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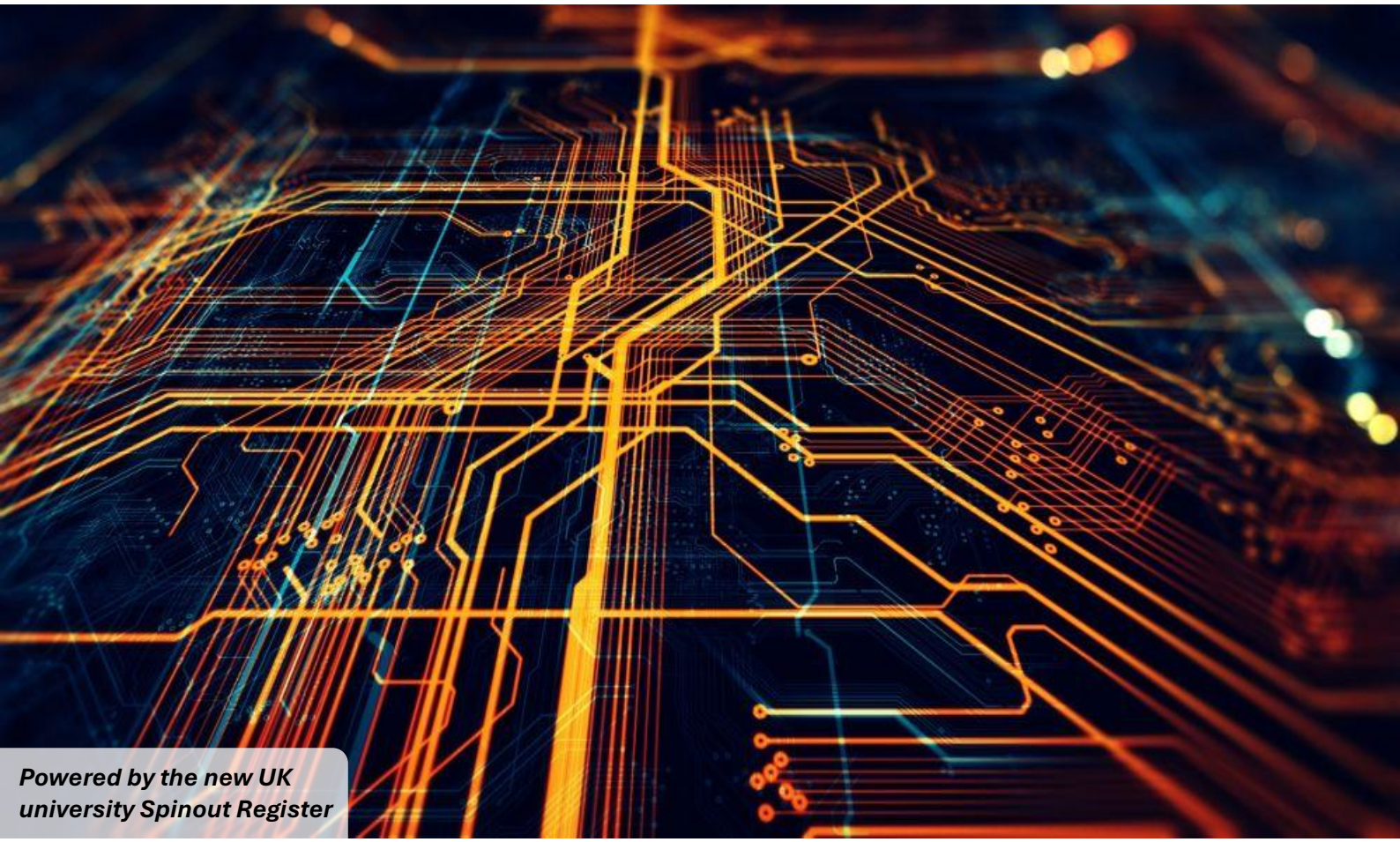
Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem

A Technical Report Commissioned by Research England to support the Hickson Review on Deepening University and Investor Links

TOMAS COATES ULRICHSEN



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Tomas Coates Ulrichsen is the Director of the Policy Evidence Unit for University Commercialisation and Innovation (UCI) at the University of Cambridge and National Advisor to Research England on the knowledge exchange (KE) metrics. Funded by Research England, he has developed UCI into a leading centre developing high-impact, practice-focused evidence and insights, tools/frameworks, and data/metrics to inform the work of policymakers, funders and university leaders looking to accelerate the impacts of universities on innovation and economic prosperity through their commercialisation and wider forms of KE. His work fills a critical translational gap between the work of academics and policy/university practice. Over the past two decades his work has been instrumental in informing the development of KE-related policies and funding programmes in this area. Since 2023 he has led a joint work programme with Research England to develop next generation data and metrics for knowledge exchange, a key focus of which has been around evidencing the health, functioning and performance of the university spinout ecosystem in the UK. This work underpinned the design and delivery of the UK Spinout Register by the Higher Education Statistics Agency (part of Jisc).

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Disclaimers

The views and arguments expressed in this report are of the author and do not represent the positions of organisations or expert groups of which they are currently, or were previously, members, nor of organisations that funded this work.

Much of the analysis leverages data from PitchBook, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

Executive Summary

Tomas Coates Ulrichsen was commissioned by Research England to produce this report to support the independent review being developed by Tony Hickson on Deepening University-Investor Links for UK Research and Innovation (UKRI). The technical report presents a data-driven analysis of the investment and investor landscape for UK university spinouts, and updated insights on the health and performance of the UK university spinout ecosystem.

University spinouts provide an important vehicle to commercialise breakthrough ideas and technologies emerging from within the university system and deliver impacts on the economy and society at scale. They open up new wealth-creating opportunities in existing industries, help to seed new markets, and provide solutions to help other organisations innovate, raise productivity and build resilience. Once a critical mass of activity is reached, university spinouts can also help to drive the entrepreneurial dynamism of a local cluster. They play an important role in driving science and innovation-led economic growth and national competitiveness, strengthening national security, and tackling some of the world's most pressing societal challenges.

Following years of policy focus on what universities can do to better enable their staff to create new ventures to commercialise new ideas and technologies, attention is now turning to other areas of the entrepreneurial and innovation ecosystem where progress needs to be made. This includes a focus on where and how the UK's investment and investor ecosystem, and its links with the university spinout ecosystem, could be strengthened and further developed to help better seed and nurture university spinouts during their early development, and provide the necessary financial capital to help them grow and scale for the benefit of the UK.

Guided by the needs of the Hickson Review team and powered by the latest data available from the new UK university Spinout Register (September 2025 release), and linked to data from PitchBook, Moody's FAME and Orbis data platforms, and the Higher Education Statistics Agency (HESA, part of Jisc), the report examines the following key topics:

- The structure of the investment and investor landscape for UK university spinouts, how this varies across the regions and nations of the UK, and how it is evolving over time
- The structure, performance and outcomes of the UK university spinout ecosystem and how this compares to the wider startup population
- Spinout production from different types of universities
- Indicators of the UK's ability to retain value from their spinouts as they grow and scale
- An international comparison of the investment performance of university spinouts emerging from leading universities in the UK and selected comparator nations
- The extent to which UK universities are producing serial entrepreneurs and how this compares internationally

The report updates and expands the rich set of insights on the structure and performance of the UK university spinout ecosystem captured in the 2025 *Powering Ideas to Innovation* report published by the Policy Evidence Unit for University Commercialisation and Innovation (UCI) at the University of Cambridge.

Selected key findings from the report are captured here.

Spinouts are important for driving entrepreneurial activity in key sectors for UK economy

The UK Spinout Register (September 2025 release) identifies 2,307 spinouts emerging from UK universities. These were either founded between 1st August 2012 and 31st July 2024 regardless of whether they are still active, or founded prior to this date but are still active. Of these, almost 1,700 are still active, 67 have listed on a stock exchange, and over 200 have been acquired. Most spinouts have least some origins in the life sciences and/or engineering and physical sciences disciplines with universities.

University spinouts play an important role in driving entrepreneurial activity in strategically important sectors and verticals of the UK economy and commercialise technologies, products and services that are valued by investors. Of the best performing startups founded in the UK between 2013-2024 (ranked based on the cumulative amount of VC funding raised during since foundation), 70% of the top 20 in pharmaceuticals and biotechnology were university spinouts; 65% of those in healthcare devices were spinouts; 70% of startups in semiconductors were spinouts, and in the market vertical of advanced manufacturing, 40% were spinouts. Furthermore, while just 5% of all AI/ML startups during this period were university spinouts, 20% of those raising the most VC funding were spinouts.

While heavily concentrated in a small number of universities, spinout activity is growing outside traditional spinout producing heartlands of largest research universities in UK

Over the past decade, spinout production increased steadily until pandemic period, where it jumped significantly. Following an apparent 'pandemic bounce' in 2021-2022, numbers have dropped back, and it is not yet clear whether this represents a stabilisation of spinout production at around 150-160 spinouts per annum, or a declining trend. Spinout production appears to broadly track the availability of VC investments at the earlier stages of company development. Spinout production is also heavily concentrated within a relatively small number of universities, with 72% of spinouts coming from just 20 universities. Spinout production is also strongly correlated with the scale of the research enterprise of a university.

Encouragingly, the past decade has seen spinout production outside the traditional spinout producing heartlands of the largest research universities in the UK (Cambridge, Edinburgh, Imperial, Manchester, Oxford, and UCL) increase significantly, with production levels now comparable once normalised by the scale of their research activity. This group of universities includes the universities of Bristol, Newcastle, Nottingham, Queen Mary, Exeter, Liverpool, Sheffield and Birmingham. A number of factors could be driving these changes, not least the overall maturing of university ecosystems beyond the Golden

Triangle of Oxford, Cambridge and London to support spinouts; efforts by these universities to strengthen their incentives and support for spinout founders; proactive investment by funding bodies, such as Research England, in these universities to enable them to provide more dedicated resources to support spinout development and attract investment; and the introduction of dedicated seed funds (e.g. Northern Accelerator, backed by Research England) and larger scale investment funds (e.g. Northern Gritstone), helping to increase the availability of investment capital for spinouts based in universities outside Golden Triangle.

The UK is a leading nation globally in terms of the amount of venture capital funding it attracts, but it struggles to grow and retain significant VC-backed companies domestically

The UK is one of the leading nations globally in terms of attracting venture capital funding, ranking third after the United States and China. Despite this, the UK is home to relatively few 'unicorn' companies (VC-backed companies that with a post-money valuation of more than $1 billion). Most of these unicorn companies are in software and financial services sectors of the economy. Venture capital funding is also heavily concentrated in London and the East and Southeast of the UK, with companies headquartered in these regions attracting more than 80% of all VC funding. Consistent with this, 78% of UK headquartered VC investors are based in this area of the UK, and over 90% of overseas investors with a presence in the UK have their offices in London.

Despite the UK being an attractive location globally for VC funding, and entrepreneurs seeing a rise over the past decade in perceived opportunities to start a business, the UK has seen a significant rise since 2018 in the fear of failure amongst those that see good opportunities.

University spinouts raised £2.9 billion in venture investment in 2024 but worrying trends are emerging around early-stage venture capital

UK university spinouts raised £2.9 billion in VC investments in 2024, a level that remains significantly higher than pre-pandemic. This accounted for approximately 17% of all VC funding secured by UK headquartered companies in that year. Pre-seed/seed stage investments – critical for the emergence and initial development of spinouts – continued to grow, increasing from £100 million in 2019 to £195 million in 2024. Later stage VC investments have also increased significantly over this period to £2.24 billion in 2024 and have been relatively stable at over £2 billion since 2021 (except for 2023).

Concerning however, is the trend in early-stage VC funding. Following a 'pandemic bounce', investment at this stage has now dropped to levels below pre-pandemic levels, with UK university spinouts securing £456 million in 2024 (down from £594 million in 2020). This is consistent with the experiences in the wider startup landscape.

Investing in university spinouts is a portfolio game with relatively few companies experiencing significant positive outcomes and exits

Investing in spinouts – like many technology-driven and deep-tech start-ups – is a portfolio game. Some will succeed, and a few will deliver game-changing innovations that shape markets and societies. Many, however, while perhaps not failing outright, will struggle to develop, scale and deliver widespread impacts. This portfolio nature of spinouts is seen clearly in the investment and outcomes data. The top 10% of spinouts (ranked by investment raised) raise significantly more at each stage of their journey than the median spinout. At the pre-seed/seed stage, the average deal size for the top 10% was 8 times larger than the that for the median company; at the early VC stage, this ratio jumps to 31.

Many UK spinouts struggle to raise larger amounts of investment, often required to enable the company to scale their technologies and operations. Considering the proportion of spinouts at least three years old raising different threshold levels of venture capital and private equity investment, the UK sees a big drop between those raising more than £2 million (44%) and those raising more than (£10 million); just 6% raise more than £75 million.

Looking at the sample of spinouts that have survived at least five years also shows that 30% exhibit limited growth or commercial traction, a further 8% have not secured any investment or are not identifiable in investment data platforms, and 12% have raised less than £1 million over their lifetime.

Spinouts may contribute to the economy and the UK through different pathways

When examining spinout outcomes and the scale of successes, it is important to recognise that spinouts may grow and develop through different pathways. Many seek to develop through seeking equity-backed VC investment, with some being acquired or publicly listed on a stock exchange. A few may become 'unicorns' and large employers, the latter being clearly important for driving economic growth and prosperity in the UK, particularly if, as a nation, we can anchor more of the employment domestically.

Some may realise success and contribute significantly to the economy and society in other ways. For example, some spinouts may emerge to provide niche, yet critically important, products and services to strategically important industries nationally and regionally. They may be providing enabling products and capabilities that, while not requiring large numbers of people to meet demand, may help other companies to become more productive and competitive, attract and anchor industrial value chains in a location, and contribute to national resilience and security and the building up of sovereign capabilities. The role and importance of these types of spinouts are hard to identify and capture in aggregate analyses of spinout outcomes and is an area where further work is urgently needed.

Universities, university-affiliated funds and venture capital investors and angels are important early investors into spinouts

Spinouts deals attract a variety of different types of investors, with universities, university-affiliated funds, venture capital investors, and angels particularly important early investors. Private equity and other institutional investors, corporate venture capital and corporations become more prevalent in later stage deals. While see a variety of investor types involved in spinout deals, there is still a significant concentration of spinout deals amongst a relatively few investors; 42% of pre-seed/seed spinout deals, and 48% of early-stage VC deals involved at least one top 10 investor (ranked by the number of spinout deals they invest in).

The growing role of accelerators in the spinout journey is also evident from the analysis, with more spinout deals now involving at least one accelerator. In addition, we are also seeing a growing number of spinout deals involving corporate venture capital and corporations more broadly.

University venture funds (including both seed funds and larger university-affiliated and university-focused funds and investment companies) are becoming an important part of the investment landscape for university spinouts in the UK and globally. These appear to be enabling universities (such as Oxford and Cambridge that have had access to such funds for many years now) to follow-on their initial investments and become involved in later stage deals. The study also found that spinouts whose initial deals involved investment from both the university and a university-affiliated fund appeared more likely to raise significantly more post-seed VC investment than others. Given the growing prominence of, and attention to, these funds, much more detailed and in-depth analysis is needed to robustly determine their contributions and what works, when and under what circumstances.

High-net-worth investors, corporations, institutional investors, and governments are important sources of financial capital for funds that invest in initial spinout deals, with pension funds appearing to play a more limited role compared to other nations

Moving beyond investors that invest directly into spinouts, the study found that high-net-worth investors, institutional investors, corporations and governments are particularly sources of investment into the funds that go on to invest in spinouts. Particularly important for funds that have significant investment activity in spinouts are the British Business Bank (including British Patient Capital, British Business Finance, and British Business Investments) and the European Investment Bank (including the European Investment Fund) and the European Regional Development Fund (ERDF), with each making multiple commitments across different funds that invest in the earlier stages of spinout development.

By comparison with our international sample of university spinouts (across the US, Belgium, Switzerland and Sweden), pension funds (public or otherwise) appear to play a much more limited role in the UK as a source of capital for funds that invest in earlier stage deals in spinouts.

Spinout success typically requires more than grant funding and accelerator support, with the timing of this support relative to private investment appearing to matter

Many spinouts receive some level of grant funding, with UKRI's Innovate UK a leading source. Forty-six percent of spinouts reported to the UK Spinout Register had received at least one grant from Innovate UK, with many securing collaborative R&D grants and grants for feasibility studies. Spinouts winning from Innovate UK grants secure on average 3 projects, with some securing many more. Many spinouts also participate in accelerator programmes.

While there is some evidence that these grants and accelerator programmes can benefit the spinout, there is also concern that companies can become overly reliant on this type of funding and support. An initial analysis presented in this report suggests that spinouts that raise *both* VC investment *and* multiple grants/accelerator support have, on average, much higher employment than those that just receive grants/accelerator support. The analysis also that the timing of deals in relation to securing private sector investment may matter, with those securing grants/accelerator support alongside private investment exhibiting higher employment over their lifetime than those that secure this type of support only in advance of any private sector investment. Caution is urged when interpreting this analysis given the limited time available during this study to deeply examine this topic. With the role of public funding and accelerators in supporting spinouts high on government agendas in the UK and globally, this is an area warrants much greater and urgent further study.

UK struggles to scale spinouts domestically with significant implications for ability of the nation to retain value from these companies over longer term

As spinouts grow and scale, they require, among other things, access to new or significantly expanded sets of capabilities (skills, facilities, infrastructure, etc.), development partners, key early markets, and, of course, increasing levels of financial capital. Where these are more competitively accessed or acquired abroad, or where the innovation and business environment is more competitive elsewhere, there can be pressures to expand or relocate outside the UK.

The analysis shows that while UK university spinouts can often secure investment from UK-based investors for smaller deals (below £2 million), above this threshold, many spinout deals involve at least some overseas investors, and increasingly only overseas investors for the very large deals. For the largest deals (£100 million and above), over half of deals involved no UK headquartered investors. Furthermore, many public listings of spinouts over the past decade were in the US (typically on the NASDAQ), and just 30% of spinouts were acquired by a UK company.

Overall, the evidence points collectively points to the growing importance of overseas markets, investors, and companies for enabling UK-based spinouts to grow and scale into large, global corporations. This may weaken the ties of these companies to the UK, increase pressures on them to expand their operations overseas, and reduce the ability of the UK to capture long-term value from its spinouts.

UK universities produce spinouts at rates that are competitive with US universities, with investment performance of spinouts from UK's major spinout producing universities comparing favourably with leading US universities and outperforming European counterparts

UK universities produce spinouts at rates that are comparable to US universities once the size of their research enterprise is accounted for. Rankings of spinout production across European universities also typically see major UK universities dominate the top positions.

Our perceptions of the success of the US system in producing high potential spinouts is shaped very much by the experiences of the leading, very large research universities based in the deep-tech entrepreneurial hotspots, including Boston/Cambridge, Massachusetts, the Bay Area in California, and New York. Spinouts from this group of universities raise the most investment over their lifetimes and are much more likely to secure much larger deals at each stage of development than spinouts from UK universities and from leading universities in Belgium, Switzerland and Sweden.

That said, the investment performance of spinouts from major research universities in the UK compares strongly against the wider US sample of major research universities and those emerging from leading research universities in Belgium, Switzerland and Sweden. Furthermore, the investment performance of spinouts from the largest research universities in the UK – most based in entrepreneurial hotspots in the UK – compares favourably – if not quite meeting – the performance of the group of leading US universities in deep-tech entrepreneurial hotspots.

While UK university spinouts are competitive globally in attracting investment, this does not appear to be translating into the scale of serial entrepreneurs seen in leading US hotspots, nor in the numbers of founders that become investors

Serial academic entrepreneurs are believed to help drive culture change with universities, demonstrate potential pathways to commercial success, and provide mentorship and advice to academics new to the process. Some also go on to become investors and help to build up their local ecosystems. Overall, evidence from the comparative analysis of founders of UK university spinouts and those from leading research universities in selected nations, suggests that the UK (and the European nations studied) are not creating and nurturing serial entrepreneurs at anywhere near the levels seen in the US, nor are they as likely as those from US universities to become investors or take up non-founding roles in other companies.

The UK has powerful, globally competitive university spinout ecosystems that are strengthening across the country. However, we face significant challenges in enabling more of these companies to scale in ways that deliver benefits for and across the nation. It is hoped that the actionable recommendations presented by the Hickson Review can strengthen the UK's investor and university ecosystems in ways that enable spinouts to fulfil their potential to unleash the innovations that tackle societies most pressing challenges and deliver much needed economic value to power the UK economy into the future.

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1 Introduction

Tomas Coates Ulrichsen was commissioned by Research England to produce this report to support the independent review being developed by Tony Hickson on Deepening University-Investor Links for UK Research and Innovation (UKRI). This technical report presents a data-driven analysis of the investment and investor landscape for UK university spinouts, and updated insights on the health and performance of the UK university spinout ecosystem.

Building on the rich set of insights in the 2025 Powering Ideas to Innovation report published by the Policy Evidence Unit for University Commercialisation and Innovation (UCI) at the University of Cambridge (Ulrichsen & Miller, 2025), and powered by the latest data available from the new UK university Spinout Register, the report looks at the following key topics, guided by the needs of the Hickson Review team:

- The structure of the investment and investor landscape for UK university spinouts, how this varies across the regions and nations of the UK, and how it is evolving over time
- Further insights on the structure, performance and outcomes of the UK university spinout ecosystem and how this compares to the wider startup population
- Further insights on spinout production from different types of universities
- The ability of the UK to retain value from their spinouts as they grow and scale
- An international comparison of the investment performance of university spinouts emerging from leading universities in the UK and selected comparator nations
- The extent to which UK universities are producing serial entrepreneurs and how this compares internationally

1.1 Background and context

University spinouts play an important role in driving science and innovation-led economic growth and national competitiveness, strengthening national security, and in delivering solutions to some of the world's most pressing societal challenges. They provide an important vehicle to further develop and commercialise breakthrough ideas and technologies emerging from within the university base and deliver impacts on the economy and society at scale. They can open up new wealth-creating opportunities in existing industries, help to seed new markets, and provide solutions to help other organisations innovate, raise productivity and build resilience. Once a critical mass of activity is reached, university spinouts can also help to drive the entrepreneurial dynamism of a local cluster. Their growing importance is reflected in the efforts governments around the world are making to strengthen university spinout ecosystems.

There is mounting evidence to show that university spinouts are an important driver of entrepreneurial activity in key sectors for the UK economy (Ulrichsen & Miller, 2025) and across Europe (Dealroom, 2025a). However, we must also recognise that only a relatively small proportion of academics and other university staff will typically seek to build a spinout venture to commercialise intellectual property (IP) emerging from their work within the university

(Hughes et al., 2016). By contrast, evidence shows that a much larger cohort of academics will engage with external partners through many other formal and informal routes to exchange knowledge and apply their expertise to deliver impacts on the economy and society (Hughes et al., 2016). This includes, for example through collaborative research and innovation partnerships, sponsored research, consultancy, provision of training to companies, leveraging of university facilities and equipment to provide testing services, and providing advice and expertise to help solve technical and wider business problems and shape the strategic directions of organisations, technologies, sectors and local and national policies.

Much recent policy attention in the UK has been on universities and whether they are creating environments and approaches capable of incentivising, enabling, and supporting academics and others to create new ventures to commercialise IP developed within the university system. This culminated with the publication in 2023 of the Tracey-Williamson independent review of university spin-out companies, commissioned by the UK HM Treasury and Department for Science, Innovation and Technology (DSIT) (Tracey & Williamson, 2023). With progress now being made on several fronts, not least developing more founder friendly deal terms and the availability of proof-of-concept funding, attention is now turning to other areas. This includes a focus on how the UK's investment and investor ecosystem and its links with the university spinout ecosystem could be further strengthened and developed to better help seed and nurture university spinouts during their early phases of development and unleash the full potential of these companies for the benefit of the UK as they seek to grow and scale.

It is against this backdrop that Tony Hickson was commissioned by Research England on behalf of UKRI. Over the course of 2025, he led an extensive programme of interviews and engagement with key stakeholders and experts from across the university, spinout and investor ecosystems. Coupled with insights from the data-driven analyses presented in this report, Hickson develops a series of actionable of recommendations on how the investor and university ecosystems can be further strengthened and linked to unlock even more potential from the efforts to seed spinout companies able to commercialise intellectual property (IP) and ideas emerging from within universities to power innovation and growth for the benefit of the UK (Hickson, 2026).

The report presents evidence emerging from data-driven analyses on wide range of topics set by the Hickson Review team. The analyses are largely underpinned by the data on the population of university spinouts available from the new UK Spinout Register first published by the Higher Education Statistics Agency (HESA, part of Jisc) in June 2025 and linked to data from PitchBook and Moody's FAME and Orbis data platforms. The first flagship analysis of the UK university spinout ecosystem using this new dataset was published by Ulrichsen and Miller (2025).

In September 2025 HESA published an update to the Spinout Register providing further information on a number of spinouts – mostly founded prior to 2012 – that were missing from the initial release. Where relevant, this report updates the analysis presented in the flagship study by Ulrichsen and Miller to ensure the insights and evidence presented in here is based on the latest data available[1].

[1] Where sections of the Ulrichsen and Miller (2025) report are updated using the September release of the UK Spinout Register, much of the text was replicated and updated with the latest data with permission from the authors.

1.2 Report structure

The report is structured as follows.

Section 2: Provides information about the data and approach used to investigate the different topics and issues set by the Hickson Review team.

Section 3: Provides important context and insights on the structure and dynamics of the UK's economy and R&D and innovation system, and how this compares with key comparator nations globally.

Section 4: Examines the scale and structure of the UK university spinout ecosystem and key trends in spinout production across the nations and regions of the UK. It also presents evidence on the importance of spinouts in driving entrepreneurial activity and success in strategically important sectors for the UK economy. Much of this section is replicated and updated from Ulrichsen and Miller (2025).

Section 5: Presents evidence on the university system producing spinouts, and the scale and intensity of spinout production from different types of universities. The section also examines the spinout potential of different disciplines.

Section 6: Explores what happens to university spinouts once they enter the market. It provides evidence on investment trajectories and trends and how this varies across the nations and regions of the UK. It also looks at how the size of investment deals varies at different stages of company development and for spinouts emerging from universities across the UK and in different sectors. It provides evidence on spinout survival, including developing measures that adjust for minimal thresholds of commercial activity. Parts of this section are replicated and updated from Ulrichsen and Miller (2025).

Section 7: Investigates the investor landscape for UK university spinouts to better understand who is investing in these companies at different stages of their development. It examines the prevalence of different types of investors and how this is changing over time, and how different types of investors get involved at different stages of company development. It also looks at where the capital being invested into funds investing in spinouts comes from, both in terms of types of limited partners and geographically.

Section 8: Examines a number of indicators that provide insights on the ability of the UK to retain value from its spinouts as they develop, grow and scale.

Section 9: Presents an international comparison of the investment performance of spinouts emerging from leading universities in the UK and selected comparator nations, including the United States, Belgium, Switzerland and Sweden.

2

2 About the data

Before diving deeply into structure, dynamics and performance of the UK university spinout and investor ecosystems and the links between them, it is important to understand the data that underpins the analyses. Many of the analyses presented in this report are powered by the UCI Spinouts Dataset which builds from the UK Spinout Register through further curation and data linking. Key information about the UCI dataset and the underpinning UK Spinout Register are provided in this section to aid interpretation of the report's findings.

2.1 The UK Spinout Register as the analytical backbone

The backbone for much of the analysis presented in this report is the UK Spinout Register published by HESA. Developed with expertise and advice from Research England and UCI, the UK Spinout Register provides, for the first time in the UK, a publicly available and comprehensive list of spinouts emerging from UK universities, with every effort made to cover the full spinout population.

In addition to the spinout name and company registration number, the Spinout Register provides basic information about each company, including its foundation date, disciplinary origins, other information that may aid identifying the company in other datasets (e.g. website, legal incorporation date, and country of registration), whether the spinout is also a social enterprise, and the nature of the contractual relationship with its parent university.

2.1.1 Key definitions

Critically, the UK Spinout Register collects this information based on a set of common, and publicly available definitions. At the heart of these definitions is greater clarity on what constitutes a university spinout.

What is a university spinout?

"Firms founded primarily to commercialise the intellectual property (including ideas, information, and knowledge) created by university staff, where:

- *the IP either belongs to the university under general law or under the terms of the contract of employment; or,*
- *the member of staff has assigned the IP to the university to enable it to be commercialised; or,*
- *where significant university resources (e.g. funding, facilities) were used to generate the IP."*

The Spinout Register also makes an important distinction between the date on which the spinout is legally incorporated and/or registered, and the date on which it becomes a university spinout – its f*oundation date*. The purpose of this was to attempt to standardise the point at which a spinout's life begins, recognising that the legal entity that becomes a spinout can be

established at different points along the commercialisation journey. For example, there are a number of cases in the UK where academics create a legal entity several years prior to any IP being transferred in, in anticipation of a commercialisable opportunity emerging from their research. A more detailed discussion of this issue can be found in Ulrichsen and Miller (2025), section 2.3.

Distinguishing incorporation and foundation dates

The distinction between incorporation and foundation dates within the data represents two different milestones concerning the spinouts origin. The incorporation date refers to the legal date the company was established and/or registered. This may differ from the foundation date, which refers to the date when the IP is transferred into the firm (for example through a licence or assignment), in other words, representing the point at which the company becomes a spinout.

A final key definition of note for this report is around the reporting years used by HESA to collect information from universities.

HESA reporting years

The HESA reporting year covers the period from 1st August to 31st July, i.e. the reporting year 2023/24 runs from 1st August 2023 to 31st July 2024. For simplicity, the year 2023/24 will be referred to as 2024 throughout the report. The same will apply to all HESA reporting years.

2.1.2 Coverage of the Spinout Register

The UK Spinout Register required all eligible UK universities to submit information on any spinout that met the common definition that was:

1. Founded between 1st August 2012 and 31st July 2024, regardless of whether the company was still active in the reporting year 2023/24
2. Founded prior to 1st August 2012, but only if the company was still active in the reporting year 2023/24

The coverage of the data collection therefore includes the total active population of spinouts as of the reporting year 2023/4, and spinouts that were founded after 1st August 2012 that are no longer active. The former group allows for analysis of the development trajectories and socio-economic impacts of spinouts. Capturing the latter group of companies that are no longer active enables for insights to be developed on trends in the production of spinouts and spinout performance and survival.

Due to the statutory requirement for universities to submit data to the HESA data collections, the UK Spinout Register provides the most comprehensive and publicly available dataset on the full population of spinouts emerging from UK universities.

2.2 Unlocking insights through data linking

Much of the analyses undertaken in this report required additional information on each spinout to be collected. This was made possible by linking the company-level information available on each spinout through the UK Spinout Register to a number of other datasets.

The data was first mapped into Moody's FAME and Orbis data platforms to obtain information on company employment, ownership, and status. It was then linked into PitchBook's data platform. This provided detailed information on many of the key variables needed to deliver the analyses presented in this report. It included detailed information on the spinouts:

- Industrial sector and market verticals
- Deals, including deal type, size and date
- Investors into deals and detailed information on the investor, including type, location, and focus
- Funds from which investments are made into the spinout, and the limited partners that commit capital to these funds including type and location
- Mergers and acquisitions, and public listings
- Management teams and office locations

In addition, through linking into the PitchBook data platform it was also possible to identify a comparable sample of start-up companies that were not spinouts that could be used to deliver a comparative analysis of investment performance of spinouts and the wider start-up population. Further details on this can be found in section 4.2.1.

Note, however, that the PitchBook data platform focuses more heavily on tracking companies that are likely to attract external investment to drive their growth and/or have high growth potential. While many spinouts will follow this path to develop, grow and scale and are identifiable in the PitchBook platform, some, particularly those emerging from the arts, humanities and social sciences, will not (Ulrichsen & Miller, 2025). While this may introduce a degree of bias into the findings and should be borne in mind, given the primary focus of the report on the investment and investor landscape for spinouts, it is not believed to be a significant problem.

2.3 The UCI Spinout Dataset

Using the UK Spinout Register as its backbone, and linked to other datasets, the Policy Evidence Unit for University Commercialisation and Innovation at the University of Cambridge developed its own UCI Spinout Dataset to underpin its analytical work on spinouts. As set out in section 2.3 of the Ulrichsen and Miller (2025) report, the UCI Spinout Dataset *further curates* the Spinout Register in ways that unlock the types of analyses required by this report, including:

- Identifying and tracing spinout origins to ensure the registration numbers pointed to the initial spinout founded to commercialise IP
- Identifying multiple entries to create a company-level dataset – the majority of these were cases where the spinout was linked to different parent universities. In a small number of cases it appears that multiple entries referenced the same company (e.g. holding companies and subsidiaries, or legal entities based in different countries)

- A small number of cases where the companies did not appear to meet the definition of a spinout – these were excluded

The further curation undertaken by UCI means that the sample of spinouts used to underpin and drive the analyses presented in this report will differ slightly from the published data available through the Spinout Register.

2.3.1 Adjusting for inflation

Many of the analyses in this report look at trends in financial variables such as research income secured by universities and investment secured by their spinout companies. In analysing trends over time, it is important to adjust for the effects of inflation. To do so, all financial variables for UK-based entities are deflated using the UK HM Treasury GDP deflators updated on 28th March 2025. This results in the variables being adjusted to constant 2024 price-levels. Where entities are based overseas, and where possible, the relevant GDP deflator is used to deflate its financial variables. These are obtained from the World Bank's World Development Indicators DataBank.

3

3 UK research and innovation ecosystem trends and global positioning

Before digging into the specifics of the UK university spinout and investor ecosystems, it is helpful to first provide some key insights on the structure and dynamics of the UK's economy and the R&D and innovation system within which spinouts and investors are operating, looking both at the position of the UK globally as well as differences across the nations and regions within the UK.

3.1 Innovation, growth and the shifting landscape for innovation

Delivering economic growth over the long-term requires improvements in productivity. Much research over the years has linked the ability to drive increases in productivity to innovation. For technology-driven innovation in particular, this is enabled by investments in research and development (R&D) and the translation and commercialisation of new knowledge, alongside other key innovation activities and inputs. This includes among others skills and expertise (technical as well as managerial and commercial); facilities, equipment and enabling tools, access to finance; and networks and alliances of partners reflecting the increasingly collaborative and networked nature of innovation processes (Arora et al., 2020; Kuznets, 1971; NIESR, 2021; Ulrichsen, 2025).

A recent study by the UK's National Institute of Economic and Social Research for the then UK Department for Business, Energy and Industrial Strategy (BEIS) examining the relationship between R&D, innovation and productivity (NIESR, 2021) found that (1) private sector R&D investment plays an important role in driving innovation, recognising, though that the relationship can be complex; (2) public R&D investments are important for fostering both private and public innovation; (3) there is no evidence that public R&D investments crowd out private investment; and (4) R&D investments are important for both process innovation and the introductions of new-to-market and new-to-business products, and are particularly important for the creation of the most advanced and radical innovations in R&D-intensive industries.

It is also important to note the rapidly increasing pace of technological change, shortening product lifecycles, and growing complexity of products and services that are increasingly built on advances at the scientific and technological frontier, and increasingly intense global competition (Arora & Gambardella, 1994; Bettis & Hitt, 1995). This has been coupled with significant changes in the organisation of innovation across industries and economies, and the rise in importance of the venture capital (VC) industry in its financing. We have witnessed a shifting division of labour between large companies and startups in commercialising high-risk, high-potential technologies and breakthroughs (Arora et al., 2020; Arora & Gambardella, 1994). As a result, the entrepreneurial dynamism of an economy, and its ability to not just produce knowledge and inventions from research, but also turn inventions and ideas into successful

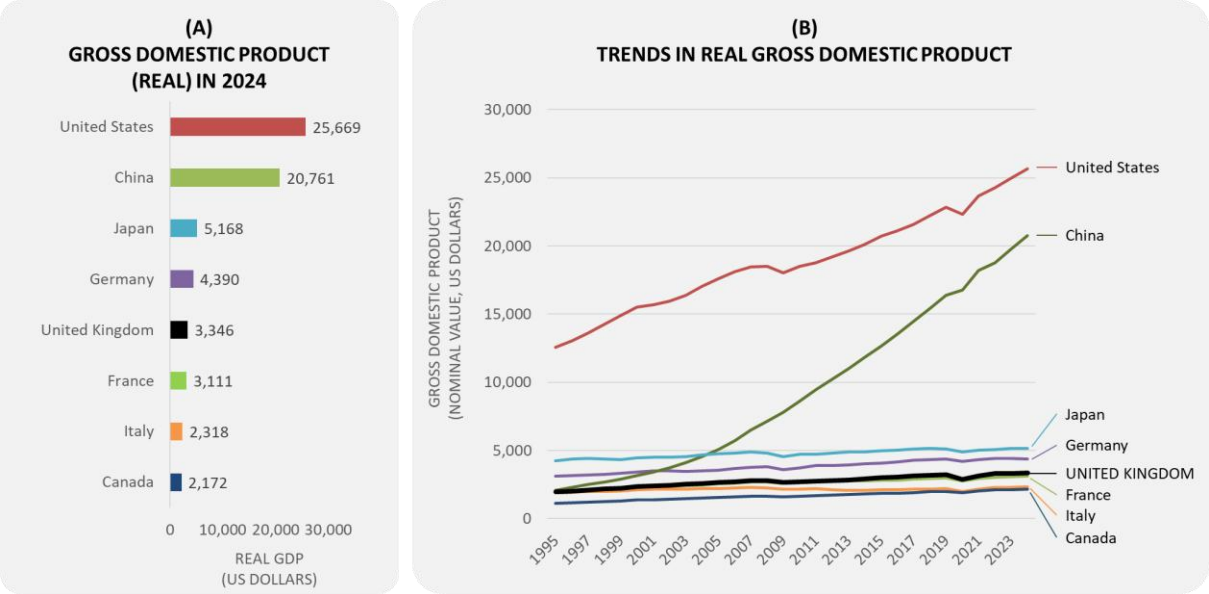
innovations that delivery value to the economy, have become important drivers of long-term economic growth and national competitiveness (Audretsch, 2014; Bettis & Hitt, 1995).

3.2 Trends in the UK economic, innovation and R&D landscape

3.2.1 The size of the economy and strategically important sectors

The real gross domestic product – a frequently used measure of the size of an economy, adjusted for inflation – of the UK in 2024 was £3.3 trillion. While one of the larger economies of the world, the UK is, in reality, a mid-sized economy when compared with the juggernauts of the US (£25.7 trillion) and China (£20.7 trillion) (Figure 1, panel A). Perhaps more importantly, panel B of Figure 1 shows the significant growth of the Chinese economy over the past 30 years compared with countries such as the UK, Japan, Germany and France. Also well-reported are the challenges with the UK's sluggish productivity growth since the mid-2000s compared with other leading economies (Figure 2)[2].

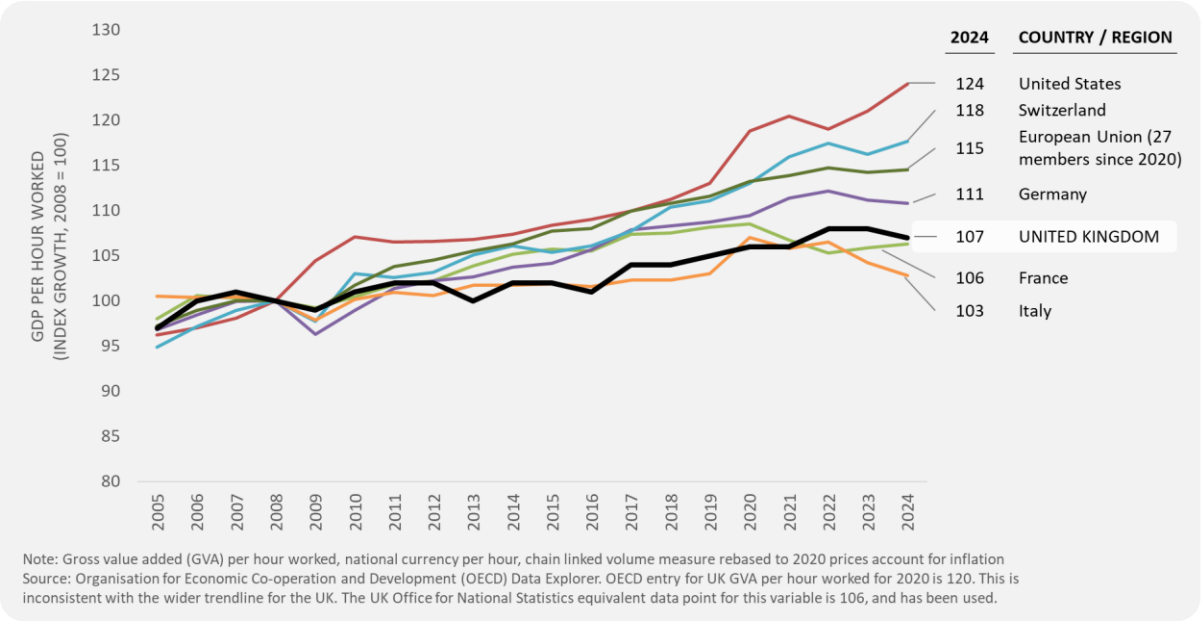
Figure 1 | Scale and trends in real gross domestic product for the G7 economies and China



Note: Real gross domestic product (chain-linked volume measure, converted to US dollars using constant exchange rates)
Source: Organisation for Economic Co-operation and Development (OECD) Data Explorer

[2] For a detailed discussion on the UK's productivity problem, see chapter one *The UK's productivity challenge: people, firms, and places* by Bart van Ark and Mary O'Mahony in the 2023 report *The Productivity Agenda* produced by The Productivity Institute (Coyle et al., 2023).

Figure 2 | Index growth (2008 = 100) in gross value added (GVA) per hour worked (a measure of labour productivity) for the UK, selected G7 economies and the European Union

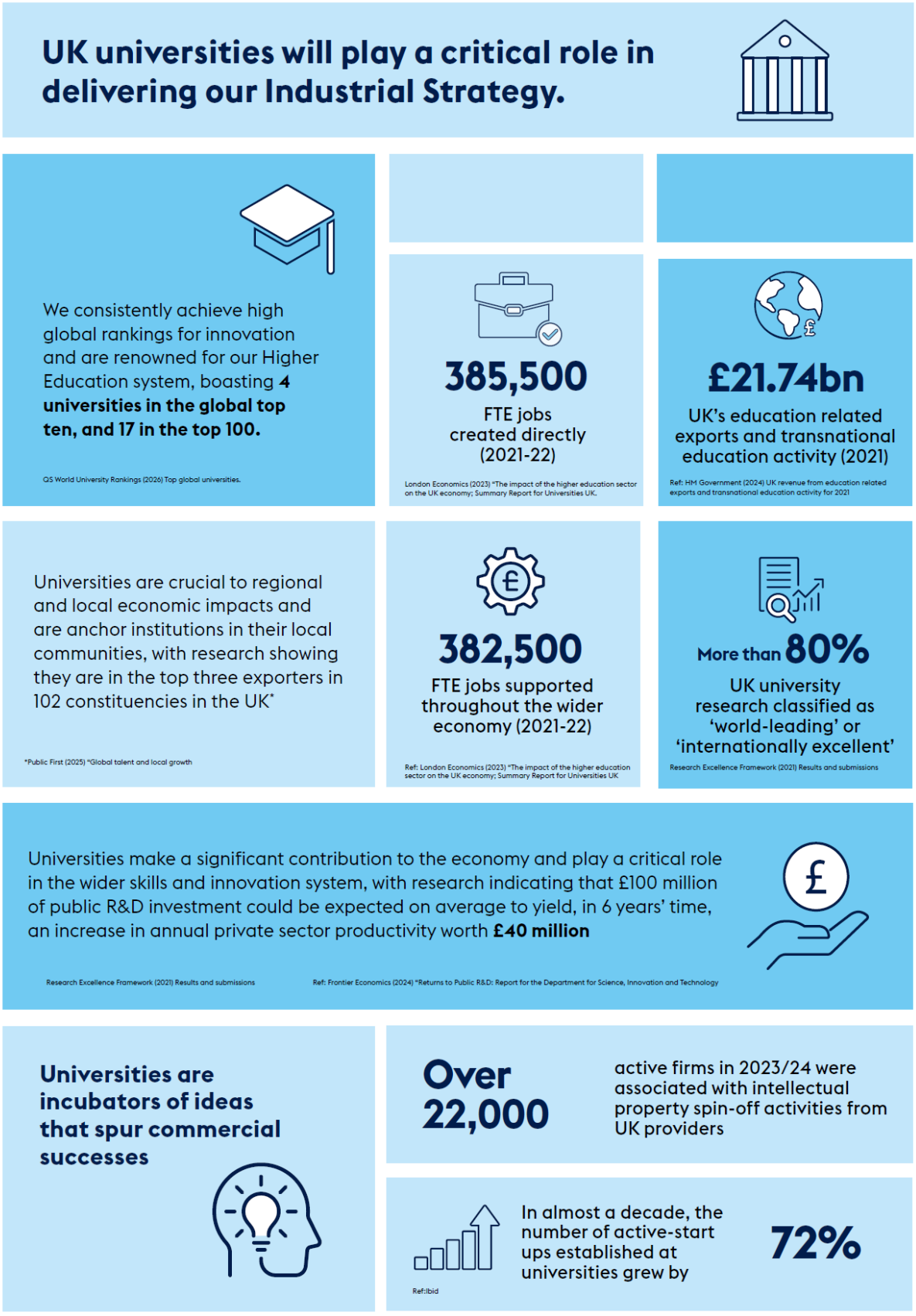


Note: Gross value added (GVA) per hour worked, national currency per hour, chain linked volume measure rebased to 2020 prices account for inflation
Source: Organisation for Economic Co-operation and Development (OECD) Data Explorer. OECD entry for UK GVA per hour worked for 2020 is 120. This is inconsistent with the wider trendline for the UK. The UK Office for National Statistics equivalent data point for this variable is 106, and has been used.

The 2025 UK Innovation Report published by the Cambridge Industrial Innovation Policy (CIIP) group based at the University of Cambridge (CIIP, 2025a) provides a detailed analysis of the UK's industrial innovation landscape and shows the UK is very much dominated by services sectors. Outside labour-intensive services, the financial services sector, and professional, scientific and technical services are particularly important. Nevertheless, they show that manufacturing still plays an important role in the UK, not least in terms of our exports, R&D activity, and contribution to gross value added and capital investment.

The UK recently published its industrial strategy (UK Government, 2025). This prioritised support for eight key, high-growth sectors across the UK's strengths in both manufacturing and services. These include life sciences, advanced manufacturing, digital and technologies (including artificial intelligence (AI), engineering biology, quantum, semiconductors and cyber), clean energy, defence, the creative industries, professional and business services, and financial services (Figure 3)

Figure 3 | Frontier sectors prioritised by the new UK industrial strategy



Source: reproduced from UK Government. (2025). *UK's Modern Industrial Strategy* (p. 116)

3.2.2 R&D investment

The UK invested £72.6 billion in R&D in 2023. Based on estimates from the Organisation for Economic Cooperation and Development (OECD), this equated to 2.7% of its GDP in 2023 (Figure 4). By comparison, the US invested 3.4% of its GDP in R&D and Germany 3.1%.

Figure 4 | Expenditure on R&D as a percentage of GDP for OECD countries

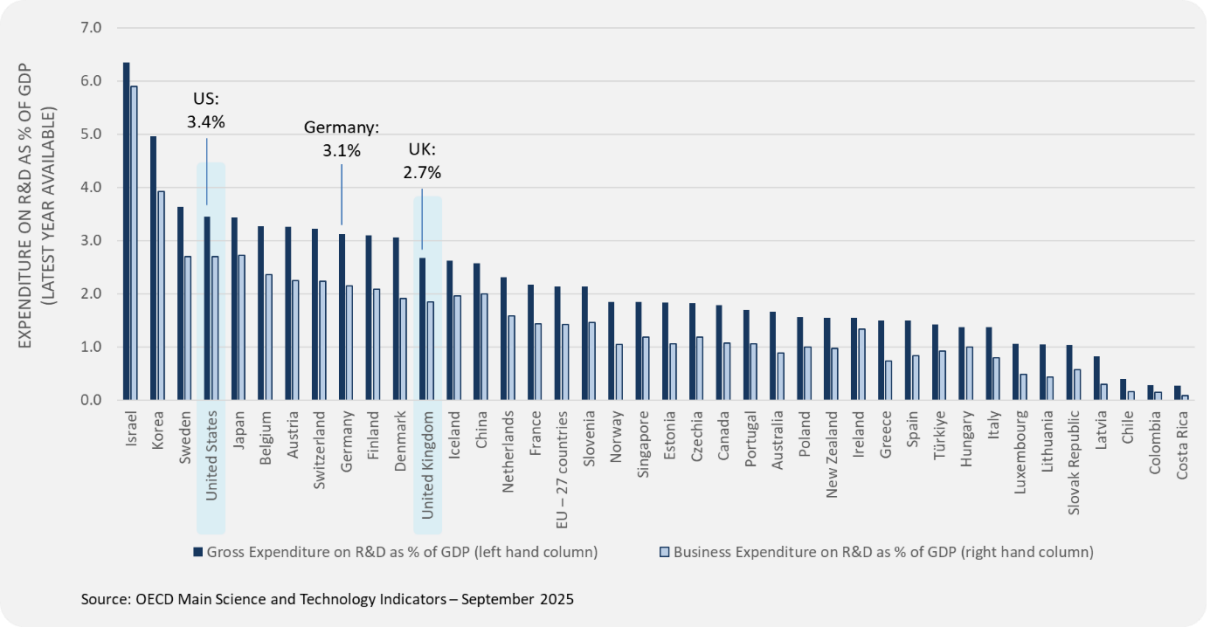


Figure 5 | Proportion of R&D performed by different sectors (percentage of gross expenditure on R&D)

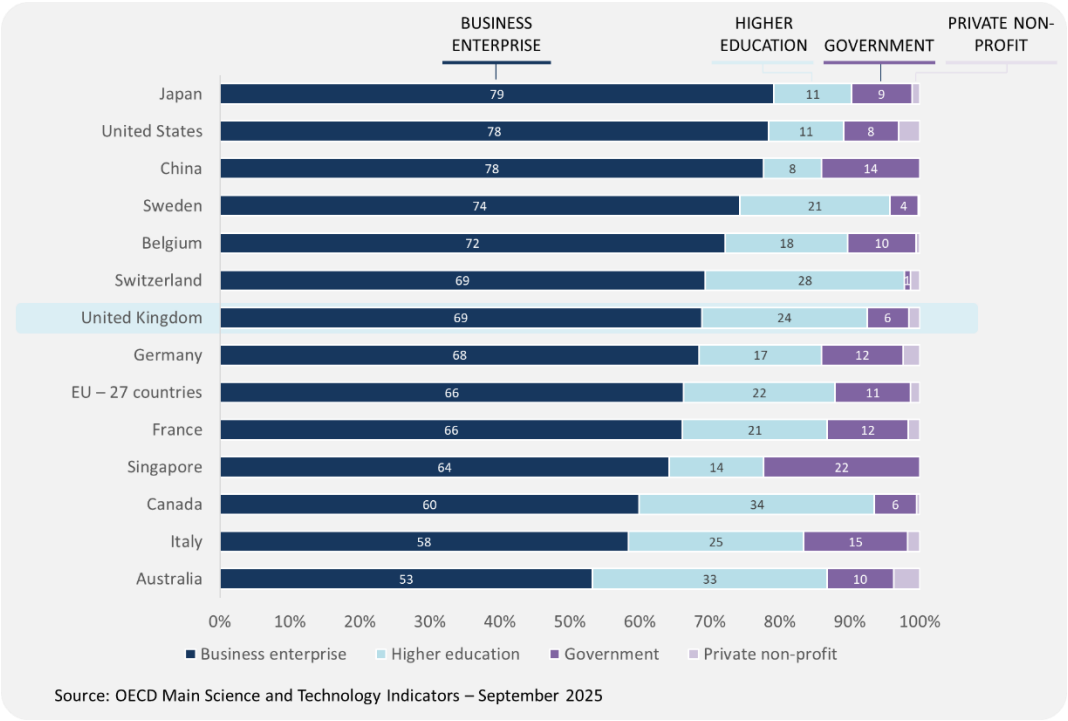
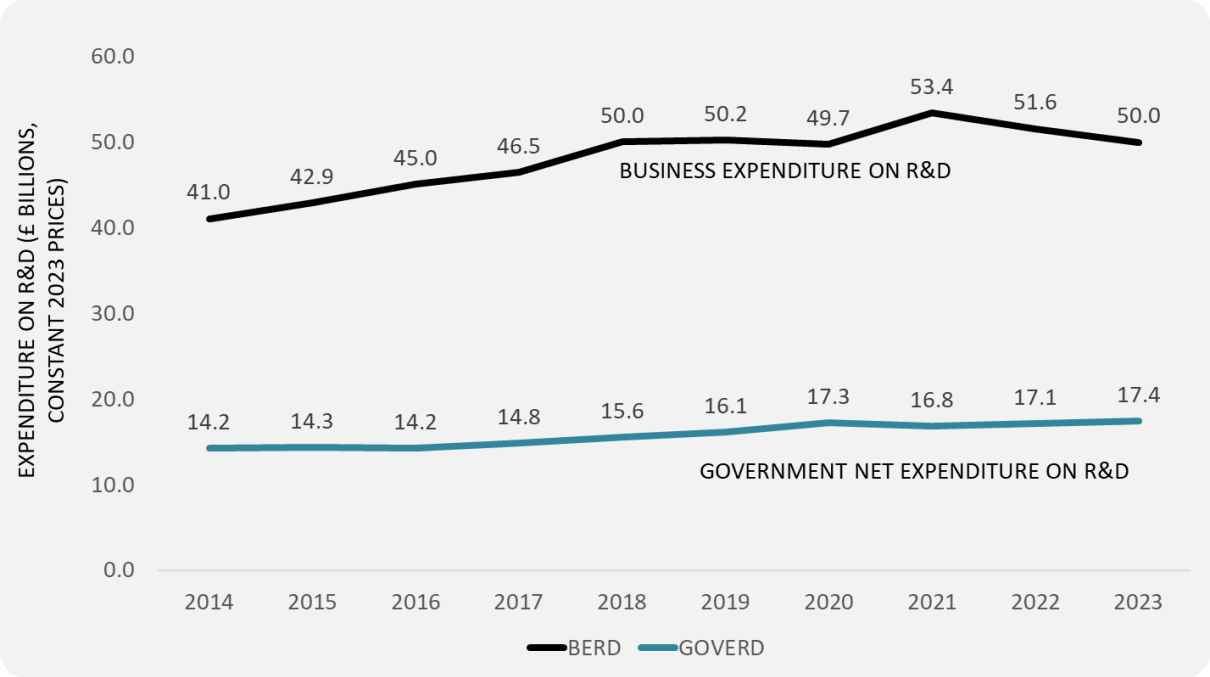


Figure 5 looks in more depth at the sectors of the R&D system performing R&D and reveals significant differences across countries. In the UK, the business sector performed 69% of R&D in 2023 (based on the proportion of R&D investment); the higher education (HE) sector performed 24%; the government sector 6%, and private non-profit organisations performed 2%. The dominance of the HE sector outside the private sector in delivering R&D is a striking feature of the UK and reflects a lack of diversity of types of public organisations performing research and technology development when compared with comparator nations (CIIP, 2025b). By contrast, in Germany the government sector performed 12% of R&D, in China 14% and in the US 8% (Figure 5).

