

RSS response to Department for Business, Innovation & Skills consultation on proposed next steps for higher education reform

Please tick the box that best describes you as a respondent to this consultation.

<input checked="" type="checkbox"/> (also a professional body, please see description below)	Representative Body
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The Royal Statistical Society (RSS) is a learned society and professional body for statisticians and data analysts. As a learned society, one of our strategic goals is for statistics as a discipline to thrive, so that methodology is advanced, applied and made accessible, leading to greater understanding of an increasingly complex world. As a professional body, we also have wider goals that extend beyond our discipline's foundations in mathematical sciences. We would therefore like to respond to your Question 24 in relation to the uniquely wide reach of statistics, across almost all natural and social sciences.

Question 24. In the light of the proposed changes to the institutional framework for higher education, and the forthcoming Nurse Review, what are your views on the future design of the institutional research landscape?

24.1. Within higher education, almost every natural or social science discipline benefits from innovative statistical input to its research. However, a consequence of successive RAE and REF exercises has been an increased concentration of funding for statistical research into fewer, larger departments.

This is a rational strategy to promote world-leading research in statistical mathematics, but threatens the quality of research as a whole in universities where statistical groups have been relegated to a service role, or disbanded altogether.

24.2. The distinctive, and often competing, priorities of sustaining excellence in statistics as a discipline, and capitalising on the ability of statistics to add value to inter-disciplinary research, create tensions and inefficiencies in the way UK statistical research is funded. The Engineering and Physical Sciences Research Council (EPSRC) funds statistics primarily within its mathematics programme, and accordingly focuses on mathematical advances, whilst making occasional forays into inter-disciplinary space. Other Research Councils, notably the Medical Research Council (MRC) and the Economic and Social Research Council (ESRC), make substantial investments in inter-disciplinary research and recognise that contemporary and future substantive research in their respective domains will require more, and more sophisticated, statistical input.^{1,2} There are

¹ Medical Research Council (2015). 'Position statement: Reproducibility and reliability of biomedical research' [webpage]. <http://www.mrc.ac.uk/research/research-policy-ethics/position-statement-reproducibility-and-reliability-of-biomedical-research/> (accessed January 2016)

² Economic and Social Research Council (2015). *Strategic Plan -2015* [PDF], Available from: <http://www.esrc.ac.uk/files/news-events-and-publications/publications/corporate-publications/strategic-plan/esrc-strategic-plan-2015/> (accessed January 2016)

investments that would benefit from more cross-Council coordination. For example, the EPSRC recently solely funded five Centres for Mathematical Sciences in Healthcare.³ A more joined-up and possibly productive RCUK approach might have been to coordinate across more than one Research Council (e.g. MRC, ESRC as well as EPSRC) which would bring both extra resources and bring together key personnel from either side of the disciplinary boundary.

24.3 Accordingly, the RSS strongly supports the recommendation of the Nurse Review to establish an over-arching body, Research UK, in particular with regard to its proposed roles in supporting "cross-cutting activity across the Research Councils," and in "the formulation of research strategy." Our assessment is that whilst EPSRC can and should continue to support statistical research in key aspects of the discipline (in particular, at present under its mathematical sciences programme), support for statistics as a discipline that cuts across so many others, in which innovative statistical work is required to solve a substantive research problem, needs to be managed by an over-arching body such as the proposed Research UK.⁴

Submitted by Policy and Research Manager, 15 January 2016

³ EPSRC (2015) '10 million for new maths centres to tackle life-threatening diseases' [webpage], 16 December 2015. Available at: <https://www.epsrc.ac.uk/newsevents/news/newmathscentres/> (accessed January 2016)

⁴ The Royal Statistical Society (2015) *Data Manifesto Briefing Note 7: Investment in research, science and innovation* [PDF], available from: <http://www.rss.org.uk/Images/PDF/influencing-change/2015/data-manifesto7-investment-in-research-science-and-innovation.pdf> (accessed January 2016)