

The joint funding bodies' review of research assessment

Introduction

1. Once again, the CBI is pleased to contribute to a Funding Council led review of research assessment. This time we hope that there is an impetus for real change.
2. Rather than discussing what is wrong with the current system in any detail, the list below highlights some of the key failings of the Research Assessment Exercise (RAE) from the business perspective:
 - the RAE involves a significant administrative burden on institutions and assessors. The burden on assessors was particularly evident in RAE 2001 when a higher proportion of research users were involved in the assessment panels—some assessors told us that their time commitment was unacceptable, amounting to some 20 days of individual effort. For the institutions, the time spent preparing submissions represents a major distraction from core research work
 - institutions are now able to 'play the game' to get the best overall result for them, while the RAE provides less and less discrimination at the high end of research excellence—an important issue for business trying to make objective assessments of where to develop research activities
 - much cross-disciplinary work ends up being assessed in an inappropriate way—this is a serious failing considering that innovation is most likely to take place at the interfaces between subjects and where expertise from many disparate subjects can be brought to bear on problems. Everything possible must be done to help break out of the traditional research silos in universities
 - collaborations and partnerships across and between institutions are not easily recognised—taking the silo issue further, universities and departments must be encouraged to work together and with other major research players such as business to share ideas, help generate critical mass and improve the overall efficiency of the R&D base in the UK
 - work of value to business does not attract adequate recognition—currently the RAE focuses too much on academic output, in particular academic papers, and fails to value work that may be of more relevance to business. In turn this can help to drive wider academic activity away from business-specific work if the perception is that this is only a second class add-on to work that might have a greater impact on RAE scores.
3. Business is also interested in research assessment issues because it has a significant and relatively long-term impact on the distribution of research support money in UK



universities. If the disbursement of funds better reflects the current and future needs of business then this should have a significant positive effect on business R&D and innovation activities, and be beneficial to the UK economy (and ultimately society) as a whole. Experience shows that the effects will be apparent across all areas of university activity as what research is supported can also have a major impact on the quality and relevance of teaching and on broader knowledge/technology transfer activities involving business.

4. With so much at stake it is right to re-examine the assessment mechanism and we welcomed the open discussion that members of our Inter Company Academic Relations Group had with Professor Sir Gareth Roberts in October. We have now explored a number of possible options for replacing the RAE ranging from self assessment to no assessment, providing a super overhead on research income from other sources, and only assessing departments claiming a high proportion of research at levels of international excellence.
5. Our conclusion is that there is no single clear-cut winning option for research assessment. All have both plus and minus points and we recognise that what might seem most desirable from a pure business perspective may not be entirely acceptable to academia or other stakeholders. Experience with the RAE also demonstrates that too much focus on one line of assessment can seriously distort the system being measured, both in terms of subtle attitude changes over time and with more proactive ‘game playing’ to get the best deal. The assessment system also has significant knock-on effects into other areas of university work. In light of these concerns we propose more of a hybrid system that would bring together the best parts of a standard peer review mechanism with other options that would provide greater breadth, while reducing the quinquennial bulge of administrative activity that accompanies the RAE.
6. On the following pages we highlight the elements that should be brought together in a hybrid assessment model. The precise balance of elements will be for the Funding Councils to decide, taking into account the need to deal with problems that we have identified above. Ultimately, a basket of measures should be developed with weightings adjusted to ensure that the assessment supports a balance of research activity from blue skies right through to near market work with business.

Key elements of a hybrid assessment model

7. Making better use of other independent reviews. A significant proportion of additional assessment effort could be removed by taking more account of existing external review activity. This could also help to bring the quality judgements made by research users into the core of research assessment. For example this could include:
 - the quality assessments done by business before it decides to engage in a piece of work with a university (the extent of industrial funding won by a research group should make a significant contribution to the overall research rating)
 - ditto those made by government departments
 - assessments made by journal editors before accepting material for publication (taking into account an accepted ranking of journals in terms of their review procedures and importance to the subject), and
 - research grant decisions made by the Research Councils and charities.

