

RSE COUNCIL STATEMENT ON RESEARCH FUNDING AND THE REFERENDUM

AUGUST 2014

A. Introduction

1. In its role as Scotland's National Academy, and in recognition of the historic importance of the Referendum, the Royal Society of Edinburgh (RSE) sought to inform the debate by promoting, jointly with the British Academy, a series of public events under the title, Enlightening the Constitutional Debate. In April, we published a book with that title, based on these events, which took place throughout Scotland and at the British Academy in London, in which invited speakers examined the key issues in an impartial and scholarly way.
2. One of these events was on Science and Higher Education. Since that meeting last October, several relevant documents have appeared and are listed in Appendix I. These include:
 - A Scotland Analysis paper on Science and Research (published by UK Government in November 2013)¹
 - A Report on Higher Education Research in an Independent Scotland (published by the Scottish Government in April 2014)²
3. A discussion about Higher Education Research was held at the RSE on 11 June 2014, involving the Cabinet Secretary, Michael Russell MSP. The RSE is grateful to him for his informative address and for responding to robust questioning. An account of this discussion is available on the RSE website⁸ and is appended to this statement for ease of reference as Appendix II.
4. The RSE had also earlier invited the UK Minister for Universities and Science, David Willetts MP, to address the RSE on this subject. Although Mr Willetts resigned as Minister in mid-July and was replaced by Dr Greg Clark MP, the RSE was pleased that the new Minister re-arranged his commitments to enable him to come to Glasgow University on 24 July with Mr Willetts, to address Fellows and members of the Young Academy of Scotland. We are grateful for the exposition they gave of the UK Government's position, particularly on the risk that the current framework for research could not continue in the event of Scotland becoming independent. An account of that discussion is available on the RSE website¹⁰ and is appended to this Statement for ease of reference as Appendix III.
5. As Scotland's National Academy, the RSE has a responsibility to encourage and support the wellbeing

of the research carried on in and from Scotland. From its independent standpoint, the Council of the RSE felt it was timely to issue a Statement following the meeting in June with the Cabinet Secretary. This has been updated to take account of the subsequent meeting with the UK Minister in July. Almost all of what was said in the Council's earlier Statement remains valid and we seek greater clarity on the outstanding issues set out in Section C below.

B. General Comments

1. A strong research base in Scotland is crucial to its societal and economic development, and its wellbeing.
2. The strength of the Scottish research base – as demonstrated by its share of research funding won on a competitive basis – relies in large measure on Scotland being part of a common research area embracing the whole of the UK. Researchers in Scotland have performed remarkably well in terms of the research funding they have been able to attract from Governments, UK Research Councils, research charities, businesses and European and international sources.
3. Access to funding for research is, however, only part of the research landscape. Maintaining a supportive research environment, in which the research community determines research priorities in accordance with the Haldane principle, is hugely important. This includes enabling researchers in Scotland to continue to benefit from collaborations and networks with researchers in other parts of the UK, and internationally. It is also reliant on researchers in Scotland having continued access to research establishments, facilities and data sources, wherever they may be located, and being part of a high-quality system of peer review. The range and depth of the interaction of research activity in the UK is without parallel elsewhere.
4. The RSE welcomes the assurance given by the Scottish Government in paragraph 68 of its Paper on Higher Education Research that, in the event of Scotland becoming independent, it would seek to agree to the continuation of a single research area across the UK, including shared Research Councils, access to facilities and rigorous peer review. During the discussion on 11 June 2014, the Cabinet Secretary stated that the Scottish Government is determined to achieve this, and commented that key areas of research depend on it.

5. The RSE welcomes the Cabinet Secretary's assurance that, whatever the outcome of the Referendum, the Scottish Government will continue to provide a level of public investment in university research that will enable researchers and universities in Scotland to remain internationally competitive (see his Ministerial Foreword to the Scottish Government's Paper)². The RSE also welcomes the statement by the Scottish Government that "in all circumstances we will guarantee no adverse funding impact from Scotland's transition to independence" (paragraph 34 of the Paper)².
6. The RSE also points out that the major grant-making research charities, most of which are regulated by the Charity Commissioners for England and Wales but operate as if they were UK-wide charities, make a significant contribution to the funding of research in Scotland. In 2012/13, 13% of Scottish universities' income from research came from charities, much of this for biomedical sciences.

C. Some outstanding issues

1. Last October, the Scottish Science Advisory Council (SSAC) – the Scottish Government's own independent advisory body – published 15 questions that needed to be addressed³. Given the documents and statements issued since, answers have started to emerge on some of these questions, and this is welcome.
2. The outstanding issues identified by the Council of the RSE in its earlier Statement remain key. These are:
 - a. **Is it feasible to create a sustainable common research area with the rUK?**

In its Analysis Paper on Science and Research¹, the UK Government stated that in the event of a vote for independence, the relationship between the rest of the UK (rUK) and an independent Scotland would become an international relationship. In his presentation to the RSE, Dr Clark indicated "there is no international precedent for sharing or replicating a system on the scale of the current UK funding streams across international borders". He also added, "the effects of regulatory differences, and objections to pooling sovereignty and competing interests from institutions in the continuing UK, should not be underestimated." Given this degree of divergence from the aspiration of the Scottish Government, it is simply not possible at this time to be certain that agreement could be reached to set up a common research area. We believe that if it were decided to try to do this, the prior negotiations would not be simple⁵ even if, as was envisaged by the Cabinet Secretary, members of the research community assisted in this process.

- b. **What happens if it is not possible to set up a common research area with rUK?**

The Cabinet Secretary acknowledged that, if Scotland were no longer part of a common research area with the rUK, different arrangements for funding research in Scotland would need to be created. There are several different options on how a separate Scottish Research Council could operate, but what would be the optimal option is not yet clear.

