

GOVERNMENT REVIEW OF THE BALANCE OF COMPETENCES BETWEEN THE UNITED KINGDOM AND THE EUROPEAN UNION

Call For Evidence: Research and Development May 2013.

Response from Sheffield Hallam University.

30 July 2013.

The University has actively been involved in the consultation and development relating to the new programme, working with the Sheffield City Region Local Enterprise Partnership and stakeholders in the preparation of the Draft European Structural and Investment Strategy and the Sheffield City Region Growth Plan. In addition the University has been working with Yorkshire Universities, UUK, and government agencies. Information has been gathered from a number of national and regional briefings and from over 15 years successful experience of delivering European projects, including ERDF, ESF and Framework programmes, has informed this response.

This response is based on Sheffield Hallam University experience of working with regional funding programmes, particularly ERDF, and the EU Framework / Horizon 2020 programmes, it also considers links with Government funding and national programmes.

*1. Where has EU action had a **positive impact** for the UK on research, technological development, innovation or space? What evidence is there for this? Has EU action encouraged national action in any areas?*

Article 180 in the Treaty for the EU established the principle of a framework programme, to enable research, technological development, demonstration and researcher mobility at a European level. The Framework programmes have been running since 1984; budgets for the first three programmes were below €10bn, for the next three programmes below €20bn, and it is only really with the advent of FP7 and the new Horizon 2020 programme that budgets have risen significantly. Framework Programmes have provided opportunities for UK organisations to gain funding to undertake collaborative research with various types of partners both within and outside of the EU.

One of the major advantages of the Framework Programme is that it has allowed organisations from across Europe to participate in projects, knowing that funding from a single source was guaranteed for all partners. Without this, as an HEI, the only methods for pan-European collaboration would be for organisations in individual member states to apply for funds from their own national funders, and then hope that both (or multiple applications) would be funded. Obviously this would mean that national funding priorities, across Europe, would then be required to align.

From a regional perspective, ERDF funding has opened up opportunities for SMEs to engage with the University at little or no cost to the client company. The outcomes of the engagement are demand creation and understanding of the University's offer by an important client group in the Sheffield City region and wider Yorkshire region, as SMEs are an important part of regional economic activity. Interventions can be connected directly to outputs such as economic growth as demonstrated through GVA and job creation.

The connections between ERDF funded activities and research and innovation are less clear and consistent. At Sheffield Hallam the delivery of innovation services to SMEs is strongly rooted in research centres with a foundation of research excellence. The service and outcomes required by SMEs is not consistently technologically advanced or intensive. A

transformative intervention with some SMEs, can be for example a simple business support, HR or marketing intervention.

ERDF interventions are on the whole positive, for example, a £3m project at Sheffield Hallam, Innovation Futures, which included £1.5m of ERDF, has recently generated around £15m increased GVA over three and a half year period through interventions with 119 SMEs. Outcomes can also be more research and innovation focussed through the creation of opportunities for SMEs to participate in Knowledge Transfer Partnership programmes. The benefit and impact of national ERDF programmes are less visible and consequently are less clear as previous programmes and it appears also the proposed 2014 - 20 programme are primarily regional or city region in focus. National opportunities are welcome in the HE sector, for example in the use of ERDF in the support of Knowledge Transfer partnerships or Innovation Voucher programmes, particularly if they can be matched centrally at Government level.

*2. Where has EU action had a **negative impact** for the UK in these fields? What evidence is there for this? Has EU action prevented potentially useful national action in any areas?*

From an institutional view point, we cannot comment on whether EU action specifically in relation to research and technological development has affected these fields in the UK. However, EU regulations (and the requirements for national law to adhere to these) do affect how R&D is conducted on a day to day basis in the UK. A recent example would be the changes implemented by HMRC in the exemption that allows for Research supplied between eligible bodies to be "exempt from VAT"; this change has been prompted by European Commission regulations, and will affect how, and whether, Universities at a national level, work with each other to undertake research i.e. whether in the current economic climate, they will still be able to afford to do this as freely as before the change.

