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Redefining a Post-Brexit EU-UK Partnership in Research and Higher Education

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Executive Summary

- > Continuity and certainty are crucial to excellent scientific research, which builds on decades of fruitful relationships and networks between European partners.
- > Following the withdrawal of the UK from the Union in March 2019, the eligibility of UK researchers and universities to access EU research funds will be at risk.
- > Either formal association, or an arrangement of similar ambition in the area of research and innovation is crucial to maintain continuity.
- > Should there be no agreement, additional UK research funding must be agreed upon at a national level and match any projected EU increase for the 9th Framework Programme (2021-2027).
- > UK government funding should be ring fenced and remain available regardless of potential changes in government.
- > Because cross-border collaborative applications to EU grants are time consuming, any further delay is damaging to the wider European research and science community as well as to the development of the European Research Area.
- > An urgent solution is of the essence, as an EU-UK partnership in research and higher education is already behind schedule.

The complexity of the intricate relationships linking European Union (EU) member states as well as the EU institutions and their member states appears to have been misunderstood in the United Kingdom (UK) at the time of the June 2016 referendum. If information is indeed power, its current unavailability is a concern, given that the UK government's plans to remain firmly embedded within the European Research Area (ERA) or the Erasmus Plus programme are largely unknown to the UK's 162 higher education institutions (HEIs) in receipt of public funding (2016-17). In what can be described as a game of high politics between the EU and the UK government, the fate of research and higher education collaboration will be sealed by high-level inter-governmental agreements decided behind closed doors.

This policy brief argues that unless a (re)new(ed) EU-UK partnership in research and higher education is signed off as soon as possible, the UK's science and higher education sectors will suffer from a lack of connectivity to EU partners, whether with regard to research collaboration or mobility. More uncertainty and delays will only further damage the research output of all EU universities, and diminish mobility opportunities for students and staff, while isolating the UK from its region. In order to prevent such an unfortunate scenario for British and European science, agreeing as soon as possible - and independently from the broader, final high-level Brexit negotiations - an EU-UK research and higher education deal, including at the very least 'associate country' status for the UK, is of the essence. There are 16 associated countries to the current research framework programme, Horizon 2020 (2014-2020), including Israel, Norway and Switzerland. Association is a mechanism whereby legal entities (for example universities) from associated countries can participate under the same conditions as legal entities from EU member states. It should be noted that association to Horizon 2020 takes place through the conclusion of an International Agreement between the EU and the associated partners, and that under the current association rules, an associated member has no voting rights (Papatsiba & Highman 2017: 2).



Eligibility of UK partners for the EU research & innovation programmes

The intertwined relationships between EU members and EU institutions are particularly evident in research and higher education, where the UK is a net beneficiary of the EU Research & Development (R&D) budget, with several of its universities ranking among the top performers (see Table 1). Articles 165 and 166 of the Treaty on the Functioning of the European Union give power to the EU to operate as a major player in supplementing and supporting EU member states' higher education and vocational training policy. With regard to research and technological development, Articles 179-190 give the EU a steering role in adopting and implementing multiannual framework programmes.

Table 1: Number of project participations and EU contribution by higher education institution

	Legal name	EU contribution	Project participations
		(EUR)	
1.	University of Cambridge	225,841,125	361
2.	University of Oxford	222,553,340	337
3.	University College London (UCL)	216,453,342	342
4.	Imperial College London	158,775,353	263
5.	Delft University of Technology	142,836,333	238
6.	University of Copenhagen	142,812,416	295
7.	Catholic University of Leuven (KU Leuven)	138,331,426	262
8.	University of Edinburgh	137,962,066	209
9.	Swiss Federal Institute of Technology in Lausanne (EPFL)	130,526,304	206
10.	Swiss Federal Institute of Technology in Zurich (ETH Zurich)	108,202,036	213

Source: European Commission, *Participant Portal H2020 Projects*, 27 February 2018.