Looking at trends in expenditure on R&D by businesses in the UK shows that, following increases between 2014 to 2018 from £41 billion (in constant 2023 prices) to £50 billion, business R&D has largely flatlined, with the exception of an increase in 2021 (possibly due to the effects of the pandemic – a pattern seen in other statistics not least venture capital investment). Worryingly, an analysis by the National Centre for Universities and Business showed that business R&D spending in some key comparator nations has risen in recent years, including Korea (+12.5% since 2021), Japan (+8.5%) and the average for OECD countries (+7.2%) (NCUB, 2025). This stagnant UK business sector R&D is despite significant increases in public sector investment in R&D by the UK Government from £14.8 billion in 2017 to £17.4 billion in 2023 (Figure 6).

Figure 6 | Trends in expenditure on R&D by businesses in the UK and by the UK government

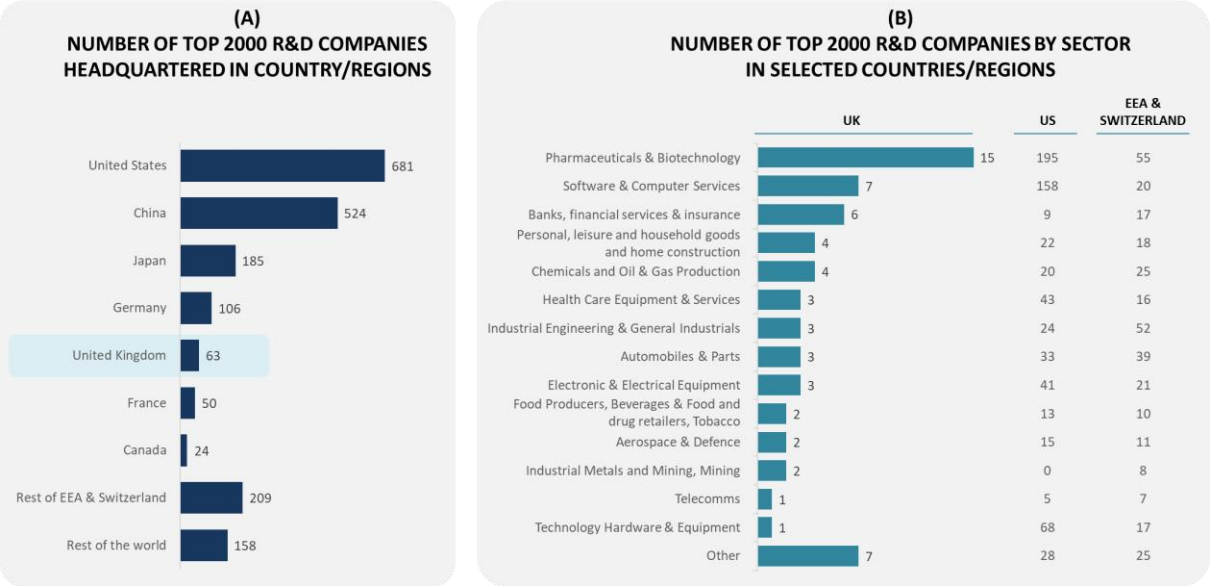


Sources: Office for National Statistics (ONS), released 11 December 2024, ONS website, statistical bulletin, Business enterprise research and development, UK: 2023, and Office for National Statistics (ONS), released 9 April 2025, ONS website, statistical bulletin, Research and development expenditure by the UK government: 2023

Looking in more detail at the top R&D performing companies globally, the 2024 European Union Industrial R&D Investment Scoreboard provides details on the top 2,000 companies based on the amount they invest in R&D. These companies can be important for spinouts in providing development partners and early customers, particularly those commercialising technologies that require significant investment in the later stages of the journey, are targeting into highly regulated markets, or entering markets dominated by very large companies.

An analysis of this data shows that the vast majority are headquartered in the US (681) and China (524) (Figure 7, panel A). The UK is home to just 63 of these top R&D companies. These are concentrated in pharmaceuticals and biotechnology (15), software and computer services (7), banks, financial services and insurance (6), personal, leisure and household goods (4), and chemical, oil and gas production (4) (Figure 7, panel B). Compared with the US and countries within the European Economic Area (EEA)/Switzerland, we have many fewer R&D companies in technology hardware and equipment, electronic & electrical equipment, industrial engineering, and healthcare equipment and services.

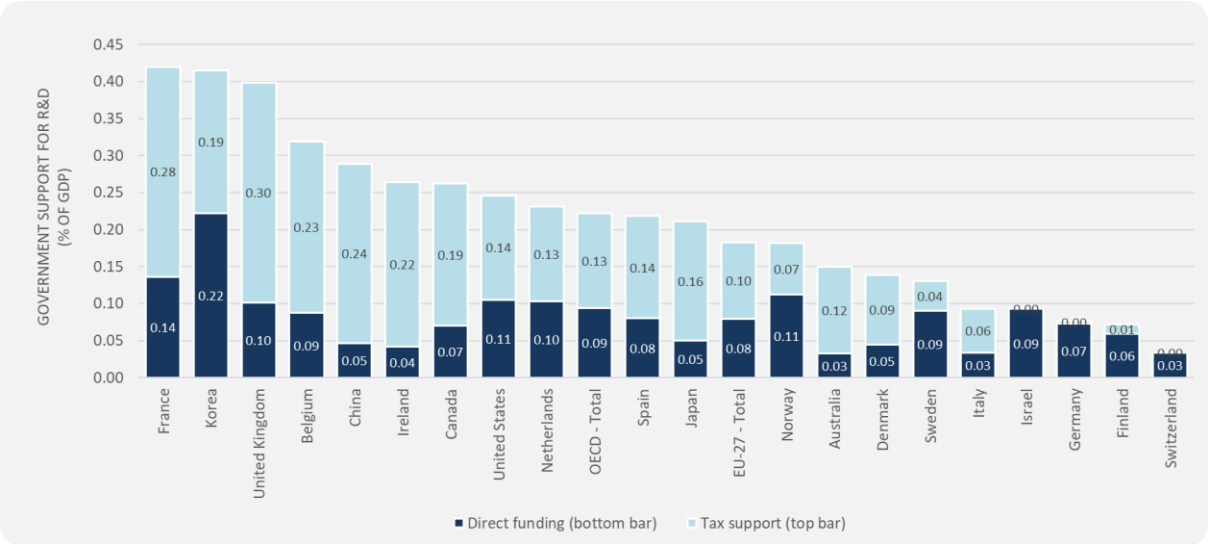
Figure 7 | Number of the top 2000 R&D companies headquartered in the UK and selected comparator nations (panel A) and the number of top R&D companies by sector in the UK, US and EEA/Switzerland (panel B)



Source: Author's analysis of the 2024 European Union Industrial R&D Investment Scoreboard, available at https://iri.jrc.ec.europa.eu/scoreboard/2024-eu-industrial-rd-investment-scoreboard#field_data, accessed on 30th December 2025

Much is also made of the incentives facing businesses to invest in R&D as part of efforts by governments to stimulate productive R&D in the economy. When it comes to the scale of direct funding and tax support for R&D, data from the OECD shows that amongst the advanced OECD economies, the UK provides greater tax incentives for business R&D than other countries (0.3% of GDP in 2023), for example the United States (0.14% of GDP in tax support for R&D), Japan (0.16%) and Canada (0.19%).

Figure 8 | Direct funding and tax incentives for business R&D in 2023 as a percentage of GDP for selected OECD countries

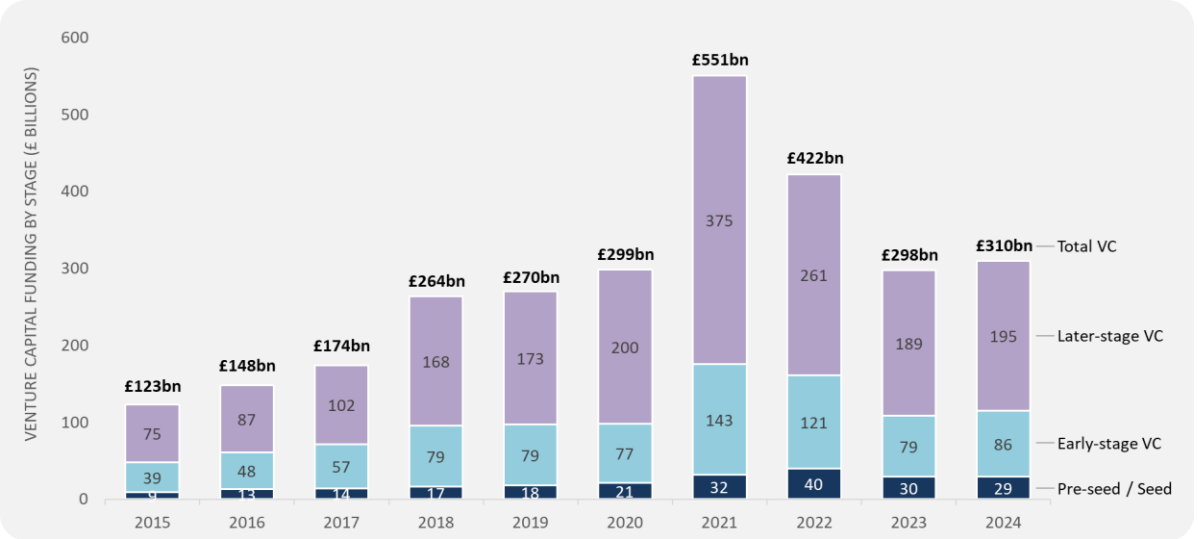


Source: Organisation for Economic Cooperation and Development (OECD)

3.2.3 Global trends in venture capital funding

Many university spinouts – particularly IP-rich, deep-tech-focused spinouts, as well as those commercialising software-based technologies and applications – pursue growth strategies built on securing equity-backed investment from the VC community. VC investment globally grew over the period 2015 – 2024, from around £123 billion in 2015 to £310 billion in 2024 (with the pandemic seeing investment reaching a peak of £551 billion globally in 2021) (Figure 9). For 2024, £29 billion was invested at the pre-seed/seed stage, £86 billion for early-stage VC and £195 billion for later stage VC. The proportion of pre-seed/seed funding in total has increased slightly from around 7% in 2015 to around 9% in 2024. By contrast, early-stage VC funding decreased from approximately 32% of total in 2015 to 28% in 2024.

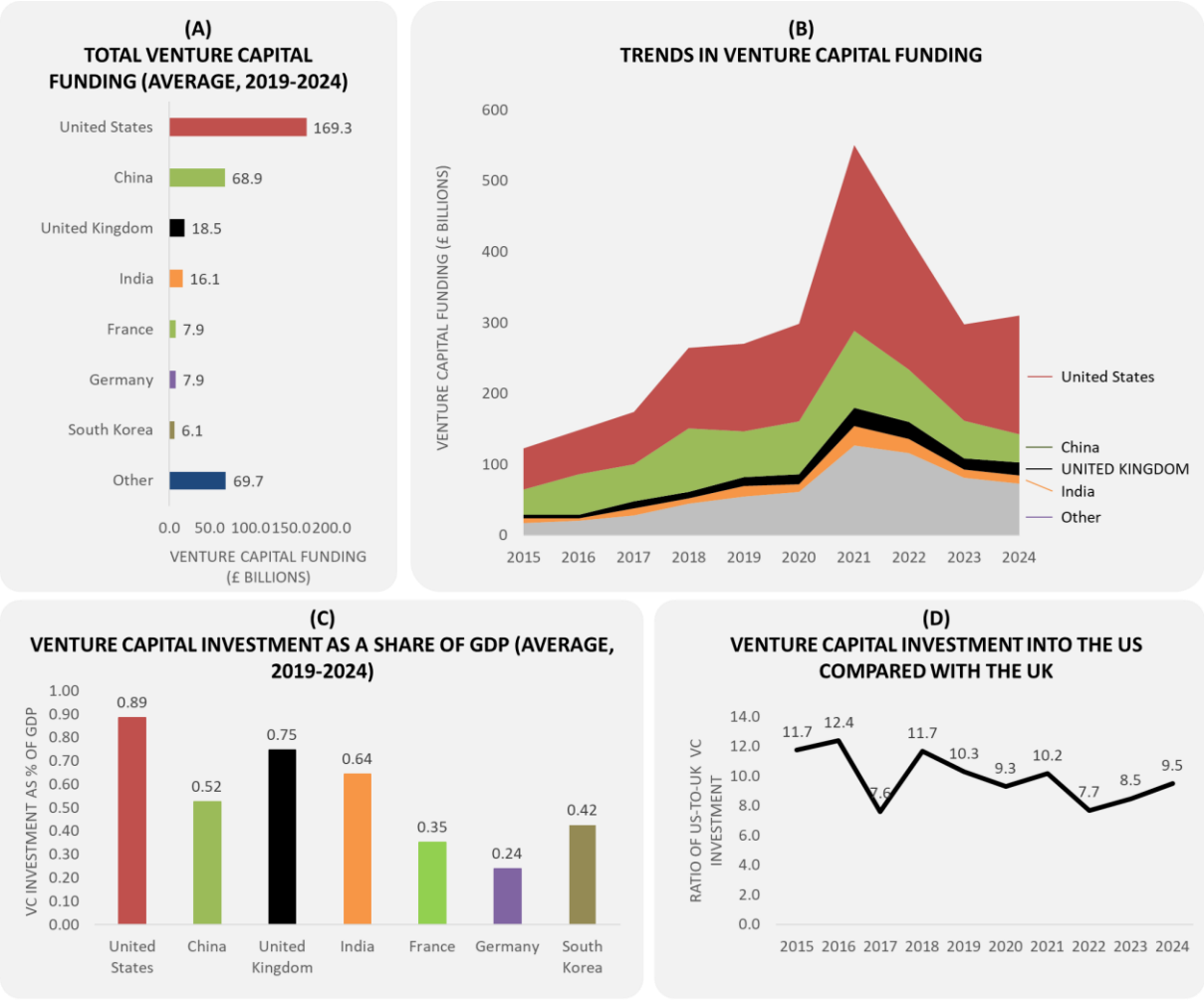
Figure 9 | Trends in pre-seed/seed, early-stage and later stage venture capital funding globally



Source: Author's analysis of data from PitchBook, Inc.

The UK secured approximately £18.5 billion in VC funding per year over the period 2019-2024, third globally in terms of scale of VC funding invested. The United States attracted by far the greatest amount of VC investment (£169 billion) per year over this period, with China attracting £69 billion (Figure 10). By comparison, VC investment into the US was 9.5 times greater than into the UK, although this has decreased from around 12% in 2015-16. Once normalised by the scale of the economy, however, the UK attracts less VC investment over the period 2019-2024 (0.75% of GDP) compared with the US (0.89% of GDP), but significantly more than other leading nations countries for VC investment such as France and Germany.

Figure 10 | Scale and trends in venture capital funding secured by companies headquartered in different countries and regions of the world



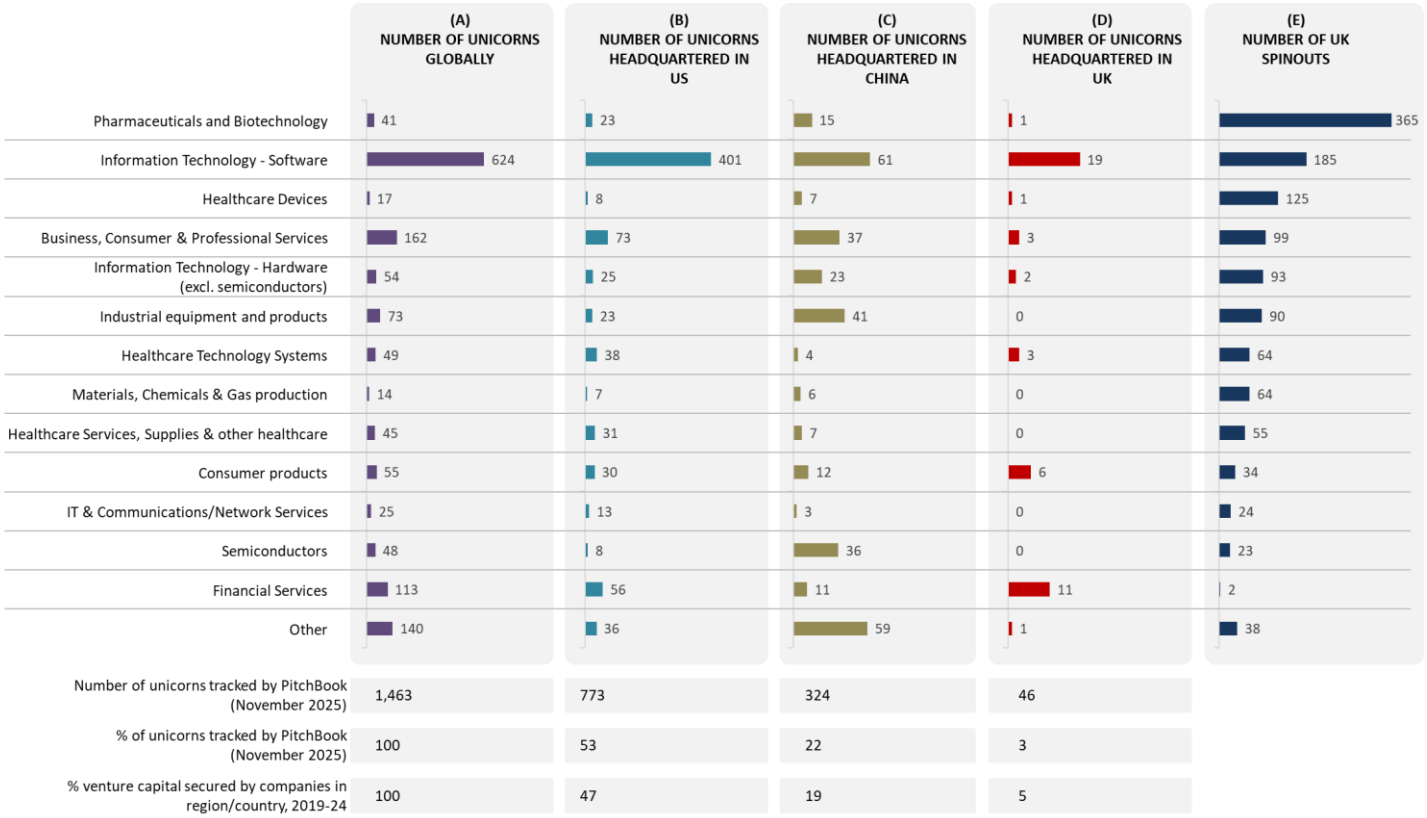
Source: Author's analysis of PitchBook, Inc. data

3.2.4 Venture capital outcomes

Many commentators on the success of the venture capital market look to the numbers of privately held companies reaching $1 billion valuations – referred to as 'unicorns'. For greater precision, PitchBook refines the definition of unicorn companies to focus on venture capital-backed companies that has raised a round at post-money valuation of greater than $1 billion. They stop considering a company to be a unicorn if it is no longer venture-backed (for example if it went public or was acquired); if its valuation falls below $1 billion; or if it goes out of business).

Taking this definition, Figure 11 (panel A) presents the numbers of unicorn companies globally and for US (panel B), China (panel C) and the UK (panel D) as of November 2025, with numbers broken down by industrial sector. It also provides the number of UK university spinouts for the equivalent industrial sectors in panel E. There are over 1,400 unicorns globally, with over half of these headquartered in the US (773) and many in China (324). By contrast, the UK is home to 46.

Figure 11 | Number of venture capital backed companies with unicorn status in different industrial sectors of the economy in the UK and selected nations



Sources: Author's analysis of data from PitchBook, Inc., and the UK Spinout Register published by HESA

The sectoral distribution of unicorns is also really revealing. Most of the UK's unicorns are in either the IT software sector, financial services or consumer products. The US similarly has over half of its unicorns in the IT software sector. China, by comparison, has unicorn companies distributed across many industries covering not just software and services but also IT hardware, industrial equipment and products, and semiconductors.

Recall from Figure 7 that the UK's top R&D companies are dominated by those operating in the pharmaceuticals and biotechnology industry, software and financial services. Comparing UK university spinout production (panel E, Figure 11) with the combined sectoral focus of our top R&D companies and unicorns suggests that, other than for pharmaceuticals and biotechnology and IT software, the UK is producing spinouts in areas where we neither have large R&D players that can act as a valuable large domestic customer base, nor unicorns demonstrating a pathway to significant UK-based value creation.

Another key metric capturing the health of the VC industry is the number of exits – for example through the public listing of a company, its acquisition, or through some form of buyout. From a VC perspective, these exits are important to ensure that financial returns flow back into the industry to invest in the next generation of companies.

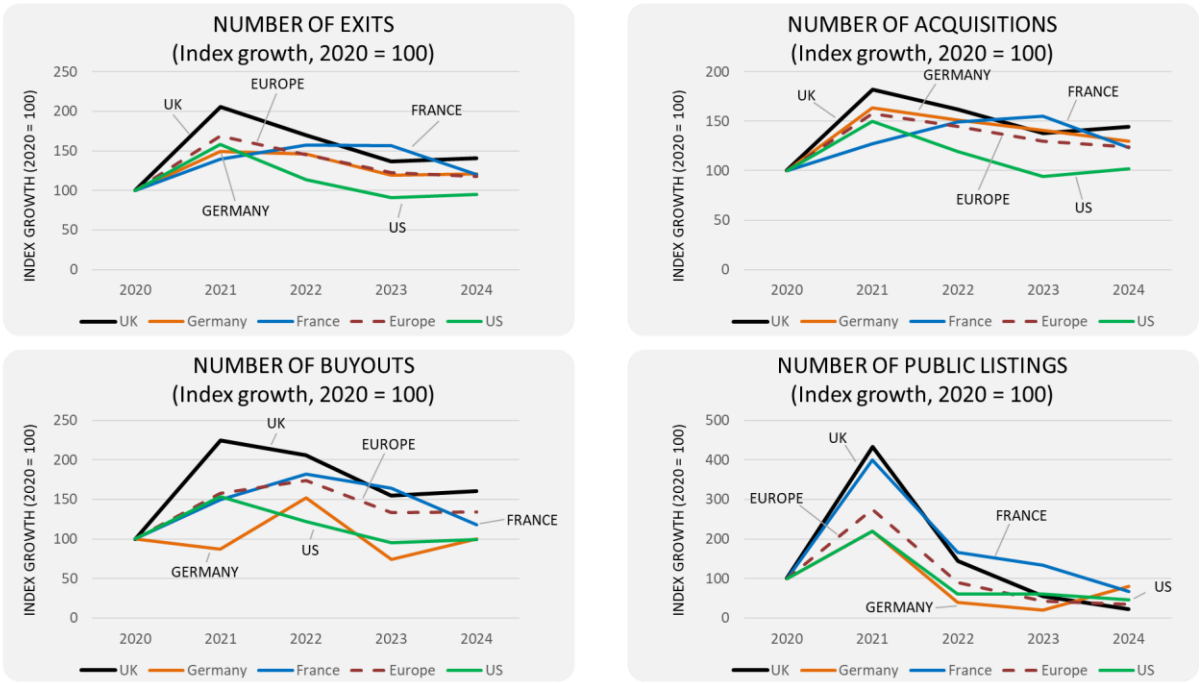
Reflecting the scale of the VC industry in the UK and the size of its economy, the UK performs well compared with key European nations in terms of the numbers of exits. Averaging over the period 2020-2024, PitchBook identified approximately 235 exits from VC-backed companies. Most of these (approximately 160, 70% of total exits) were acquisitions, with around 60 buyouts (24% of total) and 15 public listings (6% of total). The distribution of exits across these different types for the UK is similar to the experiences of the US, Europe, and France. Germany had relatively more acquisitions and fewer buyouts.

Table 1 | Number of venture capital exits in the UK and selected comparator nations and regions, average over 2020 - 2024

Nation / region	Total VC exits	VC exits - Acquisitions	VC exits - Buyouts	VC exits - Public listings
US	1,440	995	305	140
UK	235	165	60	15
France	165	120	40	5
Germany	130	100	25	5
Europe	*1,070*	*760*	*230*	*80*

Source: author's analysis of PitchBook market reports. Rounded to the nearest 5; as such numbers may not sum to the total in each row.

Figure 12 | Index growth (2020 = 100) in the number of venture capital exits (total, acquisitions, buyouts and public listings) for the UK and selected comparator nations



Source: Author's analysis of PitchBook analyst reports: Q1 2025 UK Market Snapshot, Q2 2025 European Venture Report, Q2 2025 France Market Snapshot, Q2 2025 Germany Market Snapshot, PitchBook/NVCA Q2 Venture Monitor: The definitive review of the US venture capital ecosystem

Looking at the trends in different exit types and taking 2020 as the baseline, Figure 12 shows that the UK has fared relatively well compared with the experiences of the US, Europe, France and Germany. Consistent with trends in the VC investment landscape, the UK experienced a spike in the number of exits in 2021 across all types. The numbers of acquisitions and buyouts appear to have stabilised in the UK at a higher level compared with 2020, although public listings are weaker. This may reflect wider market issues affecting the UK economy, not least the relatively weak British currency in recent years and well reported challenges for listed companies in the UK stock market.

3.2.5 Entrepreneurial climate in the UK

The entrepreneurial capabilities and dynamism of an economy have become crucial drivers of long-run economic growth and national competitiveness (Audretsch, 2014; Bettis & Hitt, 1995; GEM, 2025). The Global Entrepreneurship Monitor (GEM)[3] collects data on the state of entrepreneurship across the world, including the UK, to enable governments and other stakeholders to make informed decisions about where and how to stimulate entrepreneurship and nurture the development of healthy entrepreneurial ecosystems. Its most recent report on the UK (Hart et al., 2025) provides a wealth of evidence and data on the state and health of the UK's entrepreneurial ecosystem. Key findings include:

- The UK is experiencing the highest proportion of working age individuals either engaged in an entrepreneurial activity or intending to start their own business (36%), with immigrants and ethnic minorities remaining the most entrepreneurial groups.
- Early-stage entrepreneurial activity among women has almost tripled since 2002, but women-led businesses still face persistent barriers in accessing equity finance.
- AI is increasingly transformative for entrepreneurship, enabling value creation, operational efficiency and innovative business models, with evidence pointing to a strong association between entrepreneurial ambition and confidence in potential to drive innovation, productivity and growth.
- The UK's entrepreneurial ecosystem remains weak in key areas including access to finance, government support, and physical infrastructure.
- Emphasis on the importance of building on the UK's impressive record in starting new businesses to create an environment that enables them to scale and grow.

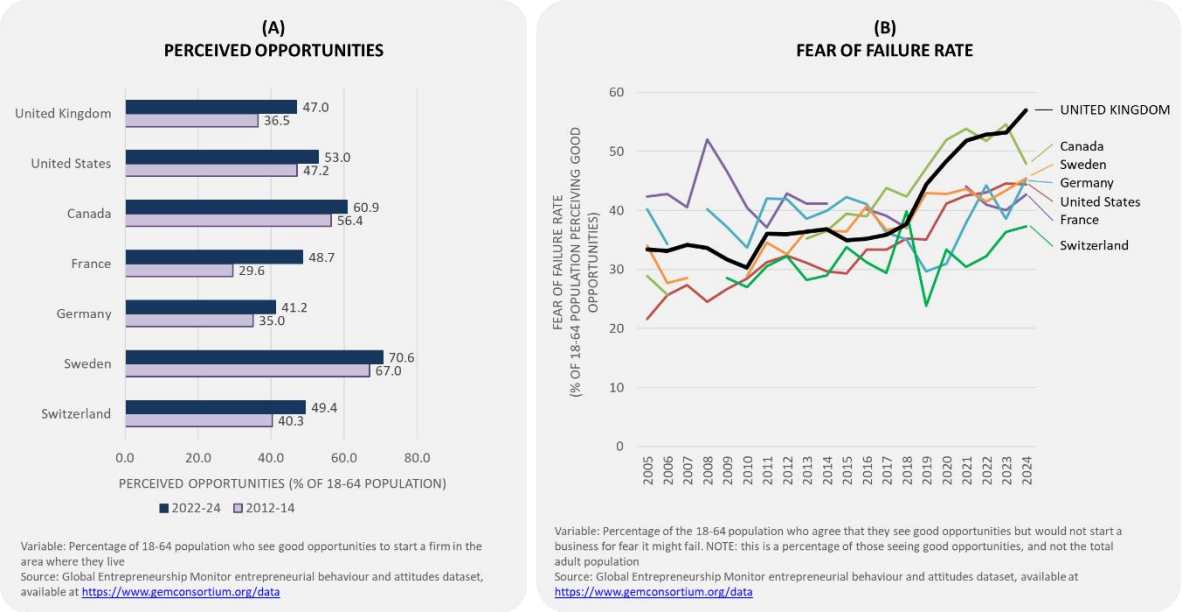
GEM makes their global dataset available for international comparative analyses on key metrics of entrepreneurial ecosystem health and performance over time. Two key data points are presented in Figure 13. The first (panel A) looks at the perceived entrepreneurial opportunities in the UK and selected comparator nations. Across the period 2022-2024, 47% of the working age population in the UK see good opportunities for starting a firm in the area where they live. This is up from 36.5% between 2012-2014. This is similar to the experiences of France (49%), Switzerland (49%), but lower than the United States (53%), Canada (61%) and Sweden (70%).

Figure 13, panel B presents evidence on the fear or failure amongst those perceiving good opportunities in these nations, and how it has changed over the period 2005 to 2024. The significant rise in the percentage of the working age population in the UK who see good

[3] https://www.gemconsortium.org/, accessed on 14th December 2025

opportunities for starting a firm but would not start one for fear it might fail, was roughly stable between 2011 to 2018 at around 36-38%. This was broadly similar to the experiences in Sweden, France and Germany, but higher than the United States and Switzerland. However, since 2018, the fear of failure has jumped significantly and steadily in the UK to 57% in 2024, a similar trajectory to that experienced by Canada. While other countries have seen increases, including within the United States and Sweden, the scale of the increase is significantly lower than what we have witnessed in the UK.

Figure 13 | Perceived opportunities to start a firm and fear of failure rates for the UK and selected comparator nations



3.3 The sub-national landscape in the UK

In additional to a challenging national picture for economic growth, R&D and innovation, and entrepreneurial ecosystem health, the UK exhibits one of the highest levels of spatial inequality across the industrialised world (Kenny et al., 2023). Analyses of regional economic inequalities consistently point to (1) significant variation across the regions and nations of the UK; (2) significant variation even within regions cities, towns and rural areas; and (3) the dominance of London.

Selected sub-national measures of productivity, R&D and innovation activity at the UK region and nation level are provided in Table 2. Productivity differences across the regions are stark. For example, gross value added (GVA) per head in London is more than 1.5 times greater than the UK average, and 2.5 times greater than the region with the lowest regional productivity, the North East. GVA per head in the South East is 1.5 times greater than the North East.

Table 2 | Selected measures of economic, R&D and innovation activity and performance across the nations and regions of the UK

UK nation / region	GVA (average, 2019-23)	Business expenditure on R&D (average, 2022-23)	GVA per head (average, 2019-23)	Business R&D per employed person (average, 2022-23)	High growth enterprises (average, 2021-23)	Innovation active firms (% enterprises, 2020-22)	Product innovators (% enterprises, 2020-22)
London	496,700	10,100	55,900	2,100	2,800	36.8	19.6
East of England	179,000	9,800	28,100	3,200	1,000	38.9	22.7
South East	314,400	8,500	33,700	1,800	1,700	40.2	22.0
South West	160,200	2,900	28,000	1,000	1,000	37.3	20.7
East Midlands	122,200	2,300	24,900	1,000	700	35.1	17.7
West Midlands	152,000	4,100	25,400	1,400	800	35.4	17.5
North East	59,500	800	22,300	600	400	38.5	20.7
North West	208,000	4,400	27,900	1,300	1,300	35.1	18.3
Yorkshire and The Humber	140,800	1,800	25,500	700	900	35.4	19.6
Scotland	158,600	2,700	29,000	1,000	700	32.4	16.4
Wales	71,600	900	23,000	600	400	30.9	16.7
Northern Ireland	47,900	800	25,100	900	200	32.1	15.6
United Kingdom	2,110,900	49,300	31,700	1,500	12,000	36.3	19.4

Sources: Regional GVA and regional GVA per head (ONS Regional gross value added (balanced) per head and income components dataset[4]; Business expenditure on R&D and High Growth Enterprises (ONS Local Indicators[5]), Employed persons (Annual Population Survey[6]); Innovation active enterprises and product innovators (UK Innovation Survey 2023[7]).

R&D spending is also heavily concentrated in London, the South East and the East of England, with these regions combined capturing 57.6% of all business expenditure on R&D between 2022 and 2023. Beyond these areas, the West Midlands and North West attract much more business R&D (over £4 billion per year during this period) than other parts of the UK, with the North East, Wales and Northern Ireland attracting the least (around £800-900 million). This pattern of regional difference in business R&D spending is also seen if you normalise business R&D spend by the scale of economic activity in the region, for example by the number of people employed.

The numbers of high-growth businesses (as measured by the Office for National Statistics as those with more than 10 employees and an average growth in employment of greater than 20% per year over a three-year period) is also dominated by London (23% of total), with the South East home to 14%. With the East of England, this 'Greater South East' area of the UK is home to almost 46% of such businesses. The North West is home to 1,300 high growth businesses (almost 11% of total), while the North East, Wales, and Northern Ireland have relatively few.

[4] Available at https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalregionalgrossvalueaddedbalancedperheadandincomecomponents)

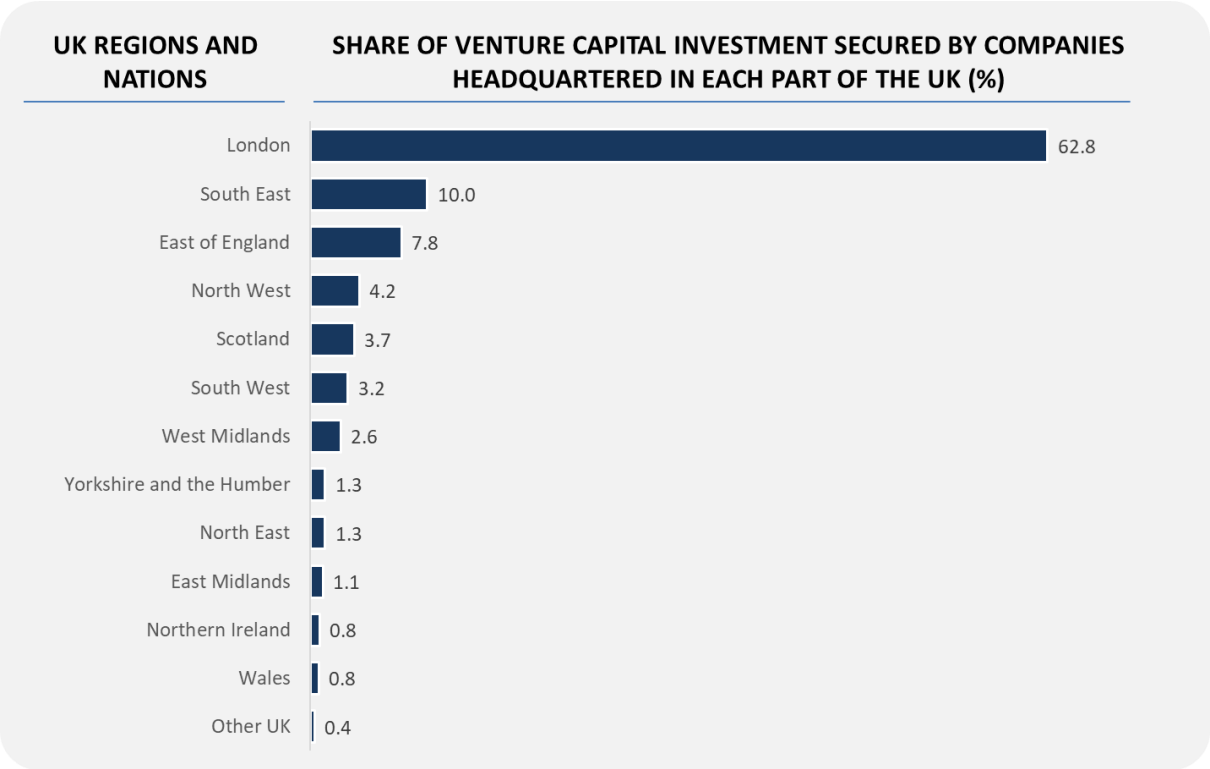
[5] Available at https://www.ons.gov.uk/explore-local-statistics/

[6] Available through Nomisweb at https://www.nomisweb.co.uk/

[7] Available at https://www.gov.uk/government/statistics/uk-innovation-survey-2023-report

Despite the lack of business R&D spending and high-growth businesses in the North East, analysis of the UK Innovation Survey shows that the prevalence of innovation active businesses is higher than the UK average, in line with that of the East of England, and higher than London (areas which capture significant amounts of R&D spend), as is the prevalence of product innovators more specifically.

Figure 14 | Share of venture capital investment secured by companies headquartered in each region and nation of the UK during the period 2022-2024 (%)



Source: Author's analysis of data from PitchBook Inc.

Access to finance is known to be a significant challenge for start-ups and small companies looking to scale (British Business Bank, 2025). While the UK as a whole attracts a significant share of the world's VC investment given the scale of its economy, the distribution of this funding around the UK is highly uneven. Across the period 2022-2024, companies headquartered in London attracted almost 63% of all VC investment in the UK, with those based in the South East securing 10% and those in the East of England almost 8% (Figure 14). Collectively, companies based in the Greater South East captured over 80% of VC investment into the UK.

Taking this one step further, Table 3 looks at where venture capital investors are geographically located across the UK, distinguishing between UK and overseas investors, and for UK investors their headquarters and their wider office presence (including headquarters and regional offices). It reinforces the dominance of London as a base for VC investors, with almost 70% of UK VC investor headquarters based there. The South East is home to 5.9% of UK VC investor headquarters, while the East of England is home to 3.8%. The North West dominates the north of England (covering the North East, North West and Yorkshire and the Humber) as a home for

VC investors. Broadening the analysis to capture regional offices of VCs does not significantly change the findings.

The concentration of overseas VC investors with an office presence in London is stark, with 91% of offices based in the UK's capital.

Table 3 | Distribution of venture capital investors across the regions and nations of the UK

Region / nation	UK HQ investors (% investors with UK HQ)		Overseas HQ investors - any office (% investors with HQ outside UK)
	Primary HQ	Any Office	
North East	1.1	1.4	0.2
North West	3.6	4.7	0.5
Yorkshire and The Humber	1.9	2.6	0.4
East Midlands	1.0	1.3	0.0
West Midlands	1.5	1.9	0.3
East of England	3.8	4.7	1.1
London	68	71	91
South East	5.9	7.2	2.5
South West	1.7	2.3	0.7
Wales	0.7	1.1	0.1
Scotland	2.9	3.9	1.3
Northern Ireland	0.8	1.0	0.3
Channel Islands & Isle of Man	2.8	3.4	1.4
Not known	*4.4*	*4.7*	*3.4*

Source: Author's analysis of data from PitchBook Inc.

4

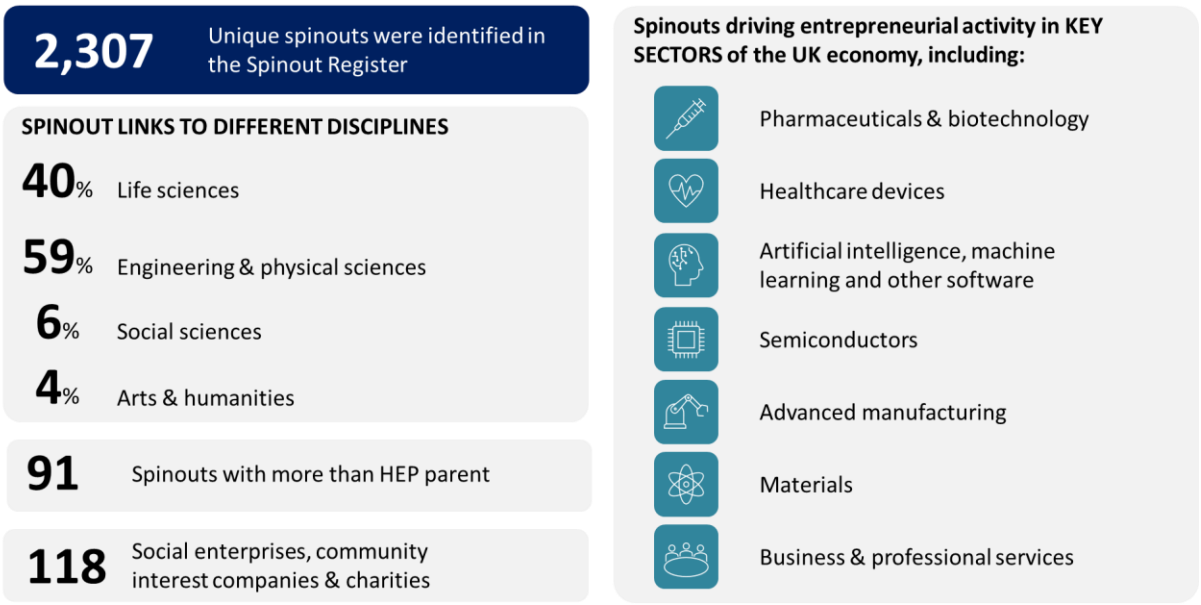
4 Trends and significance of the UK university spinout ecosystem

It is against this economic, research and innovation, and venture capital backdrop that spinouts are emerging from UK's universities to commercialise IP (interpreted here as ideas, technologies and knowledge) generated at least in part within their institutions. This section examines key trends in the production of spinouts from UK universities and their significance in driving the entrepreneurial dynamism of the UK economy.

The most recent update of the UK university Spinout Register (September 2025 release) identified 2,307 unique spinouts emerging from UK universities, founded between 1st August 2012 and 31st July 2024 regardless of their eventual success or failure, or founded prior to this but still active in 2024. Of these, almost 1,700 are still active, 67 have listed on a stock exchange, and over 200 have been acquired.

Most spinouts have least some origins in the life sciences and/or engineering and physical sciences disciplines with universities (Figure 15). Spinouts are commercialising IP into sectors of strategic importance to the UK, including pharmaceuticals and biotechnology, healthcare devices, AI/ML and other software industries, semiconductors, advanced manufacturing, materials, and business and professional services.

Figure 15 | Insights on the types of spinouts being reported to the UK university Spinout Register

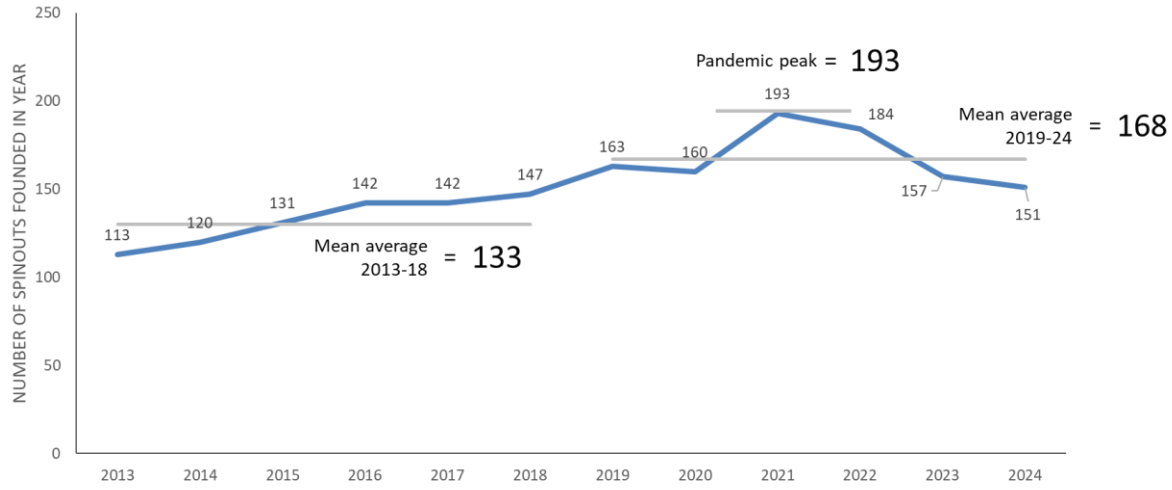


Note: spinouts can have origins in multiple disciplines; the share of spinouts with links to each discipline are therefore not additive.
Source: author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release)

4.1 UK university spinout production trends

The number of spinouts produced by UK universities annually can provide a valuable leading indicator of the health of the research commercialisation pipeline, **although it is important to use this metric as part of a wider suite of metrics that capture the value potential or quality of these companies**.

Figure 16 | UK university spinout production trends



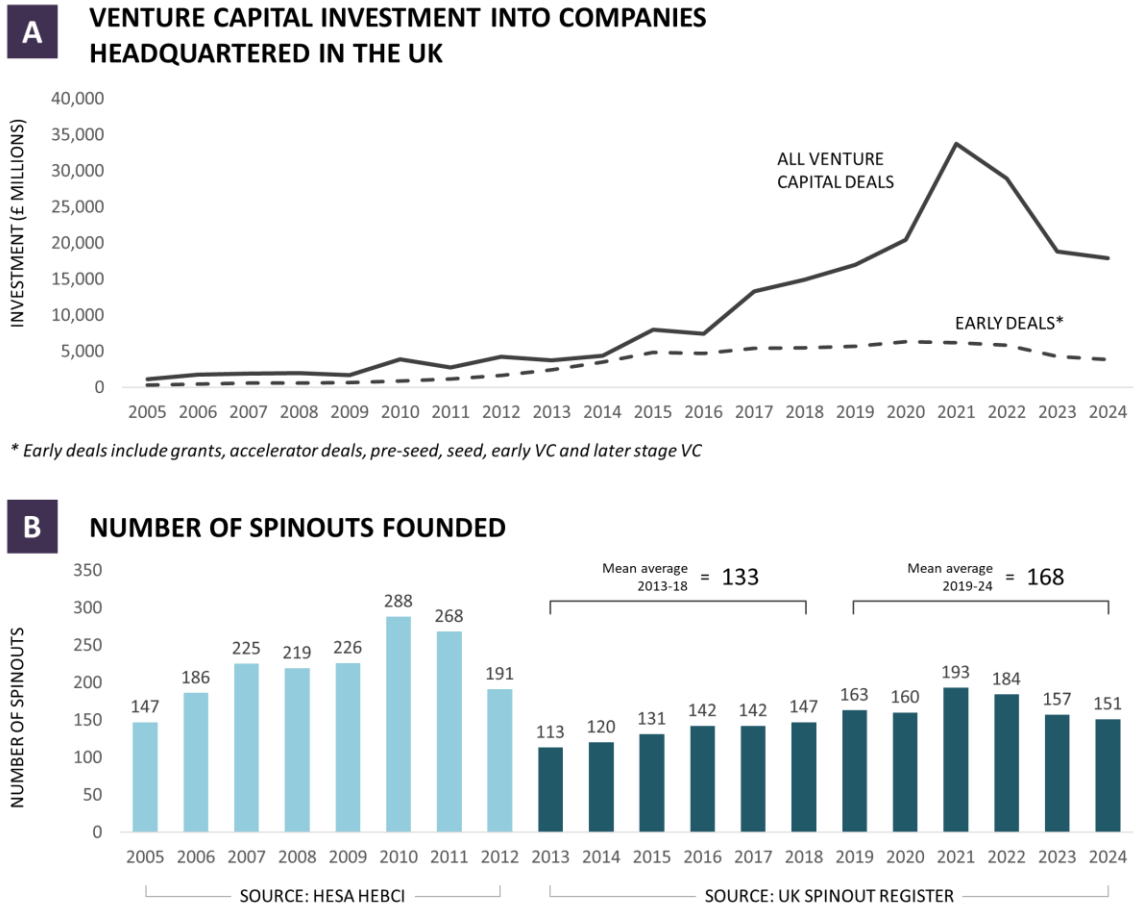
Source: author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release)

The Spinout Register allows us to investigate annual spinout production rates from 2013 onwards. Prior to this, universities are only required to submit spinouts that are currently active in the reporting year (2024) and we therefore do not have those that were founded but have since ceased operations for whatever reason (e.g. dissolution following an acquisition).

