

Review of the Balance of Competences between the UK and the EU: Research and Development

CBI response to the call for evidence

The CBI welcomes this opportunity to respond to the Government's call for evidence on the balance of competences in the area of research and development. The CBI is the UK's leading business organisation, speaking for some 240,000 businesses that together employ around a third of the private sector workforce. With offices across the UK as well as representation in Brussels, Washington, Beijing and Delhi the CBI communicates the British business voice globally. CBI members occupy the top 17 places in the UK section of the 2011 EU Industrial R&D Investment Scoreboard – i.e. among UK-based companies they invest most in R&D. They span sectors including pharmaceuticals, telecommunications, software, aerospace, defence, oil & gas, and food. Many other CBI members which are not headquartered in the UK also invest heavily in R&D in this country.

EU action in research, technological development, innovation and space has benefited the UK, but there is substantial scope to improve the picture. In particular:

- EU action has had a positive impact for the UK on research, technological development, innovation and space, primarily through components of the Framework Programme.
- However, the potential for positive impact has been constrained, partly because of the UK's failure to develop a suitable infrastructure to secure the maximum benefits
- There is scope for improvement in the EU's operations, and risks to be avoided
- There should be a coherent UK strategy to increase the impact of EU action in stimulating innovation by business in the UK

EU action has had a positive impact for the UK on research, technological development, innovation and space, primarily through components of the Framework Programme

The principal instrument of EU support for R&D is the 7th Framework Programme (FP7) 2006-13 which from 2014 will be replaced by an eighth and larger Programme known as Horizon 2020. The UK has received €4.9bn from FP7, equivalent to 15.1% of total FP7 funding. Only Germany receives more (€5.3bn, or 16.2%). France receives €3.7bn, equal to 11.5%. Moreover the UK proportion has been steadily growing while those of Germany and France have been declining. The UK now receives a



proportion of funding which is greater than would be implied by the ratio of its GDP to the aggregate GDP of the EU as a whole.

Higher education institutions have directly benefited more than industry from FP7, and there has been a decline over the past two decades in the level of business participation in successive Framework Programmes. This pattern for the EU overall is even more marked in the UK, where universities account for more than 60 per cent of all UK participations and receive over 70 per cent of funding. UK business participation in FP7 is 5 per cent lower than business participation across the EU. SMEs receive only 12.6 per cent of the UK total. Those businesses which have successfully participated in Framework Programme activities frequently report that the non-financial benefits, through developing networks with European suppliers, customers, competitors and knowledge providers, tend to exceed the purely financial impact. But a business which succeeds in accessing EU funding can thus be enabled to resource projects which could not otherwise be sustained, including partnerships with universities or other research institutions. In the case of a business which is the UK arm of a multinational company headquartered outside the EU this can add to the attractiveness of the UK as a potential location for future R&D projects.

Businesses which have been involved with EU R&D support programmes have reported that this has both benefited existing relationships and helped in developing new ones, with partners within the EU and frequently also in other countries. European Technology Platforms are a particularly effective means of facilitating collaborative relationships within Europe. The European brand can also give an additional guarantee in dealings with parties in non-EU countries.

Certain EU actions have a particularly strong beneficial effect, including Joint Technology Initiatives such as the Innovative Medicines Initiative (IMI), the Clean Sky programme, as well as some European Technology Platforms. Other actions which enjoy a good reputation include the fully funded Industry-Academia Partnerships and Pathways (IAPP) of Marie Curie Actions, and EUREKA's Eurostars Programme for research-performing SMEs.

The concept of a European research area (ERA) has served a useful function in stimulating thinking about the need to facilitate mobility of researchers across Europe and the need for critical mass in some scientific infrastructure. The concept would benefit from greater clarity, particularly in terms of concrete objectives, the obstacles to achieving them, and how these obstacles are to be overcome.

In addition to the Framework Programme, an important source of funding for innovation by businesses in the UK is the Structural Funds, particularly the ERDF. Reliable statistics on the level of this support are apparently not available, but it is likely that the disbandment of the RDAs in England, which were able to provide match funding for ERDF support and had expertise in securing it, has diminished the volume and effectiveness of this major stream of innovation support. The emphasis the EU has placed on 'smart specialisation' should drive the UK to take action at a national level to fill this void in the English regions, but it is too early to judge whether the UK will be successful in meeting the challenge.

A number of other EU actions can have a positive impact on research and innovation, including the free movement of people and some forms of standard-setting – although businesses competing in the global marketplace need to comply with standards across international markets and European standards must therefore avoid creating obstacles to this. Other initiatives which are potentially beneficial have lacked

visible impact, such as the Risk-Sharing Finance Facility and Risk Sharing Instrument. Others, such as plans for Pre-Commercial Procurement, are at too early a stage of development for their impact to be assessed.

