixed UVC Firm	University & Professional	University, private, institutional	Own USOs	Balanced
Mixed UVC Fund	University & Professional	Private, institutional, some university	Own USOs	Balanced – academic
External UVC Fund	Professional	Private, institutional	USOs + other start-ups	Commercial
Dual University UVC	University	University, limited public	Own USOs	Academic
Dual Mixed UVC	University & Professional	University, private, institutional	USOs + other start-ups	Balanced – commercial
Dual External UVC	Professional	Institutional, private	USOs + other start-ups	Fully commercial

Methodology

We compiled a novel dataset capturing UVC activity across Europe (Austria, Belgium, The Netherlands, Germany, France, Luxemburg, the UK, Ireland, Spain, Italy, Switzerland, Denmark, Sweden, Finland, Norway, Poland, and Hungary) and North America (US and Canada). The temporal scope is restricted to 2015–2024, ensuring the coverage of active UVCs in recent years and comparability with the Global University Venturing list [20], which served as a complementary source.

The unit of analysis is the university. Data collection combined multiple sources in three stages. First, we assembled our "own list" of 96 European universities with UVC entities, drawing on the Reuters Top 100 Most Innovative Universities and Top 200 UniRank institutions, verified through university and fund websites. Second, we merged these records with 72 additional universities identified in the Global University Venturing list [20]. Third, we supplemented the sample with 39 universities obtained from Pitchbook by querying all investors tagged as "University". Follow-up validation was conducted via Pitchbook, Dealroom, official press releases, and institutional disclosures. Inclusion in the list was determined by two criteria: (1) the investment vehicle must be formally linked to at least one university or research institute, whether as founder, investor, limited partner, or through direct involvement in fund management; and (2) its primary purpose must be to make equity investments in academic spin-offs. This ensured that the UVCs identified are conceptually distinct from: (1) conventional venture capital firms that target university ventures; (2) university endowments acting solely as asset managers; and (3) student-led funds established for educational purposes.

Our data collection resulted in a dataset linking universities, funds, and general partners. We connected each UVC fund to its affiliated university/ies and associated general partners, while complementary tables contain detailed fund-level information (e.g., names, vintages, investors, performance metrics) and general partner-level information (e.g., type, affiliation, fund history). University-level records provide institutional metadata and are enriched with ranking indicators

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

from Times Higher Education 2025. To ensure reliability, we implemented several quality-control procedures: erroneous or incomplete funds were removed, vintages were corrected for consistency, missing general partner identities were imputed where stable across related funds, and outliers (e.g., unusually large reported fund sizes) were investigated and corrected. All links between universities, funds and general partners were manually verified through official websites, press releases, and institutional disclosures, reducing the risk of database inconsistencies and enhancing the dataset's conceptual validity.

Overview

The dataset covers 215 funds managed by 217 general partners, linked to 209 universities and research institutes across Europe and North America. Fund sizes vary widely, from very small vehicles to funds exceeding €370 million, with European UVCs on average larger than their North American counterparts. This diversity alone demonstrates that UVCs should not be treated as a uniform category: while they share the same university-linked orientation, their financial strength, strategy, and investment capacity vary considerably.

Table 3: Descriptive statistics of our UVC dataset

Indicators	Value
Number of unique funds	215
Number of unique general partners	217
Number of universities and research institutes	209
Average fund size	€51.9 million
Median fund size	€24.02 million
Average fund size in Europe	€59.01 million
Average fund size in North America	€45.15 million

In addition to financial characteristics, UVCs also vary in their organizational design. Our dataset shows three dominant structures. The largest group (186 cases) follows the traditional limited partner–general partner model, where a UVC firm manages a dedicated fund. A second group (59 cases) involves funds managed by independent, external VC firms, with universities acting as investors. A final group (36 cases) operates without the limited partner-general partner structure; these firm-only vehicles, often organized as evergreen funds, invest directly with shareholders as capital providers. Fund Characteristics

Figures 1–3 reveal several striking patterns in UVC fundraising between 2015 and 2024. First, fundraising activity is highly volatile, with a few peak years (notably 2020 and 2022) accounting for the majority of capital raised. This volatility does not necessarily indicate instability, but may reflect the cyclical nature of fund formation. Like traditional VC funds, UVCs often raise new vehicles every five to six years as earlier funds reach the end of their investment period and begin divestment. Second, the unusually strong presence of 2020–2022 may also be linked to the COVID-19 pandemic, when large amounts of capital flowed into biotech and life sciences for vaccine development and related technologies. Since these are domains where universities and their research groups are particularly active, UVCs were well positioned to channel capital into these opportunities, amplifying the fundraising volumes observed during this period. Third, Europe is stronger both in overall volumes and in average