Figure 16 shows that annual spinout production increased steadily from 113 spinouts founded in 2013 to 163 in 2019. Since then, if we exclude the apparent effect of the Covid-19 pandemic, spinout production has been largely flat, or even declined slightly. It is believed that spinout productions during 2021 and 2022 were boosted due to the effects of lockdowns where much research activity was halted due to laboratory and office closures allowing academics more time to devote to exploring commercialisation opportunities.

With only two data points following the pandemic spike, it is very difficult to make concrete assertions on the direction of the trend going forward. Ignoring the pandemic spike, the two most recent data points may suggest that production may be starting to fall below pre-pandemic levels. The 2025 datapoint in this series, once available, will be crucial to identify whether this levelling off of spinout production appears to be persisting.

Figure 17 | Comparing UK university spinout production trends with trends in UK venture capital



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

Figure 17 provides a longer-term trend analysis of spinout production from UK universities, combining data from the UK Spinout Register from 2013 onwards, with data from the Higher Education Business and Community Interaction (HEBCI) record which provides annual information on university-level spinout production going back to the early 2000s[8]. The figure also compares spinout production with long term trends in venture capital investment secured by UK headquartered companies over the period 2005-2024.

The analysis reveals a number of striking observations. The first is that, since the early-2010s, spinout production largely tracks the trends in early-stage VC investment (including pre-seed/seed stage investments). This is perhaps unsurprising given that many spinouts seek this type of funding to seed and grow. Positive trends in the early VC market are likely to create a positive pull for greater spinout production, while a challenging investment market is likely to dampen activity.

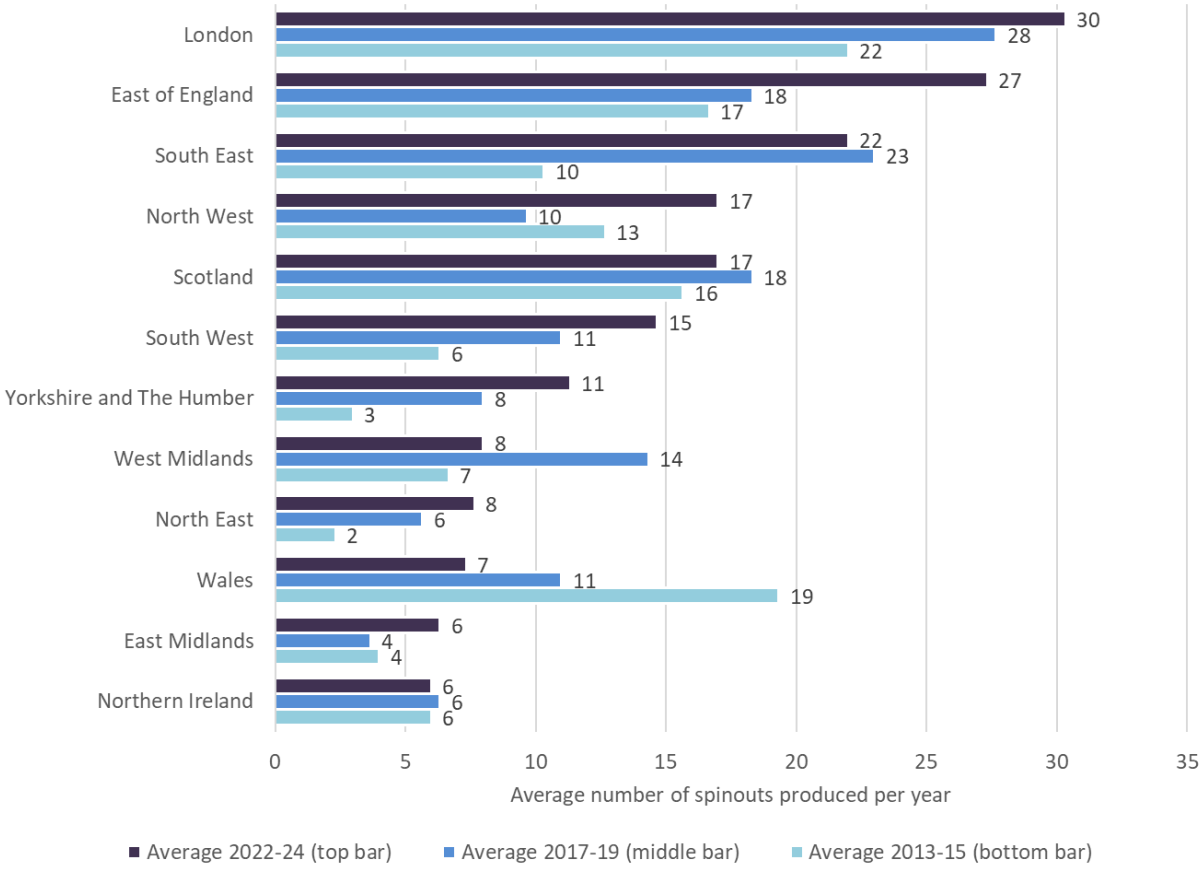
[8] The HEBCI record is managed by the UK Higher Education Statistics Agency (part of Jisc) and is an annual collection of data on spinouts and many other areas of knowledge exchange between universities and non-academic partners. It is a statutory requirement, with all eligible UK universities required to submit data. As such it represents a comprehensive and complete, university-level dataset. The Spinout Register now forms part of this collection.

The second observation is the significant increase and levels of spinout production in the 2000s. This period was one where there were a number of incentives within the system that implicitly or explicitly rewarded the numbers of spinouts produced, regardless of their quality. Given the ease with which a company can be legally incorporated in the UK, and at very little cost, people believe this led to many so-called 'paper companies' being created; companies with very little potential to unleash economic value and gain any commercial traction. The early 2010s saw the system correct, with emphasis increasingly focused on the outcomes of these companies in securing external investment and employing people.

4.1.1 Spinout production levels across the regions and nations of the UK

In terms of absolute numbers of spinouts emerging from UK universities, London and the East of England produce the highest volume of spinouts per year, with the South East also producing significantly more than other regions (Figure 18). All these regions have seen large increases in the numbers of spinouts produced over the past 10 years. The North West region of England sees 17 spinouts per year emerge from their universities, up from 10 per year across the three years prior to the Covid-19 pandemic. Scotland sees 17 spinouts emerge per year, with numbers relatively stable over time. The North East, Yorkshire and the Humber, and the South West, while producing fewer spinouts in total than leading regions, have seen big increases the spinout production over the past 10 years.

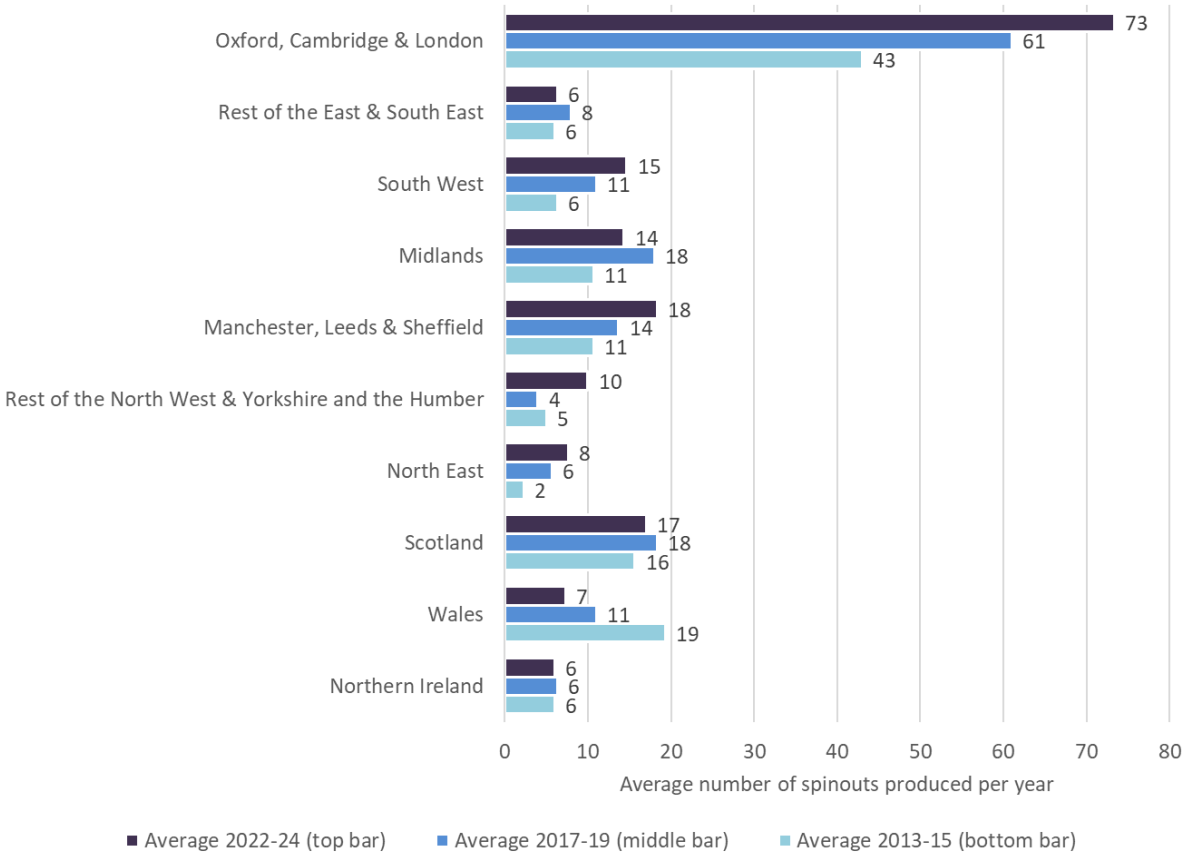
Figure 18 | Numbers of spinout produced from universities based in different regions and nations of the UK



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release)

As Section 5.2.2, Figure 30 shows, much of the variation across regions is driven (1) by the presence of large, research intensive universities, and (2) increased performance of some larger research universities in producing more spinouts for the given scale of research.

Figure 19 | Numbers of spinout produced from universities based in areas and nations of the UK



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release)

Figure 19 explores the regional distribution of spinout production using a more bespoke set of geographies that map more closely to areas of the country where there is specific (science and innovation) policy interest or where groupings of universities are coming together to invest time and effort to strengthen their spinout ecosystems. The geographies were constructed based on aggregations of the Travel to Work Areas (TTWAs) in which a university is based[9]. These include:

- The Golden Triangle of Oxford, Cambridge and London
- The South West, which has, among other things, seen the emergence and long-term success of SETSquared in supporting spinouts and commercialisation from universities across this region

[9] Travel to Work Areas (TTWAs) are geographies of the UK constructed to approximate relatively self-contained labour markets. They reflect areas where most people both live and work. Among other things, they provide a valuable tool for spatial analyses where location decisions of companies and individuals are important. For a longer discussion on TTWAs, see Coombes and ONS (2015).

- Manchester, Sheffield and Leeds, which has in recent years seen concerted efforts by universities of Manchester, Sheffield and Leeds to come together with the wider ecosystem to strengthen support for commercialisation within the region, culminating with the creation of Northern Gritstone, an investment company investing in spinouts and other science and innovation-focused from these universities and the North of England
- The Midlands, which has in recent years seen increasing efforts across their universities to come together to support commercialisation and innovation within their region (for example through Midlands Innovation), attract more R&D investment into the region, and assemble a new investment company, Midlands Mindforge to invest in companies emerging from the region's universities and the Midlands more widely
- The North East (based on the administrative ITL1 geography), which has seen their universities come together to invest in supporting commercialisation, including not least through the efforts of the universities of Durham, Newcastle, Northumbria Sunderland, Teesside and York to seed and develop Northern Accelerator
- The nations of Scotland, Wales and Northern Ireland are maintained as distinct geographies given the devolved nature of much of this policy area

Diving below the large English regions to explore more policy-focused geographies shows the dominance of the Golden Triangle within the Greater South East in driving spinout production. It also shows the importance of the emerging cluster of Manchester, Leeds and Sheffield for the North West and Yorkshire and the Humber, although universities based outside this area (which include both the universities of York and Liverpool) have seen a doubling of spinout production over the past 10 years.

4.1.2 Spinout production by industrial sector and market vertical

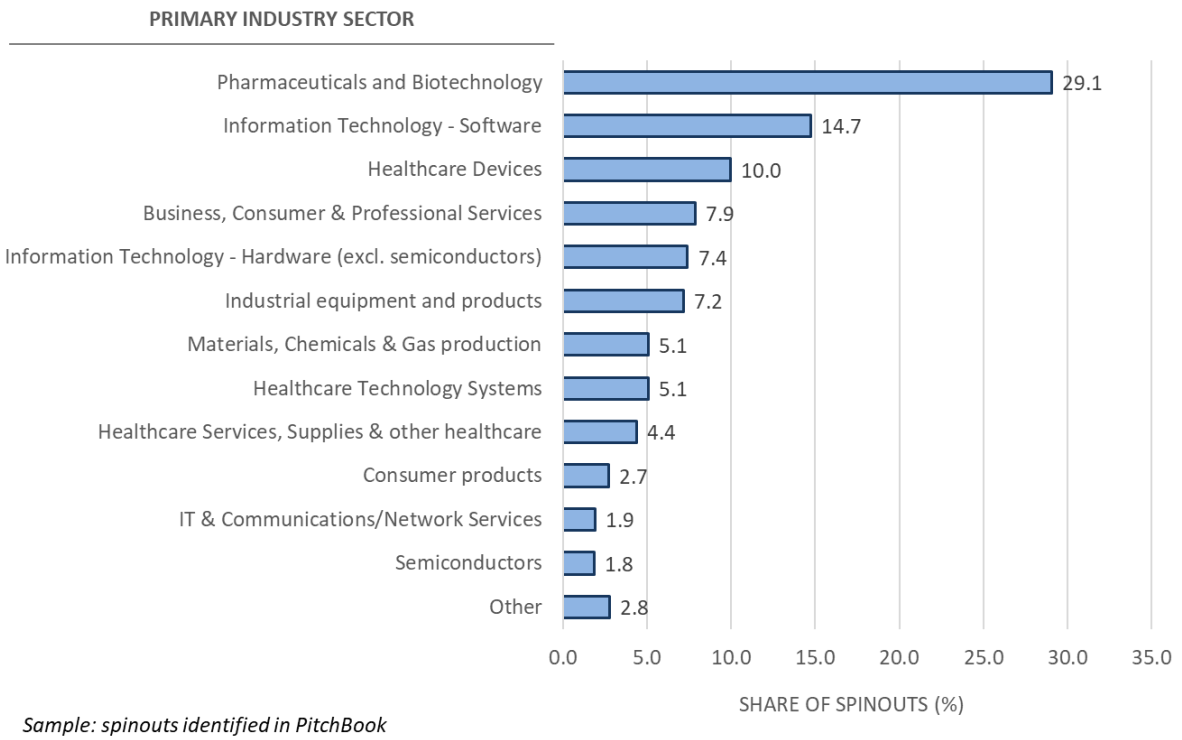
Spinouts commercialise IP into specific sectors, with ambitions to deliver innovations that create socio-economic value. Commercialisation pathways from idea to innovation through spinouts differs for different types of technologies and sectors of application (Maine & Seegopaul, 2016; Ulrichsen, 2019). The importance of sectoral differences were recognised in the Tracey-Williamson Review of University Spinouts for HM Treasury and DSIT (Tracey & Williamson, 2023), which distinguished between life sciences, engineering, and software.

The sectoral analyses presented in this report are based on the **industrial sector** classifications developed by PitchBook. These were developed to provide more meaningful insights on the business activities of companies for investors than the much more widespread Standard Industrial Classification (SIC) codes. They are custom developed but are influenced not least by the Global Industry Classification Standard. SIC codes, while available for all UK registered companies, are routed in legacy industrial categories and largely fail to capture the types of economic activities and focus of university spinouts that are typically commercialising ideas and technologies at or near the technological frontier and/or are working within nascent industries (Roupakia & Ulrichsen, 2025; Ulrichsen & Miller, 2025).

Spinouts operating in the pharmaceutical and biotechnology are by far the most common in the Spinout Register (29.1%) (Figure 20). Other life science-related sectors also represent a large share of the spinout population (covering healthcare devices (10.0%), healthcare technology

systems (5.1%) and healthcare services (4.4%). There are also considerable shares of spinouts operating in strategically important sectors for the UK, for instance: software (14.7%); IT hardware (7.4%); and materials, chemicals and gases sectors (5.1%). Additionally, almost 8% of spinouts were operating in business, consumer and professional services; a category broadly aligned to the business and professional services sector prioritised in the UK's recent Industrial Strategy (Figure 3).

Figure 20 | Share of spinouts operating in each industry

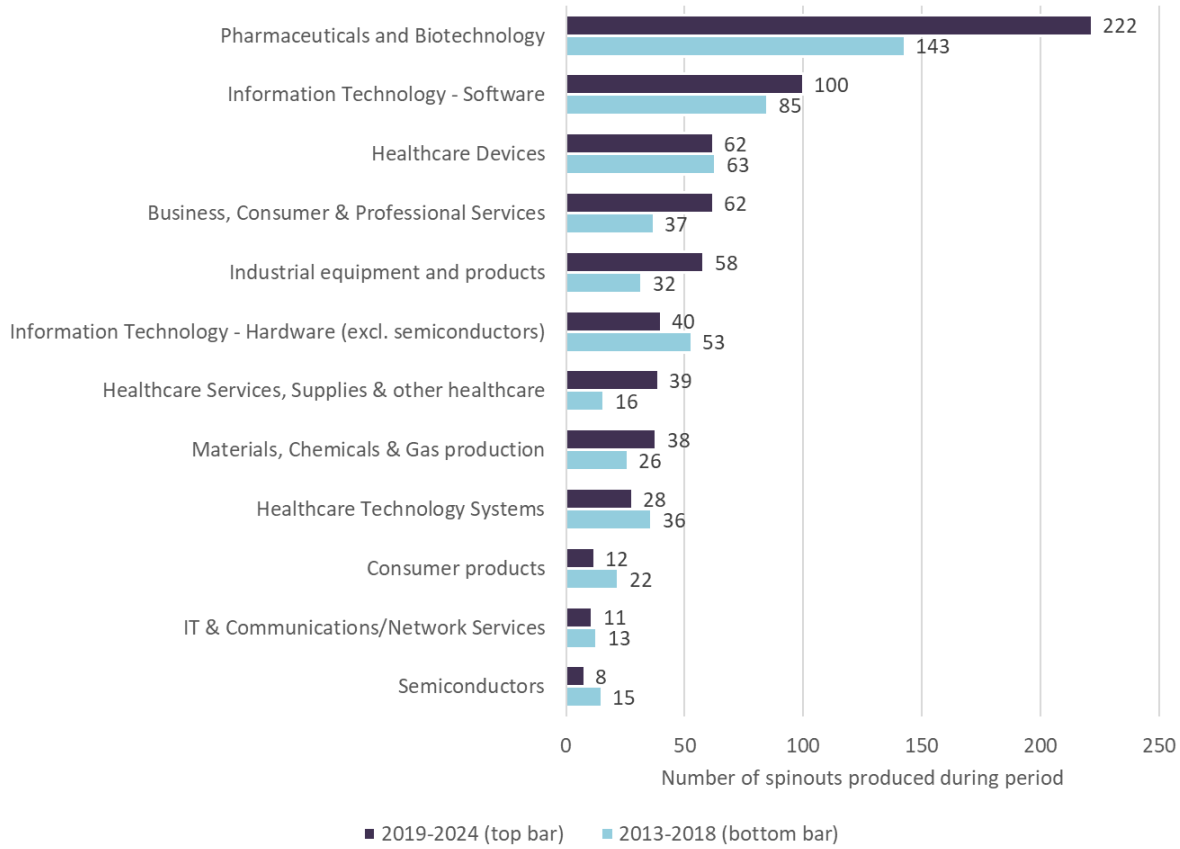


Sample: spinouts identified in PitchBook

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

The numbers of spinouts operating in the pharmaceuticals and biotechnology sector increased significantly between 2013-2018 and 2019-2024 (Figure 21), from 143 companies being founded in the earlier period to 222 companies established in the more recent period. Other sectors seeing a jump in the numbers of spinouts being founded include industrial equipment and products; business, consumer and professional services; and healthcare services. The numbers entering the software sector have increased slightly (from 85 in the earlier period to 100 in between 2019-2024), while the numbers of spinouts founded in the healthcare device space have remained relatively stable.

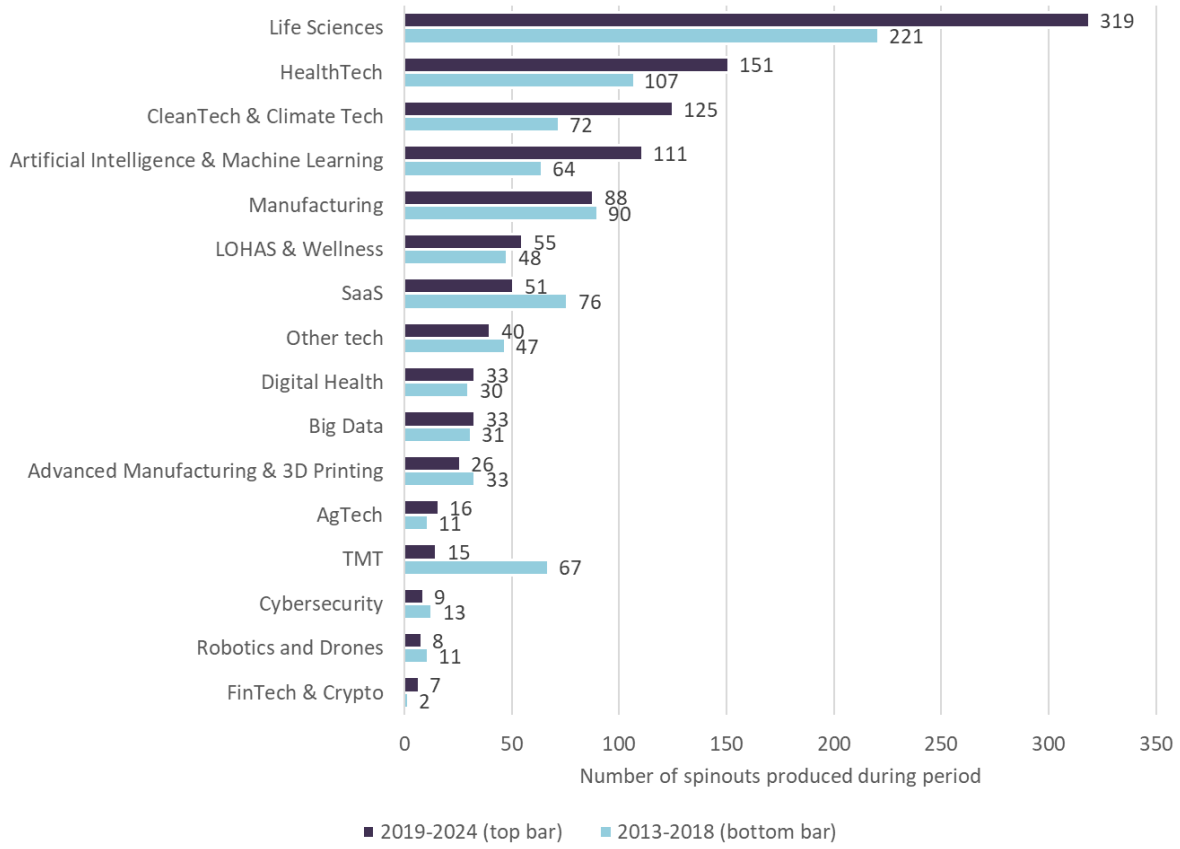
Figure 21 | Number of spinouts operating in different industries founded in two periods, 2013-2018 and 2019-2024



Sample: Spinouts reported to the UK Spinout Register (September release) and identifiable in PitchBook
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

A major challenge with analyses of industrial sectors is that it can be difficult to draw appropriate boundaries around a sector, with companies typically part of value chains that build on each other's products to deliver a final good or service to the end user. To explore this in a bit more detail, the report also leverages PitchBook's **market verticals** to explore the focus of a spinout's commercialisation efforts. PitchBook has created and curated a range of verticals that are designed to cut across industries and aim to define a common space of activity that more traditional industry-based approaches would struggle to bring together, for example Advanced Manufacturing, Agricultural technologies (AgTech), AI/ML, Digital Health, Climate Tech etc. *One important caveat here is that, while all companies in PitchBook are allocated to one or more industrial sectors, not all companies are allocated a market vertical. These are more selectively curated.*

Figure 22 | Number of spinouts operating in different market verticals founded in two periods, 2013-2018 and 2019-2024



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

Figure 22 presents the scale of spinout production within each vertical across two time periods (2013-2018 and 2019-2024). It shows that spinouts entering the Life Sciences vertical increased significantly from 221 spinouts in the earlier 6-year period to 319 in the more recent 6-year period. The emergence of HealthTech spinouts increased from 107 to 151, while those entering the CleanTech and ClimateTech vertical increased from 72 to 125.

Perhaps unsurprisingly given the rapid growth in AI/ML, the numbers of spinouts entering this vertical increased from 64 between 2013-2018 to 111 between 2019-2024. PitchBook defines this vertical as including companies developing technologies that enable computers to autonomously learn, deduce and act, through the utilisation of large datasets, i.e. it focuses more on the development of AI/ML technologies and tools rather than specific applications of these tools to applications areas (e.g. education, health, finance etc.).

Other verticals with relatively large numbers of spinouts during 2019-2024 include manufacturing (88 spinouts) and, to a lesser extent, advanced manufacturing (26 companies); LOHAS and wellness companies[10] (55 spinouts); and software-as-a-service (Saas) (51 companies). Beyond these areas, just 9 spinouts were founded during this period and operating

[10] LOHAS (Lifestyles of Health and Sustainability) is defined as companies providing consumer products or services focused on health, the environment, green technology, social justice, personal development, and sustainable living

in Cybersecurity, 8 in Robotics and Drones, and 7 in FinTech and cryptocurrency: all important areas of the UK's Industrial Strategy.

4.2 The significance of university spinouts for the UK

Recent studies by UCI[11] showed that UK university spinouts, while a minority activity for academics, play an important and significant role in driving innovative, entrepreneurial activities in strategically important sectors of the nation's economy. Their significance for the UK in enabling science and innovation-led economic growth has seen them take an increasingly pivotal role in UK government approaches and policies to driving innovation-led growth.

This section largely replicates the analysis by Ulrichsen and Miller (2025) examining the significance of university spinouts for the nation's innovation agenda using the latest release of the UK Spinout Register (September 2025)[12].

4.2.1 Identifying an appropriate counterfactual

In investigating the significance of university spinouts for the UK's innovation agenda, we must first recognise that these companies are very different from the average new business set up to sell goods and services into the economy. University spinouts are typically set up to commercialise novel ideas and technologies emerging at the frontiers of knowledge. Many are focused on commercialising what has been referred to as 'tough tech' or 'deep tech'. The term 'tough tech' is used by the MIT Engine to refer to transformational technology that solves the world's most important challenges through the convergence of breakthrough science, engineering science, engineering and entrepreneurship[13]. The commercialisation journey for tough tech / deep tech is one that is characterised by significant uncertainties and risks in many areas, notably in markets and the technology itself and its ability to develop into viable applications, as well as in areas such as regulation and in scaling (including in production). It is also a journey that is typically much more capital intensive than for other start-ups[14]. Spinouts commercialising tough tech / deep tech typically require significant and sustained investment over a number of years and may require different business models and access to enabling support and infrastructure for progress to be made.

Given that university spinouts are not the typical business start-up, it does not make sense to compare them against the general company population (as is sometimes done), where the majority of companies that start-up are in wholesale and retail, construction, hospitality, accommodation services, arts and entertainment, professional services etc.[15] A more relevant comparator would be a population of knowledge-intensive start-up companies that typically require external investment to develop and grow. While identifying such a population is very difficult, we leverage the fact that commercial investment databases such as PitchBook typically track companies that are likely to raise venture capital, private equity and other private

[11] Ulrichsen and Roupakia (2024) and Ulrichsen and Miller (2025)
[12] This section is largely replicated from Ulrichsen and Miller (2025) with permission from the authors.
[13] The Engine Ventures (2021)
[14] Ruiz de Apodaca, Murray and Frølund (2023)
[15] Office for National Statistics (2023)

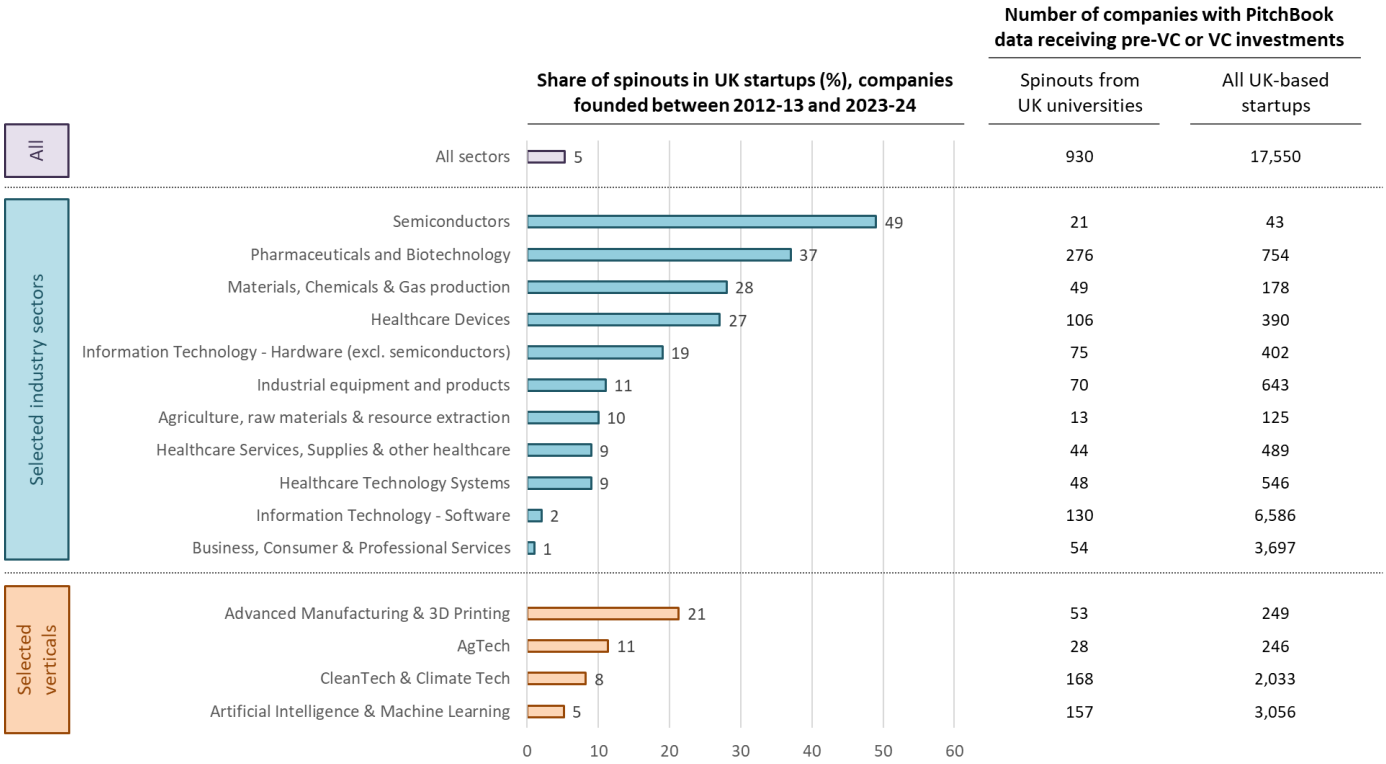
investment to drive their growth. In doing so, they focus on a population of companies that is more comparable to university spinouts.

We therefore focus on the population of UK start-ups identified in the investment datasets of PitchBook that have raised some form of venture capital-related funding (including at pre-seed/seed, early and later VC stages). For comparability, we also limit our UK spinout population to those companies that have also raised similar forms of investment.

4.2.2 The prevalence of university spinouts in the UK start-up population

The following charts explore the prevalence of this sample of UK university spinouts in the similar population of UK start-ups founded in the UK during the period 2013-2024 in key sectors of the economy. We also explore how this prevalence has changed between the earlier period of 2013-2018 and the more recent period 2019-2024.

Figure 23 | Share of UK university spinouts in the UK start-up population, companies founded between 2013-2024 raising pre-VC/VC funding



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

Across all sectors of the economy, UK university spinouts founded during the period 2013-2024 and raising VC investments (as captured by PitchBook) formed 5% of the population of UK start-ups founded during same period and raising this type of investment (Figure 23). However, this masks significant variation in the prevalence of university spinouts across different industrial sectors. Using PitchBook's industrial classifications, Figure 23 shows that university spinouts play a much greater role in driving entrepreneurial activity in strategically important sectors for the UK including in pharmaceuticals and biotechnology, where 37% of start-ups founded during 2013-2024 were university spinouts; healthcare devices (27% were spinouts); materials,

chemical and gas production (28% were spinouts); and information technology hardware (excluding semiconductors) where 19% of UK start-ups raising VC investments were spinouts. The semiconductor sector has rapidly become a critically important industry globally; one in which the UK seeks to compete. While the UK has seen relatively few companies founded in this space over the period 2013-2024, almost of these emerged as spinouts from universities.

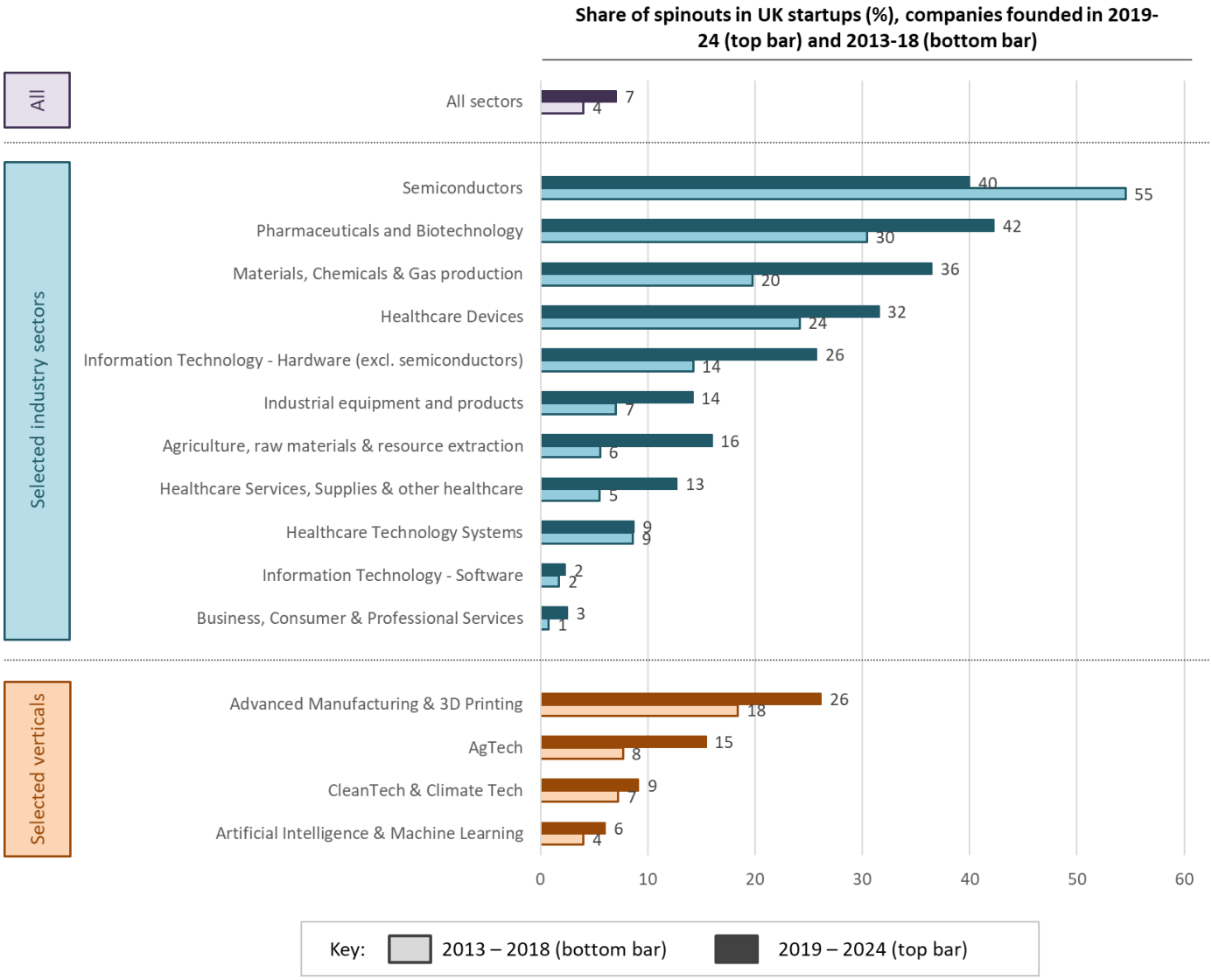
Notably, however, just 2% of UK software start-ups were university spinouts. As Ulrichsen and Roupakia (2024)[16] discuss, this is likely due to the very large number of software companies started in the UK, coupled with the breadth of types of software being created and commercialised through these companies. Included within this category will be everything from digital tools, games, and apps, through to advanced artificial intelligence and machine learning algorithms requiring significant continued investment in the technology development, as well as in the application and market penetration stages.

Using PitchBook's market verticals – groups of companies that may cut across multiple industries that serve the same market – helps to further identify companies operating in strategically important areas for the UK that are hard to capture through sector-specific analyses. This includes advanced manufacturing; agricultural technologies (AgTech), climate tech and clean tech; and the development of AI/ML technologies (as opposed to the use of more general software products and services). The prevalence of university spinouts in the UK start-up population for these selected verticals is also shown in Figure 23. In the advanced manufacturing vertical 21% of UK start-ups during 2013-2024 were university spinouts; while for AgTech they formed 11% of start-ups founded, 8% in CleanTech and ClimateTech, and 5% in AI/ML.

In many of these sectors, the prevalence of university spinouts in the population of UK start-ups raising VC investments has increased over time, suggesting a growing importance of spinouts in driving entrepreneurial activity in the UK (Figure 24). For example, during the period 2019-2024, university spinouts accounted for 42% of pharmaceutical and biotechnology start-ups founded during this period in the UK. This compares with 30% during the previous period 2013-2018. This pattern is repeated in other sectors and market verticals including healthcare devices, materials and chemicals, IT hardware (excluding semiconductors), advanced manufacturing, and AgTech. For the AI/ML market vertical, the proportion of UK start-ups that are university spinouts increased from 4% in 2013-2018 to 7% in 2019-2024.

[16] Ulrichsen and Roupakia (2024)

Figure 24 | Share of UK university spinouts in the UK start-up population, comparing companies founded during 2019-2024 (top bar) and 2013-2018 (bottom bar)

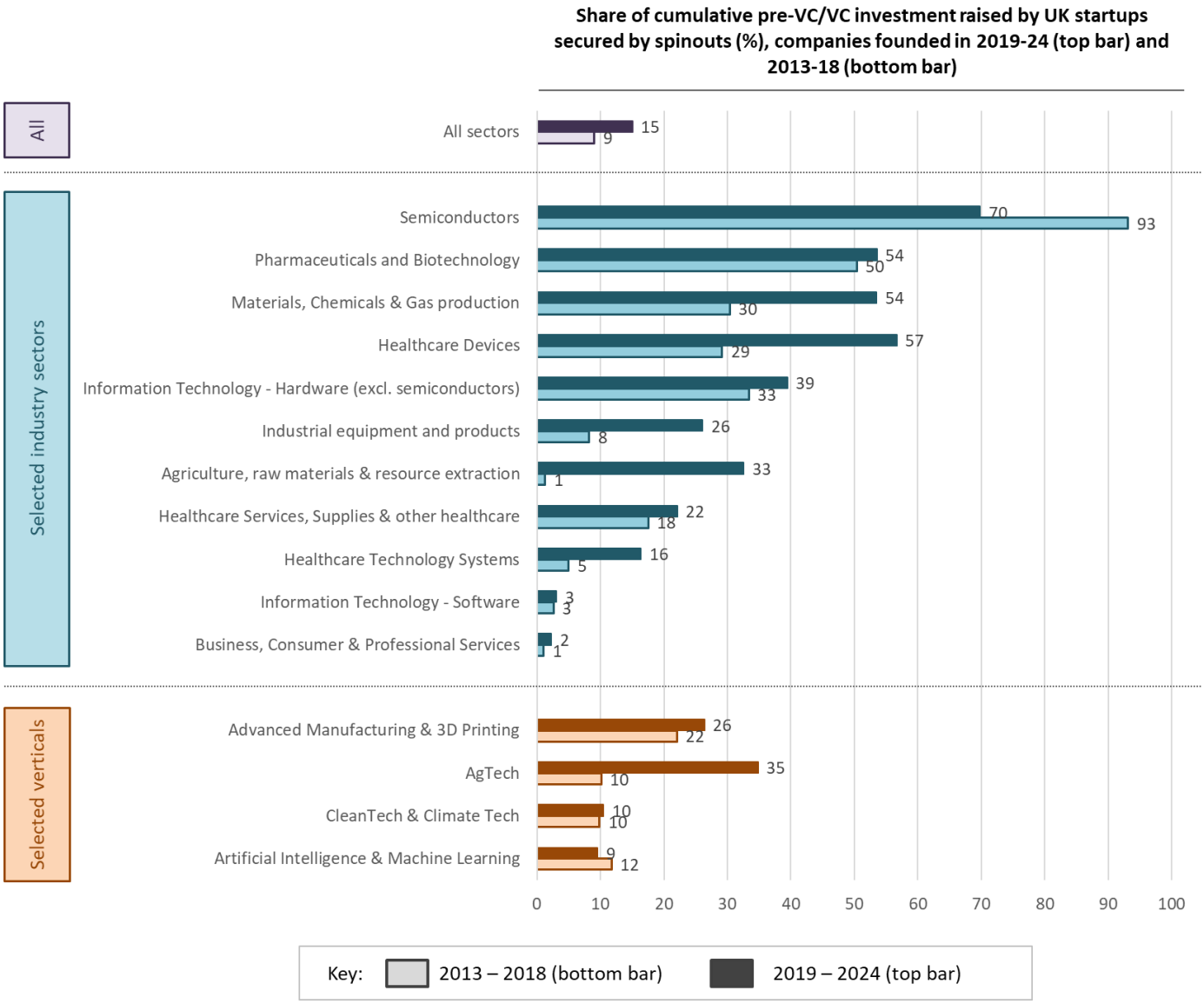


Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

4.2.3 The importance of spinouts in driving UK entrepreneurial success

University spinouts have become an important driver of entrepreneurial *activity* in key sectors and market verticals of the UK economy. To what extent are these spinouts important for driving not just entrepreneurial *activity* but also entrepreneurial *success* and attract VC investments to drive their development and growth in these sectors compared with non-university start-ups?

Figure 25 | Share of cumulative pre-VC / VC investment raised by UK start-ups secured by spinouts (%), comparing companies founded in the periods 2019-2024 and 2013-2018



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

Figure 25 shows that the significance of university spinouts in developing valuable, investable technologies, products and services is understated if we just look at their prevalence in the start-up population. The figure presents the proportion of venture capital funding (including pre-seed / seed stage, early and later stage investments) secured by university spinouts compared with the comparable UK start-up population across all sectors, as well as for specific selected sectors and market verticals. Across all sectors, while 7% of UK start-ups founded during 2019-2024 were university spinouts, they secured 15% of venture capital investments secured by startups founded during this period. This compares with 9% of investments during the previous period 2013-2018.

Once again, we see very different levels of importance in the dominance of spinouts in raising VC investments across sectors and market verticals. For pharmaceuticals and biotechnology

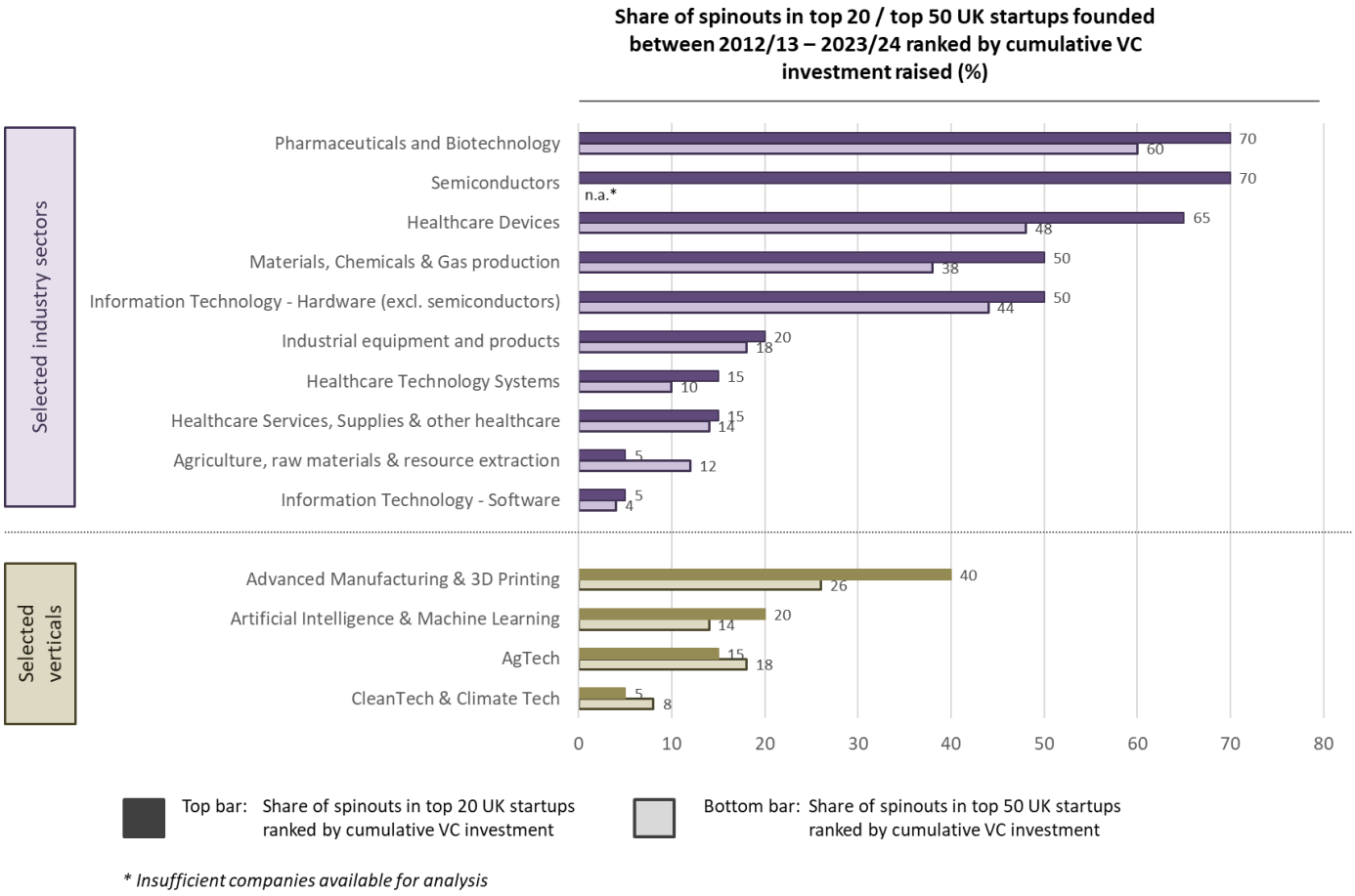
sector, the 42% of UK companies in the pharmaceuticals and biotechnology sector during 2019-2024 that were university spinouts, secured 54% of VC investment raised by these companies during this period. Similarly, university spinouts in the healthcare device sector secured 57% of the VC investment during this period, up from 29% in the 2013-2018; spinouts in materials, chemicals and gas production sectors attracted 54% of VC investment in the recent period compared with 30% in the previous period; and spinouts operating in AgTech secured 35% of VC investment in 2019 – 2024 compared with just 10% for companies founded during 2013-2018. Semiconductor spinouts also secured a majority of VC investment in during 2019-2024 (noting the relatively small number of start-ups and spinouts founded in this sector which makes the data quite volatile).

AI/ML spinouts secured 9% of VC investment during 2019-2024, down from 12% during 2013-2018, despite seeing an increase in their prevalence in the start-up population.

Turning now to the subset of best performing companies founded during 2013-2024 in terms of cumulative VC investment raised, Figure 26 shows that the top performing start-ups in many key sectors are university spinouts. This includes in pharmaceuticals and biotechnology where university spinouts accounted for 60% of the top 50 start-ups ranked by the amount of VC investment raised and 70% of the top 20. For healthcare devices, 65% of the top 20 start-ups by VC investment raised were spinouts (48% of the top 50). In semiconductors, spinouts accounted for 70% of the top 20 start-ups by VC investment and in IT hardware (excluding semiconductors), 50% of the top 20 start-ups (and 44% of the top 50) were university spinouts. In the key vertical of advanced manufacturing, spinouts accounted for 40% of the top 20 start-ups ranked by the cumulative amount of VC investment raised. These data show that university spinouts are among the most successful start-up companies in the UK in terms of raising VC investments to drive their development and growth, underlying their importance in driving entrepreneurial activity that results in valuable and investable technologies and product being developed.

Interestingly, while just 5% of AI/ML start-ups founded during 2013-2024 were university spinouts (Figure 23), 20% of the top 20 start-ups ranked by the cumulative amount of VC investment raised were UK university spinouts. This compares to 5% of the top 20 for software companies, underlining the importance of finding ways to further segment the software sector into appropriate subsegments where we might expect the frontier knowledge being developed by universities to have particular impacts.

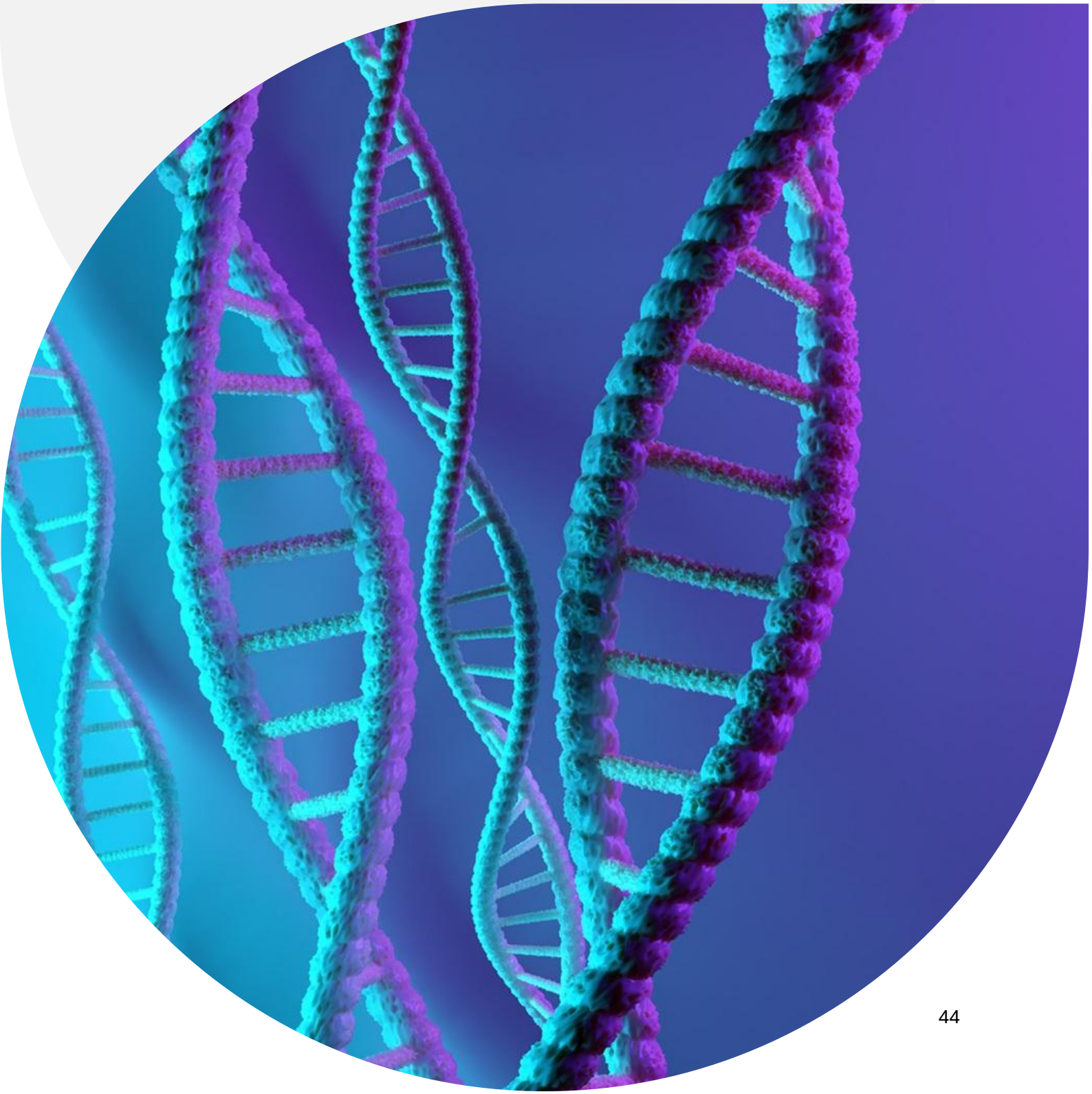
Figure 26 | Share (%) of UK university spinouts in the top 20 (top bar) and top 50 (bottom bar) of UK start-ups founded between 2013-2024 ranked by the cumulative VC investment raised during this period



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

Overall, the analyses presented in this section reveal the significance of university spinouts for driving entrepreneurial activity in strategically important sectors and verticals of the UK economy that result in technologies, products and services valued by investors.

