

8 November 2017

Submission to the House of Commons BEIS Select Committee's Inquiry into the impact of Brexit on UK business

The Royal Society welcomes the opportunity to submit evidence to your inquiry on the implications of leaving the European Union for British business. The Society is the National Academy of Science for the UK and the Commonwealth. It is a self-governing Fellowship of many of the world's most distinguished scientists working across a broad range of disciplines in academia and industry. The Society draws on the expertise of its Fellows and Foreign Members to provide independent and authoritative scientific advice to UK, European and international decision makers.

As your terms note, research and innovation are important to the health of all the sectors in scope for this inquiry. This submission aims to support your inquiry to take account of the cross-cutting importance of research and development and to share with you recent evidence and analysis that might be of interest.

Skills

Your inquiry's questions about skills overlap with the scope of the recent [call for evidence](#) from the Migration Advisory Committee on the role of EEA workers in the UK labour market. We encourage the committee to refer to the Society's written submission to the Migration Advisory Committee¹, which describes data on the role played by EEA workers in UK research and innovation, including how this varies across the UK and has changed over time.

Key findings include:

- The UK research workforce is truly international; 29% of academic staff in UK universities are non-UK nationals, with 17% coming from other EU countries and 12% from the rest of the world. The number of academic staff from other EU countries in UK higher education institutions (HEIs) increased by 94% from 2005/6 to 2016/17;
- HEIs and research institutes recruit globally as a matter of course in order to access the best talent. International recruitment of researchers is not as prevalent in industry, particularly for smaller companies, but is commonplace for particular roles. Some companies recruit international talent by drawing on the pool of foreign researchers already in UK academia. They therefore benefit, at one step removed, from the ability of the academic sector to recruit these workers.

In 2017, the Society has also published several pieces of commissioned research on the international mobility of the research workforce, which might also be useful to your inquiry. These are:

- A [literature review](#), produced by RAND Europe, synthesising existing evidence on the international mobility of the research workforce. This reports explores what is known about how, when, where and why researchers move around the world in support of their work;

¹ Royal Society submission to the Migration Advisory Committee's Call for Evidence on EEA workers in the UK labour market (2017) <https://royalsociety.org/~media/policy/Publications/2017/10-26-17-submission-MAC-call-for-evidence-EEA-workers-in-UK-labour-market.pdf> [accessed 8 November 2017]

- An original [survey of over 1,200 academics](#) in the UK, undertaken by RAND Europe, about their own international mobility;
- A [survey of national Academy Fellows and grant holders](#), commissioned from Opinion Leader, on both their international mobility and their international collaborations;
- A short, [Supplementary report](#), commissioned from RAND Europe, looking at the international mobility of researchers in industry.

Research & Development

The Society, with its sister National Academies, commissioned a report from Technopolis Group on [the role of EU funding in UK research and innovation](#). The report shows how EU funding is broken down across academic disciplines, institutions, industrial sectors, company sizes and regions of the UK, including those that are most and least reliant on it. It also shows how EU funding interacts with other funding sources in the UK. The main report is supplemented by 11 case studies, looking at particular disciplines, EU programmes, industrial sectors and regions. These show in detail the role of EU funding in particular contexts.

Key findings relevant to this inquiry include:

- Whilst EU funding makes up for a small proportion of total UK business expenditure on research & development (R&D), EU sources comprise 17% of the R&D for UK small and medium-sized enterprises (SMEs), which received over £650 million between 2007 and 2013;
- the report shows how funding from the EU that supports research and innovation is distributed across the UK. For the European Structural and Investment Fund (ESIF), which are mostly directed towards SMEs, Wales and Northern Ireland receive the most funding per person – at €125 and €60 respectively. This compares to €23 for the UK as a whole;
- the report estimates that for every €1 spent by the EU to support R&D, a further €0.74 is raised from other sources, meaning the €9.6bn received by the UK from EU Framework Programmes 2007-16 helped to generate a total R&D expenditure of €16.6bn.

This report followed three reports that the Society published before the UK's referendum on EU membership on the role of EU funding in UK research and innovation, which looked at the role of the EU in [funding UK research](#), in [international research collaboration and researcher mobility](#), and [the role of EU regulation and policy in governing UK research](#).

Regulation

UK research is governed and influenced by various EU policies and UK experts have helped shape the development of EU policies on issues from data protection, to clinical trials and the use of animals in research. As a result of the forthcoming Repeal Bill, Parliament will be scrutinising an unprecedented amount of secondary legislation. As it amends regulations that might affect research, transparent and thorough assessment of the possible effects on research must take place. This should draw on relevant expertise in the UK research community.

As the UK leaves the EU, it is critical that we identify areas of regulation where continued alignment with EU rules is most important for the UK. Where the UK chooses to align with EU rules, it is crucial that UK experts continue to be able to work with EU partners to influence EU policy development, where their expertise is relevant.

At the same time, a change in the UK's relationship with the EU provides an opportunity to develop new regulatory approaches. The UK is respected around the world for its proportionate approach to

regulating emerging technologies, and could take a leading position on international markets for some new products.

Genetic technologies are one example of where the UK could adopt a different approach to the EU, for example considering options including regulating the specific agricultural trait or product rather than the technology by which it is produced in plants and livestock animals, and taking into account likely benefits as well as hypothetical risks in regulatory decisions.

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