

## Response to HEFCE's second consultation on the assessment and funding of higher education research

**Ro Wickramashinge and Jack Stilgoe, Royal Society Science Policy Centre**

The Royal Society is pleased to respond to the Higher Education Funding Council for England's consultation on the *Assessment and funding of higher education research* (HEFCE 2009). We make some general points below before responding to some of the specific questions in the consultation document. This response builds on our 2008 submission, led by Professor Adrian Smith FRS, in response to HEFCE's consultation on the assessment and funding of higher education research post-2008 (Royal Society 2008).

The Society held an event on the Research Excellence Framework entitled "Science on tap? – Recognising and rewarding the policy impact of research" on 22 October 2009, which has informed our response.

### **General Points**

As the Research Excellence Framework evolves, it is important that HEFCE maintains a firm focus on the overarching purpose of the Framework, and ensures that all elements of the REF meet the broader 'aims of research assessment' outlined in the consultation document – chiefly to 'develop and sustain a dynamic and internationally competitive research sector.' (HEFCE 2009)

The Society welcomes many of the changes made to the proposed Research Excellence Framework following the previous consultation (HEFCE 2007). The Society is particularly pleased that the following changes have been incorporated into the new proposals:

- The use of bibliometrics as an indicator to supplement, rather than replace, peer review;
  - The removal of the distinction between 'science' and 'non-science' subjects, in terms of their method of assessment, which should help to better assess interdisciplinary work;
  - The decision to limit the number of outputs per researcher in the evaluation process to help ease the burden on panels and Higher Education Institutions;
  - The consideration of additional indicators of quality in research outputs, which will better assess excellence in applied research.
- 
- The Society supports the decision to adopt more flexibility in the assessment of early career researchers and researchers that have spent time away from the academic base by reducing the number of outputs that they have to submit compared to other researchers.
  - We would like to see alternative forms of output and indicators such as licensed patents or the amount invested in spin-off companies also adopted to assess excellence in more business-focused areas.
  - It is important that if impact is to be assessed, the measurement process is sufficiently broad and flexible.

**Specific points**

Building on our previous policy statement (Royal Society 2008), this response addresses particular points of concern.

Assessment (Consultation Question 2)

- The Society supports the revised use of bibliometrics as a tool to inform and supplement, rather than replace, expert review in certain Units of Assessment (UoA). We also support the decision to allow expert panels to decide whether to use citation data or not.
- The Society supports the introduction of measures to reduce the burden on expert panels and HEIs. However, such approaches must not compromise the quality and breadth of the REF so we urge HEFCE to review the impact of reducing the number of UoAs and the maximum number of outputs to be submitted by researchers after the initial pilot.

Impact (Consultation Question 3)

- The Society supports, in principle, the inclusion of impact as one of the features of the assessment framework. The impact of UK scientific research is considerable and more can be done to increase it further. Provided that the Framework does not emphasise crude or narrow measures of impact, it should be possible to incorporate retrospective assessments of impact as part of a research assessment exercise. However, metrics can drive behaviour. If they are narrow, they can weaken those current strengths of the system which happen not to be measured. The primary purpose of the Framework must remain the support and recognition of excellent research.
- The Society particularly welcomes the consideration of broader social, economic, public policy, cultural and quality of life impacts. It is appropriate that assessments of impact should consider as many of these types of impact as possible, rather than focusing on economic impacts alone. One of the most important impacts of research is the development of highly-skilled people. Even in narrow economic terms it is known, for example, that Foreign Direct Investment is substantially influenced by the availability of high quality research trained staff around leading research Universities. People trained in research enter a wide variety of other jobs in the UK, where their training provides real impact and value even if it is outside their original specialism (Royal Society 2009). These and other broader societal impacts are hard to capture, measure and attribute to particular projects or even individual units of assessment. For impact measurements to be valid, these broader impacts should nevertheless be represented in some form in research assessment. The previous 'esteem' criteria of the RAE understood and represented some of these impacts. We would urge HEFCE to take previous understandings of esteem forward into the current impact criteria. We recommend that panels explicitly ask that submissions consider the broader multiple impacts of research in their guidance to HEIs.
- We welcome the plan to include research undertaken outside of the REF assessment period for impact assessment, as the impacts of curiosity-driven research are often not apparent until long after the original research has been completed. The Society would welcome clarification on the reasoning behind the selection of the time limit of 10-15 years, as many impacts (particularly in the physical sciences) can take longer than this to become apparent.