There is also the question of whether if the UK was not paying into the EU budget, whether the portion of this funding designated as for R&D could not be used equally as productively for national benefit. It is known that only 1.79% of UK GDP is spent on public and private R&D, compared to an EU-27 average of 2.03%.

From a regional perspective, EU interventions cannot be identified as having a direct negative impact on opportunities. However there is a possibility that the complexities of guidance and processes, the restriction of investment criteria can promote, underachievement, inhibit and restrict activities and lead to missed opportunity and reduced impact. At an institutional level, there is a high degree of caution in engaging with ERDF type programmes. The primary reasons being;

- The complexity of guidance and the often inconsistent interpretation of funding advice results in ERDF funded projects being high risk and low viability at University level.
- Ineligibility of income from SMEs promotes a dependency culture amongst the client group.
- Restrictive impact of regional boundaries, limits client engagement and creates barriers for sector engagement and national programmes..
- A general concern that despite the good intention of partners regionally and nationally in developing flexible and responsive programmes, this objective is not compatible with audit requirements, and regionally based administrative and programme management functions.
- The inconsistency of systems and audit processes across national government, European regional funding and Horizon 2020 programmes creates barriers to coordinated and integrated opportunities.

In closing this section, the point about integration and the challenges of administration, audit and compliance is equally relevant to linking higher level skills, research, PhDs and industry, where the lack of a consistent approach between, ERDF ESF and Horizon2020 is potentially a significant inhibiting factor in delivering, applied and collaborative research in industry, which has potential to generate significant impact.

A further example is the approach to overheads on ERDF and Framework programmes. Universities have a long experience of working with the Framework Programmes where the contrast with the EU S & I funds is stark. The process and overhead arrangements are far simpler, straightforward and easy to understand. Why can't member states adopt these operating systems?

3. How and where has UK engagement with partner countries or international bodies, both within and outside the EU, been helped or hindered by EU involvement?

Again, the existence of the Framework Programme has provided a method for engaging with EU and international partners. EU agreements for scientific and technological cooperation with non EU countries e.g. Brazil, Egypt have meant that these countries have aligned some of their national research priorities with those of the EU, potentially making it easier for researchers from the UK to work with researchers from these countries to address questions that have significance both at national and European level.

The Lisbon Agenda aimed to make Europe "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion" by 2010. The Seventh Framework programme was the instrument designed, in large part, to deliver this objective. However, the funding regimes and requirements of the various actions within the programme may have reduced opportunities to work with organisations outside of the EU and the International Cooperation Partner Countries, when actually it may have been mutually beneficial to include partners from, for example the USA or Japan. At an institutional level, some of these difficulties were exacerbated by the Commission's lack of clarity in relation to the funding guidance, and the way in which the requirements of individual Project Officers in Brussels differed from the written guidance issued by the Commission.

4. What benefits or difficulties has the objective of a European research area (ERA)²⁵ delivered for the UK?

At some level, the ERA appears to have had little impact on national policy. For example, one of the principles relates to ensuring that, at a national level, funding is awarded to organisation/individuals organisations through open competition, and that peer review policies apply; this reflects the way in which the UK Research Councils and other Government research funders have operated for many years.

From the perspective of our institutional, the existence of the ERA has had little effect on how we conduct our research and technological development activities.

In 1992, the Maastricht Treaty created the 'European Citizen', allowing individuals to live and work in other member states. Even without the inception of the ERA in 2000, European researchers were already taking the opportunity to move between member states to further their careers and make best use of their skills.

