

House of Lord's Science and Technology Committee: Financing and Scaling UK Science and Technology: Innovation, Investment, Industry

Scaling UK science and technology

1. Translating excellent basic science and technology into global companies has long been recognised as a problem for the UK. Many policy initiatives have tried to address this. What are the key barriers that the Government must address to fix this? What specific policies need to change? Why have previous attempts not succeeded?

ANSWER:

The mission of SCI, formerly the Society of Chemical Industry, is to support the acceleration of science into industry for the benefit of society. The issues raised in this Science and Technology Committee inquiry are core to our focus on the commercialisation of the UK's historic strength in innovation and invention.

Government Priorities

SCI's [Manifesto for an Industrial Science & Innovation Strategy](#), published August 2023, identified that the lack of a consistent industrial strategy has been a barrier to the success of British science-based business over the last decade. This has come at an enormous cost to the UK economy. We calculated that a comprehensive and consistent long-term plan to support science-based businesses (ideally with at least a 20-year horizon) could boost UK GVA by as much as **£230bn GVA** in the life sciences and clean tech sectors alone

Government needs to assess where it wants to prioritise and determine the basis for that prioritisation. Creating jobs, securing investment, enabling security and ensuring a return on investment must surely be high on the list.

There are a range of issues that need to be addressed. These issues have contributed to a decline in faith in the UK as a market for growing an innovative business and a significant loss of value and also competency.

SCI's soon-to-be-published survey of more than 100 science-based SMEs (with combined sales of more than £300million) found that 41% of companies surveyed said the UK was not internationally competitive for enterprises seeking to scale up.

Research published by SCI in March 2025 ([Unlocking value in life sciences](#)) also demonstrated that the UK's life science sector has become less competitive compared to international competitors over the last decade.

Key data points include :

- On global share of FDI the UK has dropped down from 2nd place in the world in 2017 to 8th in 2023.

- On share of global exports of pharmaceuticals the UK has declined from 5.6% in 2018 to 2.6% in 2023.
- SCI analysis of 8 major pharmaceutical companies pointed to the UK receiving around half of the investment that had gone to Ireland over the same period.

Key barriers to science-based business include:

- ***Lack of globally competitive environment***

Globally competitive incentives need to be put in place to ensure that start-up companies are incentivised both to stay and to grow. These include R&D credits and Patent Box, but also include the regulatory environment, which can be a significant blocker.

SCI's "Unlocking Value in Life Sciences" report demonstrated that the incentive schemes in place are not currently driving investment or scale-up as effectively as they could. Whilst the UK's R&D tax incentive scheme, for example, is generous in overall share of GDP (at over 0.3% of GDP) the absolute level of support to an individual company (15%) is lower than in other jurisdictions (30% in both Ireland and France and 32% in Belgium). Incentive mechanisms used in other competitor countries offer more holistic packages to encourage scale-up including soft loans, manufacturing credits, pricing premiums for clinical trials conducted locally and for products prioritising local launches.

Research by ABPI has highlighted the problems with the VPAG scheme, which although intended to support the NHS by limiting the cost of its medicine budget, has had the negative effect of losing companies from the UK and, as a result, reducing the potential benefits for the NHS.

An appropriately responsive regulatory environment is an important element of competitiveness. SCI research has identified issues with some of the regulatory frameworks – such as those that support clinical trials the UK. And REACH remains a major barrier to new materials innovation.

- ***Access to funding and growth capital***

Growth capital needs to be available over the extended periods of time needed to develop and scale up scientific innovations into new products.

A key issue is the need for a better-tailored set of incentives for science-based enterprises across the development cycle.

The Mansion House reforms proposals are welcome, but we would encourage the government to go further and mandate funds to be allocated to UK growth stock.

Funding needs to be more easily available for start-ups. Accessing funding is significantly challenging for SMEs with little spare staffing capacity to undertake the often complex, lengthy application processes. In our recent SME survey, SCI SME members estimated that each funding application could take at least 16 hours

to complete – excluding the time taken to find the often-required partners. Bearing in mind these companies often have 1-5 staff this is a significant investment of time.

Our SME respondents reported that small businesses also find the fragmentation of funding streams confusing. Simplifying application processes and providing streamlined processes for previous applicants would all help. We heard clear calls for a centralised register with details about available schemes, and the use of AI to sign-post companies to the most relevant funding streams.