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

fund sizes, particularly in peak years, suggesting that its university systems have established a more developed and larger UVC base compared to North America. Fourth, there is a clear divergence between the number of funds and the average size of funds. While the count of new UVCs peaked around 2020–2021 and then declined, average fund sizes have continued to grow. This indicates a consolidation trend, with fewer but larger funds being launched, echoing patterns observed in the broader VC market. Lastly, while activity appears to dip in 2024, these values should be treated with caution, as some funds may not yet have been disclosed or captured in Pitchbook or other databases at the time of data collection.

Table 4: Organizational structures of UVCs

Structure Type	Count	Description
Traditional limited partner–general partner structure (firm + fund)	186	UVC firm manages a dedicated UVC fund under traditional limited partner–general partner structure model
Fund managed by an external professional VC firm	59	University capital placed in UVC fund, managed by independent VC
Firm-only structure	36	Investments made directly from UVC firm with shareholders

Figure 1: Sum of funds raised in million EUR by continent

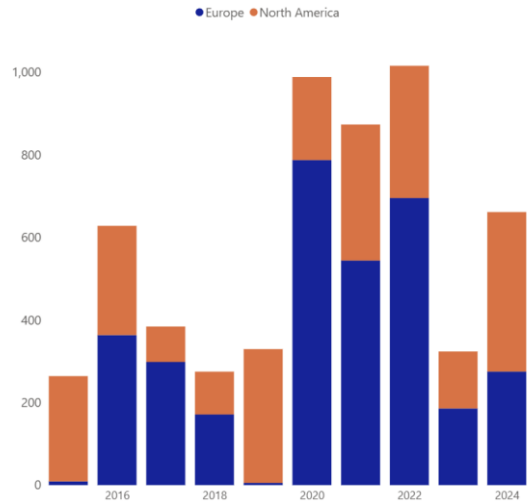
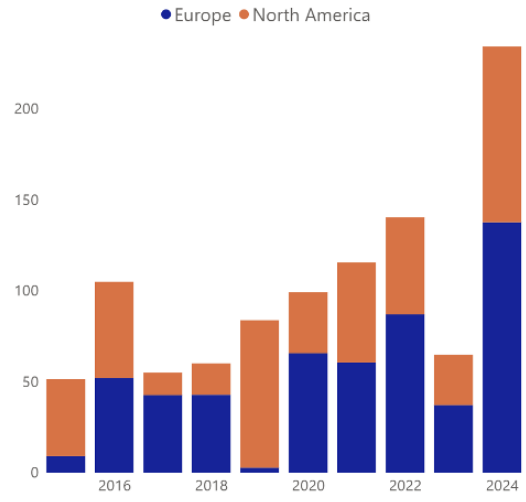


Figure 2: Average sum of funds raised in million EUR by continent



Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

Figure 3: Count of funds raised by continent

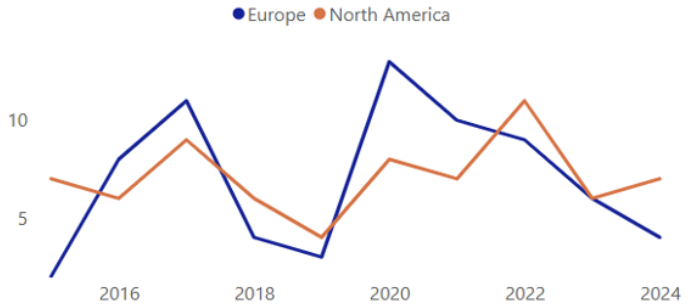


Figure 4 shows the aggregate size of UVC funds per country, with bubble size representing total capital raised. UVC activity is geographically widespread but unevenly distributed. In Europe, the United Kingdom is the largest market, followed by Belgium, Germany, and the Netherlands. Notably, the Balkan countries are entirely absent, indicating that UVC activity has not yet extended into this region. Overall, most UVC activity is concentrated in a limited number of Western and Northern European countries.

Figure 5 complements this view by presenting the number of UVCs per country together with the year of first establishment. A clear relationship emerges: early adopters such as the United Kingdom, the Netherlands, and Belgium—whose first UVCs were founded in the 1990s and early 2000s—now host relatively large numbers of funds and higher fund volumes. For example, Belgium and the Netherlands are smaller research systems, yet they rank among the largest in terms of UVC capital raised, which can be partly explained by their early entry and the cumulative effect of multiple funds launched over time. By contrast, later entrants such as France, Germany, Spain, and several Nordic countries only established UVCs after 2010. While their activity is growing, aggregate volumes remain lower compared to the early adopters. Countries in Eastern and Southern Europe launched their first UVCs only after 2015, often with a single fund, and therefore remain at a much earlier stage of development.