However, the potential for positive impact has been constrained, partly because of the UK's failure to develop a suitable infrastructure to secure the maximum benefits

The potential for positive impact has been constrained for two kinds of reason, namely those associated with the EU's administration and those arising from the UK's approach to securing the best possible outcomes from a national perspective. In the former category are the complexity, inflexibility, administrative burden, and slow decision-making which businesses report among the challenges of participation. Planning for Horizon 2020 has attempted to take some of these concerns on board, and some may be unavoidable, but they currently remain obstacles to effective impact, particularly through their deterrent effect.

The EU's use of policy instruments at its disposal has benefited researchers more than innovators across Europe, but particularly in the UK. Researchers tend to be based in universities or research institutes which benefit from internal and external infrastructure designed to secure funding to support research. Innovation is set in a more complex landscape, but typically involves business investment to meet market conditions as well as application of useful knowledge – which may be new knowledge, or existing knowledge applied in an innovative way. For businesses which are large and have an appreciation of the benefits offered by EU R&D support schemes it may be viable to dedicate resource and expertise to navigating the system, but for many others the complexity of the diverse schemes can have a bewildering or even deterrent effect. The UK lacks an effective national strategy and institutional infrastructure to overcome the obstacles to ensuring that maximum benefit is secured for innovators, though support for researchers is well organised, particularly through the UK Research Office (UKRO) in Brussels.

Some instances of the application of state aid rules may have had some negative impacts on national measures which could support innovation in the UK – but the fact that other EU member states are (more or less) equally constrained is a benefit, by providing a level playing field. However, there is a widespread perception that the UK authorities are more zealous than those of some other member states in applying the rules and sometimes over-apply them. There is a parallel perception that the UK government is less vigilant than it could be in raising concerns over abuse when it occurs in other countries.

There is scope for improvement in the EU's operations, and risks to be avoided

The most helpful measures the EU could take would be to make further progress in simplifying and accelerating its procedures, reducing the administrative burden on participants, increasing the nimbleness and flexibility with which it acts, and increasing the transparency and visibility of its programmes.

The EU goals of mobility for researchers are very positive but rules and criteria for hiring can be complex and difficult. More flexibility here could increase the attractiveness of mobility schemes to industry.

The EU should also give more attention and support to regulatory science which is an important emerging trend, for example as defined by the US FDA and the CFDA in China. It is important to look at regulatory science separately as, by definition, it is neither pure discovery science nor innovation but rather essential supporting science to underpin or speed up regulatory decisions.

If the overhead reimbursement rates for the new multiannual programme do not take adequate account of costs and incentives for participating organisations, including intermediate research and technology organisations, there is a danger that that business participation will be adversely affected. Universities' concerns regarding the ERDF have been jointly raised by PraxisUnico, AURIL and ARMA, and failure to address these concerns would diminish the ability of universities to contribute to economic growth.

There should be a coherent UK strategy to increase the impact of EU action in stimulating innovation by business in the UK

Businesses with experience of EU R&D funding programmes have a positive view of the effectiveness of the approach taken to identifying industry needs through roadmapping discussions and other events. But the administrative procedure can be a deterrent to many, and too little is done in the UK to provide support and promote awareness of the possible benefits of engaging.

The needs of UK universities are well served by the UK Research Office (UKRO) in Brussels, and they also benefit by their respective internal resources dedicated to securing European funding. Very few businesses in the UK have or could justify such dedicated resources, and there is no business counterpart to UKRO. The situation contrasts with that in Germany, where the funding model of the Fraunhofer institutes explicitly incentivises them to secure funding from EU programmes. This model could be adapted for UK conditions, beginning with the new Catapult centres. In addition, the network of National Contact Points for sectors and programmes and the European Enterprise Network are variable in quality and lack coherence and visibility. The picture is particularly patchy in England. There should be a coherent initiative to identify and implement measures to redress the imbalance of support for innovators. Failure to do so puts business in the UK at a disadvantage compared with its counterparts in some other parts of Europe.

The UK should also use its influence to seek greater alignment between EU funding (and other support mechanisms) and the areas which are of greatest relevance to the UK, including the eleven industrial strategy sectors and the 'eight great technologies'. There should be greater coordination between the Research Councils, the Technology Strategy Board, the relevant sector councils and other bodies in determining how best to pursue this objective.

As stated above, the ERDF is also an important source of innovation support for business, particularly smaller and mid-sized businesses. The English RDAs had expertise and resources available to access this support, and their disappearance has led to a decline in the effectiveness of UK efforts to secure maximum benefit from the Structural Funds. The problem may be less marked in devolved administrations, but it should be a high priority of the UK government to reverse this decline in so far as it affects English regions.