- **Government to recognise the value of manufacturing.**

The importance of manufacturing needs to be recognised and valued.

Across the “create (research) and make (manufacturing)” spectrum of the business lifecycle, public sector support has understandably focused on “create”. This gives £4.40 direct and indirect return on every £1 of public R&D grant investment over 7 years, as opposed to manufacturing (or “make”), which offers £3.70 for every £1 of public or private investment. If a focus was on both then the UK would benefit from both the research but also the manufacturing. By tending to focus on “create”, the UK carries out the difficult early stage research – for others to then maximise on that value through manufacturing.

In manufacturing different types of jobs would be created and these jobs would often be in traditional industrial areas.

- **Scale up support**

Scaling up businesses need access to funding but also scale up facilities and scale up support. In some areas scale-up facilities are not readily available in the UK with companies looking overseas.

While businesses, 39% reported that the UK did not have the right scale-up facilities for their needs. Without incentives and mechanisms to ensure that UK-funded businesses are anchored in the UK, too often, companies that benefit from public funding too often relocate their manufacturing and operations abroad.

International comparator: Singapore

A prime example of innovative government support schemes from which the UK can learn are those in Singapore which supports SMEs by making funding more accessible, supporting scale-up and attracting talent.

Singapore facilitates funding access for businesses via its Business Grants Portal which consolidates various government grants into a single platform. It provides clear information, eligibility criteria, and application forms, making the process more accessible. The system actively notifies businesses of relevant funding opportunities based on their profiles, improving engagement. Intuitive application forms reduce administrative burdens, and seamless integration with other government systems to reduce duplication, faster application reviews and increased data accuracy.

Additionally, the scheme 'Enterprise Singapore' provides localised advisory services and workshops to help businesses navigate and seek financial support, ensuring accessibility for companies across different regions.

International comparator: EU

In our SME survey, SCI members also pointed to the European Innovation Council's Scaling Club, a 2-year program, which started in October 2024. The scheme aims to bring together high-potential deep tech companies focusing on major global challenges from Clean Fuels and Hydrogen, Agri and Food Tech to Batteries and Energy Storage with investors, corporate innovators, mentors and other industry stakeholders; and it provides tailored mentoring sessions help start-up businesses scale up.

▪ **Skills and employment**

Our SME survey also revealed the challenges science-based SMEs face in recruiting skilled staff. One half of respondents reported this as a significant difficulty, identifying the UK visa system as the main source of frustration. A simpler application process which fast-tracks high-skilled workers in critical growth sectors like AI and life sciences – potentially with a dedicated visa category – could effectively address this issue.

Respondents also reflected a lack of recognition on the part of government that the skills required for scale up are fundamentally different to those required for the research.

However, the challenge is also one of keeping our home-grown scientists within the science sector. The UK has c.2.5 STEM graduates per 1,000 population, in line with Germany and leading the US, but attracting and retaining talent remains an issue for Science and Technology sectors

"Business, HR & Finance" attracts over 15% of Chemistry and Physics students – only 8% of physics students work as science professionals 15 months after qualifying, rising to c.30% for biology and chemistry graduates. Whilst at SCI we recognise the value of science-literate graduates entering the financial sector, SCI is passionate about the work we do to encourage our students and graduates to pursue careers in the sector. We are keen to work with industry and government to promote the opportunities in the science sector and to support graduate schemes.

▪ **Energy Costs**

The disproportionately high UK energy costs mean that scaling and manufacturing is just not an option for many growing companies.

Strategic priorities for UK science and technology in a changing world

2. How should the UK's science and technology strategy respond to ongoing major changes in the economic, geopolitical, and technological landscape? What challenges and opportunities now face the UK's science and technology sector? What policy actions would you prioritise?

ANSWER:

SCI continues to advocate for a dedicated Innovation and Science Growth Council, as outlined in its [Manifesto for an Industrial Science and Innovation Strategy](#), to sit as a sub-committee of the Industrial Strategy Advisory Council. This would provide a forum for evaluating and improving cross-departmental coordination on science and technology, and an opportunity for external stakeholders to share input from industry.

Government has outlined its priority sectors and whilst we broadly agree with them we think the area of Advanced and Sustainable Materials is missing. Advanced Materials underpin many high tech and important sectors, such as the semi conductor sector and defence sectors. Sustainable Materials need to be developed to enable the transition to net zero, supporting sectors such as automotive and aerospace.