5



5 The universities producing spinouts

This section provides evidence on the scale and focus of the university system which produces spinouts seeking to commercialise IP generated at least in part within universities. Building on this context, it then looks at how spinout production rates vary across the UK university system, and between UK and US universities. It examines spinout production rates from different disciplines, and explores the differences in the spinout potential of larger research universities in the UK.

5.1 About the UK university system producing spinouts

Spinouts emerge from a rich and diverse UK higher education ecosystem, employing over 195,000 academics (full time equivalent, FTE) across 173 universities and other higher education institutions and securing over £10.1 billion in research income in 2024 (Table 4). By devolved nation, English universities secured 82% of the total research income. Scottish universities secured 13% of the UK's research income, with Welsh universities securing 3% and those in Northern Ireland securing 2%. Over half (56.7%) of UK universities reported spinouts to the Spinout Register. These universities secured almost all (97.5%) of all research income in the UK and employed 85% of the academics.

Table 4 | Scale of university activity across the nations of the UK

Area	All universities in UK			Universities reporting to Spinout Register		
	Universities (number)	Research income 2024 (£millions)	Academic staff 2024 (FTE)	Universities (% of group)	Research income 2024 (% of group)	Academic staff 2024 (FTE) (% of group)
UK	**173**	**10,107**	**195,345**	**56.7**	**97.5**	**85.4**
	Of which (% UK total)					
England	83	82	83	51.7	97.2	83.2
Scotland	10	13	11	83.3	98.8	94.8
Wales	5	3	4	87.5	99.5	97.4
Northern Ireland	2	2	2	50.0	99.8	97.3

Note: monetary variables have been adjusted for inflation and are in constant 2024 prices
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance and Staff Record

Research activity is also heavily concentrated within the university system (Table 5), with just six universities securing 37% of all research income into the UK university system, and a further 17 universities capturing an additional 36%.

Table 5 | Scale of university activity by research scale group

Research scale group*	All universities in UK			Universities reporting to Spinout Register		
	Universities (number)	Research income 2024 (% UK total)	Academic staff (FTE) 2024 (% UK tot.)	Universities (% of group)	Research income 2024 (% of group)	Academic staff (FTE) 2024 (% of group)
£300 million and above	6	37	18	100	100	100
£100 million to £300 million	17	36	26	100	100	100
£50 million - £100 million	18	14	13	100	100	100
£20 million - £50 million	15	5	8	87	90	75
£10 million - £20 million	24	5	15	96	97	99
Less than £10 million	93	3	20	23	44	38

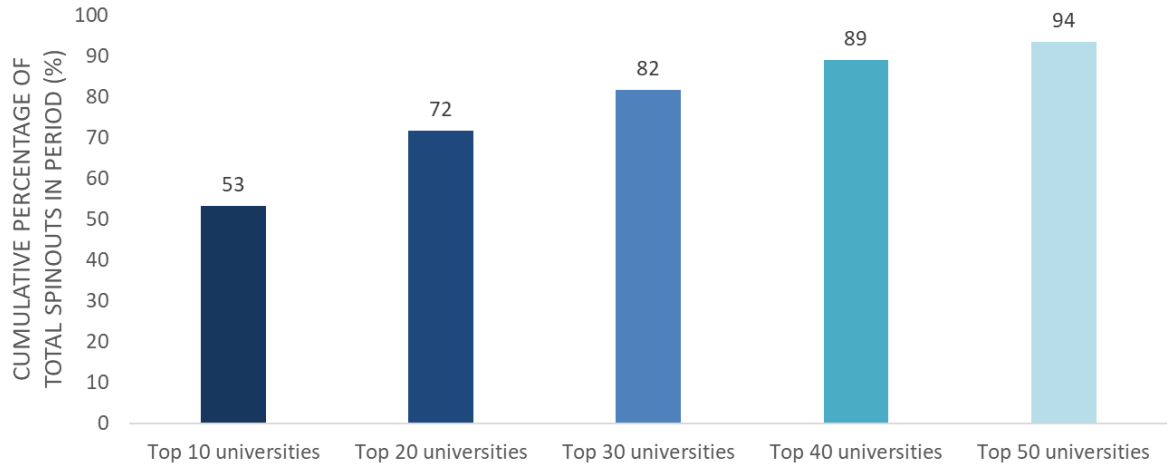
* Grouping is based on the average research income of universities over the period 2012/13 – 2023/24
Note: monetary variables have been adjusted for inflation and are in constant 2024 prices
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance and Staff Record

5.2 Comparing spinout production across the UK university system

5.2.1 Concentration of spinout production within the university sector

Spinout production is highly concentrated within the UK university system[17]. The top 10 spinout producing universities between the period 2013-2024 produced 53% of spinouts during this period; the top 20 produced 72% and the top 30 institutions produced 82% (Figure 27).

Figure 27 | Proportion of spinout production by the top university spinout producers



Note: Universities ranked by total numbers of spinouts founded 2013-2024

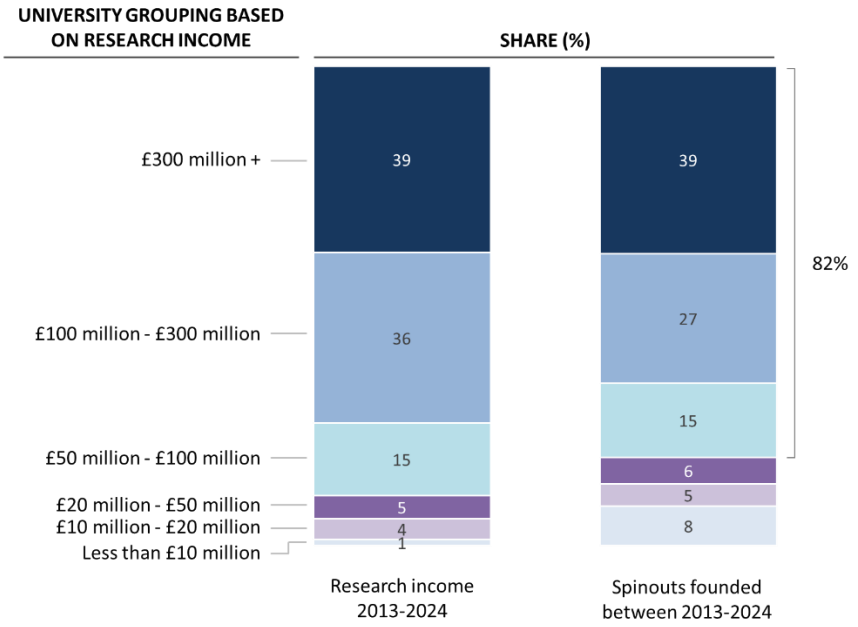
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release)

[17] As with the analysis of annual spinout production levels at the sector-level (section **Error! Reference source not found.**), we limit the sample in this section to spinouts founded between 2013-2024.

5.2.2 Scale of university research and the production of university spinouts

Previous studies have shown that spinout production correlates strongly with the amount of research undertaken by universities (Ulrichsen & Roupakia, 2024). Grouping universities based on their annual research income (taken here as an average over the period 2013-2024) (Table 5), Figure 28 shows that 82% of spinouts founded since 2013 were from universities with research incomes greater than £50 million per year. The largest 6 research universities (with research income greater than £300 million per year dominate spinout production, accounting for 39% of all spinouts.

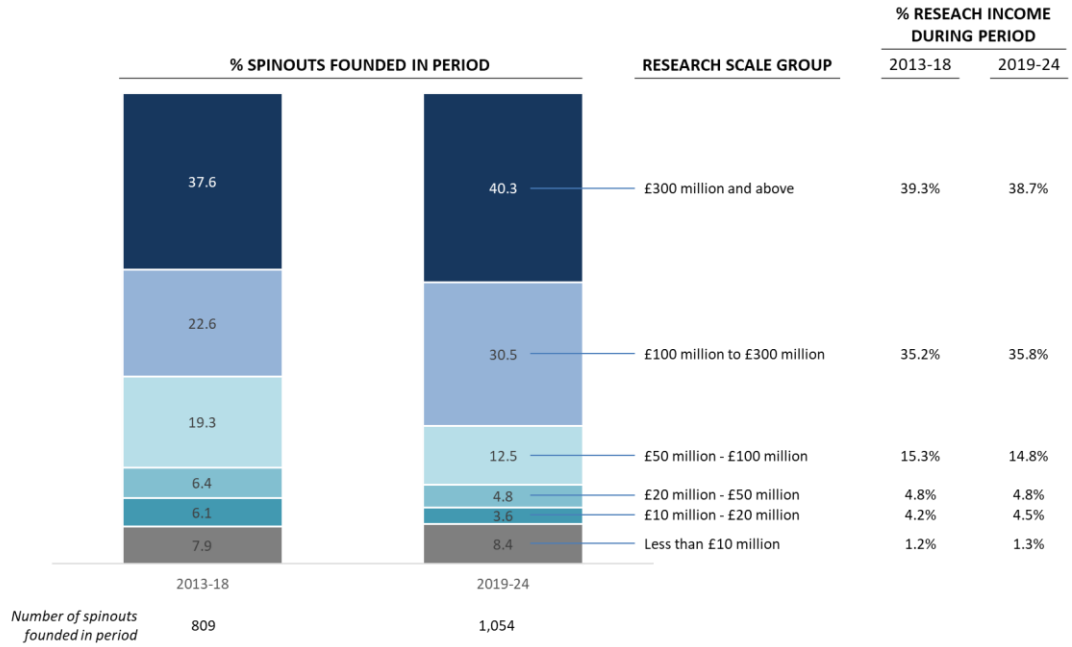
Figure 28 | Share (%) of research income and spinouts produced by universities with different scales of research income



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance Record

Earlier analysis at the sector-level (Figure 16) showed that 2013 to 2021 was defined by a period of steady growth in annual production levels of spinouts, with a peak reached in 2021. This increase is largely driven by larger research institutions. Figure 29 shows the very largest research institutions continue to dominate spinouts production, with their share increasing from 37.6% in 2013-2018 to 40.3% in 2019-2024. The second group of large research institutions (research bases between £100-300 million) also saw a notable rise in their share of spinouts produced – from 22.6% in 2013-2018 to 30.5% in 2019-2024 (an increase of 7.9 percentage points). This is despite only a modest increase in the share of research income received in that period (increasing only by 0.6 percentage points), suggesting an improvement in the performance of these universities in translating research and ideas into spinouts.

Figure 29 | Distribution of spinouts and research income during periods 2013-2018 and 2019-2024 across groups of universities with different scales of research base



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance Record

Using box-and-whisker plots[18], Figure 30 (panel A) dives deeper into comparing spinout production levels across universities both across and within different research scale groups. It also looks at how this has changed over time comparing spinout production levels in 2013-2018 with the more recent period 2019-2024[19].

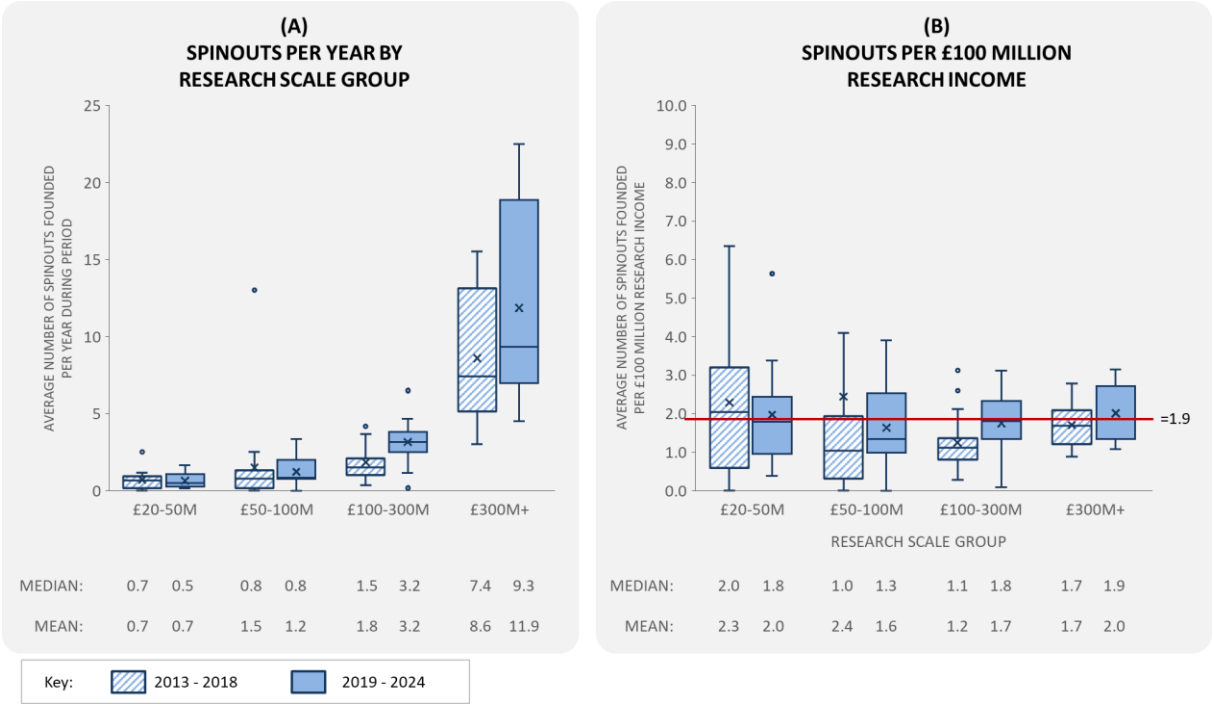
The analysis shows that universities with research bases of over £300 million show both higher median spinout production than other universities, indicating greater spinout activity on average. This group of universities also exhibits a much wider distribution around the median, suggesting much greater variation in spinout production levels among institutions in this category.

Consistent with evidence presented in Ulrichsen and Roupakia (2024), we also find that spinout production is strongly correlated with the scale of research activity once a certain threshold of research scale has been reached (around £100 million).

[18] Box-and-whisker plots are a powerful data visualisation tool that allows not just the average (median, mean) of a variable to be compared across groups, but also the extent of variability surrounding the median. In this way, it provides a visual summary of the distribution and central tendencies of a dataset while also identifying potential outliers or extreme values. This allows for much more meaningful comparisons between different groups. See Annex A for details about how to interpret box-and-whisker plots.

[19] Note that universities with less than £20 million in research income have been removed from the charts. The limited numbers of spinouts produced by most of the institutions within these categories, coupled with the smaller research bases leads to very volatile metrics.

Figure 30 | Number of spinouts founded per year (panel A) and the number of spinouts founded per £100 million research income (panel B) for universities with different scales of research base during periods 2013-2018 and 2019-2024



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance Record

Figure 30 (panel B) normalises spinout production by the research income of the university. For the period 2019-2024, we find that for universities with a research base above £100 million per annum, the median spinout production rate accounting for the scale of research activity is broadly similar at almost 2 spinouts per £100 million of research income. Of course, some universities are producing spinouts above this rate and some below during this period, ranging from 1.3 per £100 million research income for the 25th percentile to 2.7 for the 75% percentile for universities with research incomes greater than £300 million. For the group of universities with research incomes between £100-300 million group, this ranges from 1.3 to 2.3.

By contrast, the median spinout production rate for universities with research bases between £50 million to £100 million is 1.3 spinouts per £100 million during 2019-2024.

What is striking from Figure 30 (panel B) is that the range of normalised spinout production levels is broadly similar across the different groups of universities, indicating that there are at least some institutions in each group – from smaller research universities to some of the largest research institutions – that produce spinouts at similarly high levels and other that produce at similarly lower levels. This raises an important question of whether there are, as believed, critical mass thresholds for spinout production, above which it becomes relatively easier to produce, support and nurture additional spinouts. If there are, further investigation is needed to understand the mechanisms through which smaller research universities can benefit from scale.

Comparing the two time periods, there is very little difference in the performance of the group with research bases greater than £300 million. Beyond this group, large research institutions appear to be more systematically catching up. Universities with research bases of £100-300 million experienced a significant increase between the two periods (the median increases from 1.1 to 1.8 spinouts per £100 million of research income), which now puts them in line with production rates of the £300 million+ group. Universities within this group seeing significant rises in spinout production over time include Bristol, Newcastle, Nottingham, Queen Mary, Exeter, Liverpool, Sheffield and Birmingham.

A number of factors could be driving these changes, not least:

- An overall maturing of university ecosystems beyond the Golden Triangle of Oxford, Cambridge and London to support spinouts
- Efforts by these universities to strengthen their incentives and support for spinout founders
- Proactive investment by funding bodies, such as Research England, in these universities to enable them to provide more dedicated resources to support spinout development and attract investment (for example through the commercialisation-focused Connecting Capability Funds)
- The introduction of dedicated investment funds such as Northern Gritstone, helping to increase the availability of investment capital for spinouts based in universities outside Golden Triangle

Universities with a research base of £50 million – £100 million also saw their median spinout production rate grow from 1.0 to 1.3, a level slightly higher than where the group of universities with research bases of £100 million-£300 million were in 2013 – 2018.

By contrast, universities in the £20-50 million group experienced a slight decline in both the median and mean average number of spinouts per £100 million of research income between periods. Note, however, that production rates for these institutions, given their much smaller research bases, are more volatile for even with small changes in the number of spinouts produced compared with larger research institutions.

5.3 Comparing spinout production in the United Kingdom and United States

The ability of the UK university system in producing spinouts is frequently compared with the United States, often with suggestions that US universities perform much better than our UK counterparts. This section examines this claim, updating an analysis of UK-US spinout production rates from Ulrichsen and Roupakia (2024) using the latest data available.

5.3.1 Data sources and methodological challenges

At the outset of this section, it is important to note the difficulties in comparing spinout production rates across countries. This is due not least to how data is collected, varying definitions including both on what constitutes a spinout and on research spending/income, and the importance of contextual factors that shape decisions about viable and preferred routes to commercialising IP emerging from universities.

The comparative analysis of the UK and US presented here draws on data available on the US university system from the Association of University Technology Managers (AUTM) annual licensing activity survey[20], accessible through their Statistics Access for Technology Transfer (STATT) database. For the UK we leverage information from HESA on research income and the UK Spinout Register for the numbers of spinouts produced by universities. Financial data from the US is first converted into 2024 prices using the US GDP deflator and then converted into British Pounds using the Purchasing Power Parity exchange rate for 2024[21]. Financial data for the UK is converted into 2024 prices using the UK GDP deflator. This attempts to both control for different rates of inflation within country as well as adjusting for differences in the purchasing power of different currencies.

Several challenges further complicate the process of making comparisons of spinout production between UK and US university systems. Firstly, reporting to the UK Spinout Register through HESA is a statutory requirement for UK universities, ensuring complete coverage across the eligible population of universities. By contrast, the AUTM licensing survey in the US is voluntary, albeit with strong coverage across the major research universities.

Moreover, the minimum research base of a university submitting to the AUTM is around £2.5 million (average for 2019-24), while HEBCI includes universities with minimal or no research income. Additionally, the AUTM dataset specifically focuses on technology transfer activities such as licensing and start-ups, meaning that participating universities typically engage in at least some level of technology transfer. By contrast, HEBCI includes universities with some research activity but no technology transfer activity.

At the other end of the spectrum, the US is home to universities with much larger research enterprises compared with what exists in the UK. In 2024 (the most recent year available), the AUTM database lists seven universities with research expenditures of greater than £1 billion, including MIT, Stanford University, Johns Hopkins University, the University of Michigan, UC San Diego, UCLA, and UC San Francisco. Seventeen universities in their database have research expenditures greater than £800 million.

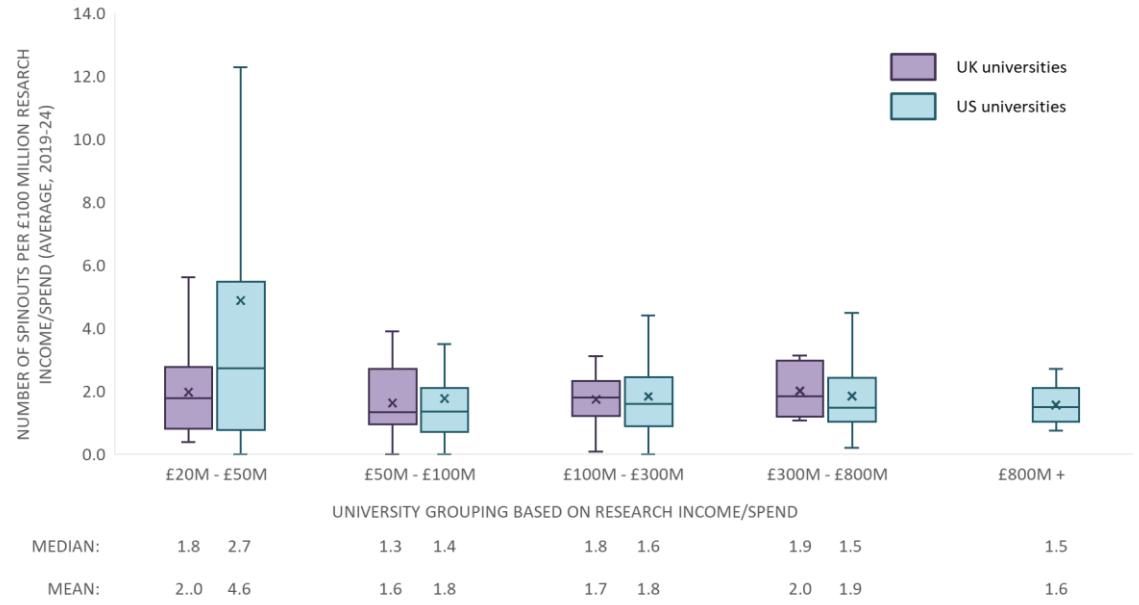
Different definitions of spinouts between the AUTM and the HEBCI datasets further complicate comparative analyses. In the AUTM context, spinouts are defined as companies *"formed that were dependent upon the licensing of your institution's technology for their initiation."* Conversely, the Spinout Register now defines spinouts as firms set up primarily to commercialise IP (ideas, information and knowledge) created by the staff of universities. While similar, the differences add a layer of complexity to cross-system comparisons.

To facilitate comparisons, the analysis limits the sample to universities with research incomes (UK institutions) or expenditures (US institutions) greater than £20 million. Universities in each country are then grouped by the scale of their research enterprise to allow for comparisons between more similarly sized institutions. The results are captured in Figure 31 and Figure 32.

[20] https://autm.net/surveys-and-tools/surveys/licensing-survey: *"The AUTM Licensing Activity Survey offers quantitative data and real-world examples about licensing activities at U.S. and Canadian universities, hospitals and research institutions."*

[21] Available from the Organisation for Economic Cooperation and Development (OECD)

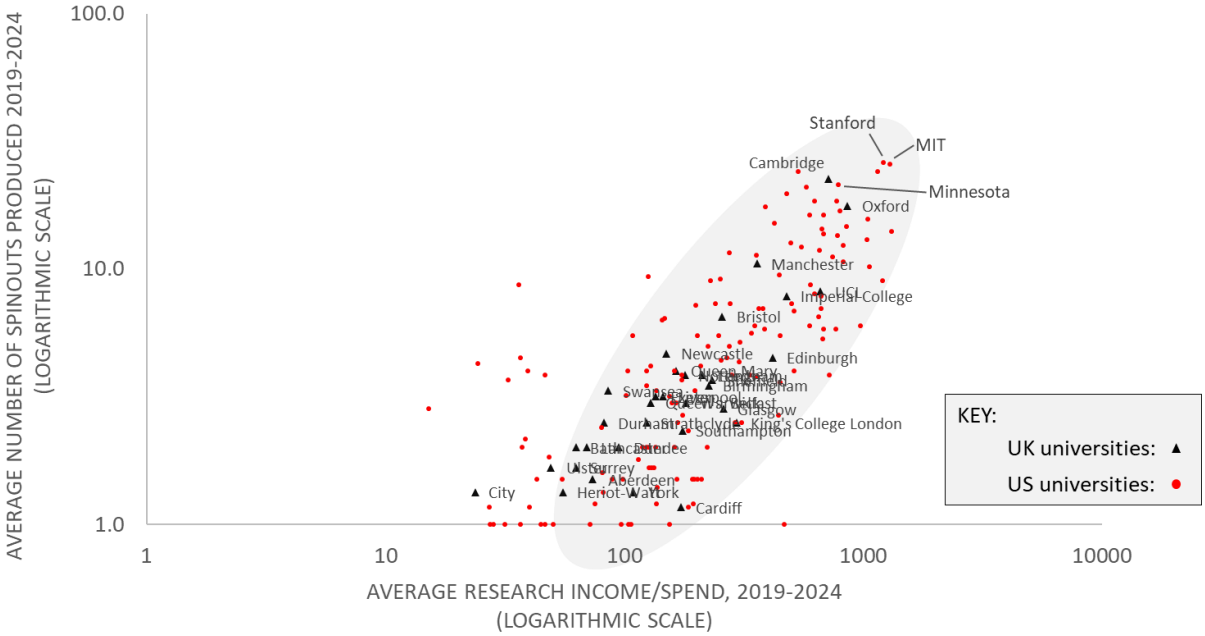
Figure 31 | Spinout production for UK and US universities, grouped by the scale of their research base (research income for UK universities, research expenditure for US universities)



Note: The research spend of US universities in US dollars was first converted to 2024 prices and then converted to British Pounds using the Purchasing Power Parity exchange rate for 2024. Research income for UK universities was converted to 2024 prices using the GDP deflator.

Sources: US data: AUTM Statistics Access for Technology Transfer Database (STATT); UK data: Analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance Record

Figure 32 | Relationship between spinout production and research scale for UK universities (black triangles) and US universities (red dots)



Sources: US data: AUTM Statistics Access for Technology Transfer Database (STATT); UK data: Analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance Record

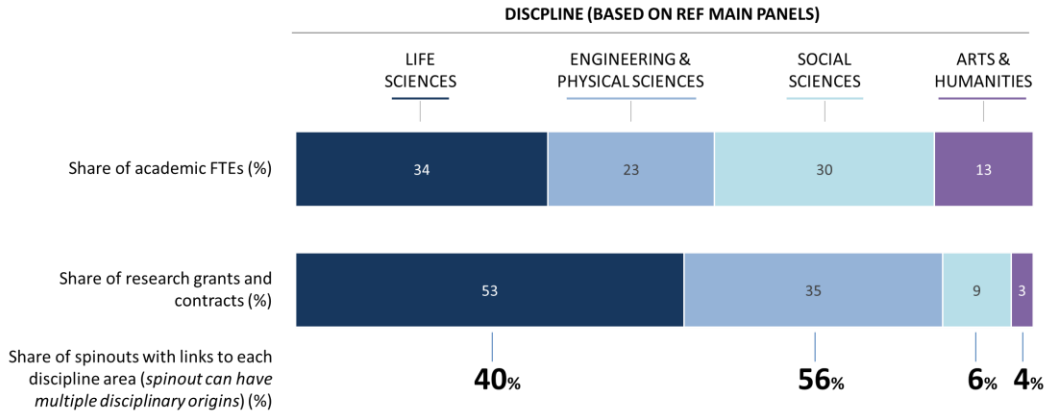
The analysis shows that spinout production rates over the period 2019-2024, when normalised by the scale of the university's research enterprise, are largely comparable between UK and US universities (Figure 31) particularly for those with research incomes or expenditures greater than £50 million. For each group of universities above this threshold, the averages (medians, means), and the ranges around the average (the boxes in the figure) are broadly similar.

This suggests that, across each size group of universities, there are universities in the UK and US producing similar levels of spinouts; some performing above the median for the group, and some below, with the range in performance broadly similar. This suggests that the high absolute numbers of spinouts we see being produced by universities such as MIT, Stanford, and Michigan are driven, at least in part, driven their much larger research bases.

5.4 Spinout production across academic disciplines

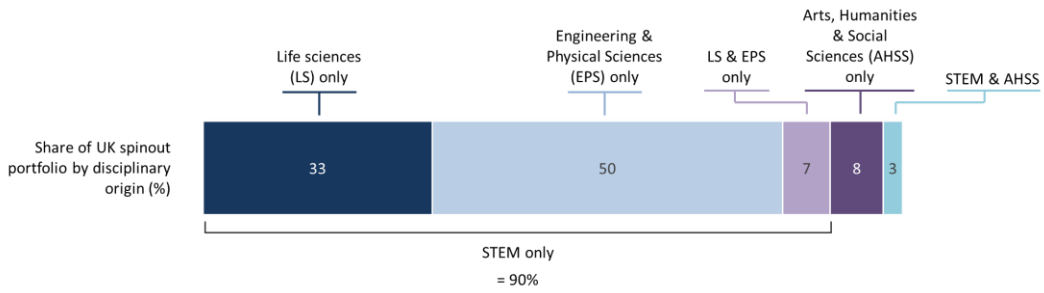
Figure 33 shows that 34% of academics (full time equivalents) in UK universities are linked to life sciences disciplines, 23% to engineering and physical sciences, 30% to the social sciences, and 13% to the arts and humanities. Research grants and contracts income is skewed towards the scientific and engineering disciplines, reflecting not least the increased costs of delivering research in these areas.

Figure 33 | Share of academic staff and research grants and contracts by discipline in 2024 (%), and the share of spinouts in the Register with links to each discipline



Source: Analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance and Staff Record

Figure 34 | Proportion of spinouts reported to the Register that emerge from different disciplinary combinations (%)



Source: Analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release)

Turning to the proportion of spinouts with links to each of these disciplines, 40% had origins at least in part in the life sciences; 56% in engineering and physical sciences; 6% in the social sciences (146 spinouts); and 4% in the arts and humanities (102 spinouts). Note that a spinout can have multiple disciplinary origins. Figure 34 adjusts for this and looks at different combinations of disciplinary origins. It shows that 33% of spinouts emerged from the life sciences only; 50% from engineering and physical sciences only; and 8% from arts, humanities and social sciences (AHSS) only. A further 7% of spinouts brought together insights from across life sciences and engineering physical sciences; and 3% from across science and engineering (STEM) and AHSS.

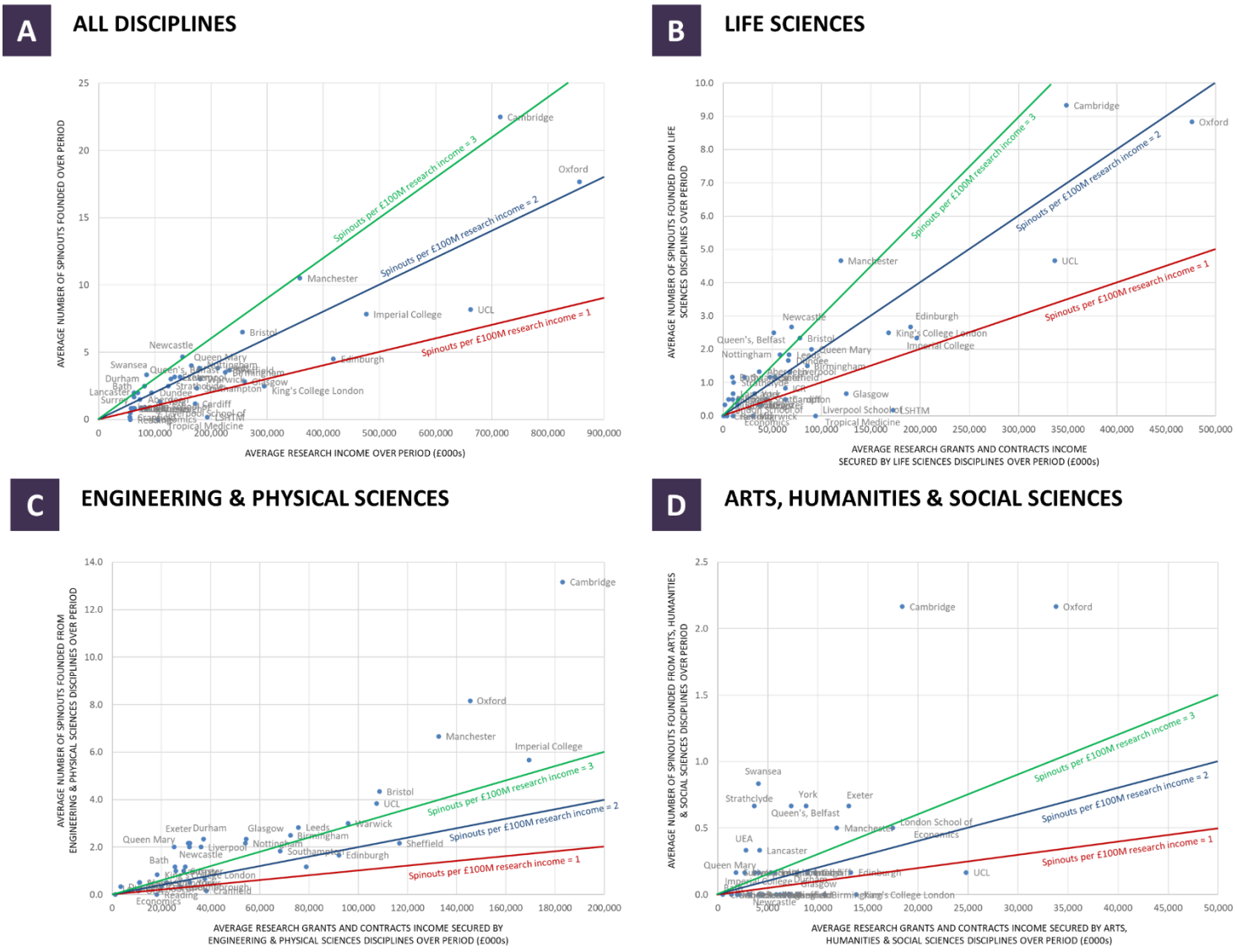
The distribution of spinouts based on their disciplinary origins appears to more strongly mirror the distribution of research income than the numbers of academic staff in each discipline. This raises the question of whether there is significant untapped potential within AHSS to pursue venture building as a route to commercialising ideas emerging from their activities; or whether other routes to scaling impact may be more appropriate. This is a growing topic of interest, with more studies being published, for example on the different pathways and barriers faced by social scientists in commercialising their research (Ulrichsen & Athanassopoulou, 2024).

The correlations between spinout production within these discipline areas and the scale of knowledge-based activity within the discipline is explored further in Figure 35. These charts focus on the experiences of larger research universities (with research incomes greater than £50 million per year) and plot the average number of spinouts with links to each discipline area against the average value of research grants and contracts linked to that area. For comparison, Figure 35, panel A provides the same chart at the university level across all disciplines. Three lines are superimposed onto the charts showing the expected levels of spinout production per year if universities produced spinouts at rates of 1, 2, and 3 spinouts per £100 million research grants and contracts income.

Note that universities secure income to support research from a number of different sources, not least through specific research grants and contracts to deliver projects, and through the formula-driven block grant for research. It is not currently possible to disaggregate the block grant component of research income – which can be significant share of total research income – by discipline.

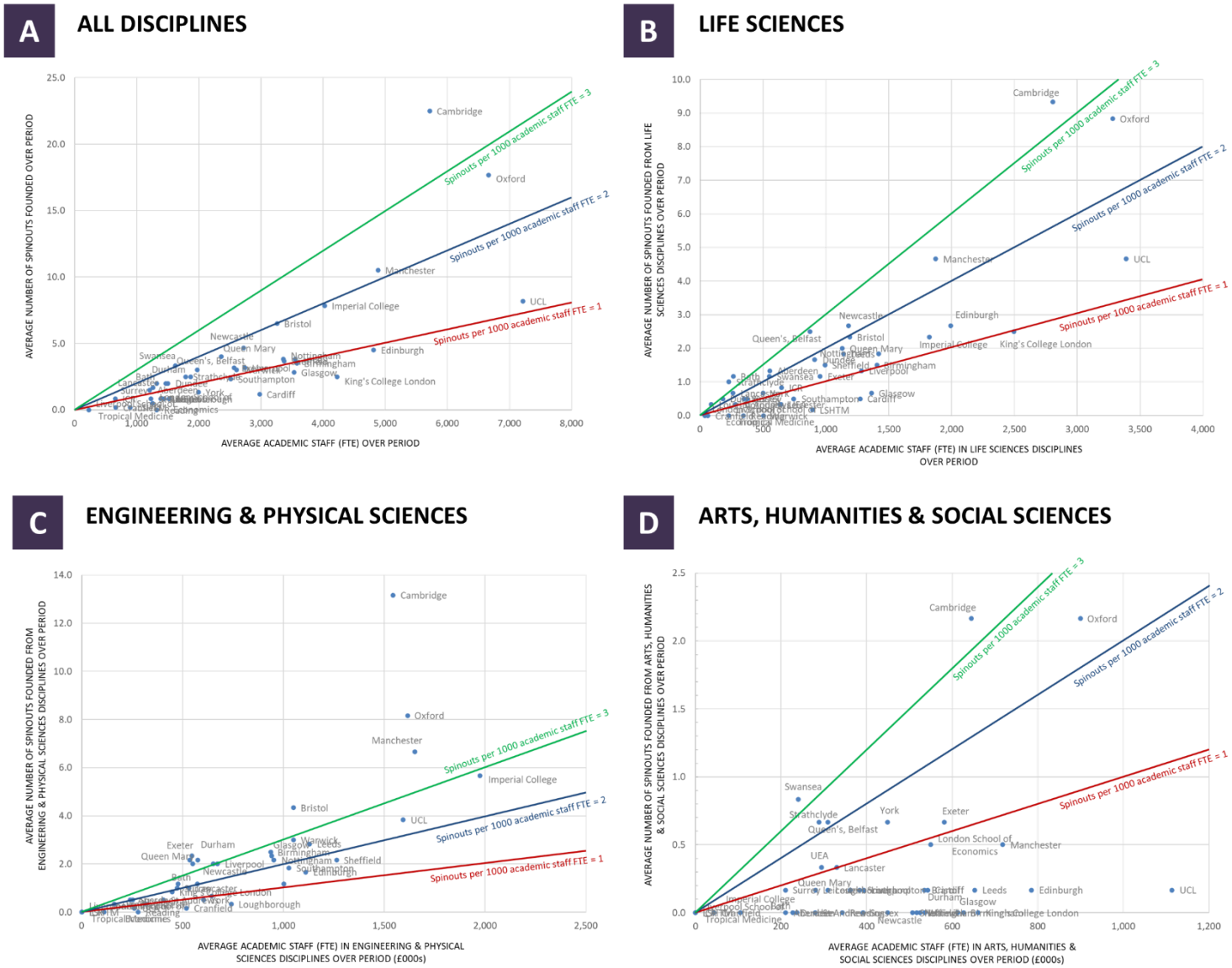
Figure 36 then repeats this analysis and compares average annual spinout production against the numbers of academics employed within each discipline area. The cost of delivering research varies significantly by discipline, in particular between STEM and AHSS, not least because of the much higher capital costs typically required to enable and sustain laboratory-based research. Furthermore, given the nature of research within AHSS, it is also much more likely that significant amounts of research activity is delivered by academics funded largely or entirely by core funding from the university's block grant for research rather than through specific grants and contracts. Because of this, using research grants and contracts income as a normalising factor may be more problematic when comparing spinout production across disciplines.

Figure 35 | Relationship between the average number of spinouts founded per year over the period 2019-2024 and average research income over the same period at the university-level (panel A), and for broad discipline areas including life sciences disciplines (panel B), engineering and physical sciences (panel C) and the arts, humanities and social sciences (panel D)



Sample: universities with an average research income of over £50 million in constant 2024 prices over the period 2013-2024
Source: Analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Finance Record

Figure 36 | Relationship between the average number of spinouts founded per year over the period 2019-2024 and average number of academic staff (full-time equivalent) over the same period at the university-level (panel A), and for broad discipline areas including life sciences disciplines (panel B), engineering and physical sciences (panel C) and the arts, humanities and social sciences (panel D)



Sample: universities with an average research income of over £50 million in constant 2024 prices over the period 2013-2024
Source: Analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and HESA's Staff Record

The analyses of Figure 35 and Figure 36 show that there are many more universities where academics within their engineering and physical sciences (EPS) disciplines produce higher levels of spinouts for a given scale of activity compared with the life sciences and the arts, humanities and social sciences. This is the case when spinout production is normalised by either research grants and contracts income or the number of academics.

- Key universities producing above average numbers of spinouts within EPS (based on both the scale of research grants and contracts income and the number of academics) include Cambridge, Oxford, Manchester, Bristol, Exeter, Durham, and Queen Mary's London.
- Key universities producing above average numbers of spinouts within life sciences include Cambridge, Manchester, Newcastle, Queen's University Belfast, Nottingham, Bristol, Leeds, and Oxford.

For AHSS, I would suggest that using the numbers of academics employed within this discipline provides a more meaningful way of controlling for the scale of the knowledge base from which spinouts could emerge.

- Figure 36 (panel D) suggests that key universities producing above average spinouts within AHSS include Cambridge, Oxford, Swansea, Strathclyde, York, Exeter, the University of East Anglia, and Queen's University Belfast.
- Note that the sample has been limited to larger universities with overall research incomes greater than £50 million. Other universities beyond this group producing significant numbers of spinouts from AHSS disciplines include the Royal College of Art and the Abertay University Dundee.

6

6 Investment performance, trends and outcomes of UK university spinouts

Having examined the scale and trends in spinout production from UK universities, and how this varies across industrial sectors and parts of the UK, the report now turns to what happens to these companies once they enter the market.

This section examines:

- Trends in the scale of investments into spinouts, how this varies for spinouts emerging from universities based in different parts of the UK, and how it compares to the trends in the overall UK VC landscape
- How the size of deals varies for spinouts in different industries, and for those emerging universities of different scales and from different parts of the country; and how the size of deals at different stages of company development secured by spinouts compared with the wider startup population
- The pipeline of spinouts raising increasing amounts of investment and how this varies for spinouts operating in different sectors
- Spinout survival, including adjusting for a minimum threshold of activity in an attempt to make this measure more meaningful

The investment analyses presented in this section draws from the PitchBook data platform. PitchBook categorise the deals they identify for each company in a number of ways, not least by the type of deal secured. Building on their categories, the report uses the following categorisation of deal types.

At the outset of this section, it is important to recognise that not all companies – even IP-rich, technology-driven companies – will develop and grow through equity-backed VC investments. Indeed, studies of the development of the Cambridge cluster have shown how many important technology-driven companies of the cluster began their lives pursuing a 'bootstrapping' business model providing R&D / problem-solving contracts and services for customers rather than focusing from the outset on raising capital to develop their products (Connell & Probert, 2010)[22]. Some of these companies were able to leverage the funds raised through these contracts to fund the exploratory phase of their core technology product ambitions, which resulted in them transitioning to become scalable, product-driven businesses that then exploited venture capital investments, later on in their development, to turbocharge their growth. Nevertheless, the ability of university spinouts to secure equity-backed investments are important for the development of many companies, particularly for those commercialising deep-tech.

[22] Connell and Probert (2010) refer to this approach as a 'soft-start' business model.

Deal types

Deal type	Definition
Grants	Non-repayable funding with no claim on company assets or future cash flows.
Accelerators / incubators	Company joins a programme variably offering funding, space, mentorship and support, often in exchange for equity.
Pre-seed (including angel investors, crowdfunding)	Angel: High net-worth individual investing personal funds in early-stage companies for a minority stake. The investment must come directly from the individual's own funds and not from any other source. Crowdfunding: financing received from a crowdfunding platform: - *Product*: non-equity funding received in exchange for companies' products, generally for pre-market access - *Equity*: funding received in exchange for the purchase of company shares
Seed	Initial equity financing from any type of investor for a new enterprise in its earliest stages of development.
Early-stage VC	Series A to series B round that occurred within five years of the company's founding date. PitchBook also categorizes deals as Early-Stage VC if no series is associated with the deal and the deal happened within five years of the company's founding date.
Later stage VC	Includes Later Stage VC and Venture Growth deals. - *Later Stage VC*: Series C to series D rounds, or a round that occurs more than five years after the company's founding date. - i: Series E+ round, or a round founded more than seven years ago with six or more VC deals.
Public listings / M&A	Includes initial public offerings (IPOs), secondary offerings, joint ventures, mergers and acquisitions, mergers of equals, and reverse mergers
Private equity	Includes private equity growth and expansion, buyouts, PIPE (private investments in public equity)
Other	Includes debt financing, other liquidity events (including share repurchase, dividends), secondary transactions (private and open market)

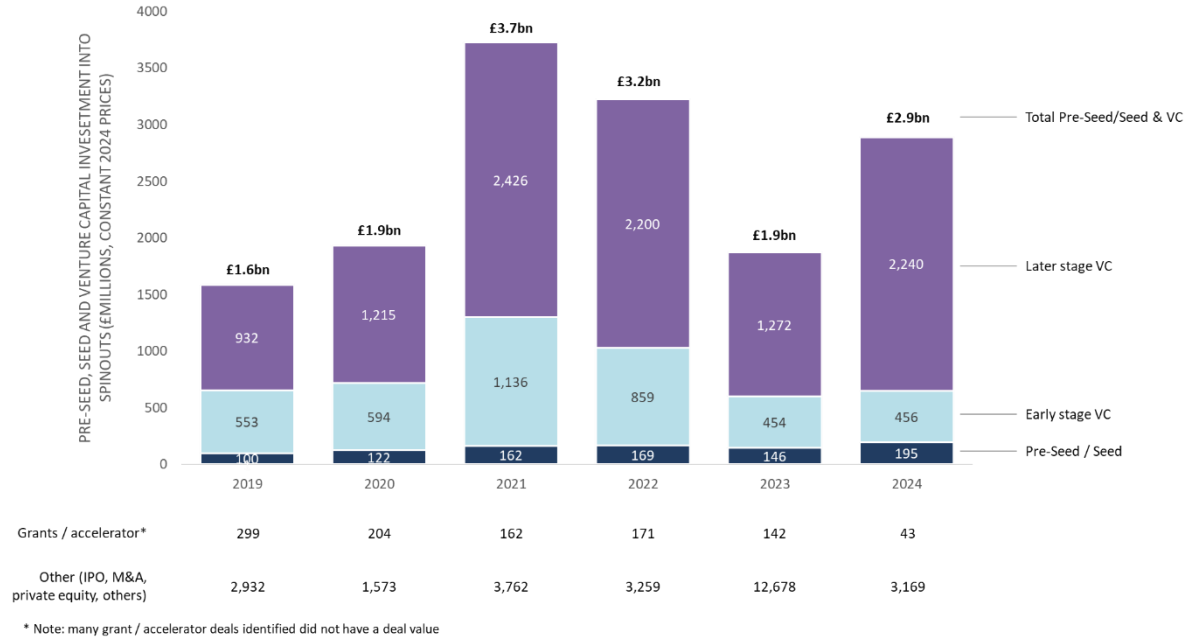
Source: Summarized from PitchBook deal type definitions

6.1 Trends in investment into UK university spinouts

Venture capital investments into UK university spinouts reached £2.9 billion in 2024 (Figure 37). This equates to approximately 17% of the total VC investment into UK headquartered companies in 2024 (across pre-seed/seed, early and later VC stages) (approximately 12% of similar investments over the period 2019-2024).

Of the £2.9 billion VC investment into spinouts in 2024, £195 million was at the pre-seed/seed stage (including angel investments); £456 million was at the early VC stage; and £2.24 billion was at the later VC stage. In addition, over £3.2 billion was raised through other types of funding, including private equity, mergers and acquisitions and public listings.

Figure 37 | Investment into UK university spinouts, 2019-2024 (constant 2024 prices)



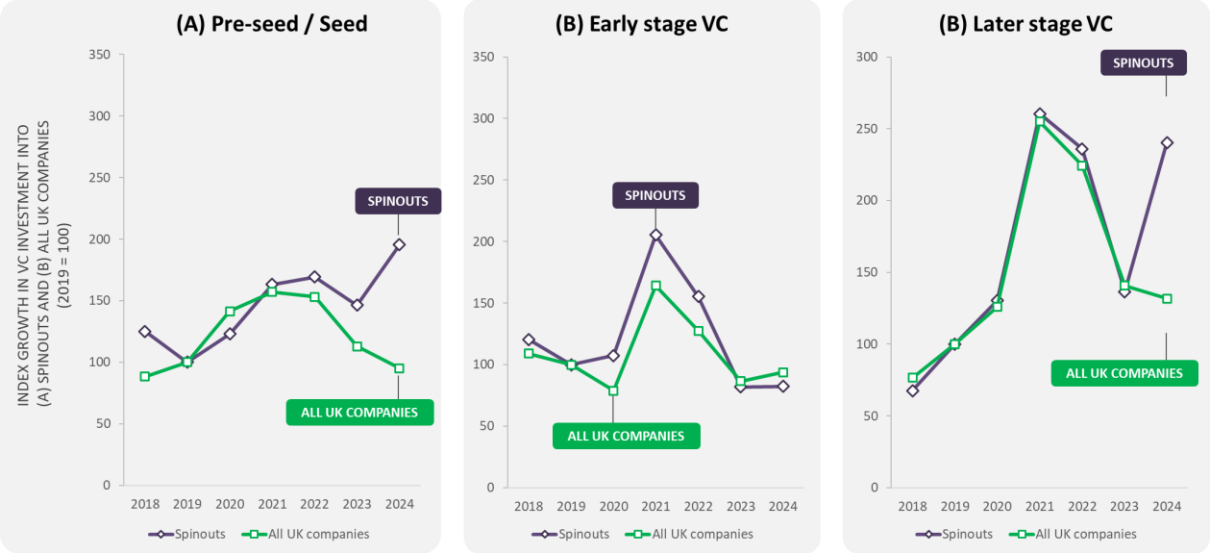
Sample: all spinouts reported to the UK university Spinout Register (September release) with PitchBook investment data
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

Looking at trends in the value of investments into UK university spinouts (in constant 2024 prices) over the past six years we find that VC investments have doubled from £1.6 billion in 2019 (Figure 37). It increased significantly during the Covid-19 pandemic years of 2021 and 2022, peaking at £3.7 billion in 2021 before falling to back to £1.9 billion in 2023. If we exclude the volatility clearly evident during the pandemic years – including the peaks in 2021 and 2022 and the significant drop in 2023 – the scale of investment into UK university spinouts in 2024 appears to be consistent with growth pre-pandemic. The 2025 update will be important for helping us to understand whether we continue to see sustained increases in investment into spinouts at around £2.9 billion or more, or whether 2024 was indeed a continued part of the volatile investment climate of the past few years and we see investment continue to fall back.