- The Society is concerned that the drive to standardise impact assessment across Units of Assessment and Panels may disadvantage certain disciplines. Impacts are not uniform across disciplines. For example, the economic and societal impacts of research in the physical sciences tend to differ significantly from those in the life sciences. We believe that individual panels should be allowed to define impacts that are relevant in their areas.
- Similarly, we recommend that the REF should include a degree of flexibility with regard to impact weighting across subject areas, by allowing subject panels to alter the relative weighting of impact criteria. The outcomes of the pilot exercise will be key in informing HEFCE's consideration of weighting and the effectiveness of the proposed system.
- HEFCE have correctly identified a number of challenges to the accurate measurement of impact. We urge HEFCE to ensure that the proposed measures adequately address these challenges and do not inadvertently compound them.
  - Paragraph 68 states that HEIs cannot '*claim credit for impact which was based on research undertaken in the unit but which was exploited or applied through the efforts of others, without a demonstrable contribution by the unit to that exploitation*'. We believe that this suggestion, if implemented, may disadvantage universities which are not 'one-stop shops' for both excellent research and its exploitation. Moreover, it misunderstands the increasingly complex relationships between different actors in the innovation ecosystem (Royal Society 2009) and suggests an innovation process which is essentially linear and self-contained. The linear model has many conceptual and practical problems, not least that of attribution – eventual impacts can rarely be traced back in a straight line to single instances of research (Martin and Tang 2006). Indeed, we believe that in the majority of cases, research is more effectively exploited by other parties, in other countries or in different sectors. We recommend that this element of the framework should be reconsidered after the pilot exercise.
  - The draft 'common menu' of impact indicators is broad, but careful consideration will need to be given to their relative importance and how they will be compared to each other. Indicators of quality rather than quantity that are tailored for each type of impact should be explored in the pilot study. For example when considering the success measures for spin-out companies, indicators such as the investment received by a spin-out could be used, as many spin-out companies are not actively generating revenue because they are primarily involved in product development.
- More generally, we encourage HEFCE to ensure that the impact indicators used in the pilot study are carefully considered and do not provide perverse incentives.
- International benchmarking and best practice are emphasised by HEFCE. It is important to bear in mind that the 'pull' from institutions around HEIs is as important as the 'push' from HEIs themselves. National innovation systems also depend on industrial policy, fiscal policy and economic structure across sectors. International comparisons need to consider differences in these wider framework conditions for innovation.

- The Society welcomes the proposed approach for assessing research environment. We are pleased that staff development, including support for early career researchers, and the training of postgraduate research students will be considered. Early career researchers are the lifeblood of the research base and the resources allocated to their development are an important indicator of an excellent research environment.

Equality and diversity (Consultation Question 11)

- The Society believes that greater clarity is needed about the way that panels operate. Many researchers do not know how panels operate and incorrectly believe that they do not take all data into account. Greater transparency for researchers will help to alleviate such concerns and increase confidence in the REF in the researcher community.
- The Society also recommends that the data from the bibliometrics pilot exercise be used to inform the way citation data will be interpreted by expert panels in the REF.

**References**

HEFCE (2007) *Consultation on the assessment and funding of higher education research post-2008*.

HEFCE (2009) Research Excellence Framework. *Second consultation on the assessment and funding of higher education research*.

Martin, B.R. and P. Tang (2006) *The Benefits from Publicly Funded Research*, report for Office of Science and Innovation, Brighton: SPRU

Royal Society (2008) *Response to HEFCE's consultation on the assessment and funding of higher education research post-2008: submission from the Royal Society*.

Royal Society (2009) *Hidden Wealth the contribution of science to service sector innovation*. London: The Royal Society

**Any enquiries about this submission should be addressed to:**

Dr Rochana Wickramasinghe  
Science Policy Centre  
The Royal Society  
6-9 Carlton House Terrace  
London  
SW1Y 5AG

rochana.wickramasinghe@royalsociety.org  
+44 (0)20 7451 2249