- c. **How would an independent Scotland fund and/or secure access to major capital intensive research infrastructure?**

Hitherto, there has been no doubt about the access of Scottish researchers to research establishments funded by UK research councils as part of their capital investment in world-leading research. In this context, the UK Department for Business, Innovation & Skills has recently consulted on proposals for long-term capital investment in science and research. This is of particular interest and importance, and the RSE response is available on the RSE website¹¹. Mr Willetts indicated that the UK could not be expected to primarily fund an institution located outwith the UK. He felt it would be difficult for UK research facilities and centres located in Scotland to continue as they are if Scotland became independent. It would be helpful to know whether the commitments given by the Cabinet Secretary extend to maintaining levels of capital infrastructure investment for Scottish-based institutions comparable to those currently in place.

- d. **What position would major research Charities adopt toward an independent Scotland?**

None of the major grant-giving research charities has clearly indicated what position it would adopt towards funding research in Scotland in the event of a 'Yes' outcome. Given the independent nature of each charity and their differing trust deeds and objectives, it would be for each Board of Trustees to decide what position they would adopt. This represents a major area of uncertainty for researchers, especially in the biomedical sciences.

- e. **How long would a 'no detriment' assurance on funding last?**

We welcome the Cabinet Secretary's assurances that there would be no adverse impact on research funding from Scotland's transition to independence. Whether this commitment could be sustained in the long term is less clear. We would welcome clarification from the Scottish Government about its long-term intentions on the funding of world-class research.

D. Conclusion

1. Perhaps inevitably, given the very different wishes of the Scottish and UK Governments as to the outcome of the Referendum, it seems it will not be possible to achieve further clarity on several key issues until after the outcome is known. This does not, however, diminish the continuing sense of uncertainty and unease felt by many in the research community.^{6,7}
2. We want to see the strength, vitality and excellence of the Scottish research base continue, whatever the result of the Referendum. The RSE will continue to monitor the situation closely, to enable it to make a constructive and impartial contribution to this important topic.

August 2014

Relevant Publications

1. Scotland Analysis paper on Science and Research (published by UK Government in November 2013)¹
2. Report on Higher Education Research in an Independent Scotland (published by the Scottish Government in April 2014)²
3. SSAC paper – Science and Engineering in Scotland in the Independence Debate (published in October 2013)³
4. Report by Scottish Affairs Committee of House of Commons on Higher Education Research and Tuition fees (published in March 2014 by UK Parliament)⁴
5. Evidence to the Scottish Parliament’s Education Committee review on Scotland’s Educational and Cultural Future⁵
6. Letter from Sir Paul Nurse PRS, Lord Stern PBA, Sir John Tooke PMedSci⁶
7. Open letter by former Scottish University Principals⁷
8. Report of presentation by the Cabinet Secretary to the RSE on 11 June on Higher Education⁸
9. White Paper on Scotland’s Future (published by the Scottish Government in November 2013)⁹
10. Report of presentation by the UK Minister for Universities, Science and Cities to the RSE on 24 July at Glasgow University¹⁰
11. RSE response to BIS Consultation on Long term Capital Infrastructure¹¹

¹<https://www.gov.uk/government/publications/scotland-analysis-science-and-research>

²<http://www.scotland.gov.uk/Publications/2014/04/6727>

³<http://www.scottishscience.org.uk/article/ssac-paper-science-and-engineering-scotland-independence-debate>

⁴<http://www.publications.parliament.uk/pa/cm201314/cmselect/cmscotaf/1144/114402.htm>

⁵<http://www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/72471.aspx>

⁶<https://royalsociety.org/~media/news/2014/open-letter-scotland-research-and-the-uk-academies.pdf>

⁷<http://www.bbc.co.uk/news/uk-scotland-scotland-politics-27856924>

⁸<http://www.royalsoced.org.uk/cms/files/events/reports/2013-2014/Discussion-Research-Funding-Michael-Russell.pdf>

⁹<http://www.scotland.gov.uk/Publications/2014/04/6727>

¹⁰http://www.royalsoced.org.uk/cms/files/events/reports/2013-2014/Discussion-on-Research-Funding_24July2014.pdf

¹¹http://www.royalsoced.org.uk/cms/files/advice-papers/2014/AP14_07.pdf

The Royal Society of Edinburgh
Discussion on Research Funding
with
Cabinet Secretary for Education and Lifelong Learning,
Michael Russell MSP

Wednesday 11 June 2014

Introduction

This discussion was an opportunity for RSE Fellows and members of the RSE Young Academy of Scotland to hear from and discuss with Cabinet Secretary, Michael Russell, research funding in the context of the independence debate. The discussion meeting was organised following the publication of the Scottish Government's paper, Higher Education Research in an Independent Scotland, which was published in April 2014.

This report provides a summary of the Cabinet Secretary's presentation, and of the subsequent discussion.

Chair: Sir John Arbuthnott, President, the Royal Society of Edinburgh

Michael Russell MSP, Cabinet Secretary for Education and Lifelong Learning

The Cabinet Secretary outlined the prospects for Higher Education and research in an independent Scotland. He welcomed the RSE's Enlightening the Constitutional Debate series of public events in stimulating open and enquiring debate on issues related to the independence debate.

The Cabinet Secretary took the opportunity to re-state the key messages and analysis from the Scottish Government's paper, Higher Education Research in an Independent Scotland.