Looking more deeply at the investment at different VC stages reveals a more nuanced picture (Figure 37). Investment growth in the early years of the pandemic was driven by large increases at all stages (pre-seed/seed, early-stage VC, and later stage VC). However, while both pre-seed/seed and later stage VC investments continue to be significantly higher than pre-pandemic levels (pre-seed/seed investments growing from around £100 million in 2019 to £195 million in 2024, and later stage VC investments increasing from around £932 million in 2019 to £2.24 billion in 2024), early-stage VC investments, following the pandemic-era jump in 2021 has now fallen below the levels seen in 2019 and 2020 (£550-600 million), and has remained flat during 2023 and 2024 at just over £450 million. This decline in early-stage VC investment is seen not just in the total quantum of investment, but also in the average deal sizes, including for those raising the most investment (Figure 43).

At the early VC stage, investments trends into UK university spinouts follow a similar track to similar investments for the wider UK VC landscape (Figure 38, panel B). At the pre-seed/seed stage, however, university spinouts appear to be performing relatively better than the wider population of UK headquartered companies, with the trends increasingly diverging from 2022 onwards. A more detailed examination of the size of deals (Figure 43, panels A.1 and A.2) suggests that this appears to be driven by growth in deal size across the sample, particularly for those above the median, rather than being down to a few spinouts raising significant deals. By comparison the median deal size for a comparable group of startups founded during the same period remains flat, with the mean average declining slightly over time.

Figure 38 | Index growth (2019 = 100) of venture capital investment into UK spinouts (purple line) and any UK headquartered company (green line) over the period 2018-2024



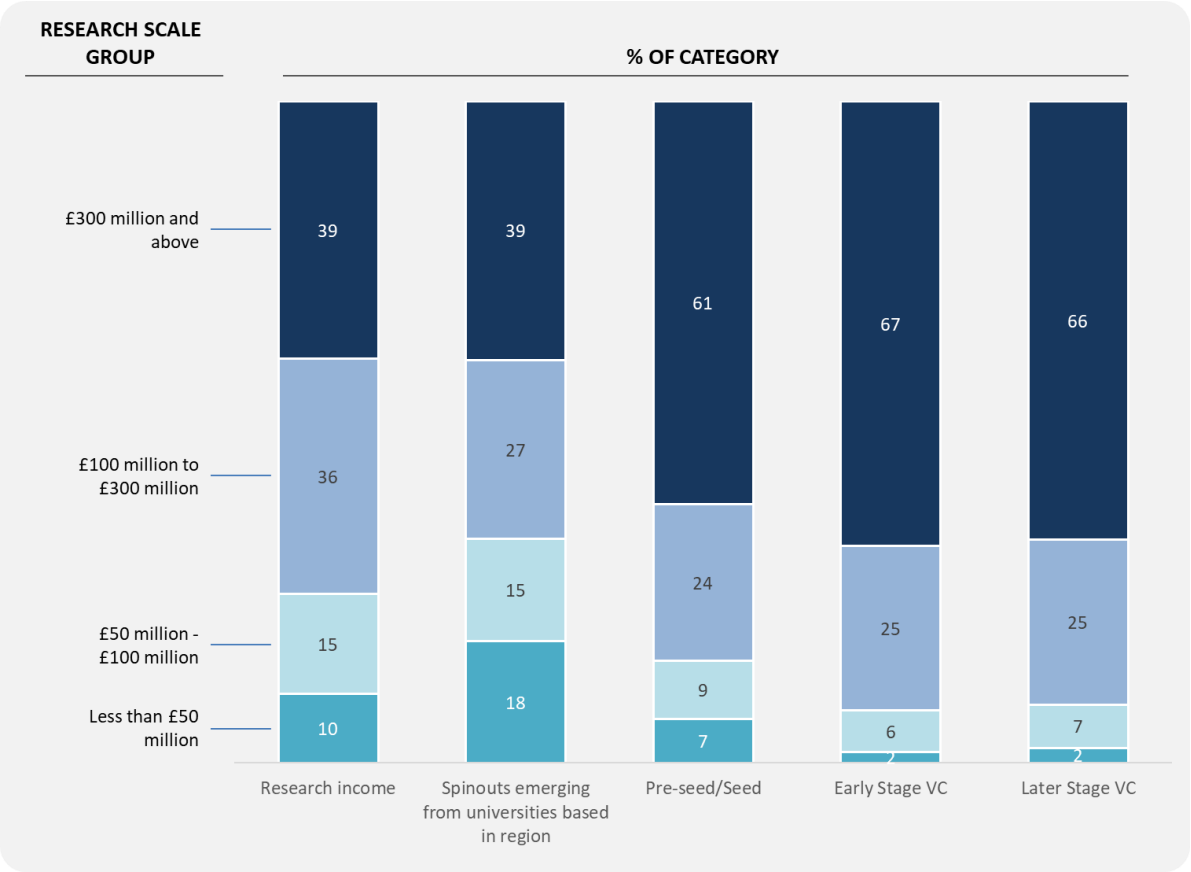
Investment was converted to constant 2024 prices using the GDP deflator to adjust for inflation, before calculating the index growth
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

6.1.1 Research, spinout and venture capital investment concentration across the UK

The report has shown that spinout production is closely correlated with the scale of research activity across the UK. This section expands this to examine how the distribution of research income and spinout production then compares to the distribution of VC funding into spinouts at the pre-seed/seed, early VC and later VC stages, for spinouts emerging from (1) universities with different scales of research activity (Figure 39) and (2) universities based in different parts of the UK (Figure 41).

The analysis clearly shows that while spinout production is closely correlated with research income the distribution of VC investment is much more concentrated in spinouts emerging from the largest research universities, of which four of the six are based in Oxford, Cambridge and London. These universities attracted 39% of research income over the period 2013-2024 and produced 39% of spinouts, which then went on to attract over 60% of VC funding at each stage.

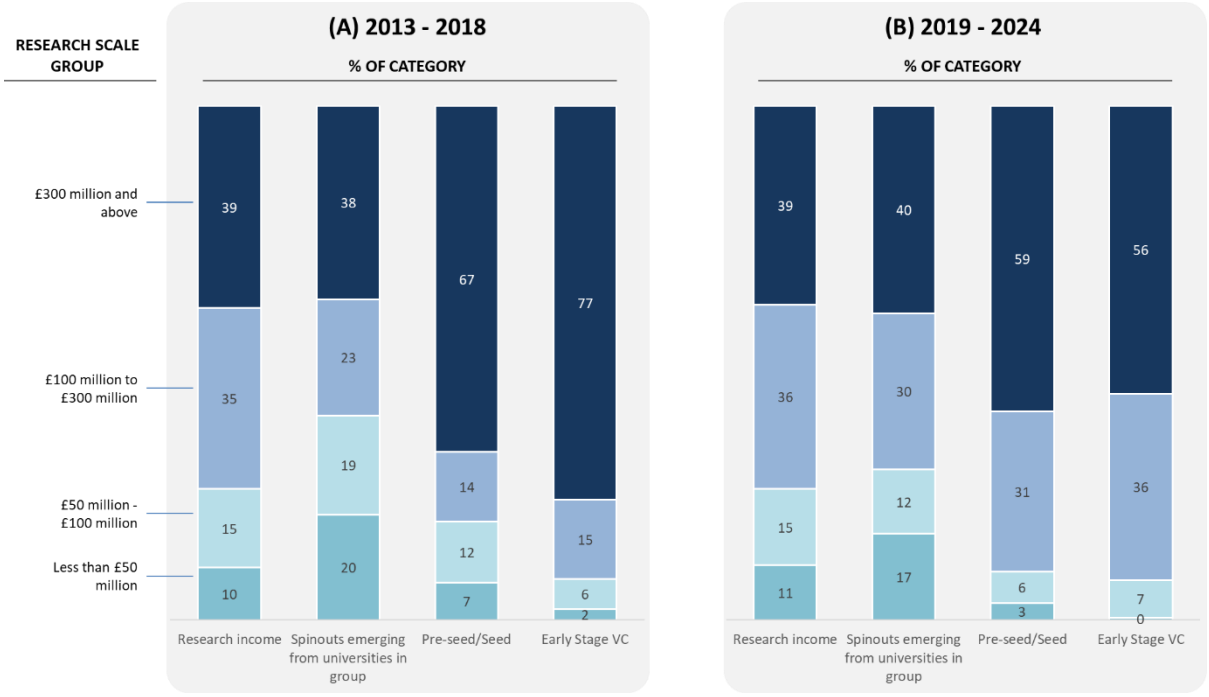
Figure 39 | Comparison of the distributions of research income, spinouts, and investment at different deal stages for spinouts emerging from different groups of universities based on their research scale



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from HESA's Finance Record, and data from PitchBook Inc.

Section 5.2.2 showed that the group of large research universities beyond the six largest had seen systematic increases in spinout production over the past decade, with production levels now similar between these groups. Figure 40 shows that this success in producing more spinouts appears to be feeding through into the ability of their spinouts to attract investment at the pre-seed/seed and early VC stage. During 2013-2018, these universities produced 23% of spinouts in the UK despite securing 35% of research income. These spinouts secured just 14% of pre-seed/seed investment and 15% of early-stage VC funding. By contrast, over 2019-2024 this group of universities produced 30% of spinouts – closer to the expected number given the scale of their research base, which then went on to secure 31% of pre-seed/seed and 36% of early-stage VC funding.

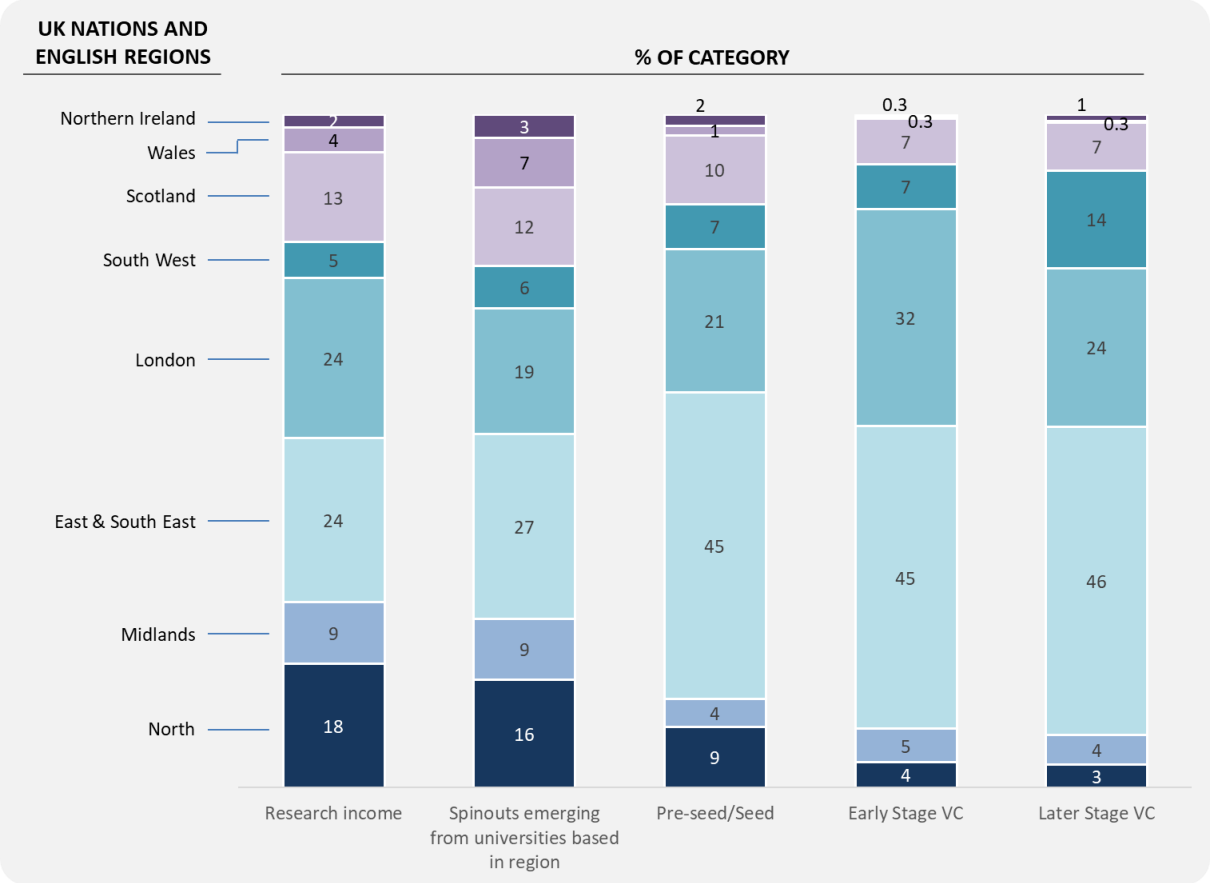
Figure 40 | Comparison of the distributions of research income, spinouts, and investment at earlier deal stages for spinouts emerging from different groups of universities based on their research scale for spinouts founded between 2013-2018 (panel A) and 2019-2024 (panel B)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from HESA's Finance Record, and data from PitchBook Inc.

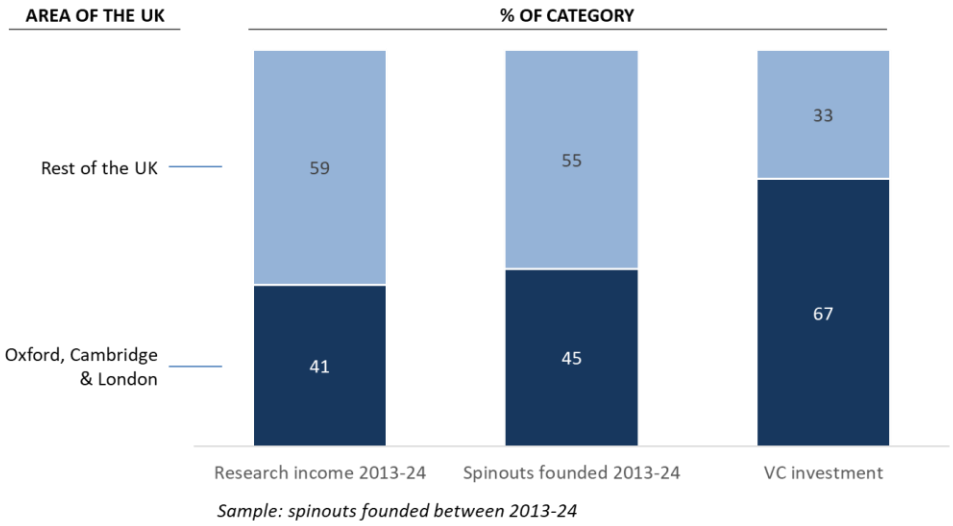
The concentration of VC investments into spinouts emerging from universities within the Greater South East is also very apparent (Figure 41). Universities within London, the East and South East captured 48% of the research income over the period 2013-2024 and generated 46% of the spinouts over this period. These companies then went on to secure 66% of the pre-seed/seed stage investment, and 77% of the early-stage VC funding. Drilling down even further shows that much of this is driven by the cities of Oxford, Cambridge and London (Figure 42).

Figure 41 | Comparison of the distributions of research income, spinouts, and investment at different deal stages for spinouts emerging from universities based in different nations and regions of the UK



Sample: all spinouts in register with PitchBook investment data
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from HESA's Finance Record, and data from PitchBook Inc.

Figure 42 | Comparison of the distributions of research income, spinouts, and venture capital investment for Oxford, Cambridge and London and the rest of the UK



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from HESA's Finance Record, and data from PitchBook Inc.

6.2 Average investment deal size trends and patterns

Over the period 2019-2024, the mean average size of pre-seed/seed deals secured by UK university spinouts was £1.7 million (median of £0.9 million). This rises to £9.8 million (median of £2.0 million) for early-stage VC and £16.5 million (median of £4.2 million) for later stage VC (Table 6).

Table 6| Average deal size secured by UK university spinouts for different types of deals over the period 2019-2024 (constant 2024 prices)

Investment stage	Mean	Median	Mean average deal size (£ millions) for each percentile group					Ratio of the average deal size for the top 10% of deals to the median deal size
			0 - 20th	20th - 50th	50th - 80th	80th- 90th	90th - 100th	
Pre-seed/Seed	1.7	0.9	0.13	0.54	1.7	3.3	7.0	8
Early-Stage VC	9.8	2.0	0.24	1.1	5.3	18.3	61.6	31
Later Stage VC	16.5	4.2	0.60	2.5	8.2	28.7	101.2	24

Sample: all spinouts in register with PitchBook data
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

The significant difference between the mean average and median (the value of the spinout deal in the middle of the distribution) suggests a highly skewed distribution of the sizes of investment deals secured by spinouts; some spinouts raise significantly more than others, pulling the mean away from the median. For example, at the pre-seed/seed stage, the mean average deal size for the 20% of spinouts receiving the least investment was £130,000. By contrast, the mean average deal size for the top 10% of spinouts receiving the most of this type of investment was £7.0 million; 8 times larger than the median deal size, and for spinouts in the 80th-90th percentile it was £3.3 million. At the early VC stage, the size of deals ranged from a mean average of £240,000 for spinouts securing the lowest 20% of deals by size to £61.6 million for the top 10% (31 times larger than the median deal), while at the later VC stage it ranged from £600,000 to £101.2 million (24 times larger than the median).

6.2.1 Trends in the average deal size for university spinouts and wider startups

The mean average deal size for UK university spinouts at the pre-seed/seed stage has increased over time from around £1 million in 2017 (median of £600,000) to £2.4 million in 2024 (median of £1.3 million), although for much of this period it was relatively stable at around £1.5-1.7 million (Table 7). The mean average early-stage VC deal increased significantly from £6.2 million in 2017 to £14.1 million in 2022 although, in line with the trend in total early-stage VC investments into spinouts, has dropped back to a similar level to 2017-2018. Later stage VC deals increased significantly in size over the period, from £9.6 million in 2017 (median of £2.2 million) to £12.5 million in 2023 and £17.2 million in 2024 (median of £4.7 million).

Table 7 | Mean and median deal size for UK university spinouts at the pre-seed/seed, early VC and later VC stages

	Deal type	2017	2018	2019	2020	2021	2022	2023	2024
Mean (£ millions)	Pre-seed/Seed	1.0	1.6	1.5	1.5	1.6	1.7	1.6	2.4
	Early-Stage VC	6.2	9.0	7.3	8.1	12.8	14.1	8.0	7.9
	Later Stage VC	9.6	9.8	11.5	13.7	23.6	18.8	12.5	17.2
Median (£ millions)	Pre-seed/Seed	0.6	0.9	0.9	0.8	0.6	0.9	1.0	1.3
	Early-Stage VC	1.7	2.4	1.7	2.2	2.9	2.1	2.1	1.5
	Later Stage VC	2.2	2.4	2.5	2.9	5.5	6.2	4.8	4.7

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

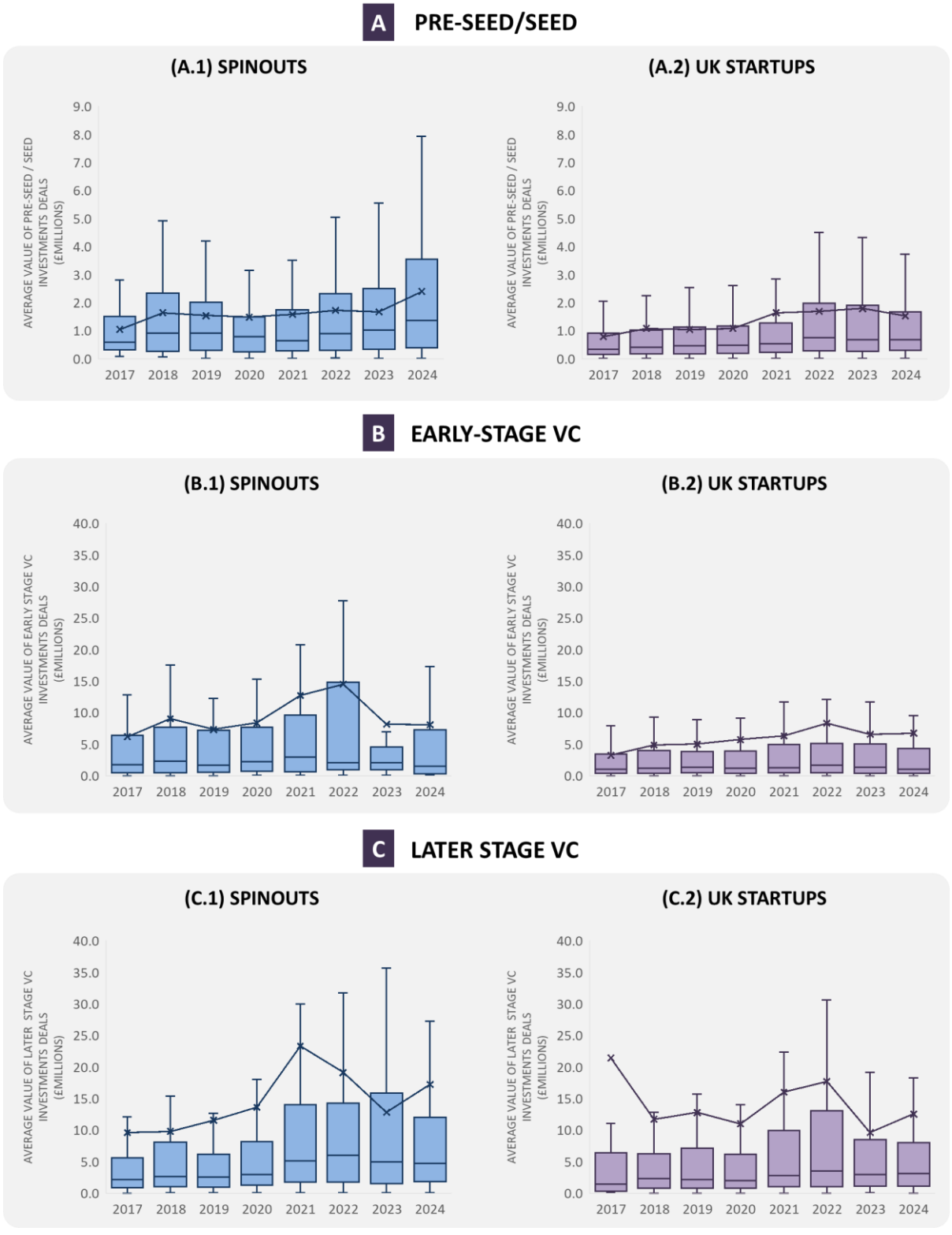
How does the size of spinout deals compare with the wider population of startups? To enable comparisons, the analysis presented in Figure 43 limits the sample of companies to spinouts and startups (excluding spinouts) founded in the UK over the same period 2013-2024 and raising at least some venture capital investment. As such the figures may differ slightly from those shown in Table 7, which includes all spinouts reported to the September 2025 release of the UK Spinout Register.

Figure 43 shows that spinouts at the pre-seed/seed stage (panel A) perform better than the wider start-up population in terms of the size of pre-seed/seed deals. The median deal size for spinouts is higher than startups, and the top performing spinouts appear to raise more than the top performing startups. It also shows that the divergent trends in spinout performance in attracting VC investments compared to the wider startup population in recent years appears to be driven not just by a few spinouts securing large deals, but by increases in deal sizes across a much larger proportion of companies.

At the early VC stage (panel B), while the median deal size is more comparable between spinouts and startups, the mean deal size is higher for spinouts, with the top performing spinouts also appearing to raise more than top performing startups.

At the later VC stage (panel C), it appears that, while the total scale of VC investment at this stage has come down since 2021, the median deal size has been relatively stable in recent years, with more deals in the top half of the distribution (i.e. above the median deal) larger since 2021 than pre-pandemic.

Figure 43 | Comparison of deal sizes for UK spinouts and the wider population of UK startups at the pre-seed/seed stage (panel A), early-stage VC (panel B) and later stage VC (panel C)



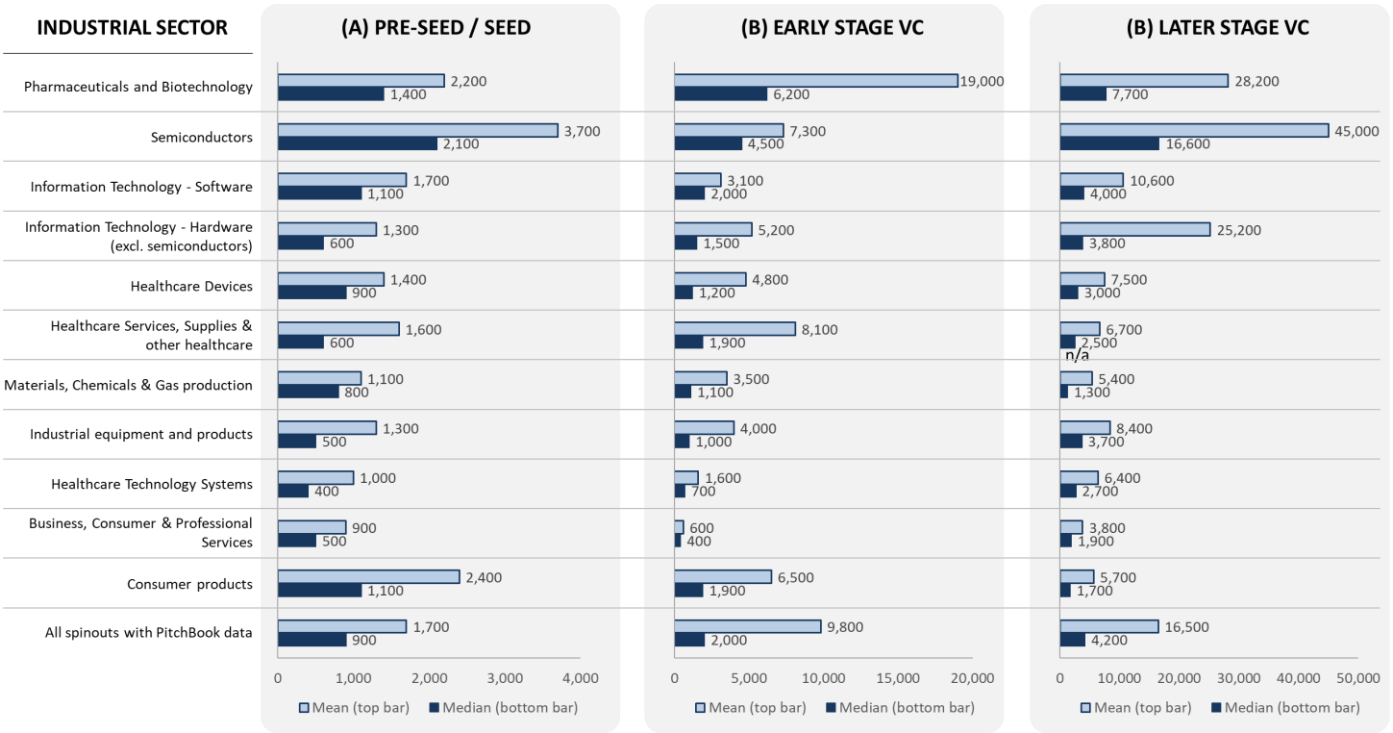
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

6.2.2 Average deal sizes for university spinouts in different sectors

There are well-known differences in the investment requirements for companies to commercialise different types of technologies into different sectors. These may reflect, among other things, differences in the capital requirements to support and drive the technology development and innovation journeys, as well in the scale of the technology and other risks that need to be reduced to gain commercial traction. For example, commercialising therapeutics and other deep-tech into highly regulated markets will typically require significantly more investment over much longer timeframes than, for example, developing digital tools and applications.

Figure 44 presents the average size of deals secured by UK university spinouts operating in different industrial sectors, covering deals over the period 2019-2024. It shows that the median deal size for spinouts at the pre-seed/seed stage was higher for spinouts entering the semiconductor sector (£2.1 million) and the pharmaceuticals and biotechnology sector (£1.4 million) compared with ventures entering sectors such as IT software (£1.1 million), healthcare services and supplies (£0.6 million), and business, consumer and professional services (£0.5 million). This much larger scale of investment is also seen at the early and later stage VC stages for both semiconductors and pharmaceuticals and biotechnology, where the median deal size for semiconductor-focused spinouts at the early-stage VC investment rises to £4.5 million (mean average of £7.3 million), and for those in pharmaceuticals and biotechnology rises to £6.2 million (mean average of 19 million).

Figure 44 | Average deal size (£000s) for spinouts operating in different industrial sectors, for deals covering the period 2019-2024 (constant 2024 prices)



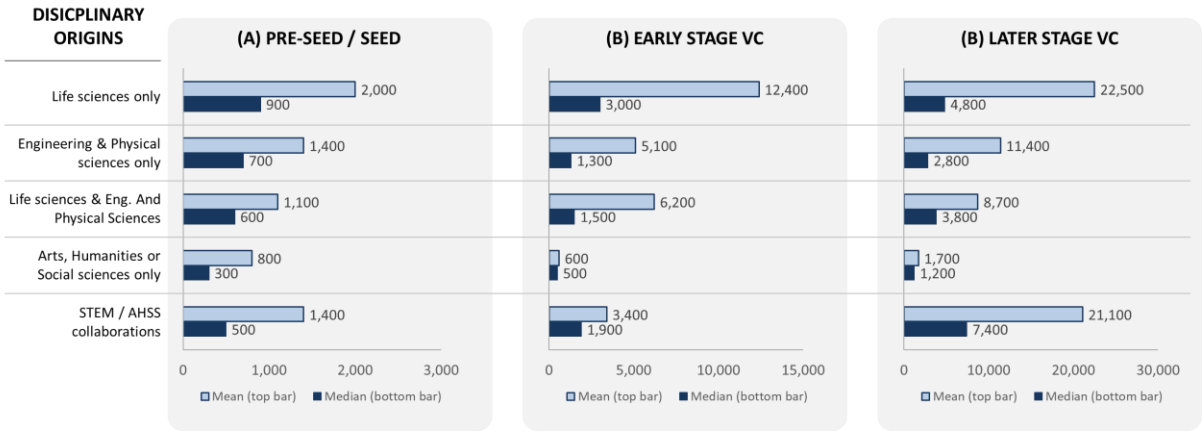
Sample: All spinouts in register with PitchBook investment data
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

6.2.3 Average deal sizes for university spinouts emerging from different disciplines

For the first time in the UK, we have robust information on the spinouts emerging from different disciplines. Section 5.4 showed that the vast majority of spinouts emerge from science and engineering disciplines. That said, 238 spinouts had links with the arts, humanities and social sciences disciplines. How do equity-backed investment deals vary for spinouts with links to different combinations of disciplines?

Figure 45 shows that spinouts emerging from the life science disciplines raised considerably more investment at the pre-seed/seed stage compared with those from other disciplines, with a median average deal size of £0.9 million (mean average of £2.0 million), compared with £0.7 million for spinouts from engineering and physical sciences (mean of £1.4 million), and just £300,000 for those emerging from AHSS disciplines (mean of £800,000). This pattern continues at the early VC and later VC stages of the investment journey. The low levels of investment into AHSS spinouts may reflect the less capital-intensive nature of many of these ventures, alternative spinout development and growth pathways based on non-VC investments, and the relative immaturity of the spinout and investment ecosystems available to support and nurture these ventures (Abdul Rahman et al., 2024).

Figure 45 | Average size of investment deals (£000s) for spinouts emerging from different disciplines, for deals covering the period 2019-2024 (constant 2024 prices)



Sample: All spinouts in register with PitchBook investment data
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

6.2.4 Average deal sizes for university spinouts emerging from universities with different scales of research bases

Venture capital investments are heavily concentrated into spinouts emerging from large research universities. The evidence also suggests that the spinout ecosystems of large research universities outside the traditional spinout heartlands of the UK's largest research universities are strengthening and now produce spinouts at comparable levels (Figure 30, section 5.2.2). This appears to be feeding through to the investment success of their spinouts (Figure 40, section 6.1.1).

Table 8 moves this analysis on from looking at the aggregate investments secured to focus on how the mean average deal size secured by spinouts from universities with different scales of research income has changed for spinouts founded in the earlier period of 2013-2018 and the more recent period 2019-2024.

Focusing first on how deal sizes compare across the groups of universities within the more recent period 2019-2024, Table 8 shows the average deal size for spinouts emerging from the six universities with the largest research bases (£300 million and above) was much higher at the pre-seed/seed stage (£2.3 million) than for spinouts emerging from other types of university. This pattern continues into the early VC stage. Note, though, that for spinouts reaching the later VC phases of their development, when they are typically seeking to scale, the mean average is broadly similar for spinouts linked to the largest research universities and those linked to the next group of universities with research bases between £100-300 million. Given the skewed nature of investment success for spinouts, the mean will be influenced much more by the top performing outliers in each group i.e. those very successful in raising investment. By contrast, spinouts emerging from universities with research scales of less than £50 million appear to struggle to raise significant amounts of investment at all phases of the investment journey.

Table 8 | Comparing the mean average size of investment deals (£000s) in the periods 2013-2018 and 2019-2024 for spinouts emerging from different types of universities (constant 2024 prices)

Research scale group	Pre-seed/Seed deals during period:		Early-Stage VC deals during period:		Later Stage VC deals during period:	
	2013-18	2019-24	2013-18	2019-24	2013-18	2019-24
£300 million and above	1,800	2,300	7,000	13,100	14,300	20,100
£100 million to £300 million	800	1,300	3,800	8,500	4,600	16,300
£50 million - £100 million	500	1,400	7,200	8,100	2,700	11,400
£20 million - £50 million	600	600	2,400	600	1,800	3,800
£10 million - £20 million	400	700	800	1,300	2,300	2,100
Less than £10 million	400	1,100	500	2,000	2,300	4,500

Sample and notes: All spinouts in register founded with PitchBook investment data. Analysis of deals completed within each period. Investment data has been adjusted for inflation using the HM Treasury GDP deflator.
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

Looking at how average deal sizes have changed over time, spinouts emerging from universities with research bases of more than £50 million have seen significant growth in the average deal size at the pre-seed/seed stage. For the six universities with a research base greater than £300 million, the average pre-seed/seed stage deal grew from £1.8 million between 2013-2018 to £2.3 million between 2019-2024. For universities with a research base between £100-300 million, the mean deal size secured by their spinouts grew from £0.8 million in the earlier period and £1.3 million in the more recent period, with a significant growth also experienced by spinouts linked to universities with a research base of between £50 million - £100 million.

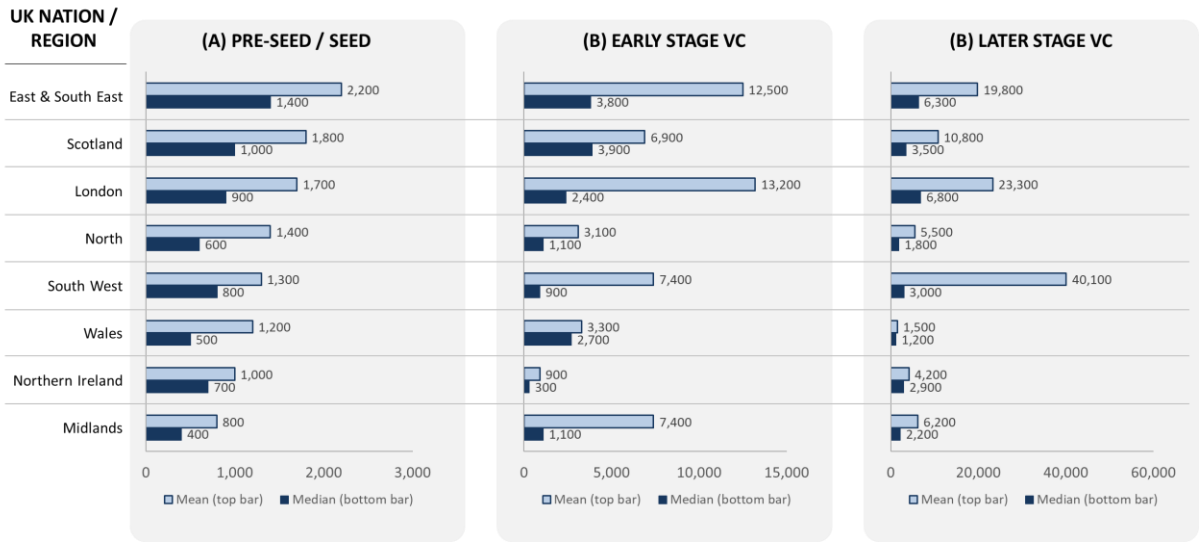
6.2.5 Average deal sizes for university spinouts emerging from universities based in different regions and nations of the UK

Section 6.1.1 highlighted the significant regional concentration of VC investments not just within the Greater South East, but in particular within Oxford, Cambridge and London. This section examines how spinouts are affected by this concentration, looking at the average deal sizes secured by companies emerging from universities based in different parts of the country.

Figure 46 (panel A) shows that, at the pre-seed/seed stage, spinouts emerging from universities based in the East and South East raised considerably more on average than those based elsewhere in the UK (mean pre-seed / seed investment of £2.2 million, median of £1.4 million). Spinouts emerging from universities in London and Scotland also raised on average more than elsewhere. The average pre-seed/seed investment into spinouts emerging from universities in the South West and North of England was a bit lower than from linked to London-based and Scottish universities. Spinouts from universities in the Midlands secured, on average, the least investment at the pre-seed/seed stage (mean deal size of £0.8 million, median of £0.4 million).

At the early and later VC stage (Figure 46, panel B), spinouts from universities based in the East and South East of England, and those based in London, secured significantly higher levels of investment than those based elsewhere (both in terms of the mean and median investment). An important finding from this analysis is that the mean early-stage VC investment into spinouts emerging from universities based in the South West and in the Midlands started to bridge the gap with those based in the East, South East and London, although the median investment remained much lower. This tentatively suggests that the better performing spinouts emerging from South West and Midlands-based universities, once through the initial funding rounds, can attract higher levels of follow-on investment. Many from these regions, however, struggle.

Figure 46 | Average size of investment deals for spinouts emerging from universities based in different regions and nations of the UK, for deals covering the period 2019-2024 (constant 2024 prices)



Sample: All spinouts in register with PitchBook investment data
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook Inc.

6.3 Spinout outcomes and survival

What happens to the spinouts emerging from UK universities once they enter the market? Overall, of the 2,307 companies reported to the Spinout Register (September release), the analysis suggests that 1,674 are still active; 67 have listed on a stock exchange and 214 have been acquired; they raised a total of £2.9 billion in venture capital funding in 2024; and 62 have raised more than £100 million in VC funding (Figure 47).

Figure 47 | Selected highlights of the UK university spinout ecosystem in 2024

** Some spinouts were acquired following their public listing on a stock exchange*

Note: Investment data has been adjusted for inflation and are in constant 2024 prices
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), Moody's FAME and ORBIS databases, and data from PitchBook Data, Inc.

6.3.1 Recognising the variety of spinout outcomes and successes

When examining spinout outcomes and the scale of successes, it is important to recognise that spinouts may grow and develop through different pathways – not just through equity-backed VC investment leading to acquisition or public listing. They may also realise success and contribute significantly to the economy and society in different ways, not just through scaling to become 'unicorns' and large employers. The latter are clearly important for driving economic growth and prosperity in the UK – particularly if, as a nation, we can anchor more of the employment domestically.

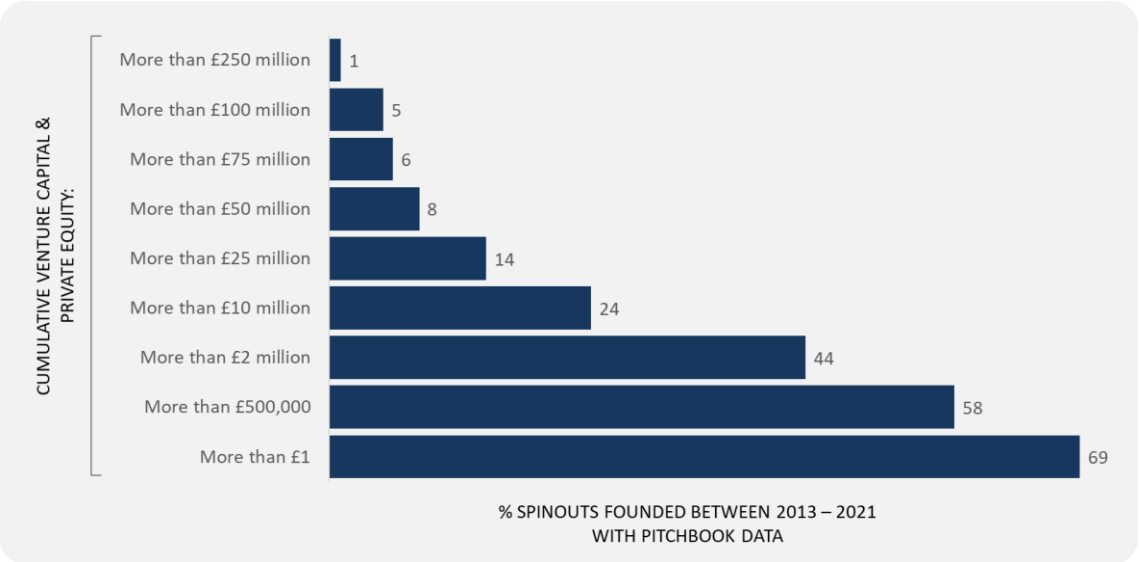
However, some spinouts may emerge to provide niche, yet critically important, products and services to strategically important industries nationally and regionally. They may be providing enabling products and capabilities that, while not requiring large numbers of people to meet demand, may help other companies to become more productive and competitive, attract and anchor industrial value chains in a location, and contribute to national resilience and security and the building up of sovereign capabilities. The role and importance of these types of spinouts are hard to identify and capture in aggregate analyses of spinout outcomes and is an area where further work is urgently needed.

6.3.2 Cumulative investment raised by spinouts

The first analysis of spinout outcomes focuses on the cumulative amount of equity investment (including both VC and private equity (PE)) that UK university spinouts have raised since their foundation. While not appropriate for all spinout companies, it does provide valuable insights into the health of the spinout ecosystem, capturing the ability of companies to raise significant equity-backed capital to drive their growth. It provides strong market-based signals that investors can see commercial value in the spinouts' proposition.

The analysis of cumulative VC/PE investment raised focuses on a sample of spinouts from the Spinout Register (September 2025 release) that were founded since 2013 and are at least 3 years old and have been identified in the PitchBook data platform (from which information on investments is obtained). This allows time for companies to move beyond their initial rounds of funding. Figure 48 shows that 69% of this sample of spinouts raised at least some investment, with 58% raising more than £500,000, and 44% raising more than £2 million. At this point we see a large drop-off, with just 24% of spinouts having raised more than £10 million – what some people refer to as breaking through into the 'scaling' phase. Just 8% have raised more than £50 million, 5% (47 spinouts) more than £100 million, and 1% (10 spinouts) have raised more than £250 million in VC/PE investments.

Figure 48 | Share of spinouts (%) founded between 2013 and at least three years old raising different cumulative levels of venture capital and private equity investment since foundation



Sample: 938 spinouts founded between 2013-2021 with PitchBook data
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

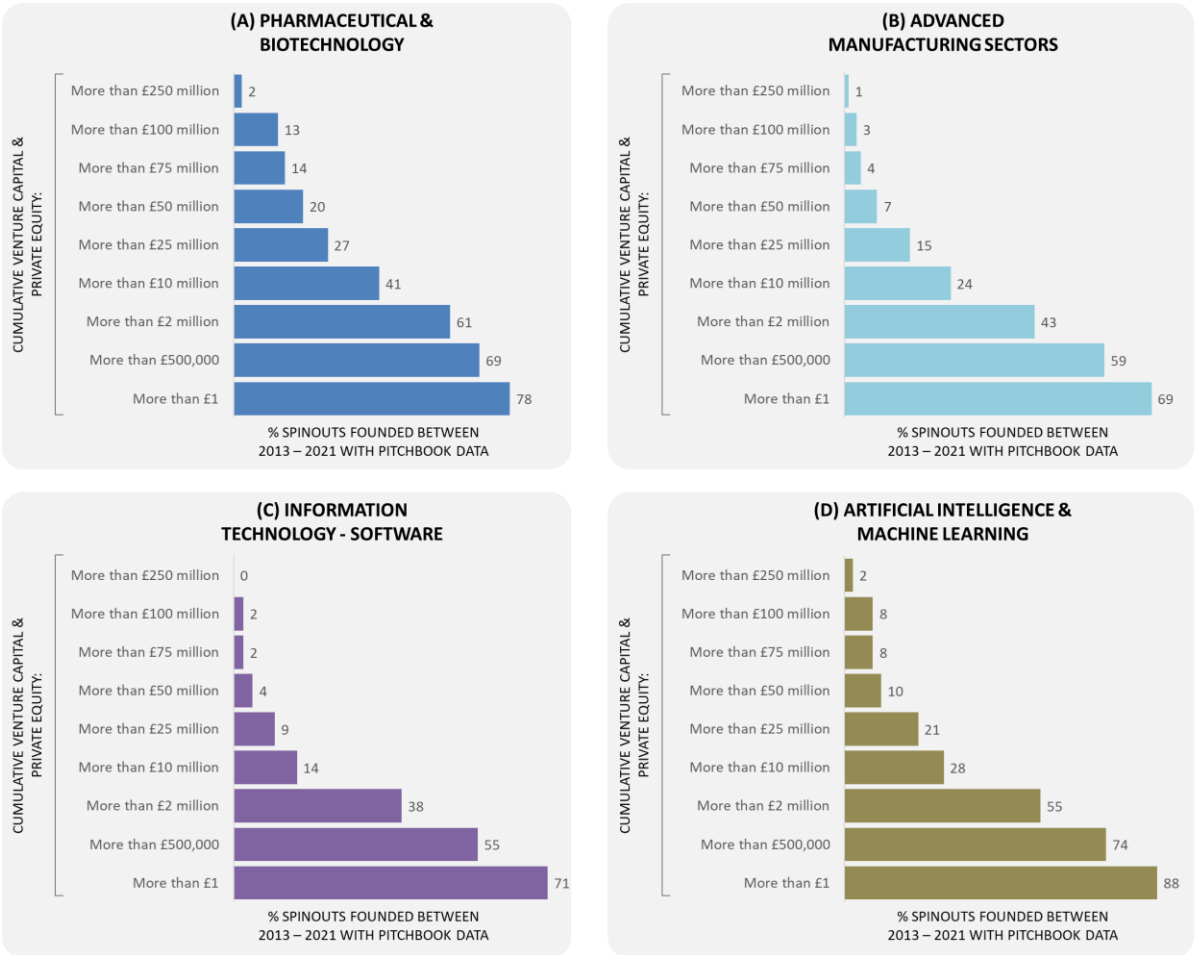
Figure 49 takes this analysis one step further to look at the progression of spinouts raising increasing amounts of VC/PE investment for spinouts operating in different key sectors and market verticals, including the pharmaceuticals and biotechnology sector (panel A), the advanced manufacturing vertical (panel B), the IT software sector (panel C), and the AI/ML vertical (panel D). The latter two are included to compare spinouts developing AI/ML specific technologies with the wider software sector, which can include a much wider set of companies.

Within this comparative analysis three key points are of interest here: (1) the share of companies raising at least some investment; (2) the point at which a significant drop-off occurs in the share of spinouts raising increasing amounts of VC/PE investment (the scaling challenge point); and (3) the share of companies raising the highest levels of investment.

The analysis shows that, across each of these sectors and verticals the majority of spinouts raise at least some VC/PE investment (around 70% - 90%). For pharmaceuticals/biotechnology spinouts, 61% raise more than £2 million. There is then a significant drop, with 41% raise more

than £10 million, followed by another large drop, with 27% raising more than £25 million. By contrast, spinouts in the software sector (panel C) see relatively large declines early on, with the numbers raising more than £0.5 million down to 55% and just 38% raising more than £2 million compared to 61% in pharmaceuticals/biotechnology. Just 14% raise more than £10 million. Within the narrowing vertical of AI/ML, the pattern up to £2 million VC/PE investment raised is more like the experience in pharmaceuticals/biotechnology. However, a much larger drop occurs at this point, with just 28% raising more than £10 million, and just 10% raise more than £50 million.

Figure 49 | Share of spinouts (%) founded between 2013 and at least three years old raising different cumulative levels of venture capital and private equity investment, for spinouts in the pharmaceutical and biotechnology industry (panel A), advanced manufacturing market vertical (panel B), software industry (panel C) and artificial intelligence and machine learning market vertical (panel D)

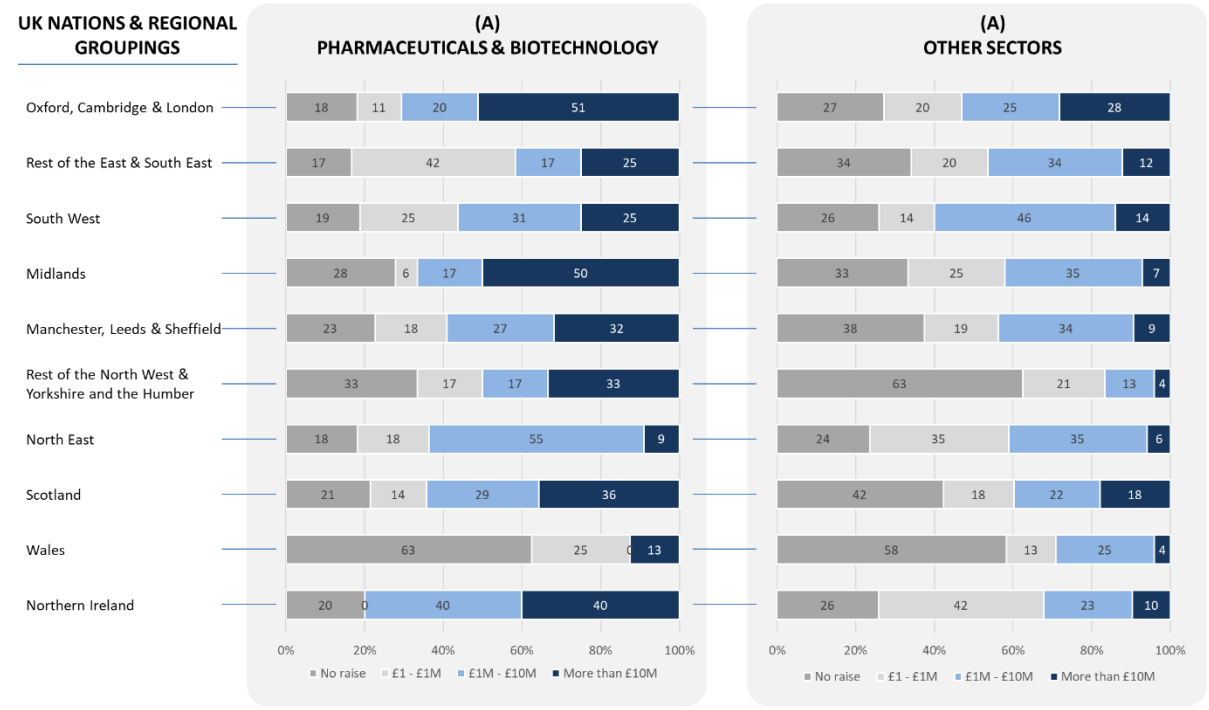


Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Significant regional disparities exist in investments into spinouts. Figure 50 explores whether this still holds as strongly when looking at spinouts operating in the pharmaceutical and biotechnology sector (panel A) and in other sectors (panel B). It reveals significant differences between the experiences of pharmaceuticals/biotechnology spinouts from those operating in other spaces. While many pharmaceuticals/biotechnology spinouts emerging from Oxford,

Cambridge and London raise more than £10 million, so do relatively large shares of spinouts in this sector emerging from universities based in other parts of the UK where the VC investment landscape is more challenging, including the Midlands, Northern Ireland, Manchester, Leeds and Sheffield, and Scotland. However, for spinouts outside this particular sector, the proportion of spinouts raising more than £10 million outside Oxford, Cambridge and London, and to a lesser extent in Scotland, is relatively low (often less than 10% of spinouts in that geographical area).