8. All of this assessment is done already and would always need to be done whether there is an RAE or not. It should be a simple task for departments, research groups or institutions to collect this information.
9. To support this, a factor relating to research impact should be included to ensure that the value of highly significant pieces of research can be captured fully. For example accounting for the impact of the research on the products and processes of a commercial partner, or to reflect the importance of a piece of blue skies research which is a long way from finding private sector interest.
10. A factor reflecting the diversity of research income should also be included. Diversity demonstrates success across a variety of peer review mechanisms and also suggests a sustainable approach to securing research funds. It may also be an indicator of international 'reach' and successful multidisciplinary work.
11. Reduced focus on publications. Apart from research at the blue skies end of the spectrum, the overall importance of academic publications should be down rated. Other research outputs (e.g. patents, designs, commercial reports for business, analysis for government) and other related activities such as engagement with teaching units and research input to science and society issues should be given more prominence. Scientific and technological advancements protected by confidentiality agreements (rather than patents etc) or that could be protected, but are made freely available, should also be taken into account.
12. Using an algorithm to build a research assessment rating. This would be an appropriate way to bring together much of the information gathered from the external review work discussed above and from other relevant factors such as patent information, citation rates, numbers of active researchers and research students. The definition of the factors and the weighting applied should be published in such a way that both the academic and user communities understand the scoring system. We suggest that this might form a significant part of the assessment for most groups.
13. International peer review and direct review by research users—for the groups that claim a high proportion of work to be at international levels of research excellence and/or of significant impact to business or other research users. Such groups could be asked to submit a sample of evidence for a second stage of peer review at the highest level. This would require the establishment of an effective college of international and user reviewers including businesses operating on an international basis and multidisciplinary experts, rather than the token involvement seen in RAE 2001.
14. Assessment linked to a business plan. Research groups should be required to submit a business plan for assessment which should demonstrate research sustainability (including compliance with training and career development standards), links to overall strategy (both within the university and more widely, for instance linked to Foresight priorities) and the likely impact of proposed work. The plan should be required to cover a period of at least five years (and certainly longer if the focus is to be more on basic research). This should bring a forward-looking element into the assessment and will make an important distinction from the overwhelmingly retrospective RAE.
15. Rolling assessments. These could be used to provide greater flexibility to the assessment mechanism rather than focusing all activity across all subjects in one year. They would allow emerging or rapidly developing areas of activity to be assessed on different time scales so that changes in funding patterns could be introduced in a more supportive way. Rolling assessment may also allow for enhanced recognition to be given to work that has clearly been of value over a number of years (rather than just in the run-up to an

assessment period). This could provide a route for capturing the value of blue skies research where its ultimate importance may not have been clearly recognised at the time it was conducted.

16. Focus on research groups. The focus should be switched away from departments and pure subject-based assessments and on to individual research groups. These groups may be involved in research across a range of traditional subject divisions, or may be more focused on one subject or an important niche area. The groups could be whole departments, coherent bodies within departments, collaborative or even virtual groupings across institutions and may also involve business or non-UK partners. This should help to foster multidisciplinary and cross-institutional working and ensure that excellence is supported independent of where it is physically located. This move should also ensure that the status of high quality research groups within otherwise mediocre departments or universities is given full recognition.
17. Assess different subjects in different ways. It makes sense to assess broad subject groupings in different ways that better reflect the nature of the work done and the likely importance of work to different potential users or to advancing knowledge *per se*. Thus the physical sciences could be assessed against a different set of criteria to those used for aspects of arts and humanities research. The subject groupings should remain broad so that multidisciplinary work is not put at a disadvantage. Work that is of a strategic national importance (e.g. nuclear or medical research) which is essential even if it cannot always reach levels of international excellence could also be assessed differently. In such cases, the assessment process ought to be accompanied by the development of a plan to raise the quality of activity over a period of time.

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