The Scottish Government's four key objectives in this area are:

- a strong research base;
- a globally-connected research community;
- a research funding policy and landscape which is right for Scotland; and
- a supportive environment for research

The Cabinet Secretary emphasised the strength of the Scottish research base, reflecting on the global excellence of Scottish universities and the quality of their work. He reported that in the 2008 RAE, 15% of research submitted from Scotland was classified as world-leading. In 2012/13, Scottish universities attracted almost £1bn of research investment from a range of funding sources including government, business, charities and the EU. The Cabinet Secretary added that in the latest Times Higher Education (THE) World University Rankings, five of Scotland's universities are in the Top 200 – which represents more per head of population than any other country.

The Cabinet Secretary stated that the excellent research base in Scottish universities is vitally important in terms of translating knowledge into impact which, in turn, supports Scotland's economic development, informs decision making and helps us better understand the world in which we live.

The Cabinet Secretary emphasised the recognition that the Scottish Government places on the value of research to Scottish society and the economy. He said that the Scottish Government has increased its spend on research and knowledge exchange activities by 38% since 2007 which amounts to an additional £100m. As a result, Scotland's Higher Education research and development expenditure is ranked top of the 12 countries and regions of the UK, and is the fourth highest among the OECD countries.

He said that the Scottish Government has made a commitment that, whatever the outcome of the Referendum, it will continue to support research and provide levels of public investment to enable researchers in Scotland to remain internationally competitive.

The Cabinet Secretary said that the Scottish Government would ensure that there would be no adverse impact on research funding from Scotland's transition to independence. The Scottish Government is of the view that independence will bring greater opportunities for increased funding and further collaborations with the private sector and partners in Europe, and greater profile and presence for Scotland on the world stage.

However, he stated that supporting research is not only about providing funding; there is also a need to provide a supportive environment where research is respected and valued and where government, businesses and universities work in partnership to grow the economy and improve society.

The Cabinet Secretary referred to the novel ideas which the Scottish Government has supported, including the internationalisation of research pools and the development of a network of innovation centres.

He said the Scottish Government respects the clear benefits of responsible autonomy across the Scottish university sector as the bedrock of future success, and, in relation to research, continuing support for the Haldane principle.

The Cabinet Secretary stated that research knows no boundaries and is predicated on excellence and not on borders. He made it clear that the Scottish Government will seek to maintain a common research area across the countries of the UK. The Cabinet Secretary believes it would be in the interests of both Scotland and the rest of the UK to maintain a common research area, including shared Research Councils, access to facilities and rigorous peer review. He believes that while the rUK would remain an important research partner, independence would provide the opportunity to extend further Scotland's global reach and partnerships. He said that with independence, Scotland would assume a greater presence on the international stage and be supported by a dedicated overseas diplomatic and trade network. He indicated that there would be an intention to use Scotland's influence as a new member state to ensure that Scotland is fully involved in the development of EU research policy.

He added that independence would enable Scotland to take decisions in Scotland's best interests and that the Scottish Government would continue to support university research through a dual support system. The Cabinet Secretary indicated that the Scottish Government is already the largest single funder of research in Scotland through the Scottish Funding Council, and this approach would be maintained with independence.

In his view, the rUK would be disadvantaged if it were not able to access research expertise in Scotland. He believed there is widespread support in Scotland and the UK for maintaining that common approach. He said there would, of course, have to be discussion and negotiation to achieve this outcome.

He referred to the contribution that Scotland makes to research funding through general taxation. He stated that over the three years, 2010/11–2012/13, currently the difference between research funding received in Scotland and what is contributed by Scotland through taxation was, on average, £36m per year. This difference could easily be made up by the Scottish Government, if necessary. However, he said that the Scottish Government is determined that an independent Scotland would remain part of a common research area with the rUK. He added that maintenance of the common research area also aligns with recent initiatives of the UK Research Councils to develop collaborative funding arrangements with partners outwith the UK, including with Luxembourg, Switzerland and the US.

The Cabinet Secretary referred to Scotland's research performance with respect to EU sources of funding. He said that between 2007 and 2013 Scotland had attracted €636 million (of which €538m had been secured by Scottish universities and research institutes) from the Framework Programme 7. This equated to 10.4% of the UK and 1.6% of the EU total.

He concluded by referring to the other opportunities and powers that he believes independence would provide to Scotland. It is his view that independence would enable the Scottish Government to design taxation, welfare and labour market policies to create a wealthier and fairer Scotland. He said control of immigration policy is absolutely vital, particularly to the university and research sector. He said that the number of students from India in Scottish Higher Education institutions had almost halved – from 3,290 in 2010/11 to 1,665 in 2012/13, while the number of students from Pakistan decreased by 39% (from 860 to 525). It was his view that Scotland's universities were paying the price for decisions made elsewhere in the UK and that Scotland's economy and research base is losing out as a result. He referred to the Scottish Government's support for the Global Excellence Initiative which encourages universities to invest in global talent. He added that UK immigration policy is deterring skilled individuals, including researchers and students, from coming to the UK. He therefore believes that it is essential that Scotland can set its own policies for migration and citizenship to ensure that Scotland is seen as welcoming and inclusive.

With independence, it is the intention of the current Scottish Government that access to Higher Education will continue to be determined by the ability to learn, not the ability to pay. He said that Higher Education and research are vital to Scotland's present and future prosperity. They secure jobs, feed into new commercial opportunities and raise Scotland's profile internationally.

Discussion

1. *The Scottish Government's desire to continue the current arrangements for a common research area and funding through established UK Research Councils was acknowledged. How would the Scottish Government seek to achieve this and persuade the rest of the UK that retaining the current arrangements would also be in its interests?*

The Cabinet Secretary responded by saying that retaining the common research area is beneficial to both Scotland and the remaining UK. In his view, the risk is that research excellence would diminish if this were not to happen. He made it clear that the notion of partnership would not change in the event of a 'Yes' vote for independence. He said that negotiation and rational decision making would have an important role to play as the parties would seek the best outcome – which in his view means the retention of a common research area. He added that it would be crucial to involve people from the research community in these discussions. He indicated that as Scotland contributes around 9% of Research Council spending through UK tax revenues raised in Scotland, it could expect to have a say in the shape of future arrangements for the research system.