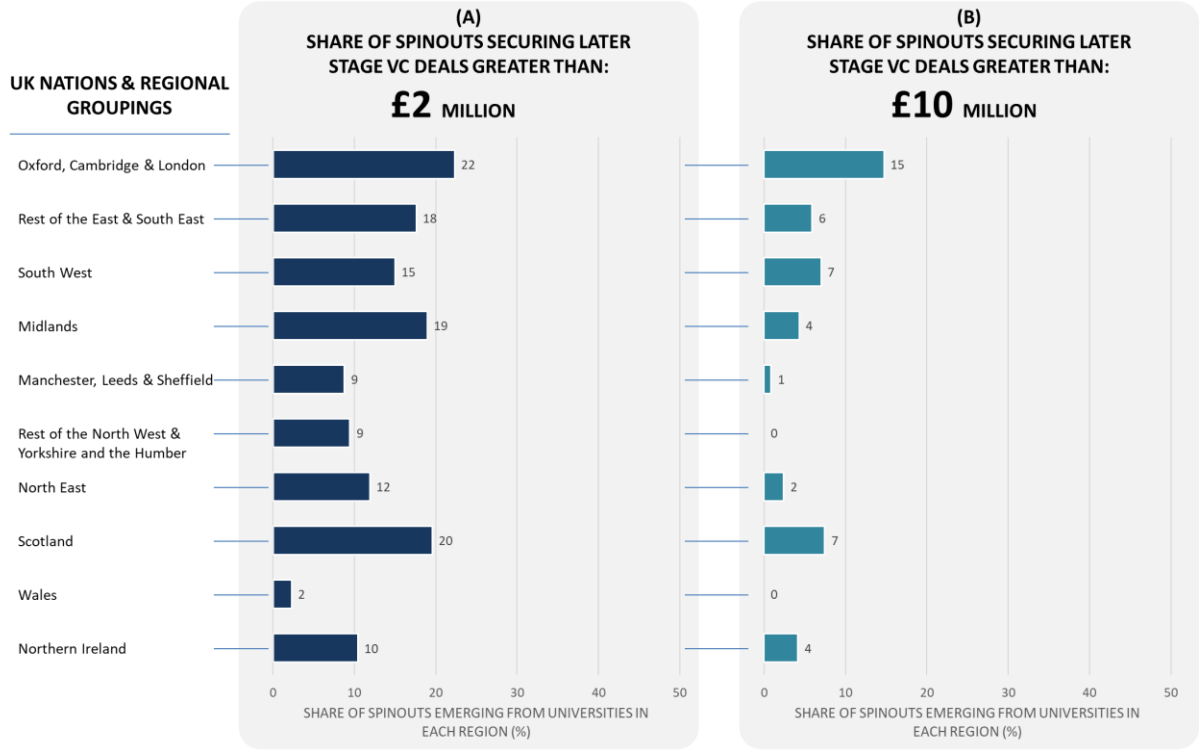
Figure 50 | Share of spinouts (%) founded between 2013 and at least three years old emerging from universities based in different areas and nations of the UK raising different cumulative levels of venture capital and private equity investment since foundation



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

There have been claims in recent years that spinout companies outside the Golden Triangle are struggling to raise significant later stage VC deals. Using the UK Spinout Register data, linked to the PitchBook investment data platform, Figure 51 examines this claim and finds some support. It suggests that a broadly similar proportion of spinouts in the Midlands (19%), Scotland (20%), and the South West (15%) are able to raise at least £2 million at the later VC stage compared to those within the Golden Triangle of Oxford, Cambridge and London (22%). Twelve percent of spinouts in the North East reach this threshold, while just 9% from Manchester, Leeds and Sheffield, 10% from Northern Ireland, and 2% from Wales do so. By contrast, spinouts from the Golden Triangle universities are much more likely than those from many other parts of the UK to raise more than £10 million (panel B); with the distribution more uneven across the areas of the UK studied.

Figure 51 | Share of spinouts (%) founded between 2013 and at least three years old emerging from universities based in different areas and nations of the UK securing later stage venture capital funding greater than £2 million (panel A) and greater than £10 million (panel B)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

6.3.3 Spinout investment outcomes and exits

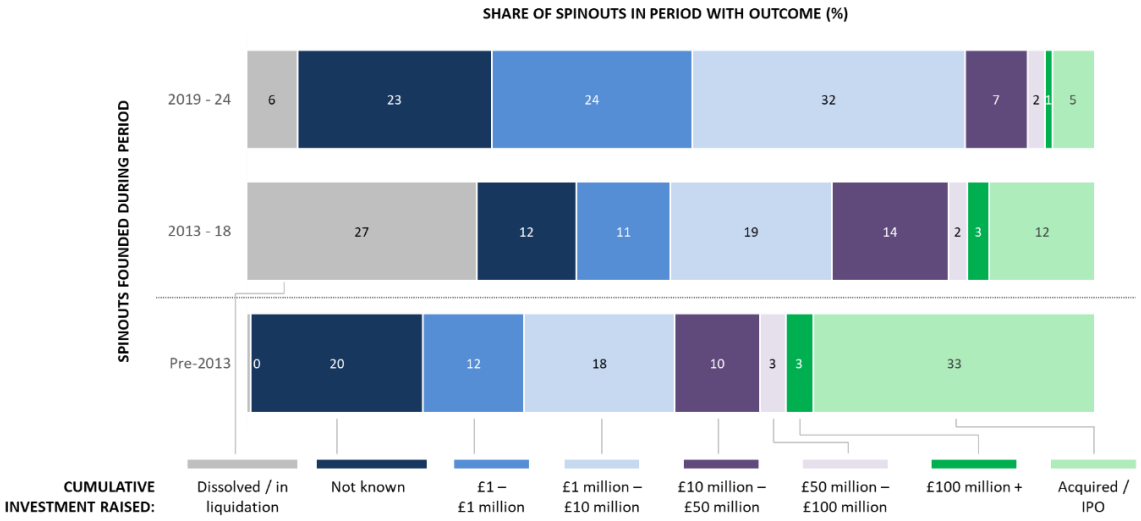
Figure 52 brings together the information on the cumulative amount of investment (of any type) with information on whether the spinout has realised a positive exit (e.g. through public listings or acquisitions) or has failed and been dissolved or is in the process of being liquidated. It combines the sample of spinouts that have information available within PitchBook with those for which no information was available, but where we could determine whether the company was still active or not. The analysis here also separates spinouts into three groups; those founded in the more recent period 2019-2024; those founded in an earlier period 2013-2018; and those founded pre-2013.

Recall that universities must only submit spinouts to the Spinout Register before 2012/13 if they were still active in 2024. Including these in a systematic assessment of spinout survival and outcomes would positively bias the results. To adjust for this, we therefore limit our attention in this section – unless otherwise stated – to spinouts founded during 2013-2024.

The outcomes analysis presented in Figure 52 that for spinouts founded between 2013-2018, 15% have either been acquired or listed publicly (12% - 87 spinouts), or have raised more than £100 million in investment (3% - 18 spinouts). A further 2% of the sample (16 spinouts) raised between £50 million and £100 million, and 14% raised between £10 million and £50 million. Twenty-seven percent of spinouts founded during this period had dissolved and 12% were still

active but lacked any investment data, suggesting they had not raised any equity-backed or other major investment. Given the length of time it can take deep-tech spinouts to develop, demonstrate and scale their applications, it is unsurprising that the proportion of spinouts raising significant investment or realising a positive exit is lower for companies founded in the more recent period 2019-2024.

Figure 52 | Share of spinouts (%) founded during each time period with different outcomes in 2024



Sample: Spinouts in register founded in each period and has PitchBook investment data, or was dissolved regardless of whether the company has been identified in PitchBook
Note: By design, no spinouts were reported to the Spinout Register during the pre-2013 period that had dissolved or were in liquidation
Note: Investment data has been adjusted for inflation and are in constant 2024 prices
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from Moody's FAME and ORBIS databases, and data from PitchBook, Inc.

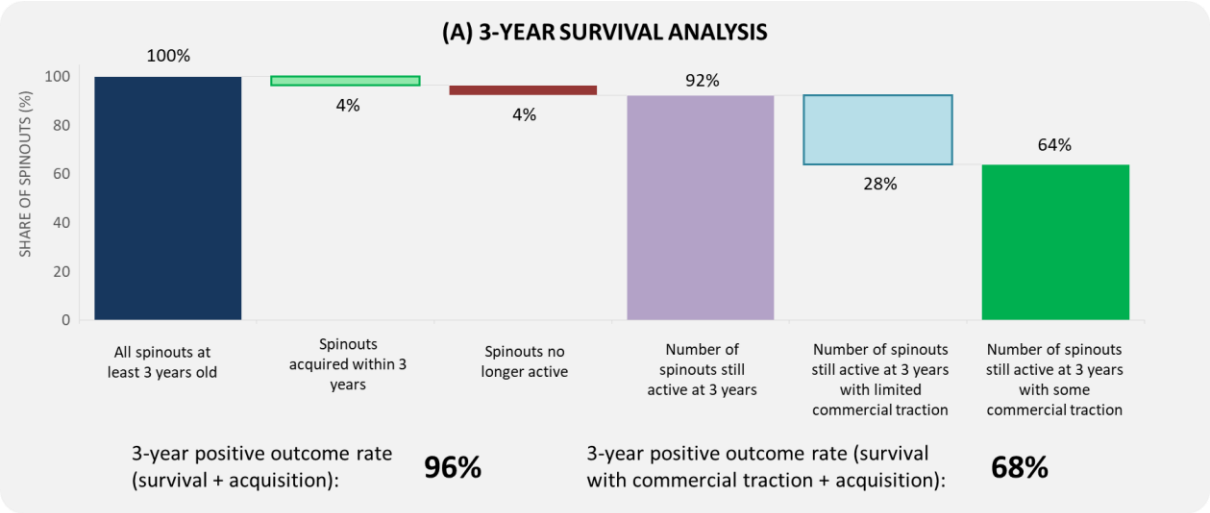
Figure 52 also presents the investment outcomes for the older spinouts reported to the Spinout Register, noting that by definition they are all still active in the current period. Of these companies, 33% had been acquired or were listed on a stock exchange. A further 4% had raised more than £100 million in investment and 7% had raised more than £50 million.

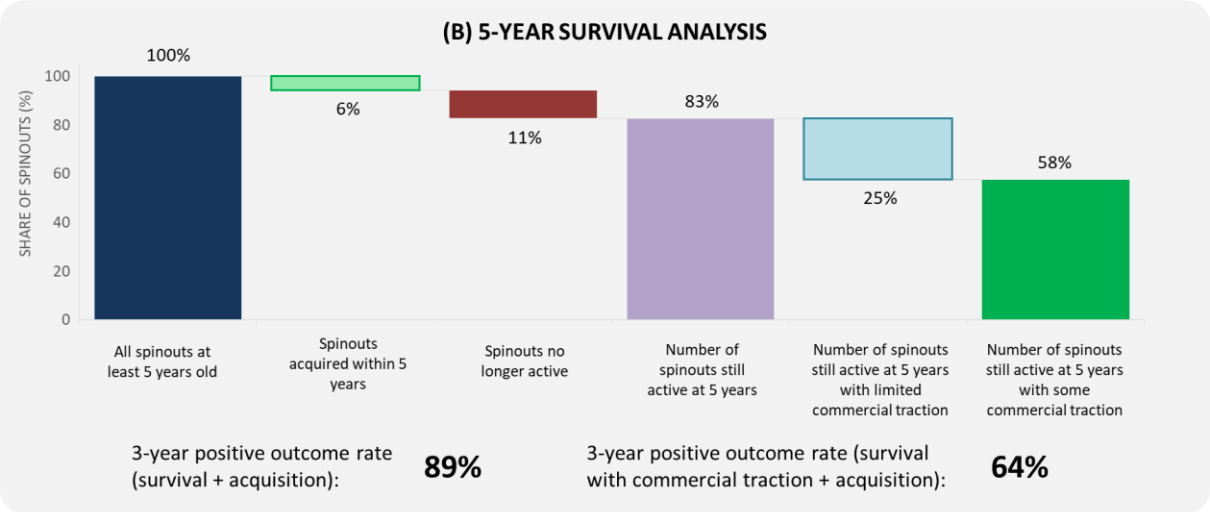
6.3.4 Spinout survival

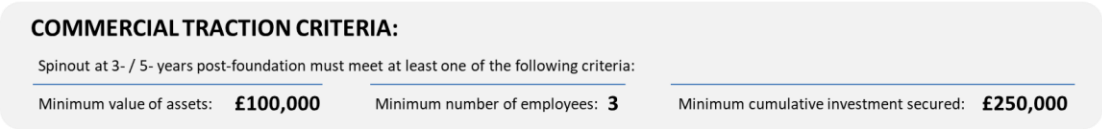
Spinout survival is often used as a metric of success, often with a focus on 3-year survival (largely due to data being available). Given the nature of spinout development journeys, with companies often able to raise at least some investment during their earliest years, and coupled with the fact that they are often led by academics who typically retain their academic positions (Ulrichsen et al., 2022), one would expect that many spinouts would survive this time horizon.

Indeed, Figure 53 (panel A) shows that 92% of spinouts remained active at the 3-year mark following their foundation, with the remainder either acquired within 3-years (4% of companies) or no longer active (4%). *Note that, following Ulrichsen and Miller (2025), this analysis treats acquisition as a positive outcome alongside remaining active.* Even over a longer period, 83% of spinouts remained active at 5-year post foundation and a further 6% had been acquired, and 11% were no longer active.

Figure 53 | 3-year and 5-year survival analysis of UK university spinouts including adjustments for companies failing to gain commercial traction within these periods







Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from Moody's FAME and ORBIS databases, and data from PitchBook, Inc.

Building on the recommendation of Ulrichsen and Miller (2025), and given the very high combined survival and acquisition rates, this study pushes the survival analysis further by looking at the proportion of spinouts that remain active at the time threshold (3- or 5-years) that appear to have gained at least some level of commercial traction. This attempts to adjust for companies that may still technically be 'active' but may be undertaking very little economic activity for whatever reason. For this study I define a company with at least some 'commercial traction' as one that meets the following criteria: (1) has total assets with a minimum value of £100,000; or (2) employs at least 3 people; or (3) has secured a minimum of £250,000 of investment within the timeframe.

Applying this commercial traction criteria to the survival analysis leads to perhaps a more useful metric of spinout company development. Figure 53 (panel A) shows that, while 96% remain active or have been acquired within 3 years, this drops to 68% when adjusting for those that have gained at least some commercial traction. At the 5-year point (panel B), 64% have survived with at least some commercial traction or had been acquired.

6.3.5 Prevalence of limited growth spinouts

In addition to analyses of spinout survival, there was also interest from the Review Team on the prevalence of spinouts that fail to significantly grow over their lifetime. To explore this, the study defined a 'limited growth spinout' as one that, over its lifetime:

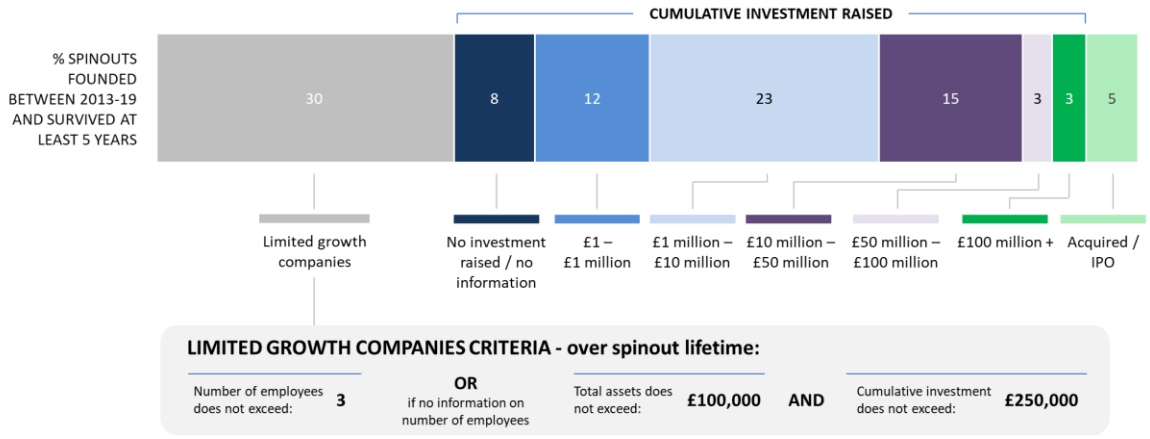
- Never employs more than 3 people

OR if there is no information available on the number of employees

- Never has total assets worth more than £100,000
- Cumulative investment does not exceed £250,000

Applying this definition to a sample of spinouts that are at least five years old and still active (and not acquired) (Figure 54) finds that 30% of these spinouts had experienced limited growth over their lifetime. A further 8% had raised no or limited investment but did not meet the definition adopted here of a limited growth company (for example because they had employed more than the minimum threshold of people without attracting external investment). Note that the results presented in this figure are materially different from those in Figure 52 due to the focus of this analysis on spinouts that have survived at least five years and have not (yet) been acquired, compared to the previous analysis which included any spinout founded during the period and looked at subsequent outcomes.

Figure 54 | Share of spinouts (%) founded since 2013 and at least five years old with different outcomes, including the prevalence of limited growth companies



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from Moody's FAME and ORBIS databases, and data from PitchBook, Inc.

The analyses presented in this section have focused on the survival and outcomes of UK university spinouts. A key area of further work will be to examine how this compares (1) to a wider, comparable population of start-ups, and (2) to spinouts emerging from universities in other countries and entrepreneurial ecosystems.

7

7 The investor landscape for UK university spinouts

This section now moves beyond an examination of the scale, trends and patterns of investment into UK university spinouts to better understand *who* is investing in these companies and how this may be changing over time. To do this, the study leverages rich and detailed information available through PitchBook on the types of investors involved in spinout deals. This allows us to identify a range of types of investors, from universities and university-affiliated funds to accelerators and venture builders, angels, venture capital investors, corporate venture capital and corporations, and private equity and other institutional investors. It also allows us to isolate different types of government entities investing in UK university spinouts, from government departments and agencies to government-back or government-run banks and investment vehicles.

In undertaking a university spinout focused analysis of the types of investors investing in their emergence and development, it is important to note that systematically identifying universities as investors into spinout deals within investment data platforms can be difficult. For example, we know that universities organise their commercialisation operations differently across the UK (and globally). Many universities across the UK still manage their commercialisation functions as a unit or department within the university. However, many – although not all – of the major spinout producing universities in the UK, including Cambridge, Oxford, UCL, Manchester and Edinburgh, have created subsidiary companies to deliver these functions. These wholly owned subsidiary companies will typically manage the commercialisation process; IP licensing, transfer and management; provide support; and may where available, oversee and manage seed funds for their spinouts. These subsidiary companies can sometimes be easily identifiable in data platforms as linked to the parent university; in other cases, the link may be less obvious. For the analyses presented in this report, universities and wholly owned subsidiary companies have been grouped together into a single category ‘universities’.

The identification and categorisation of university-affiliated, and university-focused funds and investment companies can also be challenging. These were identified through a variety of sources and mapped into the investment data platform, PitchBook. Prominent examples include Oxford Science Enterprises, Cambridge Innovation Capital, Northern Gritstone, and most recently, Midlands Mindforge. Given our interest in this class of investor into spinouts, they have been separated as a distinct type of investor. However, in many data platforms, they are also frequently categorised as venture capital investors.

Different types of investors investing in UK university spinouts

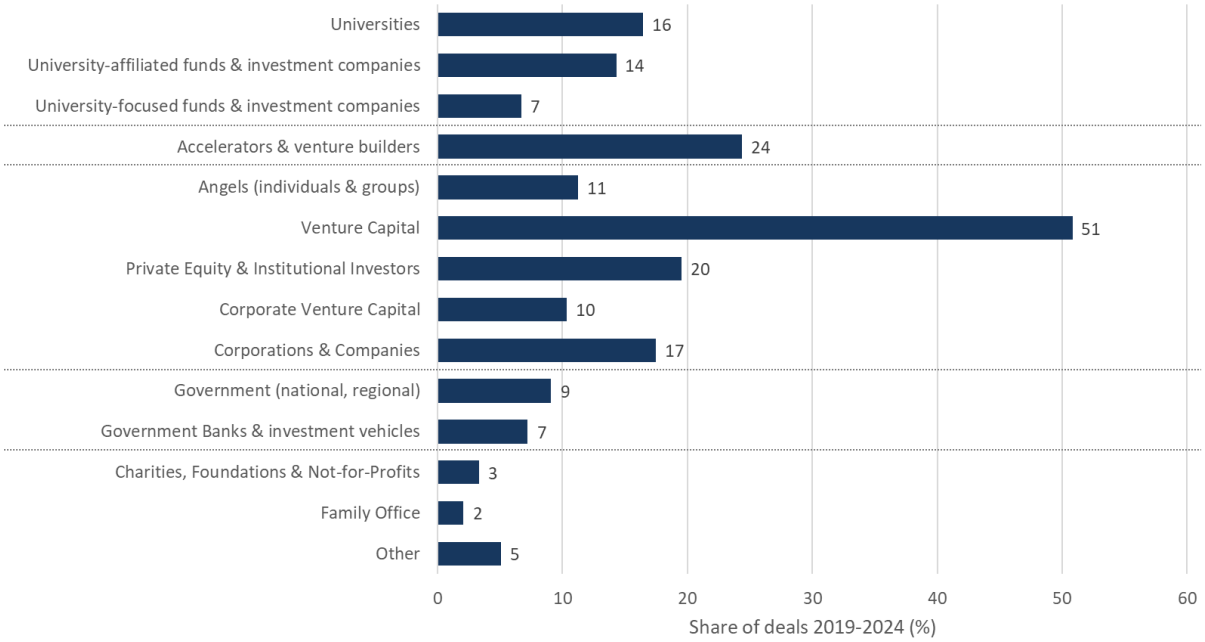
Investor type	Definition
Universities	Universities involved in spinout deals, including from their internal funds and university-owned/run seed and venture funds, through dedicated programmes and multi-university collaborations, and through university-owned subsidiary companies focused on providing commercialisation support to their spinouts
University-affiliated funds & investment companies	Funds and investment companies with arrangements with specific universities to invest in their spinouts
University-focused funds & investment companies	Funds and investment companies dedicated to investing in university spinouts, but no / limited arrangements with specific universities
Angels (individuals & groups)	Individual investors / formal groups of individual investors who provide both finance and business expertise to a company they invest in.
Accelerators & venture builders	Organizations provides services and/or funding to create, launch, scale and support new ventures and early-stage companies. Services provided can include office space, mentoring, and network connections, along with a capital injection.
Venture Capital	An investor specializing in financing new businesses or turn-around ventures usually combines risk with the potential for high returns.
Private Equity & Institutional Investors	Organisations typically investing in / lending to more established companies to drive their growth and profitability, realise returns from their investments, and deliver on the investment goals of their clients and stakeholders. This category includes, among others, private equity, asset and investment management companies, hedge funds, merchant and investment banks, and mutual funds.
Corporate Venture Capital	A unit of a corporation specializing in investing in start-ups or acquiring smaller, less established companies and growing those companies so they can potentially provide value to the main corporation as a part of the company or through a sale.
Corporations & Companies	A company with no VC or PE backing but acquires, sells or invests in other companies.
Government (national, regional)	Government departments and agencies operating at the national and sub-national levels.
Government Banks & investment vehicles	Government-backed or run banks (including development and investment banks) and investment vehicles/funds
Charities, Foundations & Not-for-Profits	Charities, foundations and other forms of non-profit organisations, some of which may have their own investment funds
Family Office	A small private company that manages investments or trusts for one or several families.
Other - Research Institutes & Catapults	Research institutes and technology/innovation development organisations (including Catapults)
Other - Ecosystem builders & platforms	Organisations dedicated to providing supporting / enabling the development of local entrepreneurial / start-up ecosystems. This includes science parks and local start-up networks, and ecosystem builders
Other - Company Nominees	An organisation / individual that holds assets on behalf of a beneficial owner
Other - Hospitals, hospital trusts & healthcare providers	Hospitals, hospital trusts & healthcare providers
Other - Investment managers, advisors, brokers, consultants, platforms	Investment managers, advisors, brokers, consultants, platforms
Other - National Academies / Professional Associations	National academies and professional associations
Other - Other/not known	Other types of organisations not elsewhere classified. Includes business development companies, legal and advisory service companies, organisations delivering and managing prizes to drive innovation, regulators and others.

Source: Categories and definitions build on those used by PitchBook. Author's analysis of PitchBook, Inc. data.

7.1 Types of investors investing in UK university spinout deals

Figure 55 presents the share of deals of all types and stages (excluding grants) secured by UK university spinouts during the period 2019-2024 that involved at least one investor of a particular type. Note that many deals will have multiple investors, potentially of different types, involved. It shows that around half of deals involved at least one venture capital investor, 16% involved universities, 14% involved a university-affiliated fund or investment company, and 24% involved accelerators or venture builders. Corporate venture capital investors were involved in 10% of deals during this period, and corporations were involved in 17%. Government-backed or government-run banks or investment vehicles were involved (directly) in 7% of deals. Note that, as will be shown later, governments are also key investors into funds that are managed by, for example, venture capital investors, who then invest directly into university spinouts.

Figure 55 | Share (%) of deals secured by UK university spinouts involving at least one investor of type (including accelerator programmes but excluding grants)



Sample: all spinouts reported to the Spinout Register

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Table 9 looks at how the exposure of spinout deals to different types of investors has changed over time. It presents the number of deals (excluding grants) in each year that involve at least investor of a particular type.

Table 9 | Number of deals (excluding grants) secured by UK university spinouts involving at least one investor of type

Investor type	Number of deals secure by spinouts involving at least one investor of type							
	2017	2018	2019	2020	2021	2022	2023	2024
Universities	44	59	45	66	78	69	53	52
University-affiliated funds & investment companies	51	68	45	58	60	56	47	50
University-focused funds & investment companies	21	25	18	23	29	33	23	22
Accelerators & venture builders	39	37	59	80	101	91	112	96
Angels (individuals & groups)	30	31	34	42	54	51	40	27
Venture Capital	94	139	138	179	214	200	193	199
Private Equity & Institutional Investors	33	42	44	75	92	85	66	70
Corporate Venture Capital	17	21	23	26	35	33	51	61
Corporations & Companies	32	44	46	54	81	60	80	65
Government (national, regional)	21	17	30	32	38	34	35	32
Government Banks & investment vehicles	6	9	14	24	33	25	33	30
Charities, Foundations & Not-for-Profits	5	2	6	13	11	13	13	17
Family Office	2	4	4	8	7	10	11	6
Other	8	9	4	12	25	32	20	19
Total	237	277	279	356	423	398	388	366

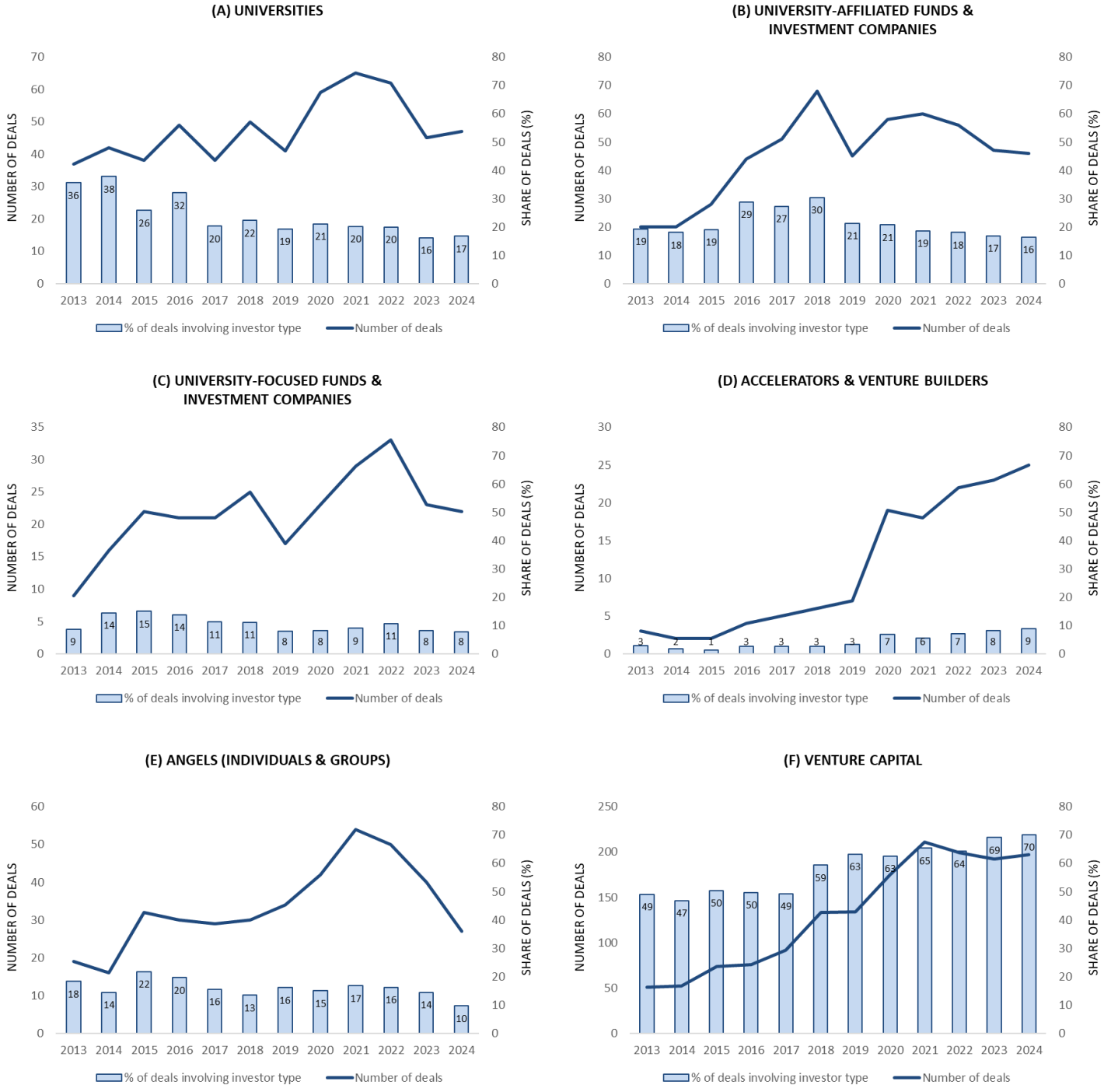
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Figure 56 and Figure 57 further limit the sample of deals by excluding those focused on the participation of spinouts in accelerator and incubator programmes as well as grants. It presents how the both the number of investment deals as well as the share of deals, involving at least one investor of each type, has evolved over time. Key highlights from these figures include:

- The relatively stable involvement of universities (as investors) and university-affiliated funds in spinout deals over the period 2017-2024
- The rapid growth of deals involving at least one accelerator or venture builder as investors (rather than spinout involvement in their programmes)
- The growth of angel investor involvement in deals, although this has declined in recent years. A note of caution here is that identifying angel investor involvement in very early-stage deals can be hard, as these types of deals may not be publicised in the same way as larger deals
- The rise in the number of deals involving venture capital investors, with 70% of deals now involving at least one such investor up from around 50% in the earlier period[23]
- The rise in the number, and share, of deals involving corporations; corporate venture capital (over the past two years); and government-backed or government-run banks or investment vehicles

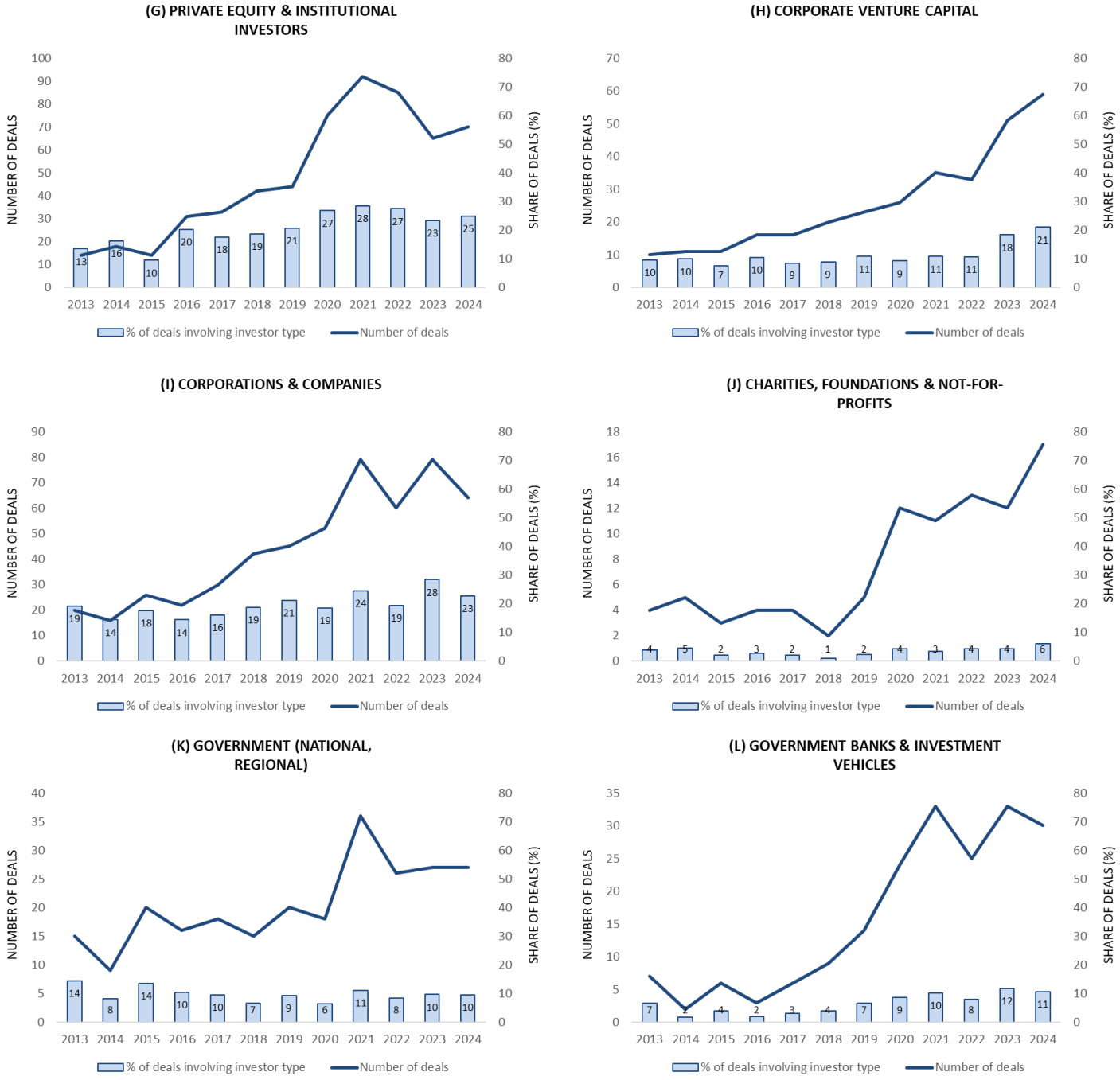
[23] Note that the proportion of deals presented in Figure 56 and Figure 57 are different to those presented in Figure 55 due to the exclusion of accelerator and incubator programme deals.

Figure 56 | Number and share (%) of deals (excluding grants and participation in accelerator programmes) secured by UK university spinouts involving at least one investor of each type: universities (panel A); university-affiliated funds and investment companies (panel B); university-focused funds and investment companies (panel C); accelerators and venture builders (panel D); angel investors (panel E); and venture capital investors (panel F)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Figure 57 | Number and share (%) of deals (excluding grants and participation in accelerator programmes) secured by UK university spinouts involving at least one investor of each type: private equity and institutional investors (panel G); corporate venture capital (panel H); corporations and companies (panel I); charities, foundations and not-for-profits (panel J); governments (panel K); and government-backed or run banks and investment vehicles (panel L)

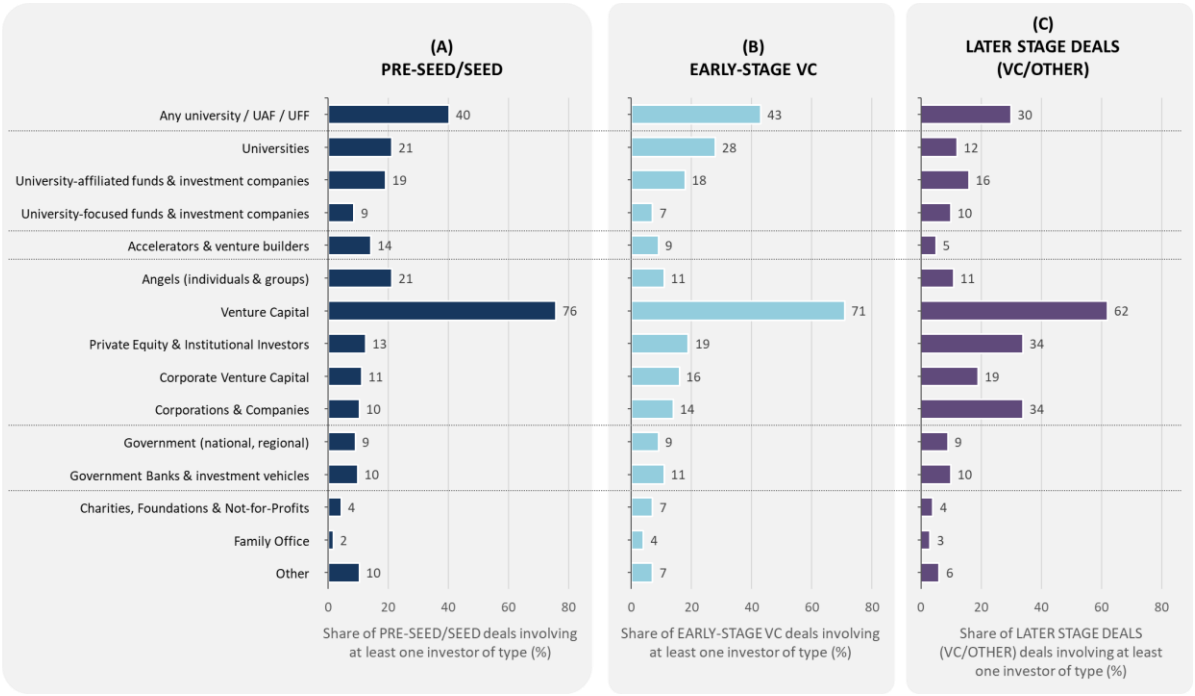


Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Figure 58 looks at the exposure of spinout deals to different types of investors at specific stages – pre-seed/seed (panel A), early-stage VC (panel B), and later stage VC (panel C). Key highlights include:

- The dominance of venture capital investors across all deal stages, including pre-seed/seed, with 76% of these deals now involving at least one VC investor
- The importance of universities and university-affiliated and university-focused funds and investment companies at the earlier stages of company development. Just under a third of later stage deals also involve at least one such investor – these are likely to be investments that are able to follow-on through the different rounds
- The growing importance of private equity and institutional investors, corporate venture capital, and corporations in spinout deals as companies progress to later stage deals

Figure 58 | Share of pre-seed/seed (panel A), early-stage VC (panel B) and later stage (panel C) deals secured by UK university spinouts involving at least one investor of type (deals over the period 2022-2024)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

7.2 Concentration of spinout deal activity amongst investors

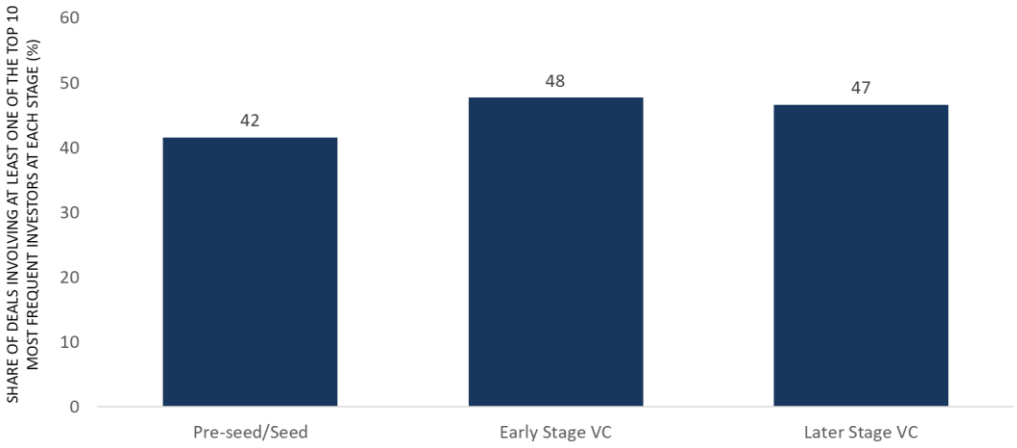
An analysis of the investor landscape into UK university spinouts reveals significant concentration of activity amongst a relatively small number of investors at each stage. At the pre-seed/seed stage, over the period 2019-2024, 660 different investors were identified as investing in at least one UK university spinout deal (Table 10). Of these, 114 (17%) had been involved in more than 3 deals, and just 55 (8%) had been involved in more than 5 deals. Twenty-one had been involved in more than 10 deals, and 3 had been involved in more than 20. This level of concentration is also seen for early-stage VC and later-stage VC deals.

Table 10 | Number of investors involved in more than each threshold level of spinout deals at the pre-seed/seed stage, early-stage VC and later stage VC during the period 2019-2024

Deal type	Number of investors involved in more than:					
	Any deal	3 deals	5 deals	10 deals	20 deals	40 deals
Pre-seed/Seed	660	114	55	21	3	1
Early-Stage VC	642	111	51	17	6	2
Later Stage VC	1,050	172	83	23	10	4

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Figure 59 | Share of UK university spinout deals between 2019-2024 involving at least one of the top 10 most frequent investors for each deal type



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

The top 10 investors, ranked by the number of spinout deals they have been involved with during the period 2019-2024, were involved 42% of all pre-seed/seed spinout deals during this period, and almost half of early-stage VC and later stage VC deals.

Table 11 identifies the top 10 most frequent investors at each deal stage. For accelerators, top organisations involved in deals include UKRI ICURe programme and other UKRI enabled programmes were frequently involved, as was the Creative Destruction Lab, the Royal Academy of Engineering's Enterprise Hub, accelerator programmes run by the University of Cambridge and Royal College of Art, and the SETSquared Partnership.

At the pre-seed/seed stage, Parkwalk Advisors, Oxford Science Enterprises, the University of Cambridge, Scottish Enterprise, and the UK Innovation and Science Seed Fund (UKI2S – a fund backed by UK government funds but privately managed) are all frequent investors in spinouts. In addition, Future Planet Capital, SFC Capital, and the Dutch early-stage investment company, NLC Ventures Netherlands, are also top 10 investors.

Table 11 also shows investors that emerge in the top 10 most frequent investors across multiple stages. This includes Oxford Science Enterprises, Parkwalk Advisors, the University of Cambridge, Future Planet Capital, and Scottish Enterprise across multiple deal stages,

highlighting their ability to follow their investments as companies develop and grow. At later stages, investors such as Mercia Asset Management, BGF, the Foresight Group, and the UK Government-backed British Business Bank all enter the top 10 most frequent investors into spinouts.

Table 11 | Top 10 investors for each deal type (ranked by the number of deals they were involved in over the period 2019-2024)

Deal type	Investor name	Investor type
Accelerators	UKRI Innovate UK ICURe	Accelerators & venture builders (government-backed)
	Creative Destruction Lab	Accelerators & venture builders
	UKRI Innovate UK (other programmes)	Government (national, regional)
	Royal Academy of Engineering Enterprise Hub	Accelerators & venture builders
	University of Cambridge	Universities
	Tech Nation Group	Accelerators & venture builders
	Royal College of Art	Universities
	Grow London	Accelerators & venture builders
	MedTech Innovator	Accelerators & venture builders
	SETsquared Partnership	Accelerators & venture builders
Pre-seed/Seed	Parkwalk Advisors	University-affiliated funds & investment companies
	Oxford Science Enterprises	University-affiliated funds & investment companies
	University of Cambridge	Universities
	NLC Ventures Netherlands	Venture Capital
	Future Planet Capital	Venture Capital
	SFC Capital	Venture Capital
	UK Innovation & Science Seed Fund	Government Banks & investment vehicles
	Scottish Enterprise	Government (national, regional)
	Oxford Technology Management	Venture Capital
	Creator Fund	University-focused funds & investment companies
Early-stage VC	Oxford Science Enterprises	University-affiliated funds & investment companies
	University of Cambridge	Universities
	Parkwalk Advisors	University-affiliated funds & investment companies
	Future Planet Capital	Venture Capital
	Mercia Asset Management	Venture Capital
	SFC Capital	Venture Capital
	University of Oxford	Universities
	Scottish Enterprise	Government (national, regional)
	University College London	Universities
	BGF	Private Equity & Institutional Investors
Later stage VC	Parkwalk Advisors	University-affiliated funds & investment companies
	IP Group	University-focused funds & investment companies
	Oxford Science Enterprises	University-affiliated funds & investment companies
	Scottish Enterprise	Government (national, regional)
	Mercia Asset Management	Venture Capital
	British Business Bank	Government Banks & investment vehicles
	BGF	Private Equity & Institutional Investors
	Oxford Investment Consultants	Venture Capital
	Future Planet Capital	Venture Capital
	Foresight Group	Private Equity & Institutional Investors

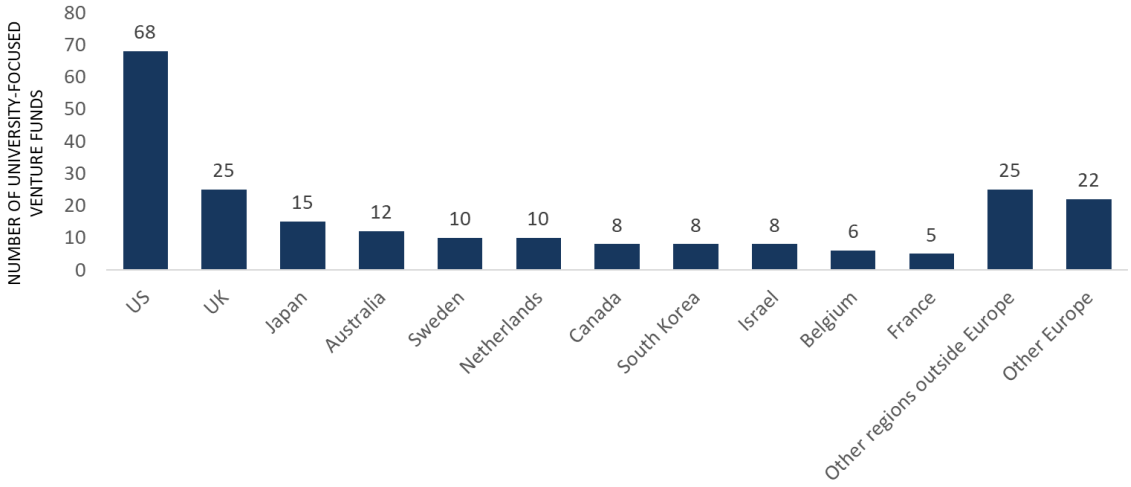
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from PitchBook, Inc., and Innovate UK's project database.

7.3 University-affiliated funds and investment companies

University venture funds have become an important part of the investment landscape for spinouts in the UK and globally. Some have formal links with specific universities (referred to here as university-affiliated funds and investment companies, UAFs) while others appear to be focused on investing in university spinouts, but do not appear to have a formal agreement and/or preferential terms. The latter are referred to as university-focused funds (UFFs).

Global University Venturing (GUV)[24] tracks the emergence of this class of university venture funds across the world. As of December 2025, it had identified over 200 such funds in 35 countries. Perhaps unsurprisingly, the US is home to the most funds (68), followed by the UK (25), Japan (15), Australia (12, including 2 covering New Zealand as well), and Sweden and the Netherlands (10 each) (Figure 60).

Figure 60 | Number of university-focused venture funds in different countries

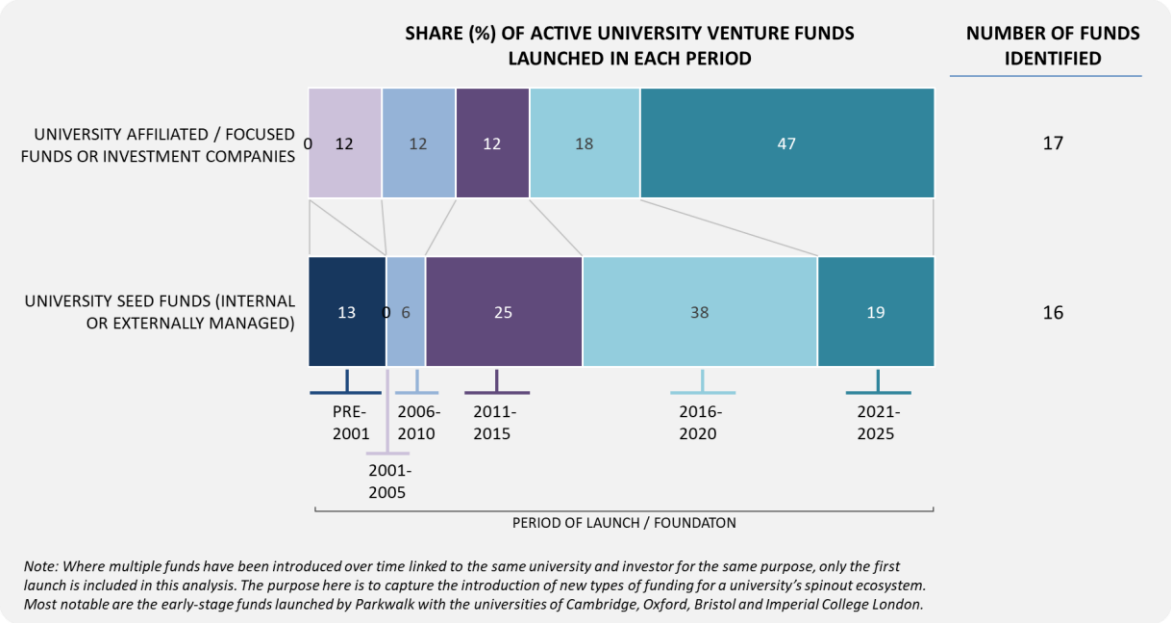


Source: author's analysis of the Global University Venturing university venture funds list, available at https://globalventuring.com/university-venture-funds-the-list/, accessed on 5th December 2025

The above GUV university venture fund list was supplemented with additional information collected for the UK via web searches to identify any additional university venture funds, distinguishing where possible between university seed funds (either internally or externally managed, for example by the investment firm Parkwalk Advisors) and UAFs/UFFs, and identify their launch date. Where multiple funds have been introduced over time linked to the same university and investor for the same purpose, only the first launch is included in this analysis. The purpose here is to capture the introduction of new types of funding for a university's spinout ecosystem. Most notable here are the early-stage funds launched by Parkwalk with the universities of Cambridge, Oxford, Bristol and Imperial College London.

[24] Global University Venturing is part of Global Corporate Venturing (GCV). GCV provides the global corporate venturing community and their ecosystem partners with the information, insights and access needed to drive impactful open innovation.