Figure 4: Sum of funds raised per Country

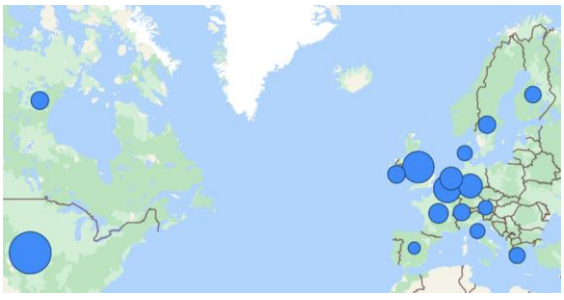
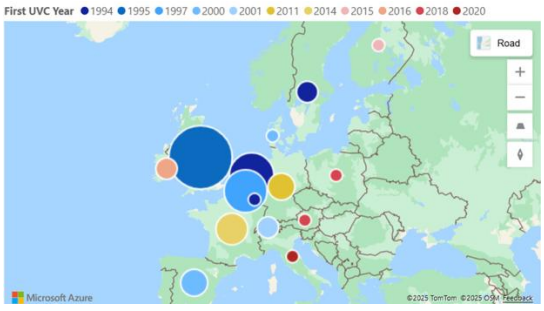


Figure 5: Number of funds raised per EU country and first UVC established per country



Figures 6 and 7 reveal two complementary but sometimes conflicting pictures of UVC activity. Normalized data show that smaller countries, such as Luxembourg and Belgium, are punching far above their weight: they mobilize significant UVC activity relative to their university staff base, suggesting that institutional commitment and collaborative structures (e.g. multi-university funds) can compensate for limited national scale. By contrast, large research systems

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

like the United States achieve overwhelming dominance in absolute fundraising volumes, but their relative UVC penetration is modest — pointing to the fact that UVCs are only one of many financing channels in such mature ecosystems. What is striking is Belgium's dual position: it combines high relative intensity with strong absolute fundraising, placing it alongside far larger systems such as the UK and Germany. This suggests that well-coordinated policies and consortia can make even mid-sized countries global leaders in UVC activity. At the other end of the spectrum, Luxembourg illustrates how high relative activity can mask structural limits: the country's UVC intensity is exceptional, but absolute fundraising remains small. These results highlight that scale and intensity do not always align, and that smaller countries can achieve disproportionate impact if their UVC models are strategically organized.

Figure 6: UVC available per staff per country

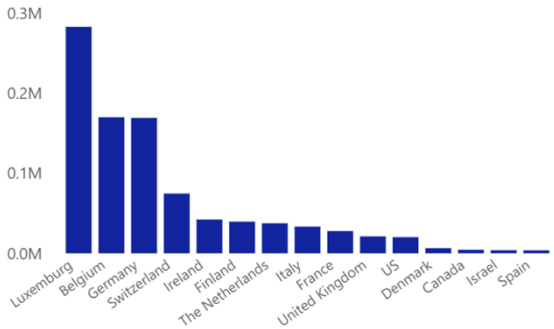


Figure 7: Sum of UVC funds (in million) per country

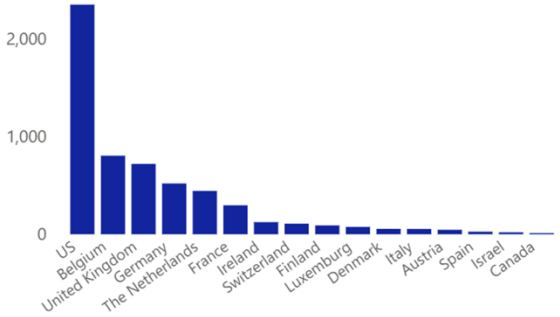
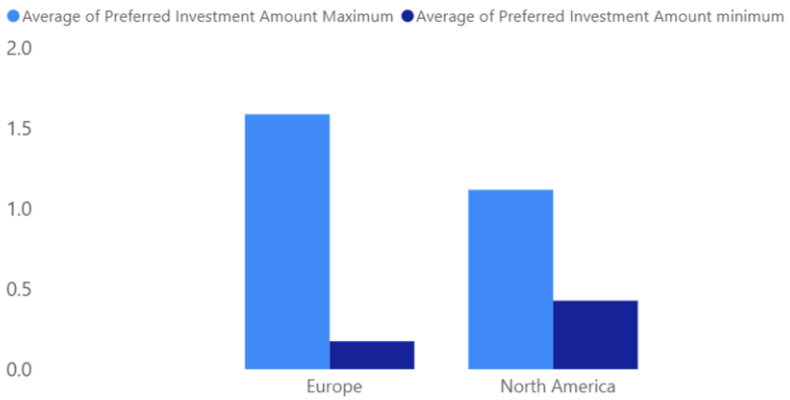