The Cabinet Secretary acknowledged that if Scotland were no longer part of a common research area with rUK, then different arrangements for research funding in Scotland would need to be created. However, he reiterated that the Scottish Government is committed to maintaining overall research funding levels no matter the outcome of the Referendum.

2. *It was suggested that there was not a convincing need to change the present system of research funding and that the current common research area serves the UK as a whole very well. As part of this UK-wide system, the strength of the Scottish university and research base means that it has been very successful at accessing research funds. The commentator was doubtful whether alternative sources of funding, including European funds, could compensate for a loss of UK Research Council funding, should this occur. Finally, the commentator questioned the implications that independence would have for the structures of research charities and the ready accessibility to charitable funding that researchers in Scotland presently enjoy.*

The Cabinet Secretary responded by reiterating that Scotland has been an active player in the European research framework programmes, with Scottish universities and research institutes securing €538 million from the Framework Programme 7 (FP7) between 2007–13. He said that he is not advocating that such sources would be an alternative to UK Research Council funding. He emphasised that between 2010/11 and 2012/13, the difference between UK research funding received in Scotland and Scotland's contribution to this through its share of taxation was on average £36m per year, and this could be made up by the Scottish Government to ensure that there would be no detriment to research effort in an independent Scotland. In relation to research funding from charities, the Cabinet Secretary indicated that the charities he has engaged with are clear that they will react to the result of the Referendum when it is known. He said they have not stated that they would refuse to fund research in an independent Scotland and cited comments from a number of charities indicating their intention for continued collaboration. Ultimately, he believed that the rational decision of the Research Councils and others would be to recognise the benefits of ensuring that the excellence of research in Scotland remains part of a common research area.

3. *Given the success of the Scottish research base as part of the current UK-wide system of research funding, what benefit can there be for research in an independent Scotland? Concern was also expressed that if it were not to remain part of a larger, competitive research system, then research in Scotland would diminish.*

The Cabinet Secretary responded by arguing Scotland is currently a member of six unions and is seeking to become independent from only one – the political and economic union. He acknowledged that while there is not a pressing need for dramatic change of the Scottish research sector (although he foresaw potential benefits), the case for independence is being made in the wider context of Scotland as a nation. He said that as part of his portfolio he has to consider every aspect of the education sector, and within that closing the attainment gap at school is a crucial priority. He said that education attainment of the poorest in Scottish society could be dramatically improved by independence. To eliminate poverty in Scotland he said Scotland needs to have the full powers that independence provides over tax, welfare and labour market regulation.

He stated that arrangements can be made that would ensure that the research sector would not be disadvantaged with independence. He added that there are also some advantages of independence that can be envisaged and delivered for the sector.

4. *How would conflicts between the research priorities of an independent Scotland and those of the rUK be addressed within a common structure?*

The Cabinet Secretary believed that agreement on research priorities could be reached on the basis of good sense and discussion. He said that the Scottish Government had asked Sir Ian Diamond, Principal of the University of Aberdeen,

to review the options for research funding. These are presented in the Scottish Government's paper, Higher Education Research in an Independent Scotland. With independence, the Scottish Government would seek to agree continuity on a common research area with the UK, with shared Research Councils. He recognised that discussion about research priorities, within the context of continued respect for the Haldane principle, would be part of an independent Scotland's participation in the common research area, but he did not envisage there being inherent conflicts.

He said another option, referred to in the Scottish Government's paper, would be the creation of a separate Scottish Research Council which could identify funding priorities directly in line with Scottish interests and priorities.

5. *Two questions were asked in relation to transition arrangements:*

a) *What would be the transition arrangements for research funding from UK between the Referendum and the date at which Scotland became independent?;*

b) *How would the Scottish Government ensure continued access to EU Horizon 2020 funds during the process of negotiating Scotland's membership of the EU?*

The Cabinet Secretary responded by emphasising that in all circumstances the Scottish Government would guarantee that there would be no adverse impact on research funding from Scotland's transition to independence.

In terms of ensuring continued access to EU funding sources, Cabinet Secretary stated that, as part of the UK, Scotland would continue to be a member of the EU during the period between the Referendum and the date of independence. He therefore questioned whether it would be right or proper to disadvantage continuing members in the application process for EU membership. However, he recognised that there would need to be some support during the transition period.

6. *Comments were sought on the recruitment and retention of researchers, particularly those from outwith Scotland.*

The Cabinet Secretary said that with independence, the Scottish Government plans to reintroduce the post-study work visa to encourage more talented people from around the world to further their education in Scotland.

7. *What would be the implications for Scotland if there is a common research area with the rUK, but at the rUK level there is not in future the same support for science as exists presently?*

The Cabinet Secretary said Scotland would want to ensure that funding for Higher Education is maintained and indeed increased. He added that Scotland was one of only three countries in Europe that has increased funding for Higher Education in recent years.

He also said that it is not a sustainable long-term solution for Scotland to have to set budget and spend on a year-on-year basis. In order to provide a long-term solution, Scotland needs to have responsibility for tax and spend. Independence would provide Scotland with the necessary powers. He said that in Scotland there is a desire to continue to invest in the Higher Education sector to ensure that education is regarded as one of Scotland's national priorities. He indicated that he would like to see free access to education enshrined in a Scottish constitution.