Figure 61 | Share (%) of active university seed funds and university-affiliated / university-focused funds or investment companies launched in each period



Source: web searches and the author's analysis of the Global University Venturing university venture funds list, available at https://globalventuring.com/university-venture-funds-the-list/, accessed on 5th December 2025

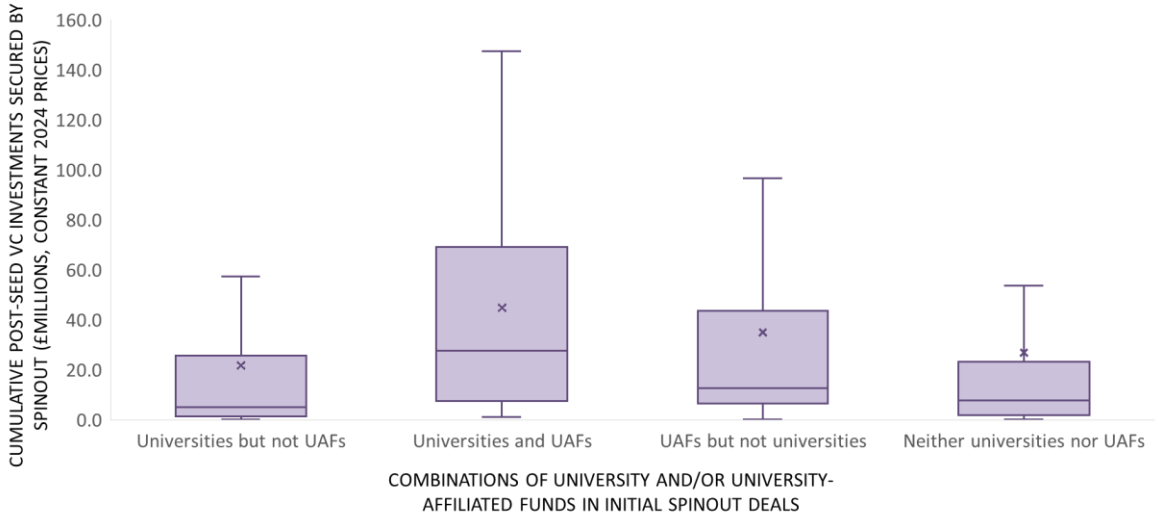
Figure 61 reveals that many of the current university seed funds and UAFs/UFFs were introduced within the past decade, while a few trace their origins back to over 20 years ago. A significant number of UAFs/UFFs appear to have been introduced only relatively recently. It will be important to understand how long it takes for these types of investment funds and companies – particularly ones seeking to raise and deploy significant amounts of capital into spinouts – for them to deliver material impact on the (often regional) ecosystem(s) on which they are focused. The funds identified are captured in Table 12.

Table 12 | UK university seed funds and university-affiliated/focused funds and investment companies

Type	Name	Earliest launch date
University seed funds	Cambridge Enterprise University Venture Fund	1995
	GU Holdings	1997
	Cambridge Enterprise University Discovery Fund	2008
	Old College Capital	2011
	University of Cambridge Enterprise Funds (managed by Parkwalk Advisors)	2012
	University of Oxford Innovation Funds (managed by Parkwalk Advisors)	2014
	University of Oxford Isis Fund	2014
	University of Bristol Enterprise Funds (managed by Parkwalk Advisors)	2016
	University of Liverpool Enterprise Investment Fund	2018
	Northern Accelerator Seed Investment Fund	2019
	Imperial College Enterprise Funds (managed by Parkwalk)	2020
	QM Social Venture Fund	2020
	Strathclyde Inspire: Entrepreneurs Fund	2020
	QUBIS Innovation Fund	2021
	Queen Mary University of London Investment Fund (QMIF)	2022

	Cambridge Founders Fund	2023
	Nottingham Invention Fund	n/a
University-affiliated fund or investment company (UAF)	Cambridge Innovation Capital	2013
	Oxford Science Enterprises	2015
	UCL Technology Fund	2016
	Northern Gritstone	2021
	KHP Ventures	2023
	Midlands Mindforge	2023
	Northeast universities (fund not yet named)	2024
	SETsquared / QantX	2024
	Northern Universities Venture Fund	2025
University-focused fund or investment company (UFF)	IP Group	2001
	Newcastle Northstar Ventures	2004
	Frontier IP Group	2007
	Bayes Entrepreneurship Fund	2010
	Creator Fund	2019
	Start Codon	2019
	Houghton Street Ventures	2021
	Gaia Sciences Innovation	2023

Figure 62 | Cumulative post-seed venture capital investment secured by spinouts with investments from different combinations of university and university-affiliated funds involvement in initial deals, for spinouts founded between 2013-2019



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

One approach to *begin* to examine the effects of UAFs alongside universities in helping to nurture and accelerate spinout successes is to examine how spinouts with different combinations of university and/or UAF involvement in their initial deals perform in the *period following these deals* in terms of the cumulative investment raised. For this analysis, the sample of spinouts is limited to those founded from 2013 onwards and at least 5 years old to give spinouts sufficient opportunity to move through different stages of development. Given the time period studied, the effects of more recent UAFs such as Northern Gritstone, are not captured.

Figure 62 presents the results. It shows that spinouts that had both university *and* UAF involvement in their initial deals typically raise significantly more VC investment post-seed stage than spinouts that have either university or UAF involvement early on but not both. This tentatively suggests that combining the expertise and resources that a university can bring to a spinout with the investor-focused expertise and scale of investment that UAFs create, raises the subsequent investment potential of spinouts.

This analysis is very much an initial attempt to start to examine the added value that UAFs can bring to spinouts working alongside universities. **More detailed and in-depth analysis is required to robustly establish their contributions and what works.** This is urgently needed with an increasing number of UAFs emerging both in the UK and globally aimed at turbocharging spinout production from universities to unlock the impact potential of research and providing these companies with the investment capital necessary to enable them to successfully develop, grow and scale.

7.4 The prevalence of grant funding for UK university spinouts

Many spinouts typically seek to commercialise technologies with high levels of uncertainty and risk along multiple dimensions not least technical, market, development and production, and regulatory. Attracting traditional sources of private investment can be difficult unless the risk profiles can be reduced – and aligned with the risk appetite of investors.

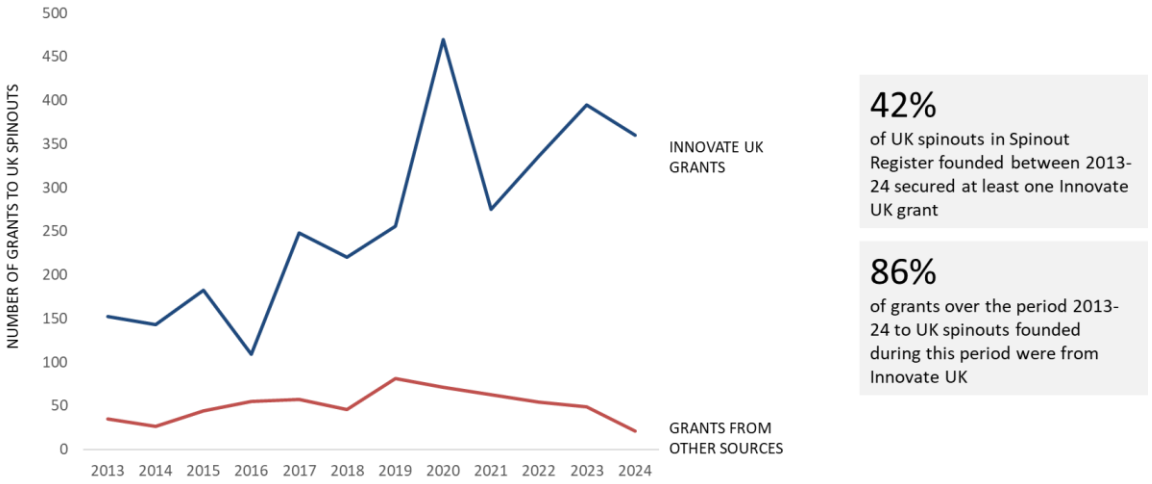
Non-dilutive grant funding has the potential to play an important role here. Among other things, grants can help spinouts further develop their ideas and technologies towards market-ready applications, demonstrate and commercially validate their emerging products, and identify potential customers and markets. If done well, this can strengthen the spinout's value proposition for subsequent investors, as well as their bargaining position during negotiations, potentially allowing spinout founders to retain more of their equity as investment enters the company.

An analysis of the UK Spinout Register (September 2025 release), linked to UKRI Innovate UK's project database[25] shows a steady increase in the number of Innovate UK grants secured by UK university spinouts (Figure 63). By contrast, the number of grants secured by these spinouts from other sources has been falling since 2019. This has meant that, as of 2024, 86% grants secured by these companies originated from Innovate UK.

Limiting our sample of spinouts to those founded between 2013-2024 (the sample representing the full population of spinouts from UK universities regardless of their eventual success) shows that 42% of spinouts had secured at least one Innovate UK grant-funded project during their lifetime.

[25] UKRI Innovate UK publishes maintains an updated dataset of all the projects they have funded from 2004 to the present. It can be found here: https://www.ukri.org/publications/innovate-uk-funded-projects-since-2004/, accessed 23rd December 2025.

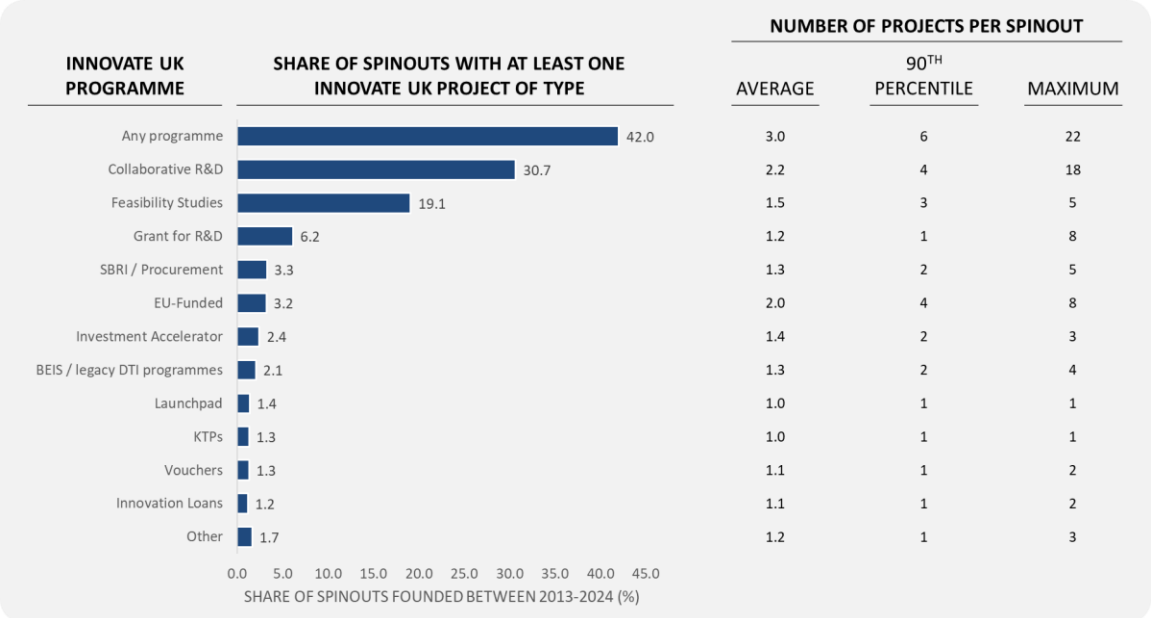
Figure 63 | Trends in grants to UK university spinouts from Innovate UK and other sources



Sample: all spinouts reported to the UK Spinout Register

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), Innovate UK project database, and data from PitchBook, Inc.

Figure 64 | Use of Innovate UK programmes by UK university spinouts founded between 2013-2024



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), and the Innovate UK project database

Innovate UK provides a range of funding programmes to support companies to develop and grow (Innovate UK, 2021). Figure 64 shows that just over 30% of spinouts secured a Collaborative R&D grant that aim to support companies to develop ideas towards useful applications; 19.1% of spinouts secured a feasibility study grant, providing funding for short projects to test an early-stage idea to establish its (commercial) potential; and 6.2% secured a grant for R&D. Given a spinout's origins from, and inherent connections with, universities, it was surprising to see so few – just 1.3% of the sample – securing a Knowledge Transfer Partnership

(KTPs). KTPs provide resources to companies to enable them to benefit from the expertise of academics and researchers in solving business-led innovation challenges.

Figure 64 also shows that the average spinout accessing Innovate UK grants secured 3 projects. There is considerable variation within the population of spinouts, however, with one spinout securing 22 projects, and the spinout at the 90th percentile (based on the number of projects secured) securing 6 projects. Where spinouts secured Collaborative R&D grants, the average number of projects was 2.2, with the 90th percentile spinout securing 4 projects of this type. For feasibility studies, the average number of projects was 1.5 and the 90th percentile spinout secured funding for 3 of these studies.

7.4.1 Regional distribution of Innovate UK grants

Section 3.3 highlighted the significant regional disparities that exist across the regions and nations of the UK when it comes to economic performance and the research and innovation system, for example highlighting that the Greater South East secured 57.6% of business R&D spending. Table 13 shows that Innovate UK funding is slightly less concentrated in this part of the country, with just under 50% of their funding to companies going to the Greater South East. The regional distribution of Innovate UK funding going to spinouts is broadly similar to the distribution of spinout production, with 52.6% of their funding going to spinouts in the Greater South East compared to 51.6% of spinouts emerging from universities based in this area.

Table 13 also shows that Innovate UK funding is much less concentrated in the Greater South East compared to VC investments, where almost 70% at the pre-seed/seed stage, and over 80% at the early VC stage go to companies in this area.

Table 13 | Distribution of Innovate UK projects across the regions and nations of the UK

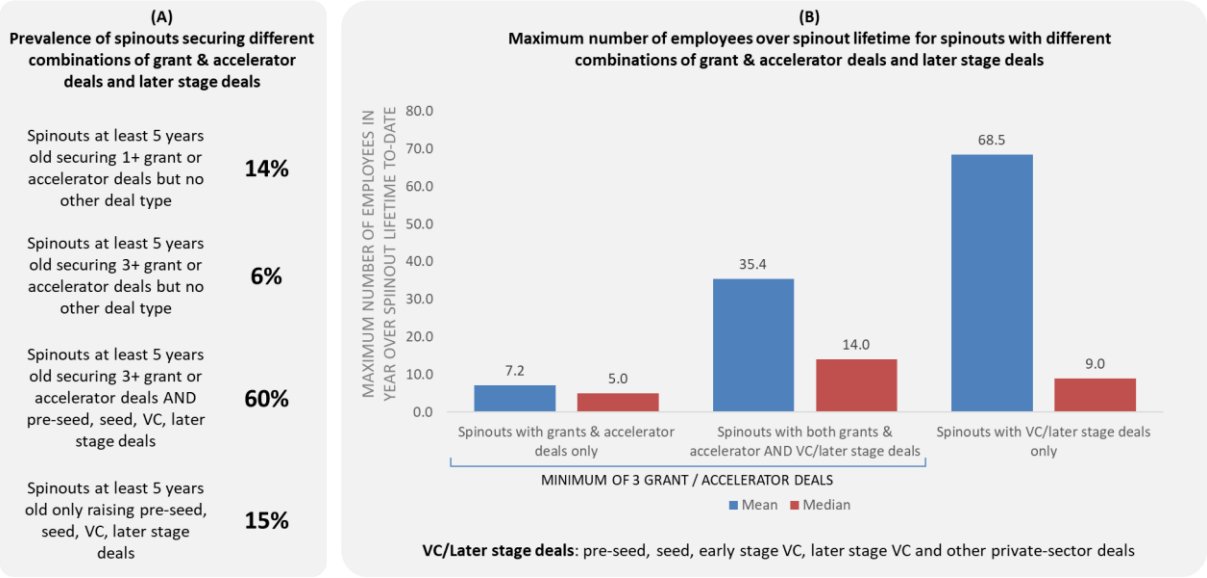
Region	% value of Innovate UK grants by any type of organisation in each region	% value of Innovate UK grants by COMPANIES in each region	% value of Innovate UK grants secured by UK spinouts in each region	% value of equity-based investments secured by UK spinouts in each region			% of spinouts founded in each region 2013-24
				Pre-Seed/Seed	Early-stage VC	Later stage VC	
East of England	7.0	9.9	13.1	19.0	20.9	23.1	13.8
London	17.9	20.8	17.9	20.6	35.7	20.6	21.8
South East	15.0	19.1	21.7	29.3	26.6	30.5	16.1
South West	9.3	11.2	12.3	5.3	2.8	12.2	7.4
East Midlands	6.1	6.6	3.1	1.6	0.6	0.5	3.8
West Midlands	14.4	7.8	3.5	2.8	1.2	0.6	4.2
North East	6.5	2.7	4.2	1.5	0.4	0.9	3.1
North West	5.3	5.5	5.8	3.9	5.6	1.7	7.4
Yorkshire and The Humber	6.1	4.9	4.4	5.2	1.3	0.8	5.0
Wales	3.4	2.9	2.1	1.4	0.1	0.5	3.6
Scotland	6.8	6.3	8.4	8.1	4.6	7.0	10.2
Northern Ireland	2.1	2.4	3.5	1.3	0.3	1.5	3.7
London, East of England & South East	*39.9*	*49.7*	*52.6*	*68.9*	*83.2*	*74.2*	*51.6*
Rest of the UK	*60.1*	*50.3*	*47.4*	*31.1*	*16.8*	*25.8*	*48.4*

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), Innovate UK project database, and data from PitchBook, Inc.

7.4.2 Grant and accelerator companies

Through the Hickson Review, some concerns were raised that, while grant funding (and accelerator programmes) provides a valuable tool for enabling spinouts to reduce key risks during their infancy to make them more attractive to investors, there is a danger that spinouts can become over-reliant on this type of funding and support, and become stuck at the pre-seed/seed stage, or result in low, or sub-optimal growth potential. To begin to explore these claims, we can exploit differences in the combinations of deal types spinouts receive over their lifetime, isolating (1) those that only receive grant/accelerator funding and support but no other form of investment from (2) those that receive both grant/accelerator funding and support and some level of VC/other private sector investment; and (3) spinouts that secure VC/other investments only. We can then look at the extent to which spinouts within each group are able to move beyond a few employees to employ larger numbers of people (measured here by the maximum number of employees employed by the spinout over their lifetime). The analysis is limited to spinouts at least five years old. Figure 65 presents the results.

Figure 65 | Prevalence of grant and accelerator programmes alongside VC investment (panel A) and the maximum number of employees over the lifetime of a spinout (panel B), for spinouts founded after 1st August 2012 and still active at 5 years old



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), Innovate UK project database, and data from Moody's FAME and Orbis databases, and data from PitchBook, Inc.

Spinouts at least five years old that have secured at least three grant/accelerator deals but no other form of investment (6% of the sample) had a mean average maximum lifetime employment of 7.2 employees (median of 5 employees). This is much lower than the average for the other groups of spinouts that secure VC/later stage investments with or without grant/accelerator deals. By contrast, the mean average maximum employment of the lifetime of spinouts that secured both grant/accelerator deals as well as private investment (VC/other) was much higher at 35.4 (median of 14). The large difference between the mean and median echoes the highly skewed distribution of success of spinouts in terms of investment, with relatively few breaking through to employing large numbers of people.

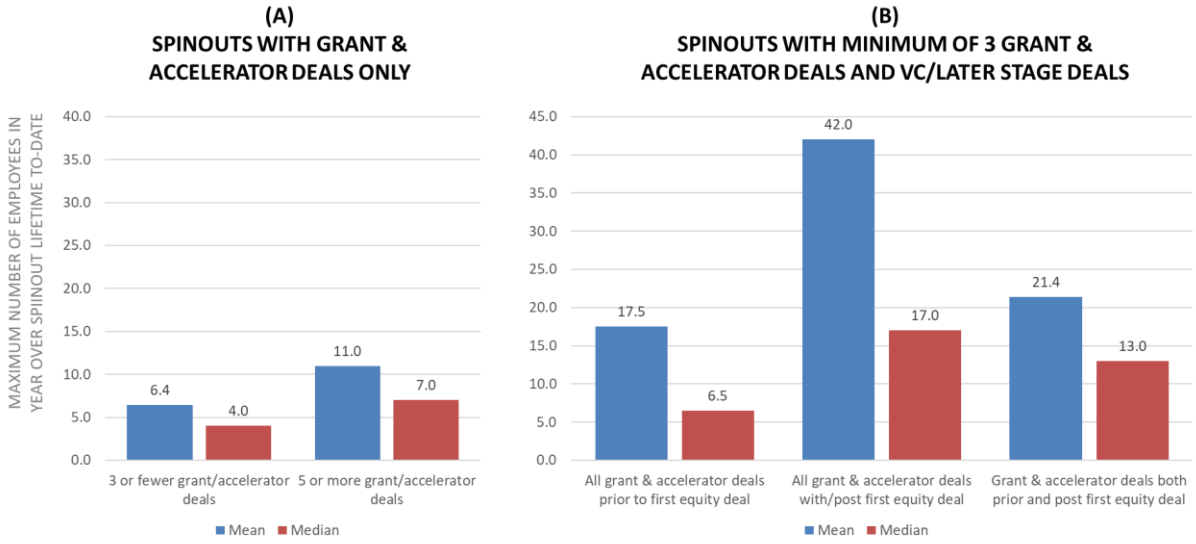
The group of spinouts that secure private investment but no grant/accelerator deals exhibit some interesting results when compared against the other two groups. The mean average maximum lifetime number of employees is much higher at 68.5, almost double that of the group that secure both grant/accelerator and private investment deals. By contrast, the median maximum lifetime employees for this group is much lower at 9 (compared to 14 for the group with both grant/accelerator and private investment deals). This suggests that the group with just private investment includes some much bigger successes that pull the mean average up, while the group of spinouts that secure both grant/accelerator and private investment deals have more companies that do relatively well (pulling the median value up).

Figure 66 (panel A) expands on this analysis by looking at whether, for the group of spinouts that only secure grant/accelerator deals, the number of these deals received is related to the maximum lifetime number of employees these companies reach. It shows that spinouts that have survived at least five years and have secured 5 or more grant/accelerator deals reach higher levels of employment over their lifetime (11 employees) than those that secure fewer than three such deals (6.4 employees). This suggests that some companies are able to continue to develop and grow through ongoing grant/accelerator deals, although not to the same scale as those receiving private investment as well.

Figure 66 (panel B) focuses on the group of spinouts that have received at least 3 grant/accelerator deals and private investment over their lifetime, and examines whether the timing of receiving the grant/accelerator deals in relation to the private investment matters in terms of the growth of these companies. It shows that spinouts that only secure grant/accelerator deals prior to their initial private investment have, on average, lower maximum lifetime employment (mean of 17.5, median of 6.5) than those that receive grant/accelerator deals either alongside or post their first private investment (mean average of 42, median of 17). Spinouts that receive grant/accelerator deals both prior and with or post their first investment also exhibit higher lifetime employment (mean average of 21.4, median of 13) than those that just secure these deals prior to their first private deal, although this is lower than those that receive these deals with or post their first private investment but not prior to this point.

The analysis presented here suggests a nuanced influence of grant/accelerator deals on spinout success, with grant funding playing an important role alongside private investment in supporting company development and growth. It also suggests that the timing of deals in relation to securing private sector investment may matter, with those securing grants alongside private investment performing better than those that secure it too far in advance. However, given the limited time available within this study to explore this topic, this analysis is still at its early stage. With the role of public funding and accelerators in supporting spinouts high on government agendas in the UK and globally, it is a topic that warrants much greater and urgent further study.

Figure 66 | Maximum number of employees over the lifetime of a spinout for companies securing different levels of grant and accelerator funding only (panel A) and for spinouts with where grant/accelerator funding is secured at different points in relation to securing their first equity funding round



VC/Later stage deals: pre-seed, seed, early stage VC, later stage VC and other private-sector deals

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), Innovate UK project database, and data from Moody's FAME and Orbis databases, and data from PitchBook, Inc.

7.5 Investors into spinout funds

The analysis has so far focused on the types of investors investing directly into spinouts. This section turns to the types of investors (limited partners[26]) investing in the funds that then invest in these companies.

7.5.1 Identifying limited partners in funds investing in spinout

Where possible, PitchBook identifies not just the deals companies secure, but the funds that invested in a deal. Focusing on spinouts founded between 2013-2024 in the Spinout Register, the analysis isolated 798 different funds investing in any deal type, and 260 funds that had invested in at least 5 deals with spinouts or where deals with spinouts represented more than 25% of total fund investments (referred to hereafter as '*funds with significant spinout activity*') (Table 14). Limiting the analysis to funds that had at least some activity in initial spinout deals (covering accelerators, pre-seed/seed, and early-stage VC deals within 3 years of the spinout being founded), 487 funds were identified, of which 177 were funds with significant spinout activity. The vast majority of these funds were finite-life funds.

[26] Limited Partners into venture capital funds provide financial capital but are not involved in the day-to-day operations or decision-making processes of the fund. This is undertaken by the General Partner.

Table 14 | Number of funds investing in UK spinouts founded between 2013-2024

Type of fund	Funds investing in any deal type and stage		Funds with at least some investment activity in initial spinout deals	
	All funds	Funds with significant spinout activity	All funds	Funds with significant spinout activity
All funds identified	798	260	487	177
Of which:				
Finite-Life	739	237	451	160
Perpetual-Life	58	23	36	17

Notes: (1) Key spinout funds: funds that have invested in at least 5 deals with spinouts, or where spinout deals represent more than 25% of total fund investments. (2) Initial spinout deals include accelerators, pre-seed, seed and early-stage VC deals within 3 years of spinout foundation. (3) The sample covers deals secured by spinouts founded between 2013-2024.
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

PitchBook also provides details on the commitments of capital made by limited partners to funds. In many cases, this includes the value of the commitment. For funds investing into spinouts presented here, coverage is much more comprehensive for certain types of limited partners such as public pension funds, high-net-worth investors, and endowments than others. Given the unevenness of coverage across limited partner types, the analysis that follows looks only at the numbers of commitments made (i.e. the involvement of different types of investors), rather than the amount of capital brought by each investor type to these funds.

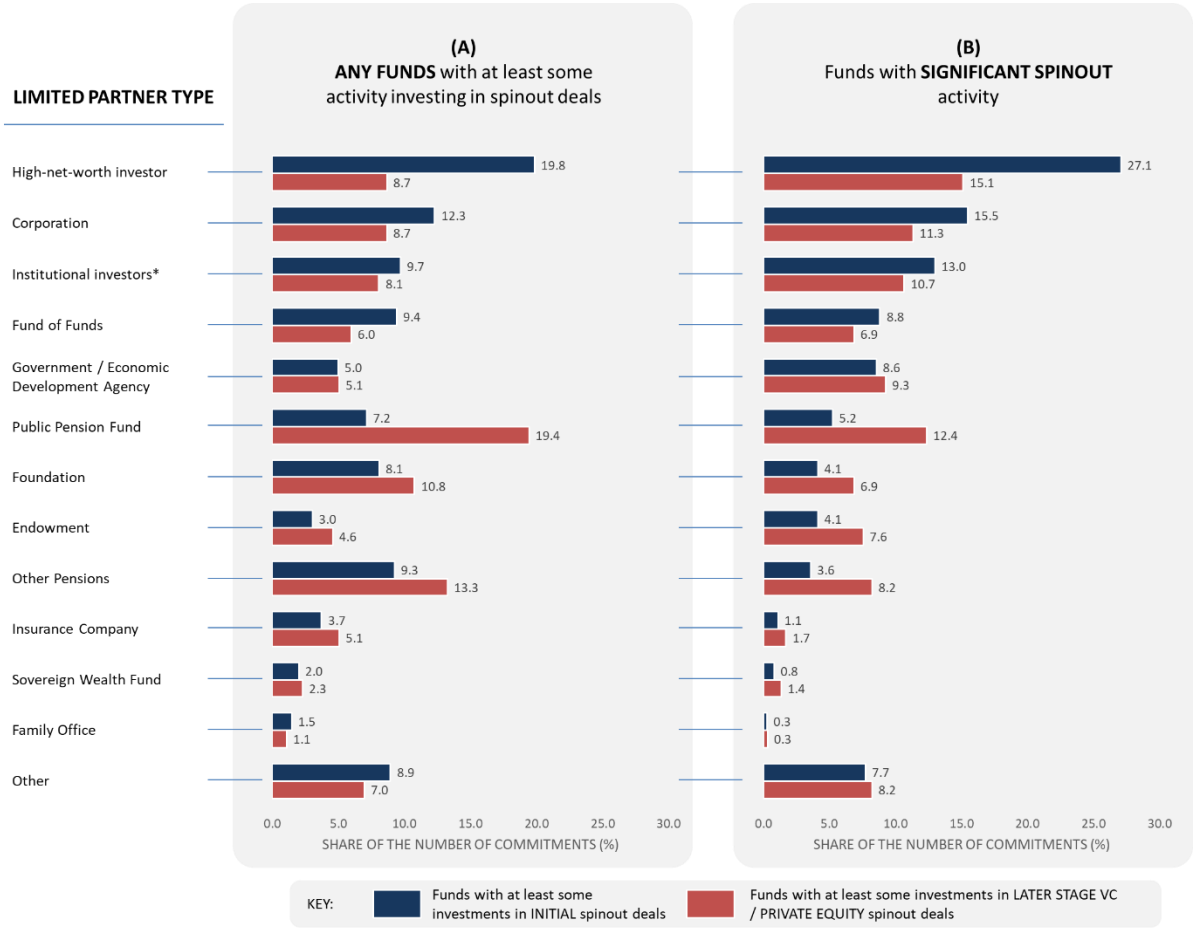
7.5.2 Types of limited partners committing capital to funds investing in spinouts

Over a quarter (27.1%) of the number of commitments from limited partners to funds with significant spinout activity investing in initial UK university spinout deals come from high-net-worth investors (Figure 67, panel B). A further 15.5% come from corporations, 13% from institutional investors, and 8.6% from governments and economic development agencies. Just 5.2% of the number of commitments into these funds come from public pension funds, and 3.6% from other pensions (including corporate pensions). By comparison, funds with significant activity in UK university spinouts that invest in later stage VC/PE spinout deals see relatively more commitments coming from public pension funds (12.4% of commitments) and other pensions (8.2%). A smaller proportion of commitments come from high-net-worth investors (15.1%) compared with funds that invest in initial spinout deals. Governments and economic development agencies provide a similar proportion of commitments to both types of funds.

Figure 67 also presents the share of the number of commitments from different limited partner types into funds with any level of activity investing in spinouts (panel A) again distinguishing between those with at least some level of investment into initial spinout deals and those investing in later stage VC/PE deals. This wider set of funds will inevitably include investments into a broader range of companies, not just spinouts. It is instructive, though, to understand the composition of these funds, particularly for those investing in the later stages of company development. As spinouts develop and scale, they will increasingly have to target a much wider pool of non-spinout focused funds, where the origins of the company from a university matter

much less, if at all. For those funds with at least some later stage VC/PE deals in UK spinouts, public pension funds provide relatively more commitments (19.4%) compared with for funds with significant spinout activity (12.4%). Other pension funds also make up a greater share of total number of commitments for these funds (13.3%) compared to more spinout-focused funds (8.2%). Governments and economic development agencies provide relatively fewer commitments to the wider set of funds (5.1%) compared to spinout-focused funds (9.3%).

Figure 67 | Share of the number of commitments provided to funds with at least some investments into initial spinout deals (top bar) and funds with at least some investments into later stage venture capital and private equity spinout deals (bottom bar), for any funds investing in spinouts (panel A) and funds with significant spinout activity (panel B)



** Institutional investors include the following types of limited partner: Banking Institutions, Money Management Firms, Wealth Management Firms, Mutual Funds, Private Investment Funds*

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

7.5.3 Top limited partners into funds investing in spinouts

Digging deeper into the data, we can identify the most prominent limited partners committing capital to funds that invest in UK university spinouts (*based on the number of commitments made, noting the difficulties in gathering information on the value of these commitments for key limited partner types*).

For funds with significant spinout activity with at least some activity at the initial deals stage, the British Business Bank (including British Patient Capital, British Business Finance, and British Business Investments) and the European Investment Bank (including the European Investment Fund) and the European Regional Development Fund (ERDF) are particularly important investors, making numerous commitments across multiple funds. Other important limited partners include the US-based Adams Street Partners, the South Yorkshire Pensions Authority, the UK's Nuclear Liabilities Fund (which is funded in part by the UK Government), the Strathclyde Pension Fund, and a number of UK-based high-net-worth investors.

Broadening out the analysis to include the wider set of funds with significant spinout activity investing in any deal type (i.e. beyond the initial stage), in addition to the above limited partners, a number of university endowment funds enter the top limited partners including the investment company of the University of Texas / Texas A&M University Systems and Rutgers University Foundation in the US, Galway University Foundation in Ireland, and the University of Edinburgh Endowment in the UK.

Broadening still further to look at the limited partners into funds with any level of activity investing in spinouts at any deal stage, a much wider range of overseas limited partners emerge as prominent in addition to the European Investment Bank, the British Business Bank, and the UK's Nuclear Liabilities Fund. These include the Alaska Permanent Fund (a sovereign wealth fund created by the Alaskans to manage the revenues from natural resource extraction (including oil and mining) for the benefit of future generations of Alaskans); the Ireland Strategic Investment Fund (a sovereign wealth fund investing to support economic activity and employment in Ireland); French BPIFrance, a public investment bank; and a number of public and industry pension funds including the San Francisco Employee's Retirement System, Texas County and District Retirement System, the Massachusetts Pension Reserves Investment Trust in the US, the Danish Industriens Pensionsforsikring, and the Norwegian Kommunal Landspensjonkasse.

7.5.4 Location of limited partners

Having examined the types of limited partners investing in spinout funds, this section turns to the extent to which the funds investing in spinouts emerging from UK universities are able to raise capital from UK-based investors, or whether they are turning to investors based overseas.

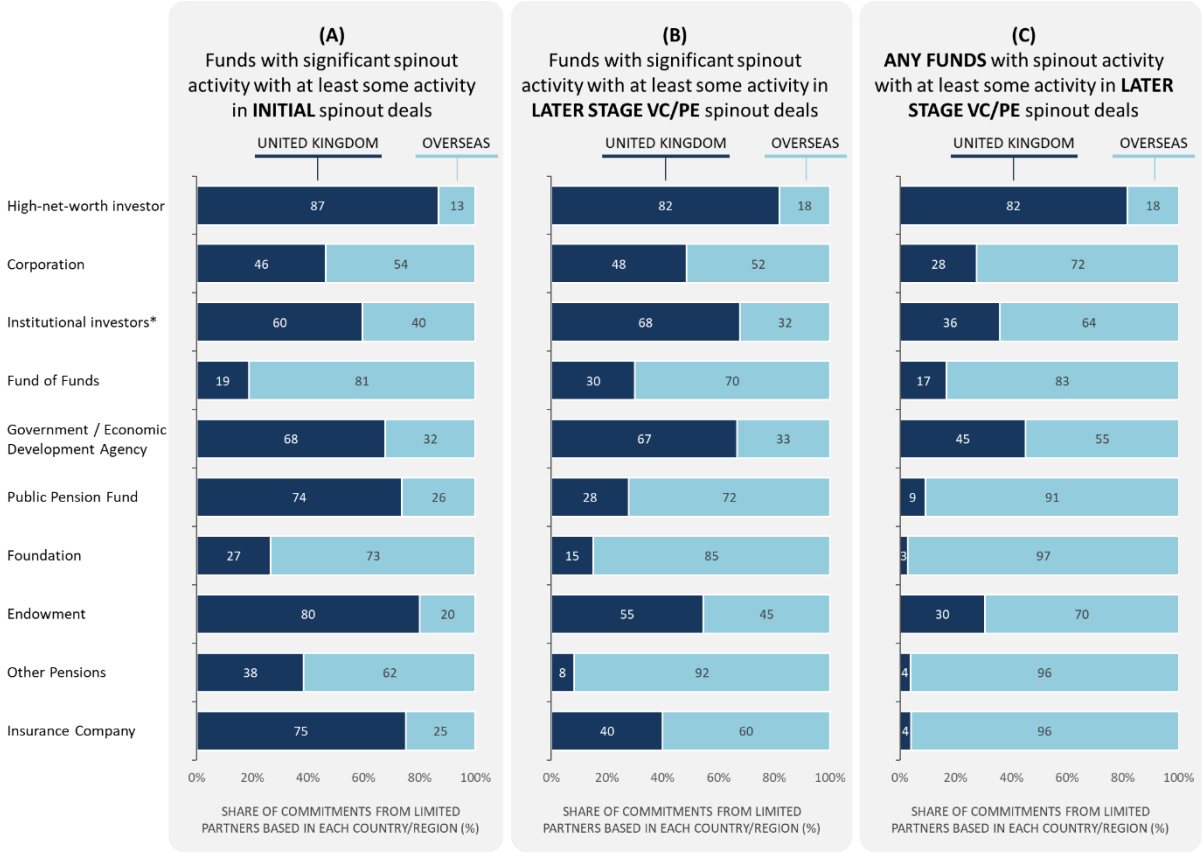
Figure 68 presents information on the share of the number of capital commitments to these funds from investors headquartered in the UK and overseas. Note that the majority of overseas-based limited partners are headquartered in the United States and the European Economic Area/Switzerland. It shows that many of the high-net-worth investors providing capital into funds with significant spinout activity are based in the UK (Figure 68, panels A and B). Beyond this category of limited partner, institutional investors and corporations are split more evenly between UK-headquartered and overseas-based organisations for funds with significant investment activity in spinouts.

For funds with significant spinout activity that have at least some investments in initial spinout deals, 74% of public pension funds – and 38% of other pension funds – that invest capital into these funds are headquartered in the UK (Figure 68, panel A). For those funds that invest in later

stage venture capital and private equity spinout deals), this drops dramatically to just 28% for public pension funds, and 8% for other pensions (Figure 68, panel B).

Broadening out to any funds with any activity investing in spinouts at the later VC/PE stages reveals a much greater reliance on overseas capital (Figure 68, panel C).

Figure 68 | Headquarter locations of limited partners investing in funds with significant spinout activity with at least some initial spinout deal activity (panel A) and later stage VC/PE deals (panel B), and any funds with any level of spinout activity investing in later stage VC/PE deals (panel C)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

7.5.5 Comparing types of limited partners investing into funds with significant spinout activity in the UK and selected comparator nations

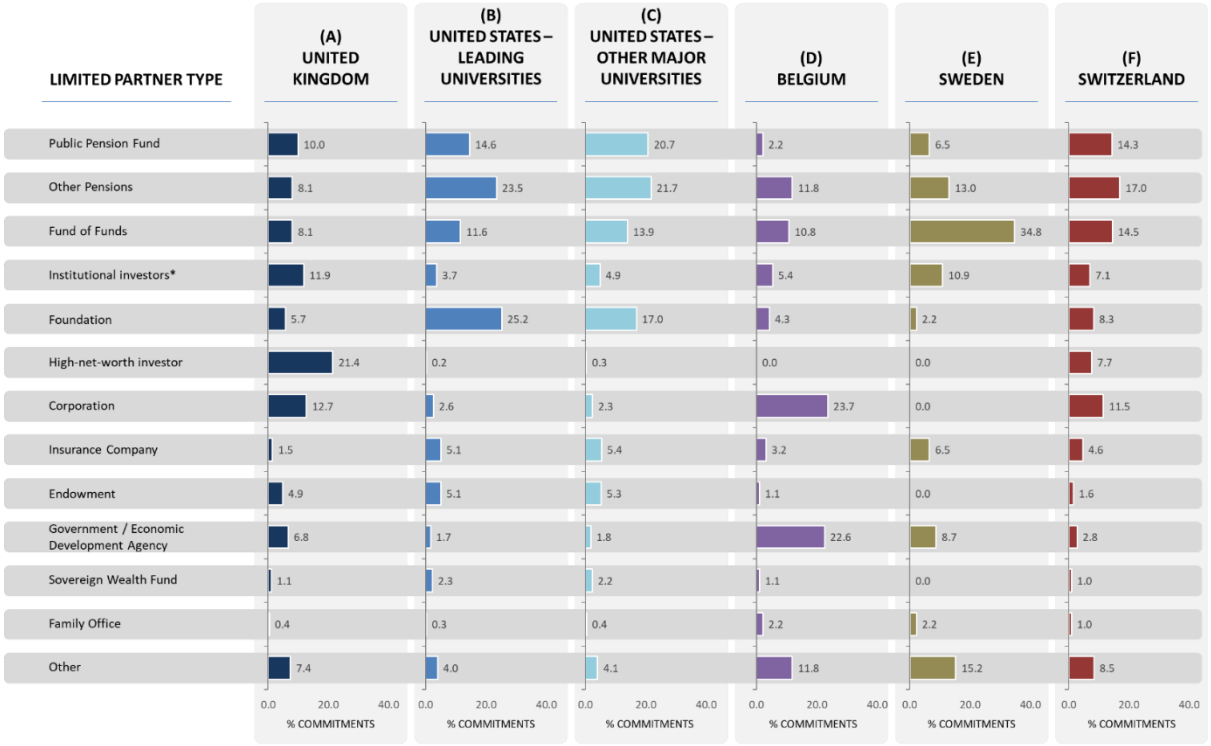
One of the claims being made of the UK investment landscape for spinouts is that the types of investors into spinout funds differs significantly from other countries. It is difficult to robustly explore this claim due to the lack of high-quality lists of spinouts for universities outside the UK. However, to make some progress, this section exploits the effort undertaken for this study to assemble an internationally comparable dataset of spinouts from leading universities in the United States, Belgium, Switzerland and Sweden. See section 9.1 for full details on the sample and key caveats on its coverage and robustness.

Mapped into the PitchBook investment data platform, information was extracted on the funds investing in spinout deals. Using a similar approach to that used for the UK sample in section

7.5.1, a subset of funds were identified that have invested in multiple spinout deals (at least 5) or where spinout deals represent at least 25% of their total number of investments. The limited partners into these funds were then isolated and their types analysed.

Note once again that the information available on the value of commitments was not uniform across limited partner types, and hence the analysis focuses on comparing patterns in the number of commitments made to funds rather than the value of these commitments. This represents a limitation of this analysis and one that should be borne in mind when interpreting the results.

Figure 69 | Share of commitments made by different types of limited partners into funds with significant activity investing in spinouts in the UK and in selected comparator nations



** Institutional investors include the following types of limited partner: Banking Institutions, Money Management Firms, Wealth Management Firms, Mutual Funds, Private Investment Funds*

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

The findings are presented in Figure 69. They show that the types of limited partners committing capital to funds with significant spinout activity vary quite considerably between the UK and comparator nations. While a large proportion of the *number* of commitments to these funds for UK spinouts come from high-net-worth investors (21.4%) and around 18% come from pension funds (public and other), pension funds play a much bigger role for funds investing in spinouts emerging from US universities (38.7% of the number of commitments to these types of funds investing in spinouts from the leading US universities group, and 42.4% for the wider group of US universities). Foundations are also an important source of commitments of capital to funds investing in US university spinouts, highlighting perhaps a greater role of philanthropy in the US compared to the UK.

For funds investing in Belgian spinouts, corporations, governments and economic development agencies, and other pension funds (including corporate pensions) are also important sources of commitments. The funds investing in Swiss spinouts draw from a broader range of limited partner types, arguably more like the UK albeit with a greater focus on pension funds (31.3% of commitments) rather than high-net-worth investors (just 7.7%).

8

8 Capturing value from UK university spinouts

In recent years, policy attention has largely focused on efforts to strengthen the ability of universities to produce high-potential spinouts as part of an ambition to drive science- and technology-led economic growth. There is now evidence that the UK performs well in producing spinouts from its universities, with UK universities producing similar numbers of spinouts to US counterparts when controlled for the scale of the research base. Importantly, within the UK we have seen a significant strengthening in spinout production from large research universities outside the traditional spinout heartlands of the UK's largest research universities, with these universities now producing spinouts at comparable levels (when normalised by the scale of their research base). This increased spinout production also appears to be feeding through into increased investment success for their spinouts.

As spinout ecosystems around the UK strengthen, policy attention is finally turning to the question of whether the UK is able to not just create spinouts that seed new sources of potential value for the economy and society, but whether we can capture and retain value from these companies over the longer-term as they develop, scale and grow, both nationally and regionally. A major challenge here is that spinouts can become increasingly geographically mobile as they scale and grow. Among other things, they require access to new or significantly expanded sets of capabilities (skills, facilities, infrastructure, etc.), development partners, key early markets, and, of course, increasing levels of finance. Where these are more competitively accessed or acquired abroad, or where the innovation and business environment is more competitive elsewhere, there can be pressures to expand or relocate outside the UK.

Reflecting its importance, the challenge of scaling and retaining innovative companies in the UK is a key pillar of the UK Government's new industrial strategy and approach to investing in R&D. The scale of the challenge was highlighted in a recent House of Lords Science and Technology Committee report *Bleeding to death: the science and technology growth emergency* (House of Lords Science and Technology Committee, 2025).

This section examines a number of indicators that may suggest that value from UK university spinouts is moving out of the UK. These include:

- The proportion of spinouts founded overseas
- The location of investors at different stages of company development
- The location of public listings of spinouts
- Where companies that acquire spinouts are based globally

8.1 Spinout foundation locations

The vast majority of spinouts emerging from UK universities are founded in the UK. However, Table 15 shows that the proportion of spinouts founded overseas has increased from 2.8% of all spinouts founded during 2013-2018 to 5.3% during the more recent period of 2019-2024. Note that most of the spinouts founded abroad during this later were founded in the United States (2.2%) and the European Economic Area/Switzerland (2.3%). This could reflect a number of factors which would require further investigation, not least a potential increase international research collaborations resulting spinouts being jointly founded between universities from the UK and overseas; increasing global competition for entrepreneurial talent and startups making it easier to found companies abroad; and, of course, a relative weakening of the competitiveness of the UK as a place to start companies compared with other countries.

Table 15 | Proportion (%) of spinouts founded in the UK and overseas during each foundation period

Location of foundation	Foundation period		
	Pre-2013	2013-2018	2019-2024
United Kingdom	97.4	97.2	94.7
Overseas	2.6	2.8	5.3

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release)

8.2 Investor locations

The location of investors investing directly into spinouts as they grow and scale provides another indicator of the strength of geographic bonds between a spinout and the UK. The assumption here is that if spinouts are forced to look overseas for investors, particularly for larger funding rounds as they scale, it is likely that this increases pressures on the spinout to expand and/or move operations overseas rather than domestically within the UK.

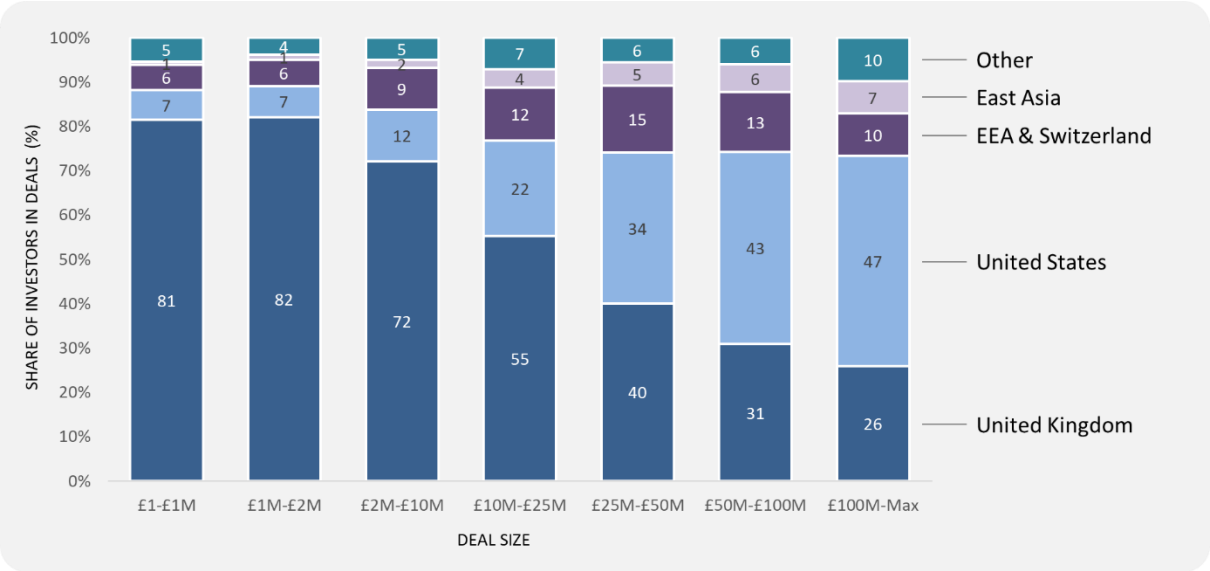
The analysis that follows leverages detailed data from PitchBook on the investors into spinout deals. This includes information on their primary headquarter location as well as where investors have regional offices. In addition, PitchBook often identifies the lead investor of deals.

The distribution of investors into spinout deals by the location of their headquarters is shown in Figure 70. Consistent with previous analyses based on spinouts from a sample of UK universities (Ulrichsen & Roupakia, 2024), it shows that most investors (just over 80%) for deals under £2 million are headquartered in the UK. After this point, the proportion of investors headquartered abroad increases, from 28% for deal between £2-10 million, to 45% for deals between £10-25 million, 60% for deals between £25-50 million and 74% for deals above £100 million.

Also evident from this analysis is the growing dominance of investors headquartered in the United States as the deal size increases. For deals between £2-10 million, US-headquartered investors represented 12% of all investors (42% of overseas investors). By contrast, for deals over £100 million, this had increased to 47% of all investors (64% of overseas investors).

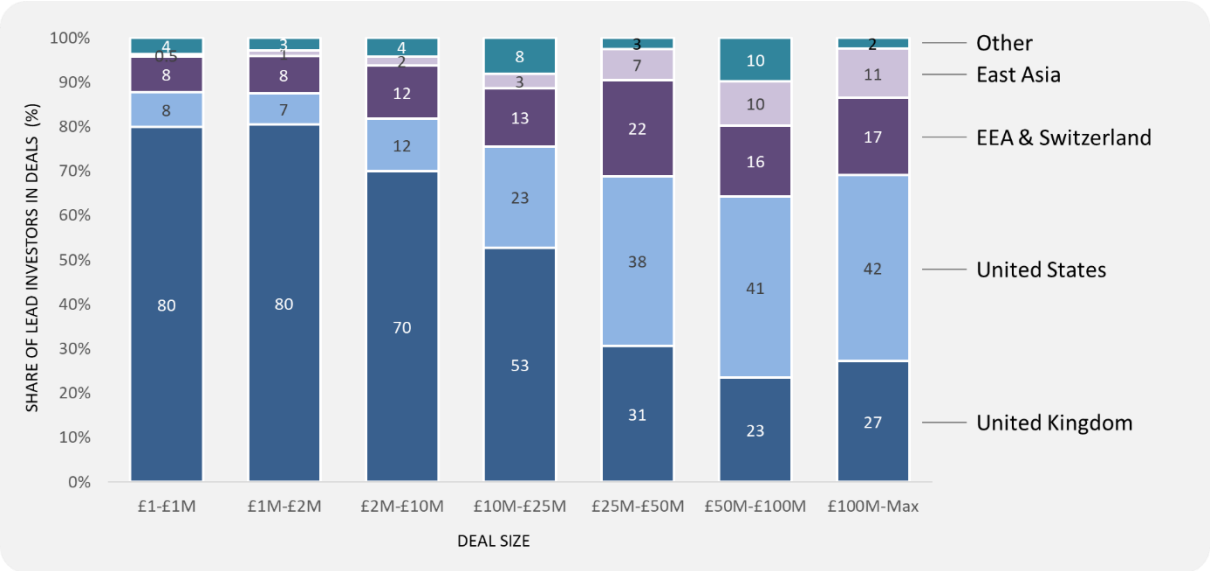
A similar pattern emerges if we limit the analysis to investors that lead spinout deals rather than all those involved (Figure 71).