The potential damage is not limited to those top Horizon 2020 performers. They are only the tip of the iceberg. The percentage of EU research income as a proportion of total research income received is particularly alarming at some mid- or lower ranked universities, with more than 40 institutions with dependency ratios above 20 per cent (see Table 2, Technopolis 2017: 20). While the 'Oxfords' and 'Cambridges' may be able to soften the blow thanks to their recognised international brands, this will certainly not be the case for all UK universities. A much larger segment of the UK higher education sector is at risk, one whose graduates are under-represented in Westminster and within the UK government, and it is the latter that has most to lose.

Table 2: The 10 HEIs that received most income from EU government bodies as a proportion of total research income, in £ thousands

1.	Goldsmiths College (University of	£3,371	61%
	London)		
2.	Middlesex University	£2,532	51%
3.	University of South Wales	£2,271	41%
4.	Birmingham City University	£1,033	40%
5.	Anglia Ruskin University	£1,324	40%
6.	Aston University	£5,589	39%
7.	Bangor University	£8,306	38%
8.	Sheffield Hallam University	£2,811	35%
9.	University of Wolverhampton	£1,040	35%
10.	Coventry University	£3,271	33%

Source: Technopolis 2017.

The European Commission has made it clear that it will not fund UK-based researchers or universities and research organisations beyond the exit date of the UK in March 2019, hence before the end of Horizon 2020, should no deal have been reached. Since this a potential outcome, it is worth pondering on the following: "if the United Kingdom withdraws from the EU during the grant period without concluding an agreement with the EU ensuring in particular that British applicants continue to be eligible, you will cease to be eligible to receive EU funding (while continuing, where possible, to participate) or be required to leave the project on the basis of Article 50 of the grant agreement" (Horizon 2020 Participant Portal website, added on 06/10/2017).

Although the UK Treasury has committed to underwrite funding for approved Horizon 2020 projects applied for before the UK leaves the EU in March 2019, research collaboration relies on interaction, consistency and trust forged over long timeframes. While evidence of UK partners being asked not to join or leave current research consortia is either anecdotal or currently not available, there is evidence that UK coordinating or leadership positions are jeopardised.

All this means that the UK has less than a year to negotiate and ratify an international agreement or treaty with the EU in higher education, research, and innovation, in order to remain eligible for EU research funding, research collaboration and networking for the rest of Horizon 2020 and its successor programme.

Erasmus Plus

Beyond research and innovation funding, Erasmus Plus, the EU's all-encompassing programme to support education, training, youth and sport in Europe (2014-20), with an allocated budget of €14.7 billion, provides a successful framework for student and staff mobility, and offers opportunities for UK universities to increase their connections and competitiveness. The enrichment of the overall student experience that is provided by Erasmus Plus is difficult to quantify but vital to the diversity of UK

campuses, as is the added value of better language skills. Alternative mobility schemes will have to be devised, and while 'going global' sounds appealing, it should not be assumed that the demand for it exists within the UK-based student body. Already now, intra-European mobility remains a privilege for only a minority because of the associated costs. Future opportunities in Australia, New Zealand and North America will be more expensive, and will not benefit from EU financial support towards the cost of living abroad.

Some UK universities are already taking it onto themselves to create small informal European networks for enhanced research and mobility collaboration, and putting aside mobility scholarships, but many universities do not have the resources to single-handedly replace a pan-European mobility scheme of the likes of the Erasmus Plus programme with their own initiatives. Exchange agreements are usually based on the principle of reciprocity, and students on both sides of the exchange benefit from EU-funded monthly allowances (around £250-£300), on top of tuition fee waivers. Should the UK not participate in Erasmus Plus, it will be a case not only of funding outgoing UK-based students, but of finding ways to enable EU-based students to still somehow access similar financial support in order to study at a UKbased university. It is unlikely this will be funded by the UK government.

In short, Erasmus Plus offers a supportive framework to nurture exchanges, with its own substantial budget enabling for a reciprocal flow of students and for the administration of these exchanges. Without such financial support, UK universities will have to draw from their own resources, both financial and human, to recreate similar arrangements at a higher cost.