8. *What would the Scottish Government expect to be able to do following independence which would encourage greater investment by business and industry in the research base in Scotland?*

The Cabinet Secretary responded by saying that independence would provide Scotland with full taxation powers which could be used to incentivise research investment of this kind. He added that at the present time the Scottish Government has only very limited powers in this respect. He indicated that there is also a need for a cultural shift within the SME sector in Scotland in terms of how it regards R&D investment.

9. *To what extent would independence provide breadth of support for fundamental and applied, impact-driven research?*

The Cabinet Secretary recognised that the level of support that could be provided depends on the resources available. He said that he would like to be able to extend the funding available for emerging new areas of research but this may not have a direct, foreseeable return. He would also like to stimulate more research in areas of the Higher Education landscape in Scotland where research is not presently a feature. In addition, he would like to be able to target more resource at post-graduate level study. However, he recognised that it is inherently difficult to re-allocate funds from within a constrained budget.

10. *How would Scotland contribute to investment in, and secure access to, large-scale research facilities which rely on long-term commitment of resource? Is there a risk that in an independent Scotland research funding would be concentrated on short-term research?*

The Cabinet Secretary said this comes down to the setting of national priorities and national policy. He believes that Scotland has aspired to punch above its weight in a range of areas. This includes a commitment to international collaborations. However, one of his frustrations is that Scotland can be at arm's length from that activity even in areas

of particular importance to Scotland. He acknowledged it would not be feasible to expect Scotland to take up every opportunity, but in playing to its strengths, Scotland ought to aspire to participate fully in major European and international research developments. He said Scotland should do so with its own presence rather than rely on the UK representing Scottish interests.

11. *The Cabinet Secretary was asked whether the size of the research excellence grant distributed in Scotland should have been increased to reflect the fact that Scottish-based researchers have won greater than population share of UK Research Council competitive funding.*

The Cabinet Secretary responded by saying that Scotland is currently very constrained by the funding mechanisms available to it. He said that apart from the ability to vary (down or up) in Scotland the basic rate of UK income tax by up to 3p in the pound (and which would cost more to administer than it could potentially raise in increased tax revenue), there is no viable mechanism available to Scotland to raise taxes or to allow it to borrow. He added that these constraints have been felt even more acutely in recent years. While it is not possible to do everything that people might desire, the Cabinet Secretary said the Scottish Government has kept its pledges for protecting university funding year-on-year as the Government recognises that investing in Higher Education is a societal good. He acknowledged that the sector had benefitted from increases in funding to a greater extent than elsewhere.

12. *It was commented that wishful thinking pervades the Scottish Government's plans for Higher Education and research. The example was given of the legitimacy of the Scottish Government's plans for continuing to charge tuition fees to rUK students if Scotland became independent.*

The Cabinet Secretary responded by saying that he does not believe this to be wishful thinking; rather, he argued that it represented hard-headed thinking. He said that nothing would give him greater pleasure than to get back to the situation where the current fee policy was not necessary. However, he said that because Scotland has a land border with the country with the highest tuition fees in Europe, if the Government were not to continue with the current policy, then serious effects would be felt in Scotland. He indicated that the number of rUK students studying in Scotland is approximately 14,500 at present. Based on Scottish Government estimations, that could rise to around 80–90,000 students from rUK, were the policy to charge rUK students reversed. He said that this would undermine the Scottish economy, as the retention rate in Scotland for Scottish-domiciled students after they have completed their courses is over 85%, compared with around a 35% retention rate in Scotland for rUK students.

13. *The Scottish Government has stated that independence would enable Scotland to adopt a different immigration policy to the rUK, including measures to attract international students and researchers. How feasible is it to have a different migration policy, given that the Scottish Government also wants to remain part of the Common Travel Area, with no border controls with the rUK?*

The Cabinet Secretary referred to the situation of the Secretary General of the Irish Department of Foreign Affairs, who is faced with the same conundrum. He said that the Secretary General's opinion is that the Irish Government regards itself as being fully in charge of its own migration policy and, indeed, it has a different policy to that of the UK. The Cabinet Secretary said it was appropriate for a government to make exceptions and have a different migration policy while benefitting from a common travel arrangement. He said to accept otherwise would be accepting that there can be no differences in migration policy in any common travel area. He is therefore confident that Scotland could adopt a different immigration policy to the rUK and that it would reap the benefit from doing so. He added that the actual increase in the number of people who would be coming to Scotland would not be much greater than now, but it would enable Scotland to attract highly qualified and skilled people, including researchers and early-stage academics.

Concluding remarks

The President thanked the Cabinet Secretary for making his presentation on research funding and responding vigorously to the various questions. These had revealed the range of issues and questions which this topic has generated.

He indicated that a summary note of the proceedings would be produced and made available shortly on the RSE website.

The Cabinet Secretary thanked the President for the opportunity to address Fellows and members of the Young Academy and to continuing his engagement with them on this topic.

**Opinions expressed here do not necessarily represent the views of the RSE, nor of its Fellows
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The Royal Society of Edinburgh
Discussion on Research Funding in the Context of the Referendum Debate
with
The Rt. Hon. Dr Greg Clark MP, UK Minister for Universities, Science and Cities;
and The Rt. Hon. Mr David Willetts MP

at the University of Glasgow

Thursday 24 July 2014

Introduction

The discussion was an opportunity for RSE Fellows and members of the Young Academy to hear from and discuss with the Rt. Hon. Greg Clark MP, the newly-appointed UK Minister for Universities, Science and Cities, research funding in the context of the independence debate. The Minister was joined by his predecessor, the Rt. Hon. David Willetts MP, for the discussion session.

This report provides a summary of the Minister's presentation, and of the subsequent discussion.

