



House of Lords EU Home Affairs Sub-Committee: Brexit – EU Student exchanges and funding for university research

Response by the Wellcome Trust

21 November 2018

Summary

- EU Framework Programmes are the most successful multilateral funding schemes in the world, with prestigious individual grants and strong collaborative and industry funding mechanisms.
- The key issues for science should be addressed in negotiations on the future relationship or in a stand-alone science agreement, as soon as possible after a Brexit deal is agreed. This should include a commitment to UK associate membership of Horizon Europe, with access to all parts of the programme.
- The UK should maintain influence over the future direction of Horizon Europe by continuing its involvement in advisory and working groups as well as through European research organisations.
- The UK must avoid a no-deal outcome, with reliance on World Trade Organisation rules, as this would jeopardise the UK's relationship with its most important research partner.

Horizon 2020 and Horizon Europe

1. This submission focuses on the impact of Brexit on EU research. It does not comment on student-related programmes such as ERASMUS, as Wellcome funding begins at PhD level.
2. The current Framework Programme, Horizon 2020, ends on 31 December 2020. The legislation for its successor, Horizon Europe, is currently being negotiated between the European Parliament and European Commission. It is hoped that this will conclude before the European Parliament elections in May 2019.
3. In February 2018, Wellcome published [Building a strong future for European science: Brexit and Beyond](#), which was informed by consultation with over 200 organisations and individuals in the UK and Europe^{1,2,3}.
4. We found that there was strong consensus that the EU Framework Programmes are a highly effective way of supporting international collaboration. **EU Framework Programmes are considered to be the most successful multilateral funding scheme in the world.** Continued participation of the UK is essential to maintain a close research cooperation with the EU. This is important because the EU is the UK's biggest research partner. Over half of the UK's collaborative papers are with EU countries – more than with any single country⁴. Many of Wellcome's grantees and centres benefit from EU funding.

Form of association

5. A central strength of Framework Programmes is their ability to accommodate associated countries, including Israel, Turkey, Switzerland and the EEA. After Brexit, the UK could participate in European science in a range of ways – from third country collaboration on specific projects to associated country status spanning entire programmes. The annex sets out how these options would look under Horizon 2020 rules.
6. The legislation for the next Framework Programme, Horizon Europe, will set out the high-level terms of association. However, we recommend **securing Associated County status in Horizon Europe, which would give much-needed certainty to researchers and businesses in the UK and Europe**. We welcome Prime Minister Theresa May's statement at Jodrell Bank on full association to European science and innovation programmes, and the recognition that this will come with a cost⁵. **The UK must seek access to all pillars of Horizon Europe to maintain a strong and balanced science base**, ensuring the broadest collaboration with EU partners.

Funding returns

7. EU funding is critical to UK research, adding to the range of sources that support Britain's diverse research base. Currently 11% of grant income to UK universities comes from the EU⁶. The Wellcome-MRC Cambridge Stem Cell Institute reports that 17% of its funding in 2017 came from the EU.
8. The UK is currently a significant net beneficiary of Horizon 2020⁷. The Horizon Europe legislative proposal states that association must ensure "a fair balance as regards to the contributions and benefits" of participation in the programme⁸. This will likely make the UK a small net contributor in the future. Even as a net contributor, the benefits of Framework Programmes mean that this is a good deal.
9. **The benefits of EU funding go beyond the financial returns**. Applicants to Horizon 2020 compete with more people, on an international scale. This increased competition, compared to national schemes, raises standards. Wellcome has recently developed [case studies](#) which demonstrate how Framework Programme funding reduces duplication, helps to establish new disciplines and supports UK companies to engage in Europe⁹. It is also instrumental to the work of UK-based Professors Bart de Strooper and John Hardy who recently won *The Brain Prize*, the Lundbeck Foundation's prestigious annual award.

Influence

10. When the UK leaves the EU, it will no longer have a vote on Framework Programme legislation. However, until then, the **UK must continue to play a full and active part in shaping Horizon Europe** to ensure that the programme continues to support excellent science.
11. Associated countries have speaking rights on research-related committees, such as the European Research Area Committee and Research Working Party. Membership of these committees would allow the UK to input papers to the EU Competitiveness Council when it no longer has a seat.
12. **The UK should also maintain influence by continuing extensive involvement of UK-based researchers in advisory and working groups**, such as the European

Research Council (ERC) Scientific Council and Commission Expert Groups like RISE^{10, 11}. The UK currently holds 11% of places on Horizon 2020 Programme Committees, which are responsible for scientific decision-making.

13. Soft diplomacy will be increasingly important as the UK loses its formal routes of influence. **The UK should strengthen its offer of expertise and input into European organisations like Science Europe and the European academies**, which often have a formal role in EU governance or advice.

Collaboration beyond Europe

14. There would be major cost and logistical challenges to the UK seeking to set up bilateral schemes to replace the depth of collaboration in the Framework Programmes. Framework Programmes are at the heart of national spending plans across Europe and beyond, limiting budget for additional deals.
15. Involvement in Framework Programmes does not stop collaboration elsewhere. The UK has a long history of international partnership beyond Europe which should continue. However, creating deeper relationships beyond the EU pose challenges. The EU and UK share important values that underpin a common approach to research, which is not necessarily the case elsewhere. Further, the scale of research investment in the USA or China far outweighs that of the UK. The UK could not expect to have a significant impact on research funding strategy in these countries.

