

Position statement

Enhancing UK prosperity through R&D investment

September 2019

As the Chancellor prepares to outline a one-year Spending Review ahead of the UK's exit from the EU, we are calling on government to safeguard the UK's outstanding national research and innovation capacity. In the long-term, the UK government should plan for and deliver on increased public sector investment in research and development (R&D) to bring the UK in line with the best in the OECD. In the short-term, the UK government must provide certainty to domestic and international researchers, innovators and investors in the face of a no-deal Brexit.

We call on the UK government to:

1. Create an R&D contingency fund of £1.5bn for 2020 in the event of a no-deal Brexit, with support for discovery research in line with that currently available through EU framework programmes.
2. Reverse the long-term erosion of core research budgets to avoid damaging our national research capacity and capability.
3. Create a 'digital shop window' for UK R&D investment that guides domestic and international researchers, innovators and investors to the UK's research and innovation offering.
4. Create a dedicated fund to help SMEs continue to trade and grow after EU exit.

1. Create an R&D contingency fund of £1.5bn for 2020 in the event of a no-deal Brexit, with support for discovery research in line with current support through EU framework programmes.

If the UK leaves the EU without a deal, our research and innovation sector faces a funding cliff-edge.

Even with the UK government's underwrite guarantee, there will be an immediate loss of access to some parts of Horizon 2020 and European Structural and Investment funds (ESIF) that support R&D. Implementing and establishing alternatives could take years, stopping valuable research in areas like health, energy and environment in its tracks. The UK government must urgently establish a transparent and easy to access contingency fund that at least matches the level of investment the UK currently receives from Horizon 2020. In particular, additional investment is needed both to address a gap in domestic provision for discovery research and the loss of access to Horizon 2020 European Research Council (ERC) grants, which currently support much of this research in the UK.¹ Reflecting current levels of ERC support, our estimates suggest this would need to be at least £250m.

*In the event of a no-deal Brexit, the **UK could lose access to around £1bn per year** in funding from Horizon 2020 and R&D-related ESIF.²*

*The UK has received an average **net contribution of €390m per year** in ERC grants from Horizon 2020, more than any other country.³*

2. Reverse the long-term erosion of core research budgets to avoid damaging our national research capacity and capability.

Increase levels of quality related funding by at least 13% to reverse the real terms decline of the last 7 years.⁴

These budgets include quality-related (QR) funding for universities, and gives them the freedom to invest in training the next generation of researchers and entrepreneurs, in cutting-edge infrastructure and in early-stage, risky or disruptive research.^{5 6} The recently announced uplift in QR funding is welcome,⁷ but it doesn't go far enough.

*QR funding has seen a **13% real-terms fall** in its value over the last 7 years.⁸*

3. Create a 'digital shop window' for R&D investment that guides domestic and international researchers, innovators and investors to the UK's research and innovation offering.

International talent and investment are an integral part of the UK's R&D landscape.⁹ UK government should create a 'digital shop window' for R&D investment that showcases information on the full range of available funding streams and grants, their purpose and source budgets. This is vital to attract the international researchers, innovators and investors crucial to reaching the UK government's target of spending 2.4% of GDP on R&D by 2027.^{10 11}

*In 2017 **over half** of all UK business expenditure on R&D was by foreign-owned businesses.¹²*

4. Create a dedicated fund to help SMEs continue to trade and grow after EU exit.

Small and medium enterprises (SMEs) are the engine of the UK's chemicals and pharmaceutical sectors.

Their success hinges on economic stability and continuity, and on their ability to keep trading and recruiting internationally.^{13 14} After EU Exit, SMEs face significant upheaval with the introduction of red tape and additional financial burdens associated with new regulatory and immigration systems:

- Under a new UK chemicals regulatory system, SMEs will need to comply with new processes and responsibilities, such as providing data to regulators at an unpredictable, possibly business-critical cost to their business.
- Under the current immigration system, the visa and associated costs to an SME can be around £8000 to recruit a single overseas employee: more than 5 times the international average.^{15 16}

***96%** of UK companies in the chemical and pharmaceutical sectors are SMEs.¹⁷*

*A **third** of UK start-ups were founded by non-UK nationals and **56%** of UK start-up employees come from outside the UK.¹⁸*

Given the importance of SMEs to the UK's national prosperity and their very limited resources for coping with the introduction of burdensome red tape, contingency funding is needed to allow them to continue to trade, innovate and grow after EU Exit.

Contact

The Royal Society of Chemistry would be happy to discuss any of the issues raised in our briefing in more detail. Any questions should be directed to Izzie Radford, policy@rsc.org, 01223 432350.

About us

With around 50,000 members in over 100 countries and a knowledge business that spans the globe, the Royal Society of Chemistry is the UK's professional body for chemical scientists, supporting and representing our members and bringing together chemical scientists from all over the world. Our members include those working in large multinational companies and small to medium enterprises, researchers and students in universities, teachers and regulators.

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- ¹ [UK participation in horizon 2020](#), BEIS, May 2018
 - ² [“No-deal” is a bad deal for science](#), The Royal Society, December 2018
 - ³ [Royal Society submission to the Sir Adrian Smith call for evidence on future frameworks for international collaboration on research and innovation](#), The Royal Society, May 2019
 - ⁴ [Challenge funds and flat-cash cores](#), CaSE, March 2019
 - ⁵ [Balance and Effectiveness of Research and Innovation Spending](#), Royal Society of Chemistry, September 2018
 - ⁶ [Empowering UK universities: how strategic institutional support helps research thrive](#), Wellcome Trust, July 2018
 - ⁷ [University research to receive major funding boost](#), Department for Business, Energy and Industrial Strategy, July 2019
 - ⁸ [The invisible hand that supports quality research](#), WonkHE, June 2019
 - ⁹ [Intramural R&D expenditure \(GERD\) by source of funds](#), Eurostat, March 2019
 - ¹⁰ [Five point plan to boost science and engineering](#), Campaign for Science and Engineering, August 2019
 - ¹¹ [The Changing Nature of R&D: Building an innovation ecosystem for the data age](#), CBI, May 2019
 - ¹² [Business enterprise research and development, UK: 2017](#), Office of National Statistics, November 2018
 - ¹³ [International collaborations create chemistry](#), Royal Society of Chemistry, December 2018
 - ¹⁴ [An immigration system that works for science and innovation](#), Royal Society of Chemistry, June 2018
 - ¹⁵ [Proposing a new immigration system](#), Campaign for Science and Engineering, December 2018
 - ¹⁶ [UK science and immigration: why the UK needs an internationally competitive visa offer](#), The Royal Society, August 2019
 - ¹⁷ Eurostat, ec.europa.eu/eurostat
 - ¹⁸ [Science priorities for Brexit – Evidence Report](#), House of Commons Science and Technology Committee, July 2017