The meeting followed the event at the RSE in June, at which Cabinet Secretary Michael Russell MSP discussed the Scottish Government's proposals for supporting Higher Education research in the event of independence. The report of that meeting is available from the RSE website at <http://www.royalsoced.org.uk/news/news.php?id=230>

Chair: Sir John Arbuthnott, President, the Royal Society of Edinburgh

The Rt. Hon. Dr Greg Clark MP, UK Minister for Universities, Science and Cities

The Minister welcomed the opportunity to reflect on issues relating to research and development in Scotland in the context of the Referendum debate. This was his first speech in Scotland since being appointed Minister for Universities, Science and Cities. He said he intends to build on the work of David Willetts and, in this context, he said he was pleased that his predecessor was also in attendance.

The Minister recognised the disproportionately large contribution that Scotland makes to UK science and research. He outlined three main observations for Scotland's science and research community, which he proceeded to address in turn.

1. Scotland's excellent science and research base

The Minister stated that Scottish science and innovation makes a vital contribution to the UK's world-class research base, bringing benefits for business and society as a whole. He reflected on the quality of the UK's Higher Education Institutions, with the UK having more universities at or near the top of international rankings than any country other than the USA. He recognised that five of the world's leading 200 universities are located in Scotland.

The Minister commented on the excellence of the UK research base, which he said is demonstrated by the UK being second in the world only to the USA for number of citations.

He indicated that the UK is the most productive country for research in the G8 in terms of citations and publications per pound. He said that Scotland plays a prominent role in this, which is evidenced by the fact that it produces 12% of the UK's research papers.

The Minister referred to the role of the UK's Higher Education Institutions in collaborating with business on innovative projects. With reference to the World Economic Forum's Global Competitiveness Report evaluation, he said the UK is ranked top among the top five nations in the world for university–industry collaboration in R&D. He also commented that the Global Innovation Index 2014, which measures an economy's innovation capabilities, showed that since 2009–2010 the UK has climbed from 14th to second in the world. The Minister proceeded to say that a strong R&D base helps leverage investment. He said that as part of the UK, Scotland is currently very successful in attracting foreign investment. He referred to the work that the RSE Business Innovation Forum has been undertaking on the issue of the financing of innovation.

The Minister provided examples of collaborations between organisations in Scotland and other parts of the UK which have resulted in ideas with the capacity to change lives:

- With EPSRC funding, a team of researchers from the Universities of Bristol, Dundee, Glasgow and Southampton have developed ultrasonic tweezers which could improve cartilage implants and reduce the need for replacement knee operations.

- In partnership with the Medical Research Council and Cancer Research UK, the University of Edinburgh's Institute of Genetics and Molecular Medicine is working to gain crucial new insights into conditions such as schizophrenia and cystic fibrosis.

The Minister commented that these partnerships are a symbol of what can be achieved without geographical boundaries. They also build on the UK's strengths in medical research.

2. UK's integrated research framework

The Minister said Scotland can be proud of its world-class reputation for science and research. He commented that this has been enhanced through access to UK-wide funding, infrastructure and other networks.

He reflected on the benefits to Scotland of being part of an established funding structure, which has resulted in a high proportion of UK spending going to Scottish institutions. He said that in 2012–2013, Scottish Higher Education Institutions secured £257 million of UK Research Council grants, which represents 13.1% of the UK total. He commented that is significantly more than Scotland's 8% of GDP and its 8.4% of the UK population. He said that in 2012–2013, Scotland secured £307 million of all Research Council funding, which represents 10.7% of the UK total.

The Minister commented that as part of the UK, Scotland also benefits from other sources of UK Government research funding. He referred to the £400m per year investment by the Ministry of Defence in its Science and Technology Programme.

The Minister said projects of all scales are supported by the UK research framework. He gave as an example the AHRC-funded Knowledge Exchange Hubs, which are connecting with creative SMEs and cultural organisations. He said that in Scotland, the Design in Action hub has connected with over 250 SMEs.

The Minister recognised that there is a limit to the level of funding that can be made available for science and research, particularly in the current difficult economic period. He gave an assurance that he will champion research and university interests. In doing so, he said he would continue to stress the importance of funding the very best science. He commented that despite the challenging economic climate, overall UK science funding is increasing. He said in addition to protecting the ring-fenced science budget in cash terms, the Chancellor has announced the largest-ever sustained long-term investment in science capital of £1.1 billion a year, rising with inflation until 2020–2021. This will bring the UK Government's overall investment in science to nearly £5.9 billion in 2015–2016, which represents an increase in overall spend compared to recent years. The Minister said it is a mark of the Government's commitment to UK science and research that there is certainty in capital investment to the end of the decade, maintaining stability for stakeholders where long-term funding commitments are crucial.

The Minister stated that as part of the UK, researchers in Scotland also benefit from access to world-leading infrastructure. This includes domestic infrastructure spread across the UK, and UK membership of international facilities, including the European Centre for Nuclear Research. The Minister also outlined the ways in which Scotland benefits from the wider UK research and innovation framework. He said that in 2013–2014, the Technology Strategy Board (TSB) invested nearly £45 million in Scotland. He commented that the TSB's development of an elite network of Catapult Centres will help business across the UK exploit new and emerging technologies. He emphasised that there are also many other UK-wide institutions – including the British Standards Institution, the Intellectual Property Office and the Science and Innovation Network – that play a key role encouraging research and innovation to drive economic growth.

He referred to the UK Space Agency as being another important example. He commented on the launch in July of its first satellite – Ukube-1 – which was built in Scotland by Clydespace. He said this demonstrated what can be achieved with collaboration between UK agencies, Scottish universities and the Scottish private sector.

He went on to say that the future for UK space is even more exciting, adding that commercial space and space tourism are just over the horizon. He said the UK Government has a firm ambition to establish a spaceport in the UK by 2018. He stated that as part of this process, UK Government announced in July that eight coastal airfields, six of which are located in Scotland, have been identified as potentially feasible locations for a UK spaceport.