On priorities for strategic R&D, SCI recommends that government should tie its strategy to output goals, which could include:

- Number of UK start-ups – and how many of these reach commercialisation.*
- Number of patents registered by UK companies domestically and internationally.*
- Investment in manufacturing.*
- Number of UK unicorns.*
- Number of Domestic listings on the London Stock Exchange.*
- Value of foreign direct investment in the UK market.*
- Value of large-scale investment in infrastructure which is critical to the industrial strategy .*

Financing investment in UK science and technology

The UK research and innovation landscape

3. Is the UK's research and innovation landscape well-structured to support science and technology commercialisation, economic impact, and strategic advantage for the UK?

ANSWER:

The UK has world-leading universities undertaking pioneering scientific research and development. To commercialise this R&D, it is common for universities to partner with company founders to help commercialise their research. However, university technology transfer offices (TTOs), which negotiate the investment terms of deals with founders and spinout companies, need a solid framework to thrive.

In November 2023, the Independent Review of University Spin Outs (REF: [Independent review of university spin-out companies - GOV.UK](#)) recommended measures to reform TTOs in the UK. We endorse these recommendations and their rapid implementation.

Several University groups have been established to help their start-ups. There are some early positive examples of new, innovative funding vehicles being used to support the development of university spin-outs and encourage collaboration between universities and across regions. For example, 'Northern Gritstone' is an investment company founded in 2021 by the universities of Sheffield, Leeds and Manchester to help 'boost the commercialisation of university spinouts and start-ups in the north of England'. More info [here](#).

Similarly, the SETsquared Partnership (made up of the universities of Bath, Bristol, Cardiff, Exeter and Southampton) provides support programmes from start up to scale up by providing 'a wide range of highly acclaimed support programmes to turn ideas into thriving businesses'.

However, from the mid TRL levels onwards SMEs need different skills and capabilities that do not reside in universities, rather they reside in industry. On scaling SMEs need access to scale up facilities. The Catapults provide an important and very valuable role here but do not provide all of the capabilities needed.

Private sector investors, companies, and capital markets

4. How can the Government encourage more private-sector investment in R&D, and in R&D intensive companies, including technology start-ups and scale-ups, in the UK? What are the major factors behind the exodus of capital and companies to the US, and is there anything that the UK can do to prevent this? We would welcome case studies from entrepreneurs or investors who have moved abroad, setting out their reasons for doing so.

ANSWER: A supportive tax and regulatory environment is integral to the success of innovative start-up and spin-out businesses. This is particularly true of science-based ventures, which can require ten years or more of capital-intensive R&D to reach commercialisation and profitability.

It is encouraging that the Chancellor Rachel Reeves recognised the need for “long-term certainty for key R&D activities through 10-year budgets” in her 2024 Autumn Budget. Risk-conscious investors would be more willing to be patient with their investments if the threat of unpredictable changes to fiscal environment were mitigated by longer term planning.

However, at present the UK’s tax and fiscal incentive system is still not competitive enough to drive start-ups to scale and list in the UK. This is well documented. This will only be addressed through stronger tax incentives such as strengthening the R&D tax credit scheme and the patent box scheme.

SCI proposes a number of other changes to the UK’s tax and regulatory environment that would influence the success of innovation-driven businesses, including:

- **A full review of the rules governing the carry-through of corporate tax losses in the UK, with a view to simplifying the system** - An SCI survey of business leaders found that the system for carrying through tax losses in the UK is overly complicated. This acts as a deterrent to early-stage investment by private equity and VCs at a critical time in the investment cycle.
- **Quicker progress on Mansion House Compact fund implementation. Government should urgently expedite proposed reforms to consolidate UK pension schemes to reduce risk and encourage larger funds to invest in high growth, start-up companies and venture capital** - For instance, as soon as early successes have been established, the government should also vastly increase the £250m pot of public funding allocated via the British Business bank LIFTS programme to further encourage pension fund investment in promising science and technology companies.
- **Improvements to the infrastructure around UK stock markets to support UK listing of unicorns to encourage largescale businesses to remain in the UK once they have scaled-up.** We recommend this infrastructure is reviewed by the new Industrial Strategy Council.
- **Tailored, concierge-style support for international companies looking to invest in the UK** – with a dedicated team to guide them through the process from their initial expression of interest to set-up.