

# Science and innovation: out of the frying pan and into the fire

November 27 2015, by Richard Brooks

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Funding squeeze over – for now. Credit: foto infot

Scientists in the UK breathed a sigh of relief when chancellor George Osborne announced that the science budget – which had been threatened with cuts – will in fact be protected in real terms over the next four years.

He also announced that the innovation budget will be frozen, but only in cash terms, which should nevertheless give confidence to research-intensive businesses as it signals to the rest of the world that the UK is still in the innovation business. That's the good news. But as the details unfold, there are some worrying signs and down right scary prospects on the horizon – including the EU referendum.

## **Devil in the detail**

The UK science budget has been declining by inflation for the past four years, which has seen it drop below the [OECD and EU average](#) for research intensity. While the funding is now to be maintained in real terms, the budget is still very low. This means we are still threatened by other nations, including emerging markets like China that are investing strongly in R&D.

Then there is the [actual detail](#) of what is being proposed. For example, a big chunk of the [science budget](#), £1.5 billion, will come from a new Global Challenges Fund. This looks like double counting money from overseas aid, meaning that a portion of UK research may be eschewed towards the funding priorities of the Department for International Development. Worthy goals, no doubt, but does this support the needs of the domestic economy?

There's also the question of how Britain's genuinely strong tradition of scientific discoveries gets translated into products and services. [Innovate UK](#) – the body in charge of commercialisation – has come out of the review as the slightly poorer cousin of the research councils with both cuts in real-terms and greater costs coming out of the Catapult centre programme. Combine this with a shift towards loan-funding from grants (a tricky proposition for income poor start-ups) and it is clear that Innovate UK will face considerable upheaval.

The chancellor also announced that he would implement the recommendations of a [recent review of the UK research councils](#), including bringing together the seven existing councils with Innovate UK agency into one collective body. This could make R&D in the UK more responsive, versatile and better integrated.

However, it is unclear exactly how politically neutral this body, Research UK, will actually be. The [Nurse review](#) was keen to stress that funding priorities should be set by experts and not by politicians and argued that by bringing all the funding agencies together there is scope to share budgets, influence government research and reduce reporting costs. Great in theory, but with the proposal of having a board appointed by the government and reporting to a ministerial committee, it is certainly possible to imagine political influence flowing the other way.

Some level of such influence has already been spotted in the decision to fund the [Royce Institute in Manchester](#), following apparent considerations about the desirability of the place from a clustering and economic development perspective, over a purely scientific assessment.

## **Brexit threat**

Yet these issues are perhaps nothing compared to the prospect following the fast-approaching referendum on whether the UK should leave the EU.

But is this really a threat to science? Look at Switzerland, it is a successful research nation and isn't part of the EU. While it is hard to predict the outcomes of the negotiations following a Brexit, the example of Switzerland is not a promising one. After a recent vote on migration fell foul of EU free-movement legislation, Switzerland's access to the research area was [swiftly downgraded](#). This crisis since been partially patched up, but not before the Swiss government had to reach into its

pocket to fund the gap. The UK is in a similar position, like Switzerland we receive more than we put in.

Participation in EU research programmes, with all their bureaucracy, are arguably not the most efficient model for getting research done. But as [research](#) led by Coventry University and Innovation Bridge Consulting found, this isn't what matters most to businesses. In a survey of businesses in emerging technologies, the key benefit of using European funding was not the actual research outputs, but the networks, contacts, exchange of expertise and relationships that follow from working together. Europe actually provides a massive low-risk testing ground for new alliances.

This is hugely important. With limited domestic funds for investment the UK needs to use all the levers it has to compete and one area where Britain excels is attracting international [R&D business investment](#). Yet should the UK's relationship with the EU falter then it is not merely EU countries which may think twice about investing in UK science, but also decision-makers in San Francisco or Shanghai that benefit from the access to a broader market of talent.

The chancellor has come out of the Spend Review riding high, benefiting from some slight-of-hand, but also from some genuinely farsighted decisions. However as the European negotiations reach their moment of truth in December, he may find that the challenge of turning the UK into an innovation dynamo has only just begun.

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