Avoiding falling behind the EU's research spending

The European Commission's "Investing in the European future we want" (2017) clearly recommended to dramatically increase the budget of the future 9th Framework Programme for research and innovation, the successor seven-year programme to Horizon 2020. While the High Level Group chaired by former Director General of the World Trade Organisation and European Trade Commissioner Pascal Lamy recommended the research and innovation budget be doubled (to 160 billion EUR), it also identifies the absolute minimum requirement for the next seven-year research and innovation budget to be in the region of at least 120 billion EUR in current prices, which is equivalent to an overall increase of 66.7%. The report explains that this is because the future EU research budget should maintain the average annual growth rate of Horizon 2020 (the compound annual growth rate is around 6.5% in current prices), taking the budget foreseen for the programme's final year as a starting point (expected to be EUR 13 billion in 2020).

The UK government has pledged to increase investment in research and development by 20% by 2020-2021 (Her Majesty's Government 2017a: 29). Even if this promise is upheld, it falls short of the expected increase in the EU research budget, as explained above through the compound annual growth rate. There is strong political momentum behind the recommendation of the High Level Group, as demonstrated through the Rome Declaration that was signed by the leaders of 27 member states. The likelihood of the first recommendation being implemented is high, and if that is not the case, the absolute minimum requirement will surely be respected. It should be noted that Theresa May was the only EU leader that did not attend the commemoration of the 60th anniversary of the Treaty of Rome, which produced the Rome Declaration containing a reflection on the state of the EU and the future of the integration process.

Research is a hugely costly enterprise, and without substantial investment from the part of the UK government, both the quantity and quality of UK research outputs are at risk of falling behind, should the UK not succeed in maintaining access to EU research funds, and perhaps even more crucially in the long-term, access to EU research networks.

Association status for the UK

What can be done to allow the UK to participate in the ERA and Erasmus Plus? Association to the Framework Programmes has been used by the EU as an instrument of soft power, and has previously focused primarily on capacitybuilding in the European neighbourhood, targeting first and foremost European Neighbourhood Policy or candidate countries, with a few notable exceptions (Iceland, Norway and Switzerland). The UK clearly does not fit in either category and because of its sheer size, high success rate in winning awards, and refusal to recognise the free movement of people, a mutually beneficial and creative solution for collaboration must be found. This agreement must recognise the positive contribution of British research to European science, while acknowledging that European science is not 'business as usual', and that the UK cannot simply expect or seek to secure a deal that would enable it to make a substantial return on its investment.

Opening up 'association status' with global trading partners of a similar level of excellence was identified as an objective to be pursued by the High Level Group chaired by Lamy. However, at present, based on the lack of information provided by both the UK government and EU negotiators, it is impossible to predict if the UK and the EU are on a trajectory to become global trading partners. In fact, at least in the short term, quite the contrary. In a leaked memo said by Politico to have been provided to Chief Brexit negotiator Michel Barnier for a "preparatory discussion" on the

"framework for the future relationship", it is revealed that the EU is of the opinion that because of the UK's rejection of the European Court of Justice jurisdiction and issues around "regulatory autonomy", it cannot be considered a "compatible" fit as a close trade partner (De la Baume & Mishcke 2017). The further emerging crisis surrounding the European Commission's February 2018 Draft Withdrawal Agreement proposal for the Northern Ireland border will only mean further discussions, delay and more uncertainty. Hence association to the EU research and innovation programmes on the basis of being recognised as global trading partner is facing considerable bottlenecks. As such, because of the sui generis nature of both the UK's departure and its future relationship with the EU, it may be possible that existing framework agreements for research and innovation, such as association, are unhelpful. Hence, looking beyond existing partnerships and models may become a more useful exercise than trying to replicate existing arrangements. However, this demands frank and transparent discussions from both sides, a capacity to look beyond national self-interest and domestic point-scoring, as well as an ability to depart from a monolithic standpoint and engage in creative policy thinking.