Figure 8 compares the average preferred minimum and maximum investment amounts reported by UVCs in Europe and North America. European UVCs display a higher average maximum preferred ticket size, but their minimum preferred investment size is considerably lower. This pattern suggests that European UVCs operate across a broader investment range, often stepping in at earlier stages with smaller tickets to support spin-offs from the outset. In contrast, North American UVCs maintain a higher entry threshold, tending to invest once projects have demonstrated a clearer need for capital and a stronger potential for scaling.

Figure 8: Average preferred maximum and minimum investment amount in million EUR per continent



Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

Figures 9 and 10 show that the overwhelming majority of UVCs are tied to a single university, which reflects the traditional model of universities developing their own dedicated spin-off vehicles. Yet the emergence of multi-university funds signals a different logic: one of pooling resources to overcome fragmentation and achieve scale. The larger average fund size of multi-university UVCs confirms that collaboration can unlock bigger vehicles and attract a broader investor base. However, the effective capital available per university within these consortia may actually be smaller, suggesting that universities trade autonomy and individual capital depth for the benefits of scale, visibility, and professional management. In other words, multi-university funds are not simply bigger versions of single-university models; they represent a distinct governance and strategy choice, balancing coordination costs against the advantage of greater market presence.

Figure 9: Number of universities per UVC

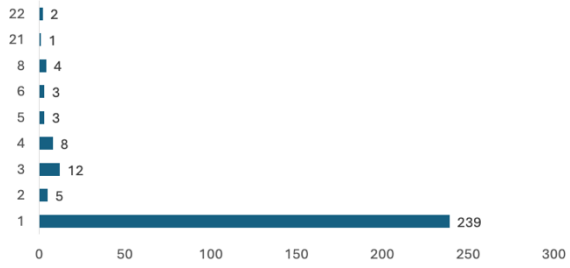
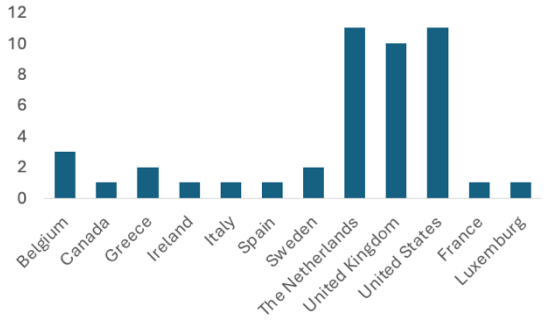


Figure 10: Number of multi-UVCs across countries



Emerging trends and challenges

In summary, we observe that the amount of UVC available in Europe is growing, with some notable trends: the emergence of multi-university UVCs attracting larger investments, the occurrence of international multi-university UVCs, and the evolution towards a broader investment scope (e.g., investing in companies that collaborate with universities or in-license university intellectual property rights). We also note some common challenges in UVC, such as potential mission drift of UVCs, their signalling function, and a lively debate on the impact of university stakes in USOs. In the following section, we will address the trends and challenges and will provide policy insights.

Recommendations for European policy makers

In a first step, we could pose the question of whether specific public policy action should be taken in favour of the development of UVC. This depends on whether there is a justification based on demonstrable market or coordination failures, inefficiencies, or opportunities to attain some otherwise unrealizable benefits.

Based on the literature and our findings, some policy implications can be traced that are worth discussing in depth, either with the intention of assessing the need to take policy action, to formulate a knowledge gap that calls for more research, or both.

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

The EU policy landscape

The European Commission adopted as a flagship action the Startup and Scaleup Strategy on 28th May 2025 under the motto: "Choose Europe to start and scale" [13]. It contains a number of measures to boost the creation of innovative firms in the EU, targeting universities. One measure refers to support cross-border networking and collaboration between leading hubs rooted in strong university ecosystems. A second one is to develop a blueprint for an academic career development framework that rewards research commercialisation activities, including considering staff mobility between the university and industry in academic staff evaluation and promotion criteria. Rewarding faculty members involved in the commercialization of research results and spin-off creation increases their propensity to contribute more to spin-off formation and knowledge transfer activity [21].