The Minister said that as part of the UK, Scottish HEIs benefit from their participation in the Research Excellence Framework (REF). As this is internationally recognised for assessing research excellence, it can be used as a quality benchmark for securing international collaborations and funding from businesses.

3. Risk that the current framework for research could not continue

The Minister referred to the address that Cabinet Secretary Michael Russell made at the RSE in June, at which he stated that research knows no boundaries and is predicated on excellence and not borders. The Minister stated that this fact was not in question. In responding to the Scottish Government's intention that, were Scotland to become independent, there would be a common research area with rUK, the Minister quoted from the open letter of 5 July 2014 from Sir Paul Nurse, Lord Stern and Sir John Tooke:

“...if Scotland is separated from the rest of the UK, the strong links and collaborations which exist in the current open system would be put at risk, with any new machinery put in place to attempt to restore them likely to be expensive and bureaucratic.”

The Minister referred to the Scottish Government’s paper on Scotland's Future Higher Education Research in an Independent Scotland, which was published in April 2014. He said the striking message from the paper was how well Scotland is doing as part of the UK and that the Scottish Government would try and negotiate with the continuing UK to maintain the current arrangements.

The Minister stated that the UK Government has made clear that national governments fund national research. He commented that there is no international precedent for sharing or replicating a system on the scale of the current UK funding streams across international borders.

The Minister said practical implications, including different intellectual property regimes, would pull systems in different directions. He referred to the Scottish Government’s White Paper, saying it envisaged a different model of patent protection from the UK’s. The Minister said the effects of such regulatory differences, and objections to pooling sovereignty and competing interests from institutions in the continuing UK, should not be underestimated.

He stated that a vote for independence is a vote to leave the UK's institutions, including the Research Councils. He said this is not just the UK Government's position, but that it is also backed up by international precedents and the views of legal experts

The Minister commented that some advocates in favour of independence seek to imply that UK and Republic of Ireland collaborations demonstrate things would not change in the event of independence. He said, first, that those collaborations are small scale, with each country meeting the cost of its own researchers; and, secondly, researchers from the Republic of Ireland have far more limited access to UK scientific infrastructure than do researchers from Scotland and the rest of the UK.

He elaborated on this, commenting that for the majority of the Research Councils, UK/Ireland engagement is conducted through the EU's research programmes. He set out that income from the EU is an important source of funding, but funding from UK Research Councils far exceeds the amount Scotland gains from the EU Framework for R&D. For example, in 2012–2013, funding for Scottish Higher Education Institutions from Research Councils was more than treble the levels received from EU funding, at £231 million and £69 million respectively.

In conclusion, the Minister said he believes that as part of the UK science and research base, Scotland currently has the 'best of both worlds'. It is his view that this heavily integrated research framework would be at real risk in the event of Scottish independence. He commented that in addition to benefitting from the UK's research and innovation infrastructure, Scotland benefits from tailored support provided by the Scottish Government. In this context, he said that the Scottish Government frequently co-invests in Scottish projects being funded by the UK Research Councils or Technology Strategy Board.

The Minister referred to the recent announcement about the UK Government’s plans for the new Glasgow City Deal. He said subject to successful business cases, the Government has committed to support the establishment of a new Stratified Medicine Imaging Centre of Excellence with an investment of £16 million, to be matched by £48 million from local sources.

Discussion

1. In the event of independence, would the rUK choose to locate the UK spaceport in Scotland?

The Minister responded by saying that given there is currently a UK-wide system, identification of the best place to host the spaceport can be done without reference to the political geography. He indicated that this was the basis used to draw up the short list of potential sites.

He invited his predecessor, Mr Willetts, to comment, since he had made the decision on the short-listed sites. Mr Willetts said the spaceport example illustrates the point made by the Minister in his speech about how gradually there would be divergence between an independent Scotland and the rUK.

He said that the UK Government wants the new spaceport to facilitate technological development and transfer. That requires negotiations with the US Government with regard to the International Traffic in Arms Regulations (ITAR). Mr Willetts confirmed that the UK Government, with input from the British Embassy in Washington, has an ITAR framework in place to facilitate discussion with the US Government.

Mr Willetts commented that if Scotland were to become independent, it would have to make new arrangements with the US, which would include a new ITAR structure. He said short of such an arrangement, even if the spaceport were located in Scotland, it would only be capable of being used for tourism. He indicated it would not have any of the underlying technology development and exchange capabilities, as these are governed by the ITAR arrangements.

2. In the context of the possibility of there being a Referendum in 2017 on the UK's membership of the EU, what reassurance can the UK Government provide in relation to the UK's access to EU sources of research funding?

The Minister responded by saying that the UK has a good record of securing EU funding. He said the weight that the UK carries in Europe is a significant factor in this.

In relation to the proposed Referendum on the UK's membership of the EU, the Minister said that the Prime Minister has been very clear that while reform of the EU is required, the UK wants to continue to be a member of the EU. He added that cross-border collaboration on research is an area in which the EU should be doing well and, indeed, doing more. The Minister said the essential question to be asked is whether the institutions and functions of the EU can be improved. In participating in discussion and negotiation of these matters, the Minister said he will promote innovation and research as being a key priority for the UK.

Mr Willetts reinforced the point that as a large state in the EU, this brings with it considerable voting powers for the UK. He said this is a significant consideration in terms of representing the interests of the UK as a whole. He also referred to research structures outwith the EU which operate by way of intergovernmental arrangements, including CERN's Large Hadron Collider, in which UK-based physicists participate by virtue of the UK's membership. He said if Scotland were to become independent, it would have to negotiate the terms on which it would participate in such international initiatives.