In addition, the UK, by being geographically speaking a European country, is not necessarily the primary target of the Union's new policy to open European research excellence to the world, which seeks to expand the EU's soft power via science globally. Indeed, the new proposed policy is considered a remedy to the current narrow geographical basis of EU research and innovation programmes, and explicitly justified as a means to widen the currently regionally biased scope of research and innovation excellence, so that it is "not confined to a particular part of the world" (European Commission 2017: 21), that currently being the greater European region and its immediate neighbourhood. Canada and Australia were explicitly mentioned as the partners of choice under this new EU strategy. Opening European research excellence to the UK would only further emphasise the current regional bias of EU research and innovation programmes.

Conclusions and recommendations

The "ambitious and close partnership with the EU" referred to in the UK's government "Collaboration in science and innovation: a future partnership paper" (2017: 8) should be agreed upon immediately, providing certainty for the higher education sector. Applications for a Horizon 2020 grant are time-consuming. The British Academy has estimated that many collaborative research grant applications in the arts and humanities and the social sciences can take more than 18 months to complete (2017). Therefore, an agreement should have already been reached six months ago. Just like business, research and higher education operate in a space where certainty is vital.

Nonetheless, certainty in the UK is today a scarce if not inexistent resource, where nothing is decided until everything is. Both the quantity and quality of UK bids for EU research grants will suffer because of the time restraints that will *de facto* be placed on the British academic community. Moreover, the enduring lack of certainty regarding principal investigator status for UK researchers will lead to fewer applications being made. It should be emphasised that this is not a prediction or an economic analysis, it is already the reality. The proportion of EU projects coordinated by British research teams fell sharply after the referendum, from 16.9% in 2016 to 12.6% of all funding in 2017, dropping behind Germany (Matthews 2017).

The UK's "future partnership paper" of September 2017 acknowledges that associated countries have no voting rights over the thematic directions of the EU Work Programmes nor can they shape funding allocation rationales. There is a need for more creative policy thinking on both sides to see how the relationship can be mutually beneficial, and not be a case of cherry-picking which sectors have the highest return on investment for one side. The UK has been a strong advocate for funding instruments based purely on excellence. Without the UK, those member states currently supporting an approach focusing only on excellence will have lost their most vocal supporter. However, should UK higher education institutions suddenly be ineligible to compete for EU research funds, those in other member countries could see an increase in their success rate for EU grants.

EU and UK HEIs need to be further included in Brexit-related negotiations, as the nature of a future EU-UK relationship in research and science can only be properly implemented with the support and input of both the academic and professional staff working in HEIs, while also including the student voice. Research outputs ultimately generate societal benefits while contributing to solving global societal challenges. Should a deal be negotiated behind closed doors, without a concerted consultation of the relevant stakeholders beyond politicians policy-makers, it would face an immediate implementation gap detrimental to research, science and society. In the UK, where British society still remains divided over Brexit, the government is keen to distance itself from its universities, perceived to be bastions of implacable remainers. However, this attitude will cripple the government's capacity to achieve a successful deal, and further undermine the value of research and higher education in the UK, and the people who make these sectors the success stories they are today.

Without a substantial UK contribution to the EU's R&D budget, continuing access of UK universities to EU research grants could face legitimacy concerns, at a time where competition between HEIs is growing and their role in driving national economies is key. It will ultimately be a matter for

EU member states, and the EU taxpayer, to decide whether they wish to continue contributing to funding research conducted outside the EU, and enable the 'Oxfords' and 'Cambridges' to carry on remaining the most successful EU grant recipients. Without a substantial UK contribution, it is unlikely this will become a popular venture with European publics, as these universities are already the wealthiest of all European public universities. However, whatever their

benefits, 'payments' to Brussels are hugely unpopular with the current UK government, and will be scrutinised and negotiated at great lengths, losing more valuable time. Research and higher education are thus becoming an increasingly threatened hostage of political negotiations. In the meantime, cutting-edge learning, research, and science, for which the economic and societal benefits are evident, are losing out.

Further Reading

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