In the current economic climate, certain facets of the ERA may be disadvantageous to the national interest. One of these is the concept of giving non nationals and non residents access to national research grants and then making these grants portable across borders. Whilst the aim of increasing research mobility, and therefore, career opportunity is welcomed,

the idea that UK researchers should be forced to compete with non residents for national funding streams that are already highly competitive is not. Unless the flow of UK funding out of the country was equal to the flow of funding from the national programme's of other member states coming into the country, it is hard to see how this policy would be beneficial to the UK research base or economy.

5. How has the EU sought to coordinate the policy instruments at its disposal across different policy areas to create an enabling environment for researchers and innovators? How successful has this been?

From the perspective of an institution that seeks to access EU funding, the various policy instruments across different policy areas seem to have a low level of harmonisation. An example of this would be the lack of connectivity between the Framework Programmes and the Structural Funds. Both streams fund technological development-type activity, and yet in terms of the bureaucracy, scrutiny and management of the programme are significantly different. It may be beneficial for there to be closer alignment between these streams, to deliver related activities and to maximise the potential impact of the funding.

Future opportunities and challenges

6. What could the EU most helpfully do to promote scientific and technological progress and innovation (including in the space sector)?

The continuation of the Framework Programme in the form of Horizon 2020 is welcomed. A reduction in the bureaucracy associated with all funding streams supporting science and technology would be beneficial, particularly in attracting more industrial and SME organisations to participate. Whilst organisations such as HEI have administrative structure that allow the management of highly bureaucratic processes, many industrial partners do not, and given that the same rules and same level of scrutiny are applied to all types of partner within the Programmes, it is unsurprising that many commercial organisations do not wish to participate.

- How could the EU use its existing competence differently to deliver more in your area?

There should be further consideration of whether policies and programmes to support research and technological development should be more closely aligned. As an HEI, interested in academic research and researcher mobility, alignment between streams such as the Framework Programmes (FP7 and Horizon 2020), the Structural Funds (ERDF) and programmes supported by the DG Education and Culture (Lifelong Learning Programme and future 'Erasmus for All') are the areas in which alignment of process and activity would be most beneficial.

For example, if some of the activities and objectives of the Framework Programmes and Structural Funds coalesced, a potential outcome could be to drive sustained regional economic growth through encouraging organisations to take advantage of scientific and technological advances. Key objectives of the Innovation Union are to bring about social and economic benefits, to strengthen Europe's knowledge base and to support business-academia collaborations; from an HEI perspective, closer alignment of Horizon 2020 and ERDF would represent a way in which we could shape our work to achieve these aims.

- How might a greater or lesser degree of EU competence deliver more in your area?

Given that the Lisbon Agenda did not achieve its aims, and that the ambition announced in the Europe 2020 Innovation Union strategy is the somewhat scaled back proposal to complete the European Research Area by 2014, it would appear that the EU do not intend

any radical advances in policy relating to research and technological development before 2020.

Perhaps more could be delivered and achieved through the EU's policies to support research and technological development if there was realignment and rationalisation of the various instruments and funding streams, to produce a simplified, coherent methodology for

- How could improvements to existing EU activities make them more effective and efficient?

As an institution that participates in actions funded by the Framework Programme, we would suggest that better outcomes could be achieved (i.e. real advances on the state of the art), if the success of the grant was not measured solely on the delivery of the agreed milestones set out at the start of the project (given that these can have been established some 5 years before the project end). Technically, there is some scope to review and alter project objectives, but given the lengthy and bureaucratic process involved in doing this, many projects fail to deliver any outcomes that are beneficial. UK national funders tend to offer much more scope to allow the researchers to whom they award grants to take advantage of serendipitous discoveries.

Additionally, the lengthy negotiation and award process employed by the EU for streams such as the Framework Programmes and Structural Funds can mean that by the time funding is provided to a consortium to start work, the proposed research may, to some degree, be obsolete, because the state of the art has already been advanced by the rest of the field.