It was commented from the floor that researchers in the UK are becoming more aware of, and successful in, accessing EU sources of funding. The commentator said that this demonstrates the need for the UK to remain part of the EU.

3. A commentator sought reassurance that the UK Government would seek to defend the UK's membership of the EU as vehemently as it is seeking to persuade Scotland to remain part of the UK.

Mr Willetts stated that the Prime Minister wants negotiations over reform of the EU to succeed, not only for the benefit of the UK but for the EU as a whole. Drawing on his experiences of negotiations in Europe, he said that the other EU members want the UK to remain in the EU just as the UK wants Scotland to remain part of the UK.

He added that if Scotland becomes independent, it would have to negotiate the terms upon which it would join the EU as a new state. He commented that this is not a straightforward negotiation and it presents an immediate and clear risk should Scotland become independent.

4. It was observed that compared to the UK Government's unequivocal stance that there could not be a currency union should Scotland become independent, its position on the possibility of maintaining a common research area with Scotland did not appear to be so blunt. The Minister was invited to respond to this observation.

The Minister said that the constitutional position meant there is no possibility of there being a currency union. He made it clear that should Scotland become independent, it would no longer be part of the common research framework which currently exists across the UK. The Minister commented that notwithstanding the international outlook of the UK research community, the uniqueness of the UK research area is dependent on the institutional and constitutional arrangements that are in place. He stated that in order to be part of the common research area, the participants need to be part of the UK.

5. Why would the UK Government not want to try to set up a common research area with Scotland if it should become independent?

The Minister responded by saying that the legal consequence of Scotland not being part of the UK is that the Research Councils would operate for the benefit of the rUK. He said there would have to be an approach from the Scottish Government to 'apply' to participate in the rUK arrangements. He said there is risk in that approach as it is not possible to say what the views of the rUK institutions would be. He reiterated that Scottish research has quite appropriately benefitted greatly from its participation in the combined research system and that would be put at risk by independence. He said what can be stated with certainty is that it would be a rupture with the current, successful arrangements.

Mr Willetts said he believed there would be an inherent process of divergence in approaches between rUK and an independent Scotland.

6. The commentator asked about the implications that independence would have for the structures of research charities across the UK and the ready accessibility to charitable funding that researchers, particularly those in the life sciences, presently enjoy.

The Minister stated that it will be for the charities to make their own decisions with respect to this issue. Referring to the medical research sphere as an example, he said that if research trials are being undertaken at multiple sites across the UK, as

soon as there are differences in the regulatory and intellectual property regimes operating across the different sites, that introduces cost and uncertainty.

The Minister referred to the Wellcome Trust, recognising that it does operate in different countries. He said that in the case of the Republic of Ireland, the Wellcome Trust supports research on the basis of receiving a matched contribution from the Irish Government. He emphasised that this is a funding decision that has been taken by a major research charity, separate from government.

7. Current UK immigration policy is viewed by many as sending the wrong signals and undermining the ability to attract and retain international students and researchers. What plans does the UK Government have to address this?

The Minister responded by saying that academia and research is international, so it is very important to UK research and education interests that talented individuals can be attracted to the UK. He commented on the work that Mr Willetts has undertaken with the Home Office in order to try to secure the best possible settlement and agreement from the perspective of universities and research. He said this is a continuing debate and it needs to be undertaken in the context of wider border security and immigration policy issues. The Minister recognised that Higher Education is on the front line of such policy questions. He gave reassurances that he understands the importance of research and its contribution to the economy and that, as Minister, he will ensure that these arguments will be felt in the debate.

The Minister said that if Scotland were to become independent and were it to adopt different immigration policy from the rUK, that would make the Scottish Government's proposed Common Travel Area with rUK untenable. He stated that a change in immigration policy in Scotland would have inevitable consequences for the border arrangements. He said this serves to demonstrate another area of possible policy divergence between an independent Scotland and rUK.

8. It was emphasised that the immigration issue is not simply about allowing students from outwith the EU to study in the UK; there is also a need to ensure that international scientists from all disciplines are able to access international conferences. What will the Minister do to ensure that the strongest case is made on behalf of the international interests of the scientific and academic sector?

The Minister acknowledged that this is an important issue and he reflected on his own experiences of working internationally. He said he recognises this is not only about student and academic interests, but also very important for those who are working in science and the humanities more generally. He said that he will be involved in discussions to ensure that the regulatory regime is sensitive to the issues that have been raised.

Mr Willetts added that the UK Government has had to tackle the abuse of student visas. He emphasised that the intention has never been to prevent international students and academics from coming to the UK. From his experience of being involved in discussions in this area, he said the Border Agency and the Home Office have learned lessons from the specific cases where international scientists have been prevented from entering the UK. He encouraged attendees to notify Government if such cases were arising.

9. If Scotland were to become independent, what implications would this have for access to major research facilities across the UK?

Mr Willetts responded by saying that it would be very difficult to envisage that UK research facilities and centres located in Scotland could continue as they are. He added that the UK could not be expected to primarily fund an institution located outside of the UK.

10. In relation to assessing impact as part of the Research Excellence Framework (REF), it was commented that sometimes it is simply not possible to measure impact in the way that the REF requires. The commentator said this needs to be addressed to ensure that all important elements of impact can be captured.

The Minister responded by saying that while much of the discussion session had focused on issues of policy and principle, points of application and detail are similarly important. He indicated that if there are any concerns in the way that impact is being captured, then this is the kind of issue that bodies such as the RSE can provide evidence on.

Concluding remarks

The President thanked the Minister for making his presentation and, along with Mr Willetts, for taking part in the lively debate. He indicated that a summary note of the proceedings would be produced and made available shortly on the RSE website.