Figure 70 | Headquarter locations of investors involved in spinout deals of different sizes (excluding grants) (% of investors into spinout deals)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Figure 71 | Headquarter locations of lead investors involved in spinout deals of different sizes (excluding grants) (% of lead investors into spinout deals)

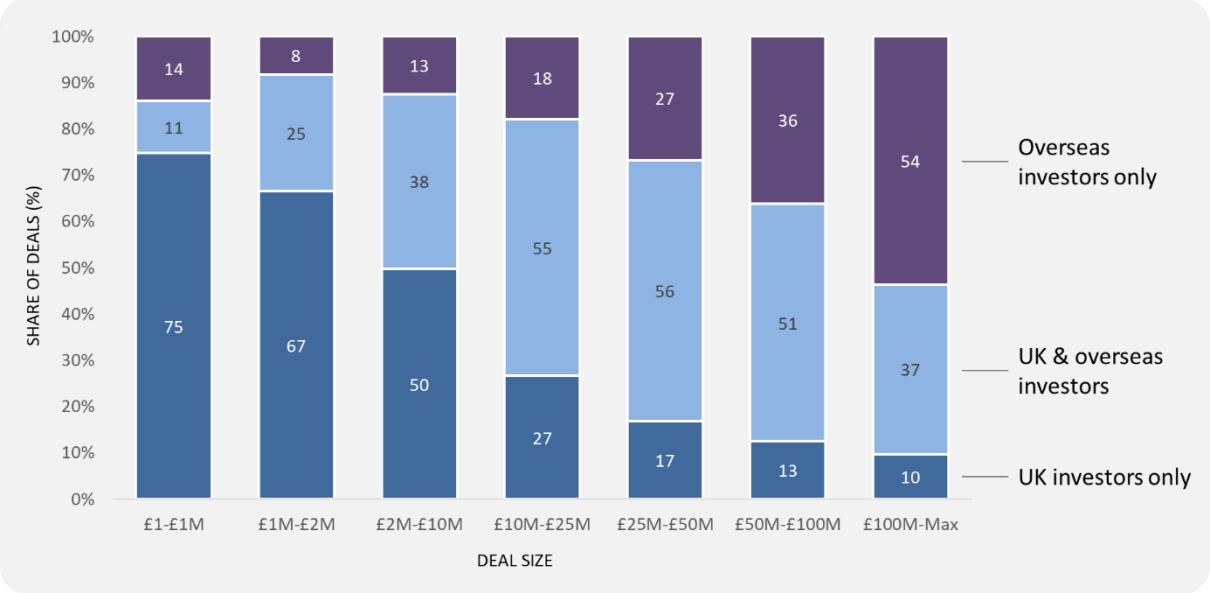


Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Spinout deals can involve multiple investors. The analysis that follows isolates the office location(s) of each investor and examines whether the deals involved investors with UK offices only, investors with a mix of UK and overseas offices, and overseas-based investors only. Figure 72 shows that 75% of smaller deals (up to £1 million) involved UK-headquartered investors only. A further 11% involved a mix of UK and overseas-headquartered investors, and the remaining 14% of deals involved overseas-headquartered investors only. As deal sizes increase, many more deals begin to involve overseas investors, initially alongside UK-headquartered investors.

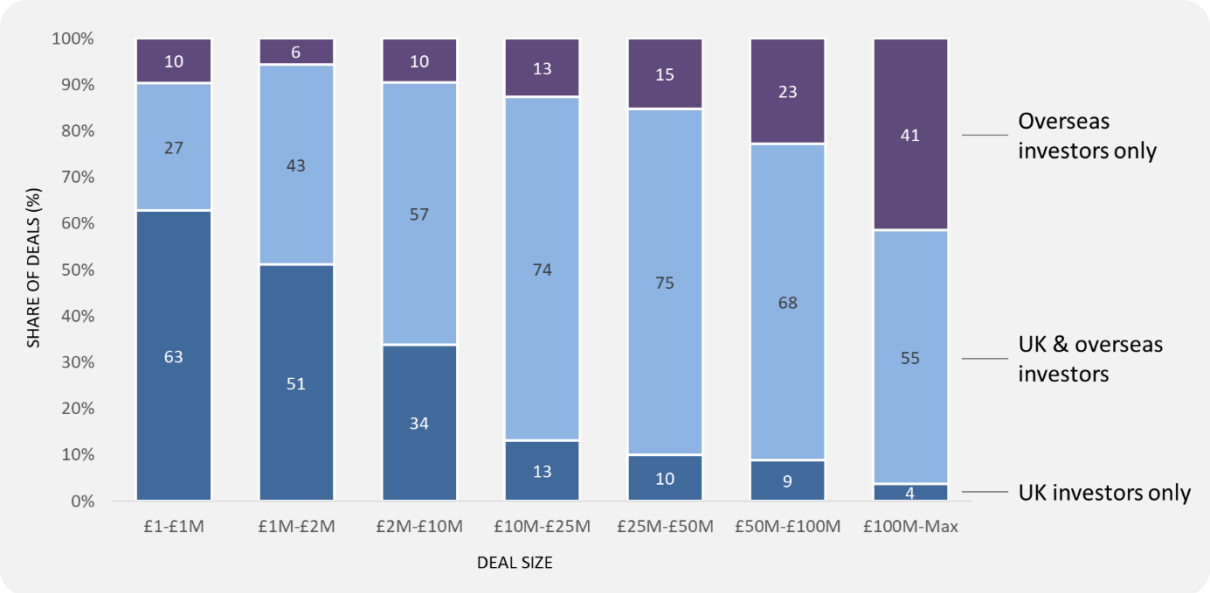
For example, 55% of deals between £10-25 million involved both UK- and overseas-headquartered investors. Striking, however, is that above £25 million, very few deals are driven by UK-only investors although for deals up to £100 million, just over half involve at least one UK-headquartered investor. For deals above £100 million, 54% of deals involved only overseas-headquartered investors.

Figure 72 | Locational composition of investors into spinout deals (excluding grants) based on investor headquarter locations (% of spinout deals)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

Figure 73 | Locational composition of investors into spinout deals (excluding grants) based on any office location of the investor (% of spinout deals)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release) and data from PitchBook, Inc.

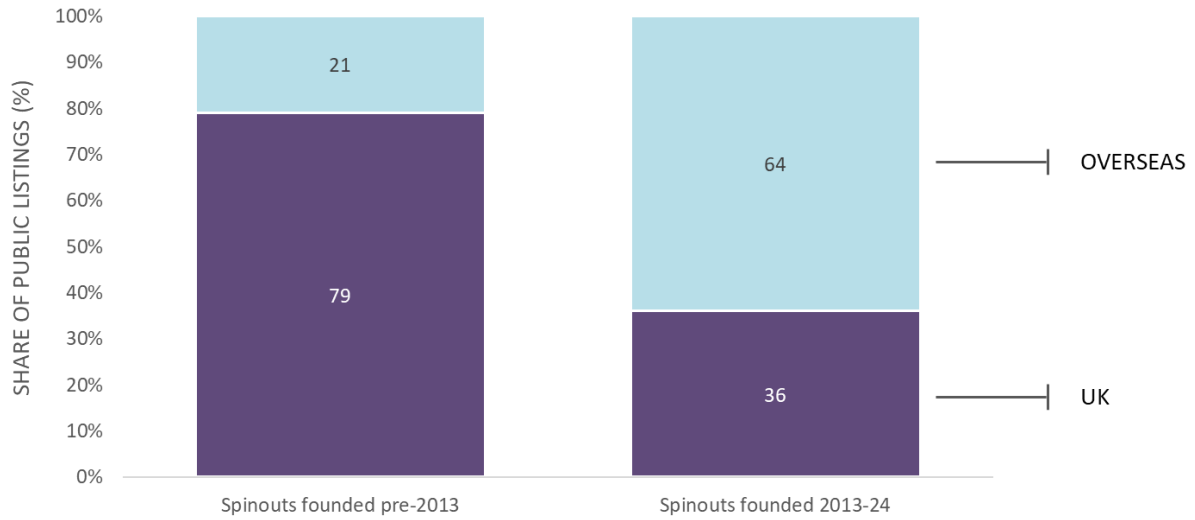
Of course, investors, particularly those with significant assets under management, are likely to have offices in multiple countries. Hence, while the primary headquarter of an investor may be located overseas, they may have a regional headquarter of office in the UK. To account for this, Figure 73 extends the analysis to look at locational composition of investors involved spinout deals based on any office presence in the UK.

Comparing Figure 73 and Figure 72, it is clear that many overseas investors investing in UK university spinouts have at least some office presence in the UK; in addition many of the UK-headquartered investors investing in larger deals also have offices overseas. For example, while 56% of £25-50 million deals involved UK- and overseas-headquartered investors, and 17% involved UK-headquartered investors only, 75% of these deals involved investors that had a presence in the UK and overseas, while just 10% were limited to UK-based investors only. Even for deals of more than £100 million, 59% of deals involved investors with at least some UK presence.

8.3 Acquisitions and public listings

Acquisitions and public listings of spinouts are two important routes to exit for investors. Where UK university spinouts choose to list on stock exchange can provide an indication of the attractiveness of, and confidence in, the business and investment climate within the UK to enable the companies to grow and scale into significant global corporations. Listing abroad may weaken the bonds between the spinout at the UK and create greater incentives to expand abroad, weakening the ability of the UK to capture long-term value from these companies.

Figure 74 | Location of public listings of spinouts founded pre-2013 and between 2013-2024



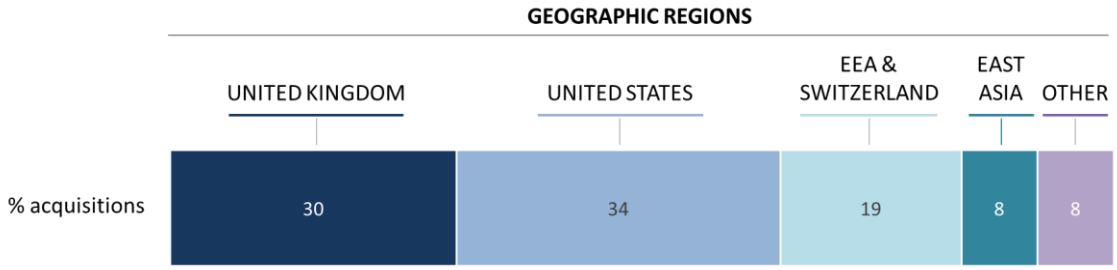
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from Moody's FAME and Orbis, and data from PitchBook, Inc.

Figure 74 shows that just 36% of public listings of UK spinouts were on UK-based stock exchanges. The majority were abroad, and indeed in the United States on the US NASDAQ exchange. For spinouts founded in the earlier period, almost 80% were on UK stock exchanges. Over this period, the number of initial public listings dropped from 42 for spinouts founded pre-

2013 to just 25 for spinouts founded between 2013-2024. Note that these shifts may have in part influenced by preferences of leading investors into these companies.

Acquisition of UK university spinouts by companies headquartered and based overseas can also weaken ties between the spinout and the UK and increase the likelihood of further development abroad rather than at home. Figure 75 shows that just 30% of spinouts reported to the UK Spinout Register were acquired by UK-headquartered companies; 70% were acquired by companies headquartered overseas, with 34% based in the US, 19% in the European Economic Area/Switzerland, and 8% in East Asia.

Figure 75 | Location of the headquarters of companies acquiring UK university spinouts reported to the UK Spinout Register



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), data from Moody's FAME and Orbis, and data from PitchBook, Inc.

Diving deeper into the acquisition data shows that UK university spinouts are being acquired by some of the world's biggest and most successful companies, including for example, in tech (e.g. Microsoft, Alphabet and Google/Google Deepmind, GitHub), automotive (e.g. Mercedes Benz, Forvia), pharmaceuticals (e.g. AstraZeneca, Roche, Novartis, Novo Nordisk, Takeda Pharmaceutical, and Illumina), and healthcare diagnostics and technologies (e.g. GE Healthcare, Stryker, Smith & Nephew).

Overall, the evidence points collectively points to the growing importance of overseas markets, investors, and companies for enabling UK-based spinouts to successfully commercialise their IP, and grow and scale into large, successful companies. This may weaken the ties of these companies to the UK, increase pressures on them to expand their operations overseas, and reduce the ability of the UK to capture long-term value from its spinouts.

9

9 International comparisons of university spinout performance

Recent policy-centred debates on spinouts in the UK have often made claims that the UK spinout ecosystem performs poorly in terms of producing spinouts that can attract investment to develop and scale, particularly in relation to nations that adopt different approaches to supporting and enabling spinout creation (for example around deal terms and IP ownership). Comparisons are often made to the experiences of the United States, Switzerland and Sweden.

This is despite evidence published over a number of years that shows that the UK produces spinouts at a rate similar to similarly sized universities in the United States (section 5.3 of this report, and previous analyses in Ulrichsen (2019) and Ulrichsen and Roupakia (2024)). In addition, several reports have been published in recent years that rank universities across Europe by the numbers of spinouts produced and investment raised, with leading UK universities typically ranking at the top of these lists. For example, the recent 2025 Dealroom report on European Spinouts (Dealroom, 2025a) showed that the UK universities of Oxford, Cambridge, UCL, Imperial and Bristol all ranked in the top 10 for deep-tech and life science spinouts, alongside universities such as ETH Zurich, EPFL, and the University of Zurich in Switzerland, TU Denmark, and TU Munich in Germany. Leading Swedish universities KTH, Uppsala University and Lund University were all in the top 20, as were KU Leuven and Ghent University in Belgium.

This section builds on the findings that, despite differences in approaches, the UK produces spinouts at rates that are competitive globally, and examines how the UK compares to nations with strong reputations for producing high-quality spinouts – the United States, Switzerland, Sweden and Belgium – in translating spinout production into spinout (investment) success.

9.1 About the sample and data

At the outset of this section, it is important to note that it is very difficult to find comprehensive, high-quality lists of spinouts emerging from universities in many countries – even for universities that are well known for their production of spinouts. In this regard, the UK, with the publication of the new national UK Spinout Register, leads the world in enabling robust insights on the spinout ecosystem to be produced. High-quality lists were more likely to be found for *major* research universities in the selected comparator nations than others. The analysis presented in this section therefore focuses on comparing the experiences of spinouts from leading research universities in each country, rather than attempting to create a nationally representative sample of universities.

The sample of universities selected in each country and the number of spinouts identified is shown in Table 16. Effort was taken to ensure that the lists of spinouts were as complete as possible and, perhaps more importantly, were not limited to success stories.

Table 16 | Sample of universities used for the international comparative analysis

University group	Universities	Number of spinouts identified with PitchBook data
US Leaders	Columbia, Harvard, MIT, UC Berkeley	801
US Other	Arizona State, Northwestern, Arizona, UCLA, UC Riverside, Minnesota, Pennsylvania, Utah, Washington	960
Belgium	Ghent, KU Leuven	261
Sweden	KTH Royal Institute of Technology (KTH Holding AB), Karolinska Institutet (Karolinska Innovations AB), Lund University (LU Ventures), and Uppsala University (UU Invest AB).	241
Switzerland	EPFL, ETH Zurich, University of Geneva, University Zurich	1,221
UK - £300M+	Imperial College, Cambridge, Edinburgh, Manchester, Oxford, UCL	784
UK - £100-300M	Cardiff, King's College London, Newcastle, Queen Mary, Queen's Belfast, Birmingham, Bristol, Exeter, Glasgow, Leeds, Liverpool, Sheffield, Southampton, Strathclyde, Warwick, Nottingham	508
UK - £50-100M	Loughborough, Swansea, Aberdeen, Bath, Dundee, Lancaster, St Andrews, Surrey, York, Durham	184

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

For universities in Belgium and Switzerland, lists of spinouts were obtained from their websites, where they appear to publish their full spinout portfolios, including both successes and failures. For many of the US universities, their spinouts were identified based on companies being tagged as a spinout in PitchBook and through other sources including web-based searches. While it was not possible to verify these companies as spinouts. I believe it provides a valuable comparator group.

For Swedish universities, spinouts were identified through the portfolios of companies supported by their university's holding companies that invest in companies commercialising research from their institutions. This includes KTH Holding AB for KTH Royal Institute of Technology, Karolinska Innovations AB for Karolinska Institutet, LU Ventures for Lund University, and UU Invest AB for Uppsala University. Given Sweden's approach to vesting IP ownership with the academic (so-called Professor's Privilege), and the ability of the academic to choose where and how to commercialise their IP, ***it is likely that this sample will only capture a subset of all spinouts emerging from these Swedish institutions. Results should therefore be interpreted with caution.***

To enable comparability, the UK sample focuses on non-specialist UK universities with a research scale of more than £50 million and producing more than 10 spinouts between 2013-2024 as reported to the University Spinout Register between 2013-24 (September release). The UK sample is further disaggregated into the research scale groups, those with the largest research budgets (greater than £300 million), those with research budgets between £100-300 million, and those with smaller budgets between £50-100 million.

Given that it has not been possible to verify the lists of spinouts for each university are complete, with some representing the full population while for others it is only a subset, the analyses that follow should not be used to compare overall spinout production rates across universities, nor total investment raised by their spinouts. Rather the focus of the analysis will be on looking at comparing normalised performance metrics.

The lists of spinouts for each university were mapped into the PitchBook data platform to obtain information on their foundation dates, industrial sectors, and investment deals. Financial data was already converted to British pounds within the platform. These data were then adjusted for local inflation using each nation's GDP deflator. The complete set of data was then combined with the UK dataset to create the international comparator dataset that drives the analyses presented here. The US sample was further separated to isolate leading research universities based in the leading deep-tech entrepreneurial hotspots of the Bay Area in California, Boston/Cambridge in Massachusetts, and New York[27] and other US institutions.

9.2 Comparing investment performance of spinouts from leading universities in the UK and selected comparator nations

9.2.1 Ability to reach critical thresholds of cumulative investment

The first analysis compares the investment performance of spinouts founded between 2013-2021 across the leading universities in the UK and selected comparator nations. It focuses on the cumulative amount of venture capital and private equity funding raised and removes more recently founded spinouts to allow companies the opportunity to move beyond their initial funding deals.

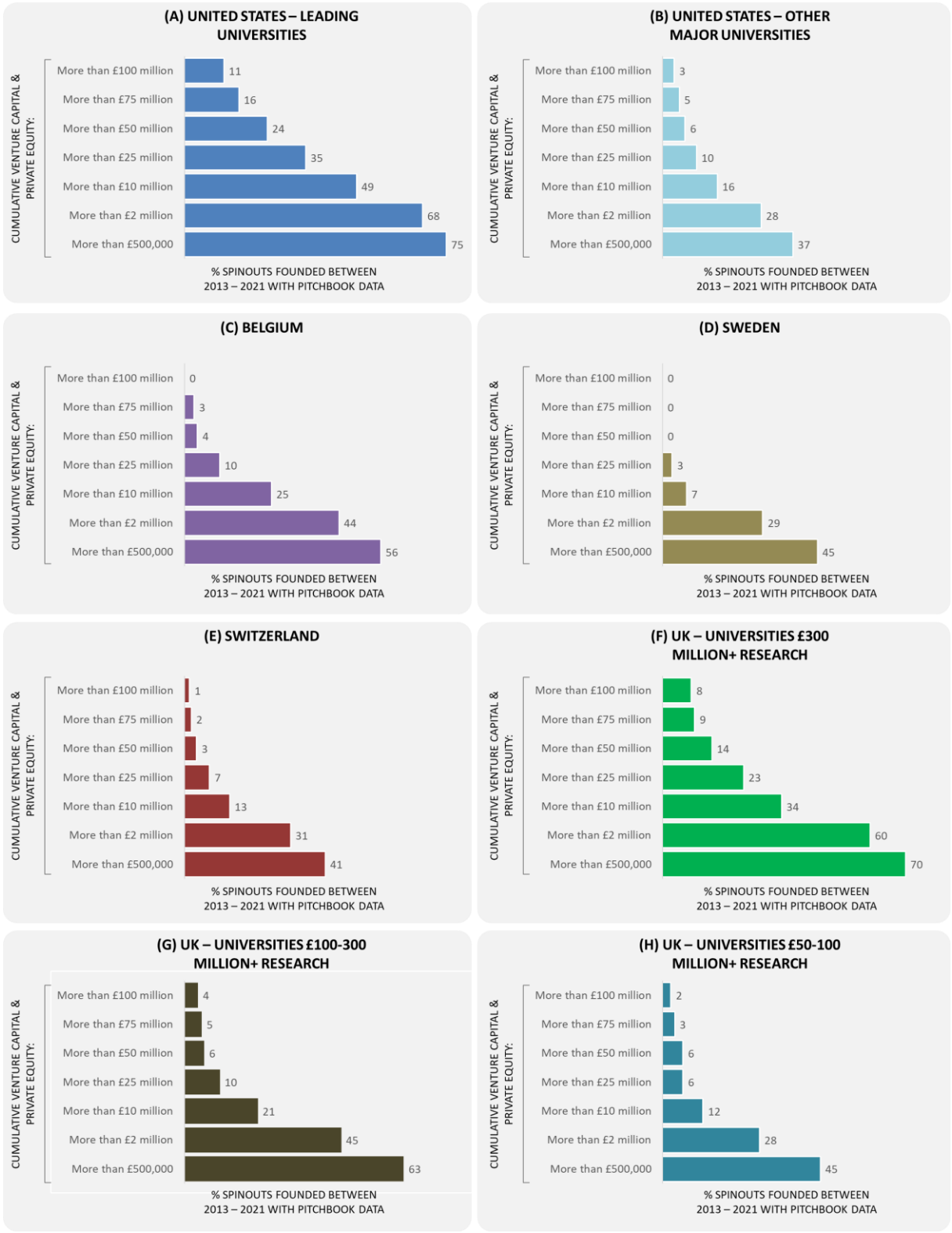
Figure 76 presents the proportion of each group's spinouts that secured different thresholds of VC/PE investment. Spinouts from the leading US universities in deep-tech entrepreneurial hotspots (including MIT, Columbia, Harvard and UC Berkeley) stand out above all other national groupings in terms of the proportions of raising different thresholds of VC/PE investments: 68% raise more than £2 million, 49% raise more than £10 million, 35% raise more than £25 million, and 16% raise more than £75 million.

What is also clear from this analysis is that spinouts from the UK's largest research universities – most of which are based in leading entrepreneurial hotspots within the UK – exhibit investment performance that is not too far off this group of leading US universities: 60% of their spinouts raising more than £2 million, 34% raising more than £10 million, 23% raising more than £25 million, and 9% raising more than £75 million. Spinouts from this group of leading UK universities outperforms the wider group of US universities as well as spinouts from universities in Belgium, Sweden and Switzerland.

The analysis also shows that, outside the group of leading US universities in entrepreneurial hotspots, spinouts from other major US research universities are much less likely to reach key cumulative investment thresholds, for example with just 16% raising more than £10 million. This analysis provides further evidence that we must be very careful not to treat the US as a single, monolithic success story with regards to spinout production and success, but rather, as with any nation, a complex ecosystem with areas that lead and others that need further strengthening.

[27] Based on the latest global tech rankings from Dealroom (2025b)

Figure 76 | Cumulative venture capital and private equity investment raised by spinouts founded between 2013 – 2021 emerging from leading research universities based in the UK and selected comparator nations (% of eligible spinouts in each group)



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

Furthermore, while the UK debate on spinouts often highlights the approaches taken by universities in Sweden and Switzerland to commercialise IP emerging from their research, at least based on the spinout samples and data available for these countries, only a relatively small proportion of their spinouts raise more than £2 million (31% for the Swiss sample, and 29% for the Swedish sample) and few raise more than £10 million (13% for the Swiss sample, and 7% for the Swedish sample).

Spinouts from Belgian universities perform relatively strongly in reaching investment thresholds, similar to UK universities with £100-300 million research budgets (Figure 76, panel G).

The relatively few Swedish spinouts raising significant amounts of VC/PE investment is surprising. It is, of course, possible, that this is due to how the spinout sample is constructed (limited to spinouts supported by the innovation companies of their leading universities) and the availability of investment data from PitchBook. Given the extent to which Sweden is often held up as a beacon of an alternative approach to successfully commercialising IP generated within universities, urgent further investigation of the Swedish experience would be very helpful.

Overall, the evidence suggests that the portfolio of spinouts from UK universities with research budgets of at least £100 million (panels F and G) perform very strongly compared with all but the group of leading US universities in some of the world's top entrepreneurial hotspots.

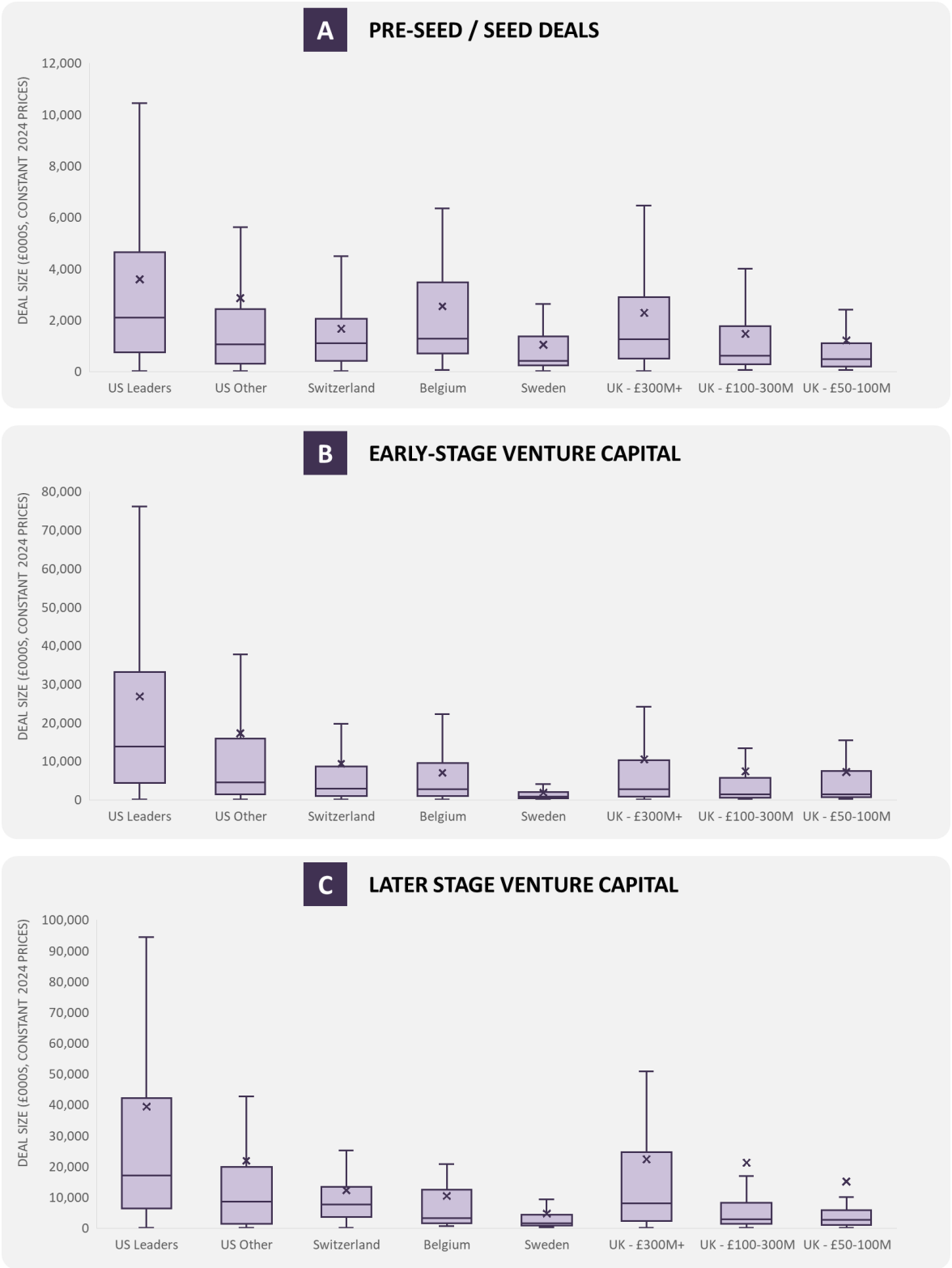
9.2.2 Comparing average deal size across nations

Figure 77 moves on to compare the size of investment deals secured by the sample of spinouts emerging from each group of leading universities in the selected comparator nations at three key stages: pre-see/seed (panel A), early-stage VC (panel B), and later stage VC (panel C).

At the pre-seed/seed stage, there is greater similarity across countries in the ability of spinouts to raise similarly sized pre-seed/seed investment deals. Spinouts from leading US universities, Belgian universities, and the largest UK universities (with research budgets greater than £300 million) appear to be able to raise more than spinouts from the other groups, particularly for their higher performing spinouts (the top half of each box – the 50-75% of deals – and the top whisker, is quite a bit larger and higher than the rest). Spinouts from the Swiss universities group, UK universities with research budgets between £100-300 million, and the group of other major US research universities, perform similarly and raise slightly less on average; while spinouts from the group of Swedish universities studied and from UK universities with smaller research budgets appear to raise less at this stage.

Moving to the early and later VC stages, the differences between groups become more striking. Here, spinouts from the leading US universities in entrepreneurial hotspots appear to raise much larger deals, both on average (mean, median) and across their portfolio of spinouts, than others. The portfolio of spinouts from largest research universities in the UK, and to a lesser extent the other groups of UK universities, exhibit broadly similar distributions of investment deal sizes at the early VC stage to the spinout portfolios from Switzerland, Belgium and the wider group of US research universities. The evidence also suggests that spinouts emerging from Swedish universities struggle to raise comparatively large deals at both early and later VC stages.

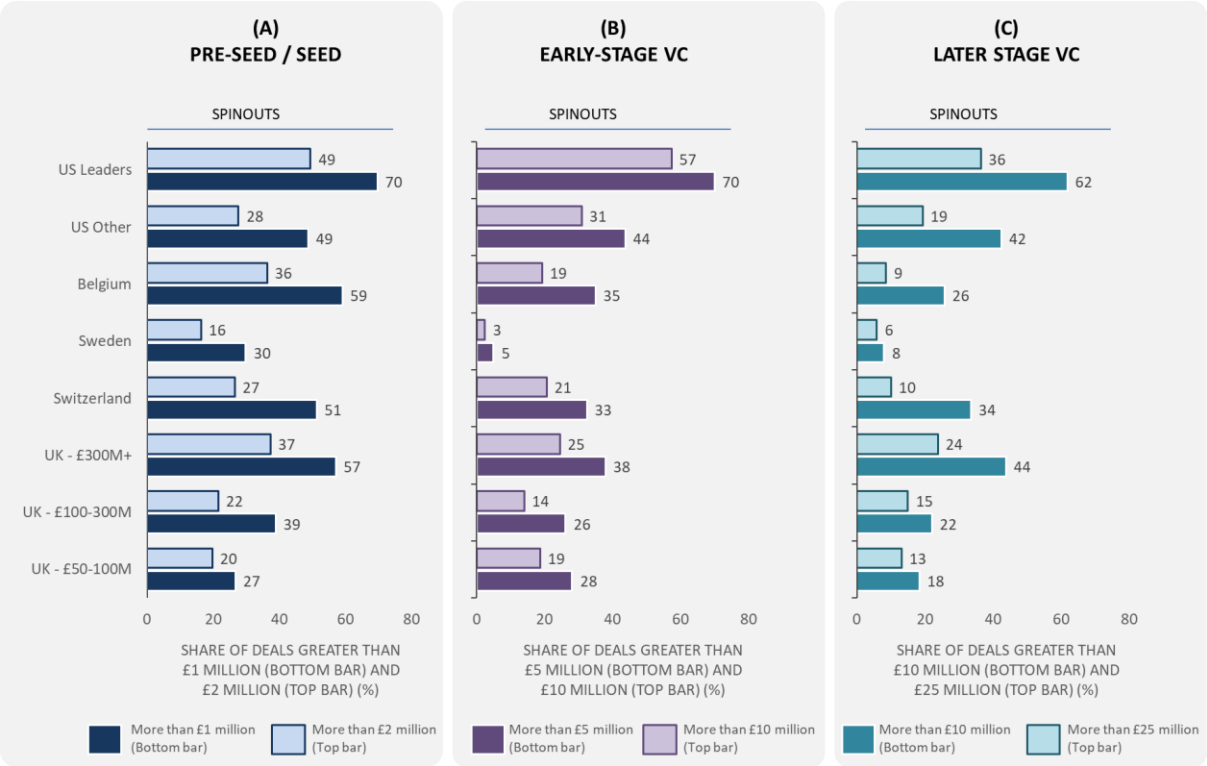
Figure 77 | Comparison of investment deal sizes for pre-seed/seed deals (panel A), early-stage VC (panel B) and later stage VC (panel C) for spinouts founded between 2013-2024 emerging from leading research universities based in the UK and selected comparator nations



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

It is often said that spinouts (and startups) in the entrepreneurial hotspots of the US find it much easier to raise significantly larger deals at each stage of development. To explore this, and how the UK compares, Figure 78 presents the share of spinout deals for each national grouping of universities raising more than key threshold amounts at the pre-seed/seed stage (panel A), early-stage VC (panel B) and later stage VC (panel C). The evidence from this analysis reinforces this view, particularly for deals post-seed stage.

Figure 78 | Share of deals greater than threshold amount for pre-seed/seed deals (panel A), early-stage VC (panel B) and later stage VC (panel C), for spinouts founded between 2013-2024 emerging from leading research universities based in the UK and selected comparator nations



Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

At the pre-seed/seed stage, 70% of the portfolio of spinouts from the group of leading US universities in entrepreneurial hotspots were able to secure individual deals worth more than £1 million, and 49% secured deals worth more than £2 million. By contrast, for the wider group of US universities, just 49% of their spinouts were able to secure a deal worth more than £1 million, and just 28% secured a deal worth more than £2 million. Spinouts from the Belgian and Swiss universities groups, and from the group of largest UK research universities exhibit similar patterns, with around 50-60% of their spinouts securing a pre-seed/seed deal worth more than £1 million. By contrast, 30% of the sample of spinouts from the Swedish universities group, and 39% from the group of UK universities with research budgets between £100-300 million secured a deal worth more than £1 million.

At the early VC stage, these differences become even more stark. Setting the benchmark, 70% of spinouts from the leading US universities group secured a deal worth more than £5 million,

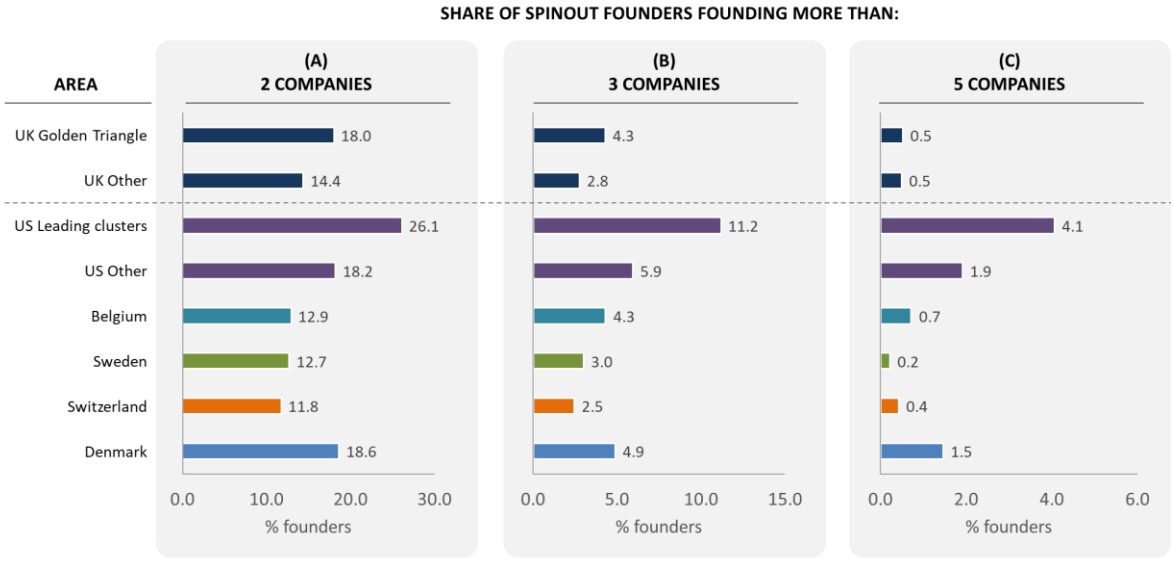
and 57% secured a deal worth more than £10 million. By contrast, just 35% of spinouts from the Belgian universities group, 33% of the Swiss universities group, and 38% of the largest UK research universities group raised more than £5 million in a single early-stage VC deal, with fewer raising more than £10 million.

9.3 Prevalence of serial entrepreneurs from leading universities in the UK and selected comparator nations

The rise of serial academic entrepreneurs is believed to help to, among other things, drive culture change within universities towards greater acceptance of academics in viewing commercialisation of their research as a legitimate pursuit; demonstrate potential pathways to commercial success; and provide mentorship and advice to academics new to the process. There is also anecdotal evidence that successful entrepreneurs go on to give back to the communities which drove their success, for example by becoming investors, providing advice and support to the next generation of founders, and supporting other companies in the area.

Despite the attention on serial entrepreneurs, little evidence could be found on the extent to which academics were becoming serial entrepreneurs, and whether they subsequently went on to become investors. To start to explore the prevalence of this phenomenon and how the UK compares to key comparator nations, the analysis that follows leverages the international dataset of spinouts emerging from leading universities in the United States, Belgium, Switzerland, Sweden and the subset of more active spinout producing universities from the UK. The dataset was mapped into data held by PitchBook on the founders of companies. It isolates the founders of spinouts and then identifies other companies that the founders are involved in, either as founders or through other management and board roles.

Figure 79 | Share of founders of spinouts emerging from leading universities based in selected nations that have founded more than 2 companies (panel A), more than 3 companies (panel B) and more than 5 companies (panel C)



Sample limited to founders of spinouts founded between 2013-2024

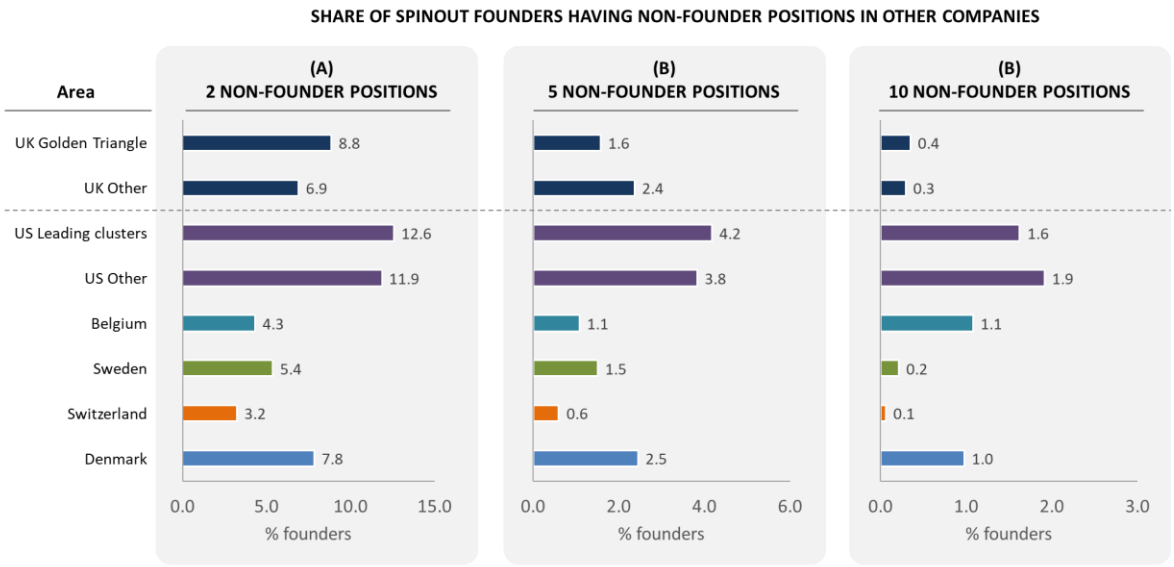
Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

Figure 79 shows that 18% of founders of spinouts emerging from universities based in the UK's Golden Triangle have founded more than 2 companies (14.4% of those founding spinouts from universities based outside this area of the UK); 4.3% had founded more than 3 companies, and just 0.5% had founded more than 5 companies. By contrast, 26.1% of founders of spinouts from the sample of US universities in leading entrepreneurial clusters have founded more than 2 companies; 11.2% have founded more than 3 companies; and 4.1% have founded more than 5 companies. The performance of leading universities across the UK in producing serial entrepreneurs appears to be similar to the experiences of leading universities in Belgium, Switzerland and Sweden.

A similar pattern is exhibited for founders of spinouts that become involved in the development of companies beyond their spinout (Figure 80). Around 4% of founders of spinouts from the US universities groups became involved in the management teams and boards of at least 5 other companies. This compares to 1.6% for founders of spinouts emerging from universities based in the UK's Golden Triangle and around 1-1.5% of founders linked to spinouts from the Belgian and Swedish universities groups.

Note that founders from UK universities based outside the Golden Triangle are more likely to take up multiple non-founder roles in other companies (2.4% taking up at least 5 non-founder roles) compared with those based within the Golden Triangle (1.6%). The reverse is true for founding multiple start-ups (Figure 79). This may reflect the types of innovation economies and opportunities available across the different parts of the UK, with the entrepreneurial clusters of Oxford, Cambridge and London providing more start-up opportunities than elsewhere.

Figure 80 | Share of founders of spinouts emerging from leading universities based in selected nations that have more than 2, 5 and 10 non-founder positions in companies other than the original spinout

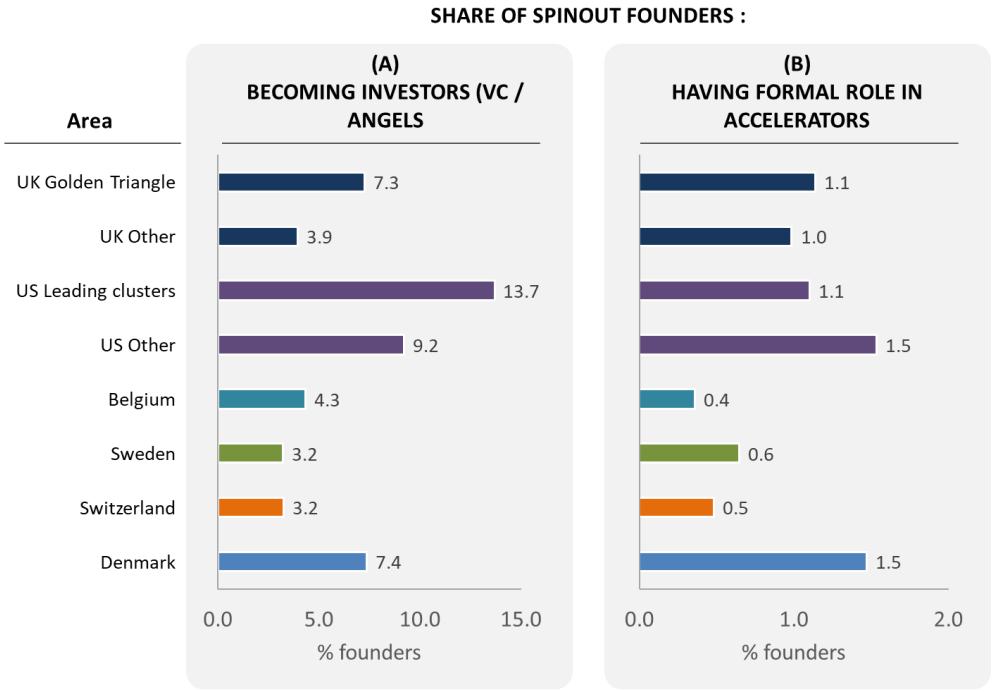


Sample limited to founders of spinouts founded between 2013-2024

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

Founders from spinouts from the group of US universities based in key US entrepreneurial clusters of the Bay Area, Boston, New York, Los Angeles, and Seattle are much more likely than founders from the university groups in other nations to become venture capital and/or angel investors with 13.7% taking up such roles. By comparison, just 7.3% of founders from the UK's Golden Triangle sample of universities become investors, 4.3% from the Belgian universities sample, and 3.2% in both the Swiss and Swedish universities sample.

Figure 81 | Share of founders of spinouts emerging from leading universities based in selected nations that have become venture capital and/or angel investors (panel A) and taken up formal roles in accelerators (panel B)



Sample limited to founders of spinouts founded between 2013-2024

Source: Author's analysis of the UCI spinout dataset based on the UK Spinout Register (September 2025 release), the international spinout dataset compiled by the author, and data from PitchBook, Inc.

10

10 Summary and conclusions

This technical report by Tomas Coates Ulricshen was commissioned by Research England to support the independent review being developed by Tony Hickson on Deepening University-Investor Links for UK Research and Innovation (UKRI). It provides a data-driven analysis of the investment and investor landscape for UK university spinouts and updated insights on the structure, health and performance of the UK university spinout ecosystem. The topics explored were shaped by the Review Team to support their core questions and to further examine and test key insights emerging from their extensive programme of interviews and engagement with key stakeholders and experts from across the university, spinout and investor ecosystems.

Through this suite of evidence collected and analysed, Hickson presents in his Review report a series of actionable of recommendations on how the investor and university ecosystems can be further strengthened and linked to unlock even more potential from the efforts to seed spinout companies to commercialise IP emerging from within universities to power innovation and growth for the benefit of the UK.

The analysis presented in this report is powered by the latest data available from the new UK university Spinout Register (September 2025 release), and linked to data from PitchBook, Moody's FAME and Orbis data platforms, and the Higher Education Statistics Agency (HESA, part of Jisc).

It is clear from the evidence presented here and elsewhere that UK university spinout ecosystem is a powerful engine for entrepreneurial activity and innovation in strategically important sectors of the UK economy. Over the past decade, spinout production increased steadily until onset of the Covid-19 pandemic, where it jumped significantly. Following a 'pandemic bounce' in 2021-2022, numbers have dropped back, and it is not yet clear whether this represents a stabilisation of spinout production at around 150-160 spinouts per annum, or a declining trend.

The ability of UK universities to produce spinouts is similar to the experiences of their counterparts in the US once the scale of the research base is accounted for, and the UK's large, research universities appear to be globally competitive in terms of the investment performance of their spinouts. Furthermore, the report finds, among other things, that:

- While heavily concentrated in a small number of universities, spinout activity is growing outside traditional spinout producing heartlands of largest research universities in UK
- UK university spinouts raised £2.9 billion in venture investment in 2024 but worrying trends are emerging around early-stage venture capital
- Investing in university spinouts is a portfolio game with the top 10% of spinouts raising significantly more at each stage of their journey than the rest, and relatively few

companies break through the scaling-phase to reach significant investment thresholds, and achieve exits through acquisition or public listing

- Spinouts may contribute to the economy and the UK through different pathways, not just through venture backed investment growth, but also by providing niche, yet critically important products and services to strategically important industries and communities nationally and regionally
- Universities, university-affiliated funds and venture capital investors and angels are important types of early investors into spinouts, with the combined forces of universities and their affiliated investment funds appear to provide benefits to their spinouts
- The growing role of accelerators in the spinout journey is also evident, and an increasing number of spinout deals involve corporate venture capital and corporations as investors
- High-net-worth investors, corporations, institutional investors, and governments are important sources of financial capital for funds that invest in initial spinout deals, with pension funds appearing to play a more limited role compared to other nations
- Spinout success typically requires more than grant funding and accelerator support, with the timing of this support relative to private investment appearing to matter
- There are signs the UK struggles to retain the value from spinouts domestically as they scale and succeed, with many acquired by companies based overseas, listing on stock exchanges outside the UK, and have to seek large scale investment from investors overseas to drive their scaling and growth
- While UK university spinouts are competitive globally in attracting investment, this does not appear to be translating into the scale of serial entrepreneurs seen in leading US hotspots, nor in the numbers of founders that become investors

The report attempts to cover many areas related to the structuring, functioning and performance of the investment, investor and university spinout ecosystems. Given time and data limitations, it was not possible to explore every issue in depth. A number of issues warrant much greater attention, including not least how UK university spinouts compare internationally; the effects of university affiliated funds on the growth trajectories of spinouts, and the conditions required for benefits to be realised; the role of different types of grants in shaping the success of spinouts; and greater insights on the geographic mobility of spinouts and the extent to which the UK is able to anchor and retain value at home.

Overall, I believe the report shows that the UK has powerful, globally competitive spinout ecosystems that are strengthening across the country. However, we face significant challenges in enabling more of these companies to scale, and to do so in the UK in ways that deliver benefits across the nation. It is hoped that the actionable recommendations developed by Hickson through his Review can help to strengthen the UK's investor and university ecosystems in ways that can accelerate not just the early development of spinouts, but also their scaling and growth to unleash innovations that tackle societies most pressing challenges, and deliver much needed economic value to power the UK economy into the future.

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Annex: Interpreting Boxplots

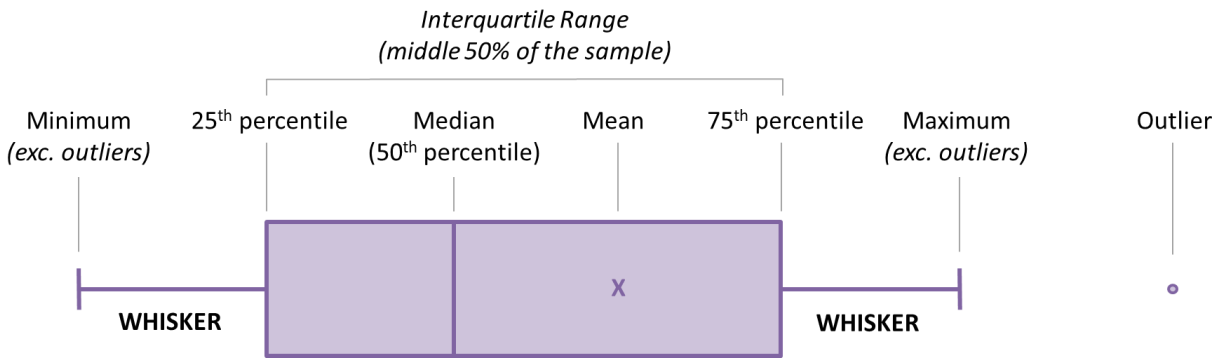
The report frequently employs 'box-and-whisker plots' as a powerful tool for data visualisation. These plots serve as a valuable tool to illustrate not just the median average of a variable but also the extent of variability surrounding the median. In this way, it provides a visual summary of the distribution and central tendencies of a dataset while also identifying potential outliers or extreme values. This allows for much more meaningful comparisons between different groups.

How to read a boxplot

Interpreting a box plot involves understanding the key components and features it represents.:

1. **Box:** The box in the plot represents the interquartile range (IQR), which includes the middle 50% of the data**.** The left (or bottom) edge of the box represents the first quartile (Q1) or the 25th percentile, and the right (or top) edge represents the third quartile (Q3) or the 75th percentile. The height of the box, therefore, shows the spread of the middle 50% of the data.
2. **Line inside the box:** This line represents the data's median or the 50th percentile. It shows the midpoint of the dataset.
3. **Cross inside the box:** Where represented, this indicates the mean average of the distribution.
4. **Whiskers:** The whiskers extend from the edges of the box and reach the minimum and maximum data values (excluding any outliers) within a defined range.
5. **Datapoints outside the whiskers:** These represent outliers, defined as values greater than (or less than) 1.5 times the interquartile range above the third quartile or below the first quartile.

Figure 82 Interpreting box plots



Note: not to scale
Source: UCI