Overall, the Startup and Scaleup Strategy, viewed against the backdrop of the horizontally enabling Savings and Investment Union (19 March 2025) and the primary framework of the Competitiveness Compass (29 Jan 2025), provides an unprecedented opportunity for public authorities and stakeholders to bring about step-change improvements in the innovation, technological, entrepreneurial, and investment intensities of the EU's economy. Success will, in part, depend on how well the different instruments and actors coordinate to avoid redundant overlap or waste, enhance synergies, and act on previously neglected gaps and blind spots. In the financing of high-risk ventures, syndication is common practice even in the world of corporate VC, where proprietary exclusivity commands a premium. In this regard, it may be interesting to investigate the syndication patterns of UVCs and their impacts, especially in relation to the increasing number of private and government VC initiatives such as the European Innovation Council and others at the national level (e.g., SPRIN-D in Germany) as a precursor to possible action aimed at compensating the shortfall in valuation of university-originating deep-tech spinoffs, or aimed at addressing other inefficiencies which the research might identify.

UVCs and regional development

In the transition to a more innovation-intensive knowledge economy, regional development policies aim to promote socio-economic convergence of the less developed regions of the EU with those that are more advanced. Less developed regions with a strong university presence are an obvious target for public policy support to such universities to contribute to the economic development of the region in which they are embedded. In cases where such universities have advanced research capabilities, there is potential for a local innovation-driven entrepreneurial ecosystem to develop in which the university plays a critical role. The potential for UVC to become a useful part of the overall ecosystem toolbox is clear, but for the present purposes, suffice it to say that the evolving efforts in the development of regional policy instruments in the EU could factor in UVC to the increasing suite of equity-type financing instruments which regional authorities are encouraged to consider deploying in their regional development programmes.

In relation to this, and building on the work of Etzkowitz et al.[22], we propose a framework for policymakers that will allow them to critically assess the role of UVCs in different systems. A UVC's role can be explored through two guiding questions:

(1) How well-developed and supportive is the regional entrepreneurial ecosystem in which the university or universities operate?

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

(2) What is the university's / universities' capacity to consistently generate investable USOs with growth potential?

Figure 11: The role of UVCs in regional and institutional development, adapted from Etzkowitz et al. (2023).

		University's capacity to generate USOs?	
		High	Low
The regional entrepreneurial ecosystem?	Weak	Type 1: UVC leads innovation ecosystem development	Type 3: UVC as a tool for regional economic development
	Strong	Type 2: UVC as a catalyst, focus on (pre-)seed stage	Type 4: UVC as a tool for institutional third mission development

Type 1: The Anchor UVC

In cases where universities generate promising USOs, but the regional ecosystem is lacking capacity, UVCs can be set up/utilized as anchor organisations to attract external investors.

Examples: Cranfield University x East Midlands (UK), Saint Mary's University Halifax x Nova Scotia (Canada), and University of Navarre x Pamplona (Spain)

Type 2: The Catalyst UVC

In otherwise optimal conditions, UVCs can be used as a catalyst for growth by exploiting their role as complementary funding sources addressing the funding gap faced by early-stage USOs and preparing them for growth.

Examples: KULeuven x Leuven (BE), Maastricht University x Maastricht (The Netherlands), Harvard University x Boston (US), Stanford University x San Francisco (US)

Type 3: The Foundational UVC

UVCs only make sense in this case if they are used as a tool to develop capacities at the university (technology transfer offices, incubators, entrepreneurship education…) and regional level (intellectual property rights, development of policies governing university third mission, incubators…).

Examples: University of Staffordshire x Stoke-on-Trent (UK), Universidade da Coruña x La Coruña (Spain), Obuda University x Budapest (Hungary)

Type 4: The Sleeping Giant UVC

UVCs are a lever to support institutional reforms at the university to align research and entrepreneurial activities at the university. The connections between the UVC and external investors, incubators, accelerators… can support capacity building at the institution.

Examples: Université Libre de Bruxelles x Brussels (Belgium), London School of Economics x London (UK), Stockholm University x Stockholm (Sweden).

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

Conclusion – Framework for policy action and research agenda

This article shows that UVC is a critical but under-explored and under-utilised mechanism for addressing the funding gap faced by university spin-offs across Europe and North America. The comprehensive dataset for 215 UVC funds linked to 209 universities, demonstrates that in some instances UVCs have evolved beyond simple investment vehicles to become sophisticated instruments of institutional and regional development. Yet, more broadly, the potential of UVC remains largely untapped.

