

Position statement



Increasing R&D investment for UK prosperity

January 2020

The UK government must plan for and deliver on its commitment to boost UK R&D, including increasing investment from 1.7 to 2.4% of GDP by 2027 in order to drive national prosperity, regain the UK's position as an innovation leader and catch up with its economic competitors' investment levels.

We call on the UK government to:

Set out a transparent, long-term, public sector investment plan to 2027 and beyond to bring the UK's total R&D investment in line with the best of the OECD.

Create a 'digit-term erosion of core research budgets to protect our national research capacity and

capability.

Ensure the proposed Shared Prosperity Fund flexibly supports the growth of R&D across the UK at a scale at least equivalent to that of the European Structural Investment Funds.

Ensure the balance of investment recognises the importance of curiosity-driven, discovery research as a vital element of a diverse R&D funding landscape.

Secure association to Horizon Europe, as well as seeking collaboration in excellent science with the rest of the world.

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There is a complementary relationship between public and private sector investment in R&D: public investment crowds in private investment, attracts overseas investment and raises productivity.⁸ In our *Open for Business* report, we found a wealth of examples where funding from public streams is being leveraged to support businesses to grow within regional economies, such as

2. Safeguard the UK's diverse R&D funding landscape

Reverse the long-term erosion of core research budgets to protect our national research capacity and capability, including

Support regional R&D growth by ensuring the proposed Shared Prosperity Fund flexibly supports the growth of R&D at a scale at least equivalent to that of the European Structural Investment Funds.

Ensure the balance of funding recognises the importance of curiosity-driven, (p)-2 vr1 (5 0 Td())7(ve)-1 (y(re

Funding to support regional growth is vital. When the UK leaves the EU it will no-longer be able to access ESI Funds such as the European Regional Development Fund (ERDF), which has a track record of supporting businesses to grow, invest and create jobs in regions across the UK. Domestic replacements, such as the UKSPF and the Strength in Places (SIP) Fund must flexibly support R&D to secure sustainable regional growth.

The UK has been allocated €17.2bn in ESI Funds for 2014-2020, of which €5.8bn is via the ERDF.²⁵

The SIP Fund will invest £236m for 2018/19-2021/22.²⁶

Diverse UK funding streams to support each stage of the innovation pipeline, from discovery to application, are vital to ensuring the strength of the UK research base and allowing the UK to compete on the international stage. Discovery research underpins current and future research and innovation activities. Whilst its impacts can often be long term, they can lead to ground-breaking discoveries that deliver new

Increasing retention and progression of women in STEM will increase workforce participation, improve the return on investment from the education budget and increase innovation and productivity.⁴⁹ There is an overall STEM participation gap in terms of gender. However, our recent *Breaking the Barriers* report shows that female chemists in academia experience considerable barriers for progression and are often lost from the STEM workforce.^{46 50}

99% of female chemists in UK academia can evidence the lack of retention and progression of women.⁴⁶

There is a crucial interdependence between attracting talent and R&D investment to the UK and immigration policy. The UK immigration system needs to do more to attract scientists and innovators – this means both welcoming messaging and streamlined rules. Doing so will help deliver maximum impact from investments in international collaboration on research and innovation.⁴⁴

84% of UK chemical scientists think that freedom of movement has had a positive impact on UK science and innovation³⁰

Contact

The Royal Society of Chemistry would be happy to discuss any of the issues raised in our statement in more detail. Any questions should be directed to Kathy Page or Mindy Dulai at policy@rsc.org.

About us

With about 50,000 members in 120 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.

¹ [Press release: The Prize in Economic Sciences 2018](#), The Royal Swedish Academy of Sciences, October 2018

² [Press release: The Prize in Economic Sciences 1987](#), The Royal Swedish Academy of Sciences, October 1987

³ [G20 GDP Growth – Fourth quarter of 2018](#), OECD, March 2019

⁴ [International comparison of the UK research base 2019](#), Department for Business, Energy and Industrial Strategy, July 2019

⁵ [European Innovation Scoreboard 2019, European Commission](#), June 2019

⁶ [New statistics show UK R&D investment rises in 2017](#), CaSE, March 2019

⁷ [Gross domestic spending on R&D \(indicator\)](#), OECD, 2019, doi: 10.1787/d8b068b4-en (Accessed on 15 July 2019)

⁸ [CaSE Briefing - The Economic Significance of the UK Science Base](#), CaSE, May 2014

⁹ [Using higher education innovation funding, The Sheffield Science Gateway](#), Royal Society of Chemistry, November 2016

¹⁰ [The 2018 EU Survey on Industrial R&D Investment Trends](#), Joint Research Centre, European Union 2018

¹¹ [From ring-fence to 2.4%](#), Campaign for Science and Engineering (CaSE), February 2019

¹² [Intramural R&D expenditure \(GERD\) by source of funds](#), Eurostat, March 2019

¹³ [Five point plan to boost science and engineering](#), Campaign for Science and Engineering, August 2019

¹⁴ [The Changing Nature of R&D: Building an innovation ecosystem for the data age](#), CBI, May 2019

¹⁵ [Business enterprise research and development, UK: 2017](#)

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- ¹⁹ [Challenge funds and flat-cash cores](#), CaSE, March 2019
- ²⁰ [University research to receive major funding boost](#), Department for Business, Energy and Industrial Strategy, July 2019
- ²¹ [Annual TRAC 2017-18: sector summary and analysis by TRAC peer group](#), Office for Students, May 2019
- ²² [Independent panel report to the Review of Post-18 Education and Funding](#), May 2019
- ²³ [Under-funded and under pressure: the finances of UK university chemistry and physics departments](#), Royal Society of Chemistry and Institute of Physics, April 2015
- ²⁴ [Science Horizons: leading-edge science for sustainable prosperity over the next 10-15 years](#), Royal Society of Chemistry, September 2019
- ²⁵ [UK funding from the EU](#), House of Commons Library, November 2018
- ²⁶ [Delivery Plan 2019](#), UK Research and Innovation, June 2019
- ²⁷ [Science Budget and Industrial Strategy](#), Royal Society of Chemistry, October 2017
- ²⁸ [Inspirational Chemistry for a Modern Economy](#), Royal Society of Chemistry, June 2015
- ²⁹ [UK participation in horizon 2020](#), BEIS, May 2018
- ³⁰ Survey of chemical sciences community on their views of European framework programmes, mobility, chemicals regulations