Avoiding No Deal

16. The key issues for science and innovation should be addressed in negotiations on the future relationship or in a stand-alone science agreement as soon as possible after a Brexit deal is agreed. **This should include a commitment to UK participation in Horizon Europe as an associate country**, along with provisions for full researcher mobility and cooperation on pre-competitive research regulation. This would mitigate uncertainty and address the decline talent coming to the UK. In the last year, the proportion of EEA researchers applying for Wellcome's early career schemes fell by 14% while the Wellcome Sanger Institute saw a near 50% drop in postgraduate applications from EU nationals.
17. **The UK must avoid no-deal, with reliance on World Trade Organisation rules.** A no deal outcome would leave a vacuum in terms of the UK's relationship with its most important research partner. There would no longer be an agreement on ongoing UK participation in the Framework Programmes, or cooperation on regulation affecting research, such as the two in five UK clinical trials that are also running at EU sites¹².

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Annex – UK participation in Framework programmes under a continuation of the Horizon 2020 legislation.

UK as Associated Country in EU Framework Programme

UK as Industrialised Third Country in EU Framework Programme, plus UK domestic investment

According to Horizon 2020 rules, which may change in Horizon Europe legislation

Access	UK researchers can access all funding streams from the Framework Programme in the same way as those from Member States.	UK researchers can only access EU funding from restricted themes agreed in advance.
	<p>UK-based researchers from anywhere in the world can access prestigious funding such as European Research Council or Marie Skłodowska-Curie actions, and lead projects.</p> <ul style="list-style-type: none"> • 22% of ERC grant holders choose to work in the UK. • The UK is the top destination for Marie Skłodowska-Curie Actions¹³. 	<p>UK-based researchers cannot apply for ERC or MSCA funding. British researchers could only apply if they move to the EU or an Associated Country. Researchers from overseas wanting to base in the UK would have to rely on UK funding sources. To continue to attract international talent to the UK, domestic schemes to replicate ERC and MSCA would need to be open to researchers based in the UK from anywhere in the world.</p> <p>UK researchers could not lead projects funded through the Framework Programme.</p>
Talented Individuals	Gives comprehensive access to EU joint infrastructure, which the UK cannot provide alone. The UK would have input to infrastructure planning, and like Norway could continue to lead infrastructure. The UK could be involved in the ESFRI executive board for infrastructure planning.	No access to EU joint infrastructure. There may be the potential for researchers to negotiate ad-hoc access for a fee. EU researchers already face long queues to access some infrastructure, it is likely UK researchers would be a lower priority.
	However, the EU's roadmap for research infrastructure will dictate where funding is spent.	The UK could invest more in non-EU infrastructure like CERN or other partnerships, assuming money not spent on EU research was still available.
Infrastructure	The method for calculating costs are dictated by the rules of association, laid out in the relevant Framework Programme regulation. The final sum is negotiated and agreed bilaterally with the EU ¹⁴ . Costs fluctuate in relation to GDP and changes to the EU budget. There may be small annual changes, and significant increases with each Multiannual Financial Framework, every seven years.	Funds are allocated in advance to specific themes, guaranteeing outgoings.
	<ul style="list-style-type: none"> • Our modelling suggests that if Britain's returns are similar to Horizon 2020, the UK will become a small net beneficiary or small net contributor. 	<ul style="list-style-type: none"> • Canadian participants cooperate in Health, Computer Technology and Food, Agriculture and Fisheries, and Biotech.
Programme Cost	Funds go into a common pot for the whole programme, and are awarded by application quality. This means that the potential returns are unknown and variable.	As costs are agreed in advance, they can be linked directly to expected (or capped) financial returns.
	<ul style="list-style-type: none"> • The UK has received €4bn from Horizon 2020 so far, 14.8% of the total. Only Germany has done better¹⁵. 	<ul style="list-style-type: none"> • Canadian law only allows them to pay into international multilateral schemes where returns are higher than expenditure. They can fund domestically in parallel to support collaboration.
Financial Returns		

References

- ¹ <https://wellcome.ac.uk/sites/default/files/building-strong-future-european-science-brexit-beyond.pdf>
- ² <https://wellcome.ac.uk/sites/default/files/wellcome-brexit-briefing-for-policymakers.pdf>
- ³ <https://wellcome.ac.uk/sites/default/files/consultation-on-future-eu-uk-relationship-on-research-and-innovation.pdf>
- ⁴ <https://royalsociety.org/~media/policy/projects/eu-uk-funding/phase-2/eu-role-in-international-research-collaboration-and-researcher-mobility.pdf>
- ⁵ <https://www.gov.uk/government/speeches/pm-speech-on-science-and-modern-industrial-strategy-21-may-2018>
- ⁶ www.universitiesuk.ac.uk/facts-and-stats/data-and-analysis/Documents/patterns-and-trends-2017.pdf
- ⁷ <https://royalsociety.org/topics-policy/projects/uk-research-and-european-union/role-of-EU-in-funding-UK-research/uk-and-eu-research-funding/>
- ⁸ https://ec.europa.eu/info/designing-next-research-and-innovation-framework-programme/what-shapes-next-framework-programme_en
- ⁹ <https://wellcome.ac.uk/sites/default/files/brexit-and-beyond-impact-case-studies-201810.pdf>
- ¹⁰ <https://erc.europa.eu/about-erc/erc-president-and-scientific-council>
- ¹¹ https://ec.europa.eu/research/openvision/pdf/rise/rise_members.pdf#view=fit&pagemode=none
- ¹² Communication from the Medicines and Healthcare products Regulatory Agency
- ¹³ http://www.cancerresearchuk.org/sites/default/files/uk_and_eu_research_full_report_v6.pdf
- ¹⁴ Article 7 https://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/fp/h2020-eu-establact_en.pdf
- ¹⁵ <http://h2020viz.vinnova.se/#/country?countryNames=%5B%22United%20Kingdom%22%5D>