The European UVC landscape exhibits diversity in both scale and strategic orientation, reflecting the heterogeneous nature of university- and regional entrepreneurial ecosystems in Europe. Early adopters such as the UK, Belgium and the Netherlands have mature UVC infrastructures with substantial capital deployment. Elsewhere, opportunities exist to develop tailored approaches suited to specific institutional and regional situations. The emergence of multi-university consortia and cross-border collaboration signals an evolution towards overcoming fragmentation and achieving greater scale, though this brings both opportunities for enhanced impact and coordination challenges.

The policy implications of the analysis underscore the need for nuanced, context-sensitive approaches. Successful UVC development requires not only adequate funding but also professional governance, alignment with broader entrepreneurial ecosystems, and regulatory frameworks that facilitate rather than hinder university-industry collaboration. Policymakers should also recognize and accommodate the heterogeneity of UVC models (avoiding a one-size-fits-all approach) while establishing clear objectives and realistic performance expectations. The four-fold typology proposed - Anchor, Catalyst, Foundational, and Sleeping Giant UVCs - provides a practical framework for assessing the appropriate role of UVC within specific policy, location and institutional contexts. In other words, UVCs cannot be treated as uniform solutions but must be strategically positioned based on both the university's capacity to generate investable spin-offs and the maturity of the regional entrepreneurial ecosystem. In regions with weak ecosystems but strong universities, UVCs can serve as anchoring instruments that attract external investment and catalyse broader ecosystem development. Conversely, in mature ecosystems, UVCs function most effectively as complementary instruments that address specific market gaps at the earliest stages of venture development.

The research also highlights areas of potential concern that warrant careful monitoring. The potential for mission drift, where UVCs gradually shift from their original university-focused mandate toward more commercially oriented investment strategies, poses risks to their effectiveness in addressing the specific needs of university spin-offs. Additionally, the possibility of crowding out private investment requires monitoring and mitigation strategies to avoid the undesirable displacement of market mechanisms.

Looking forward, the integration of UVC development into broader European innovation policy frameworks such as the Startup and Scaleup Strategy and regional development programmes, has potential for making a systemic impact.

The analysis in this article permits identification of important policy-relevant knowledge gaps requiring further research. Future analysis should move beyond the descriptive to establish causal relationships between specific policies and UVC outcomes, examining the complex trade-offs inherent in universities striving to fulfil their triple (research, education, impact) missions, and develop comprehensive metrics for evaluating both financial performance and broader societal impact.

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

Finally, this study demonstrates that UVC is a valuable but complex instrument in the European innovation toolkit. Its effectiveness depends not on its strategic positioning within each institutional and regional context, its governance structures, and how it is integrated with other elements of the entrepreneurial ecosystem. For European policies aimed at strengthening innovation capacity and competitiveness, UVC offers significant potential when developed with attention to context, clear strategic objectives, and realistic outcome expectations.

Policy actions

- Make clear strategic choices & formulate ambitions when developing policies
    - The reasons for setting up or improving UVC are manifold: design policies that allow for a heterogeneity of UVC, serving different purposes/contexts. See also our framework above: Anchor – Catalyst – Foundational – Sleeping Giant.
    - Be aware of the trade-offs encountered with scaling ambitions with regard to UVC: providing funding for every USO is incompatible with seeking only very large outcomes. VC is selective by definition; do not use or allow UVC to be used as a 'grant channel' in disguise.
- Build capacity, clear governance structures & empower UVCs
    - Ensure that the UVC's governance bodies have the expertise and delegated authority to make rapid, investment-oriented decisions.
    - Strengthen researcher/technology transfer office capabilities to ensure USOs are investment-ready and better aligned with general partner expectations.
- Construct a conducive regulatory framework & entrepreneurial ecosystem
    - Address barriers across the EU and regions that generate regulatory frictions, such as intellectual property regulations, university equity stakes, and tax regimes, as factors that alter the feasibility and attractiveness of UVCs.
    - A sophisticated entrepreneurial ecosystem — combining specialised university knowledge, local industry, and investors — increases the effectiveness of UVCs: UVCs alone are not sufficient.
    - If a UVC is your starting point to develop the regional entrepreneurial ecosystem (Anchor, Foundational), be aware of its need for additional capacities, longer development timelines, and additional roles (ecosystem development).
- At the European level, improving transparency, monitoring & evaluation to ensure systematic reporting and performance tracking of funds and USOs is necessary to evaluate impact and inform future decisions.
- Governmental co-funding of VC as limited partners, regardless of its type, should be considered, and its potential negative effects carefully weighed against potential benefits. Negative effects, such as crowding out private investment or incentivizing excessive risk-taking by making investment "too cheap," should be considered when matching money from private sources.
- Overall, more realistic expectations by all stakeholders (policy makers, investors, founders, university management…) with regard to UVC returns, timelines, and outcomes should be developed. UVC presents an early-stage investment source,

Public Management and Governance Review – 2025
DOI: https://doi.org/10.60733/PMGR.2025.07

confronted with high risk, long timelines, and very variable outcomes. Improving reporting on the results and effects of UVC should be a priority.