7. Where might future EU level action be detrimental to your work in this area?

We consider that it is important that national funders can have the flexibility to pursue national imperatives, particularly in areas where the member state has identified an emerging area or a scarcity of skills/knowledge that are relevant to the priorities of the individual member state. Any, requirement, therefore, to more closely align national funding priorities with EU funding priorities may be at odds with national interests.

From an institutional perspective, it is essential that UK funding priorities continue to recognise the importance of undertaking research in areas such as the Arts and Humanities, areas which have not featured in successive Framework programmes.

In 2010, the UK Higher Education sector was responsible for 27% (in cash terms) of UK R&D performance (UK Gross Domestic Expenditure on Research and Development, ONS, 2010). Further regulation and prioritisation driven by Europe, rather than at a national level could result in less funding being available to the UK HEI sector e.g. if the focus of Horizon 2020 and future programmes was to become more applied, or more related to the needs of the industrial sector.

8. Where might action at national rather than EU level be more appropriate / effective?

Issues relating to training and support for the next generation of researchers may be better addressed at national rather than EU level. The creation of the European Higher Education Area through the Bologna Process was designed to ensure more comparable, compatible and coherent systems of higher education across Europe. However, doctoral training varies quite considerably across member states. In many EU member states, studies last for a minimum of 4 years, whereas in the UK, a 3 year PhD is still the standard model.

Obviously, UK industries are at liberty to employ postdoctoral researchers from other EU member states, but by managing doctoral training at national level, programmes can be

developed in disciplines that are relevant to UK industry (potentially, with input from UK industry). It is also possible at a national level to identify areas in which there are shortages of highly trained researchers and so for national funding to be prioritised in these areas.

9. How could EU and national policies and funding streams interact better?

Assuming that EU and national policy and funding streams should interact better, one of the key requirements would be simplification of process. Taking funding streams as an example, the ERAnet and ERAnet+ schemes that have operated in FP6 and FP7 have very complex application procedures (a hybrid of FP and that of the specific national funder, which can involve up to three stages), for relatively small amounts of funding; and only selected member states engage in each specific ERAnet.

It may be advisable, and perhaps more realistic, for the member states to identify key areas where it would be useful for policy and research to align, rather than try and align all areas. In the UK, one might imagine that, for example, it is necessary to conduct health service research at a national level, as the NHS is a unique structure (as presumably the health systems of other EU member states might be), or defence research, in order to protect sensitive national information, but that other areas of research, especially those requiring substantial investments in infrastructure (e.g. space research), might lend themselves to alignment, and perhaps, coordination, at a European level.

10. What impact would any future enlargement of the EU have on this area of competence?

A positive impact may be that there would be a greater number of partners for UK organisations to interact with.

However, disadvantages would include more competition for research funding within future Framework programmes and a greater number of member states all attempting to champion their own national priorities at a European level. Presumably further expansion of the EU would lead to accession of member states that may have less developed economies and infrastructures than existing members (e.g. the UK, France, Germany), and this could lead to the EU imposing increased bureaucracy on the management of funding for Research and Technological Development activities to attempt to ensure harmonisation of increasing disparate national working practices.

11. Are there any other points you wish to make which are not captured above?

In closing I would like to thank you for the opportunity to contribute to the national and international perspective relating to the EU 2014 - 20 programme. Much of the experience over many years of using the Structural Funds is critical unfortunately, but the University is not alone in this view. The outcomes have been positive and high impact, but the experience of audit, risk and claw back is not positive. Work on Framework and presumably the new Horizon 2020 programme is undoubtedly more positive, but the lack of alignment of programmes relating to ESF ERDF and national initiatives is potentially a missed opportunity.

The EU S & I funds as stated represent a tremendous opportunity for the UK and Europe at a time when resources to support growth are few and far between. The major barrier to fully utilising these Funds revolves around, whilst recognising the importance of accountability, the huge opportunity cost due to administration and bureaucracy, and the perceived as well as real risk that goes alongside that. I would urge that the HE sector continues to work with partners to address these barriers.