Research Agenda

We identified the following avenues for further research:

- Documentation and description of the different governance models of UVC, case studies, and best practices in UVC development.
- From description to causation: test whether specific university policies or institutional changes actually cause changes in UVC activity and spin-out outcomes.
- Decision logics and actor behaviour: analyse how competing objectives and internal trade-offs (academic mission, commercial returns, institutional governance) shape fund strategy and outcomes.
- Networks, intermediaries & signalling: map the technology transfer offices, incubators, external VCs and general partners to proceed and measure centrality, brokerage and the signalling function of UVC.
- Longitudinal & regional dynamics: explore how regional ecosystems and experience shape the emergence and evolution of UVC (types).
- Institutional forms & heterogeneity: explain motivations and comparative advantages across institutional types (standalone university funds, multi-university funds, research technology organisations) and how these forms affect success rates.
- Investors & incentives: identify who the limited partners are, what they expect from university funds, and how these expectations influence fund strategy and spin-out selection.
- Segmentation & outcomes tracking: segment analyses by sector (biotech vs software), fund size, and vintage; link UVC activity to firm-level outcomes (follow-on funding, exits, survival, jobs).

Author bios

Thomas Crispeels is Professor of Entrepreneurship and Innovation at the Brussels Entrepreneurship and Innovation Lab of the Vrije Universiteit Brussels.. He is chairman of the board at StartLAB.BRUSSELS, the Brussels universities' incubator for young Brussels-based entrepreneurs, and co-CEO of Usquare Incubator Inc. His research expertise is situated in the domain of technology entrepreneurship and innovation management, with a special focus on technology transfer, academic entrepreneurship, and collaborative R&D. ORCID: https://orcid.org/0000-0003-3519-8240

Emiel De Buyser is a PhD Candidate and Teaching Assistant at Vrije Universiteit Brussel (VUB). His teaching and research activities focus on innovation, entrepreneurship, and technology transfer, with a particular emphasis on university venture capital and signalling mechanisms in entrepreneurial finance. ORCID: https://orcid.org/0000-0002-5048-4301

James P Gavigan investigates firm growth and venture finance at the European Commission's Joint Research Centre, Seville, Spain since 2019. Previous positions in the European Commission since 1990 include: analyst in the Scientific Advice Mechanism support unit; Head

of the S&T section at the EU Delegation to the US; Head of the European Research Area policy unit; acting Head of Research Investment Policy unit; researcher/ policy officer at the Institute for Prospective Technological Studies & the Industrial Technologies Directorate.

Ramón Compañó is Member of the European Commission's Startup and Scaleup Task Force. He works at the Joint Research Centre (JRC) in Seville, where he focuses on innovation ecosystems, venture capital, and industrial R&D policy. His work includes analyzing the role of public investment in high-growth firms and the networks of innovation across Europe. He contributes to evidence-based policymaking to support scaling and technological development in the EU.

References

[1] D. B. Audretsch, "From the entrepreneurial university to the university for the entrepreneurial society," *J Technol Transf*, vol. 39, no. 3, pp. 313–321, June 2014, doi: 10.1007/s10961-012-9288-1.

[2] H. Bathelt, D. F. Kogler, and A. K. Munro, "A knowledge-based typology of university spin-offs in the context of regional economic development," *Technovation*, vol. 30, no. 9, pp. 519–532, Sept. 2010, doi: 10.1016/j.technovation.2010.04.003.

[3] A. Caputo, D. Charles, and R. Fiorentino, "University spin-offs: entrepreneurship, growth and regional development," *Studies in Higher Education*, vol. 47, no. 10, pp. 1999–2006, Oct. 2022, doi: 10.1080/03075079.2022.2122655.

[4] H. Etzkowitz, "The evolution of the entrepreneurial university," *International Journal of Technology and Globalisation*, vol. 1, no. 1, pp. 64–77, Jan. 2004, doi: 10.1504/IJTG.2004.004551.

[5] "Spin-offs: Driving innovation across the EU-27 | Shaping Europe's digital future." Accessed: Oct. 29, 2025. [Online]. Available: https://digital-strategy.ec.europa.eu/en/library/spin-offs-driving-innovation-across-eu-27

[6] A. Lockett, D. Siegel, M. Wright, and M. D. Ensley, "The creation of spin-off firms at public research institutions: Managerial and policy implications," *Research Policy*, vol. 34, no. 7, pp. 981–993, Sept. 2005, doi: 10.1016/j.respol.2005.05.010.

[7] F. Munari, M. Sobrero, and L. Toschi, "The university as a venture capitalist? Gap funding instruments for technology transfer," *Technological Forecasting and Social Change*, vol. 127, pp. 70–84, Feb. 2018, doi: 10.1016/j.techfore.2017.07.024.

[8] P. Gubitta, A. Tognazzo, and F. Destro, "Signaling in academic ventures: the role of technology transfer offices and university funds," *J Technol Transf*, vol. 41, no. 2, pp. 368–393, Apr. 2016, doi: 10.1007/s10961-015-9398-7.

[9] F. Munari and L. Toschi, "Do venture capitalists have a bias against investment in academic spin-offs? Evidence from the micro- and nanotechnology sector in the UK," *Industrial and Corporate Change*, vol. 20, no. 2, pp. 397–432, Apr. 2011, doi: 10.1093/icc/dtq053.

[10] F. Munari and L. Toschi, "The Intersection Between Capacity Building and Finance," in *Capacity Building in Technology Transfer: The European Experience*, M. Granieri and A. Basso, Eds., Cham: Springer International Publishing, 2019, pp. 105–120. doi: 10.1007/978-3-319-91461-9_7.

[11] A. Christini, "Why universities should step up in venture investing," *Nat Biotechnol*, vol. 30, no. 10, pp. 933–936, Oct. 2012, doi: 10.1038/nbt.2390.

[12] A. Croce, L. Grilli, and S. Murtinu, "Venture capital enters academia: an analysis of university-managed funds," *J Technol Transf*, vol. 39, no. 5, pp. 688–715, Oct. 2014, doi: 10.1007/s10961-013-9317-8.

[13] "EU Startup and Scaleup Strategy - Research and innovation." Accessed: Oct. 29, 2025. [Online]. Available: https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/jobs-and-economy/eu-startup-and-scaleup-strategy_en

[14] H. Etzkowitz, "Innovation in Innovation: The Triple Helix of University-Industry-Government Relations," *Social Science Information*, vol. 42, no. 3, pp. 293–337, Sept. 2003, doi: 10.1177/05390184030423002.

[15] N. Magomedova, N. Villaescusa, and A. Manresa, "Exploring the landscape of University-affiliated venture funds: an archetype approach," *Venture Capital*, vol. 25, no. 3, pp. 317–349, July 2023, doi: 10.1080/13691066.2022.2163001.

[16] F. Ielasi, N. Del Sarto, E. Bocchialini, and L. Gai, "Enhancing Access to Finance for University Spinoffs," Jan. 25, 2024, *Social Science Research Network, Rochester, NY*: 4706658. doi: 10.2139/ssrn.4706658.

[17] B. Leleux and B. Surlemont, "Public versus private venture capital: seeding or crowding out? A pan-European analysis," *Journal of Business Venturing*, vol. 18, no. 1, pp. 81–104, Jan. 2003, doi: 10.1016/S0883-9026(01)00078-7.

[18] D. J. Cumming and J. G. MacIntosh, "Crowding out private equity: Canadian evidence," *Journal of Business Venturing*, vol. 21, no. 5, pp. 569–609, Sept. 2006, doi: 10.1016/j.jbusvent.2005.06.002.

[19] K. Abukari, E. Oldford, and N. Willcott, "Student-managed investment funds: a review and research agenda," *Managerial Finance*, vol. 47, no. 11, pp. 1608–1635, June 2021, doi: 10.1108/MF-02-2021-0080.

[20] "Global Venturing | University Venture Funds." Accessed: Oct. 29, 2025. [Online]. Available: https://globalventuring.com/university-venture-funds-the-list/

[21] M. A. Odei and P. Novak, "Determinants of universities' spin-off creations," *Economic Research-Ekonomska Istraživanja*, vol. 36, no. 1, pp. 1279–1298, Mar. 2023, doi: 10.1080/1331677X.2022.2086148.

[22] H. Etzkowitz *et al.*, "University venture capital in big data, regional and historical perspective: where and why has it arisen?," *Venture Capital*, vol. 25, no. 3, pp. 219–254, July 2023, doi: 10.1080/13691066.2023.2184287.