

CaSE submission to the House of Lords Science and Technology Committee on Science and Research Funding in Universities

The 2.4% target

The Government's target to invest 2.4% of GDP in R&D by 2027 and 3% in the long term is a welcome ambition. We commend the Government for setting out a long-term ambition for increasing investment in science and innovation. It is in line with calls we and others have made so that the UK can meet the economic, health, security and environmental challenges facing society.

However, while the Government has set out the 2.4% target it hasn't yet set out a roadmap for how the target will be met. A clear vision and roadmap will be essential both to win support from across government, business and the public, and to steer decision making towards the target. A long-term plan gives confidence for long-term R&D investment decisions by the private sector and for long-term partnerships between the public and private sector. Every country that has successfully raised R&D intensity by a similar amount has done so through raising both public and private investment¹. Our members have told us that leadership and long-term R&D investment from Government enables them to plan and gives industry confidence to keep on investing in R&D. Public investment also drives increased private investment, with a time-lag.

Role of Universities in research and innovation and the 2.4% target

Universities play an important role in the UK's research ecosystem and will be vital to achieving the 2.4% target. They have a central role in bringing together industry and others to create local partnerships that drive cutting-edge research in world class facilities. The UK has just 4% of the world's researchers but they generate 15% of the most highly-cited papers, used most frequently by other researchers². However, the way R&D in universities is funded is complex and any policy changes must be closely scrutinised in order that they have no unintended consequences that lead to a reduction in the funding available for R&D, particularly in the context of reaching the 2.4% target.

Possible effect of the Augar Review on research funding

The Government commissioned review into post-18 education (the Augar Review), due to report soon, could have an impact on R&D if its recommendations lead to a decrease in funding available to universities for teaching. Cross-subsidy of research from teaching budgets is common³, and shortfalls in funds for teaching provision would very likely affect the amount of money available for research. There is a risk that Quality-Related (QR) funding, often used for discovery research, could be redirected to teaching.

¹ [OECD MSTI database](#), data extracted 4/11/18

² <https://www.elsevier.com/connect/report-compares-uks-research-performance-with-key-nations>

³ <https://www.hepi.ac.uk/wp-content/uploads/2017/11/HEPI-How-much-is-too-much-Report-100-FINAL.pdf>

QR research funding is used to fund institutions (universities) on a formula basis. It is allocated by retrospective assessment of the quality of past research output and the funds are not hypothecated. It is widely regarded as a unique asset to UK research and innovation strength and resilience. Direct funding of higher education institutions (HEIs) is devolved. In England, QR funding is administered by Research England, in Scotland by the Scottish Funding Council (where it is called Research Excellence Grant) and in Wales by the Higher Education Funding Council for Wales.

A recent report⁴ sets out how this institutional funding complements project-based funding and is used by universities to support discovery science, research projects and infrastructure in line strategic priorities, research careers, collaboration and to leverage other funding. Over time, QR funding has reduced as a proportion of higher education institutions income from a third in 2006/7 to a quarter in 2016/17⁵. This has resulted in a change to the types of research funded and the relative level of strategic flexibility universities have in making research funding allocation decisions. It is important that this flexibility is not further reduced by the need to 'top-up' teaching funding.

Furthermore, UKRI Research Council grants typically do not meet the full economic cost of research⁶. Universities must 'top-up' grants from existing budgets so that the full economic cost of that research is met. Our members have told us that pressure on university budgets could make it more difficult to find the money necessary to top up research council grants to fund the full economic costs of research.

The Government should ensure sustainable funding for teaching and research in the long term is available for higher and further education. The Augar Review may have an impact on research, which the Government should assess and be aware of in implementing any recommendations.

EU Students and Researchers

Reaching the 2.4% target will require more researchers at all levels: PhD students, post-doctoral researchers, mid-career researchers and senior researchers. Many of these will need to come from overseas, including the EU. It is important that the immigration system and fee levels for EU undergraduate and postgraduate students do not act as a deterrent to EU citizens from continuing to come and settle in the UK to study and work as researchers.

The uncertainty around the UK's future relationship with the EU and the status of EU citizens living in the UK has already led to declines in applications for jobs and postgraduate courses in the UK from EU nationals. In a Prospect member survey of 650 EU nationals working in the UK, nearly 70% of respondents said they are thinking of leaving the UK because of Brexit⁷. 47% of British Heart Foundation funded researchers are 'more likely' to take up a post outside the UK than before the vote to leave the EU, rising to 80% for non-UK EU nationals⁸. Some members spoke of staff holding offers for work overseas and waiting to

⁴ [Empowering UK universities: how strategic institutional support helps research thrive](#), Wellcome Trust, 2018

⁵ HESA – Finances of Higher Education 2002-2016

⁶ <https://www.ukri.org/files/legacy/documents/fecfaq-pdf/>

⁷ Written evidence: Science and Innovation Summit, Prospect, HOC S&T Committee

⁸ Written evidence: Science and Innovation Summit, British Heart Foundation, HOC S&T Committee

see what happens in the UK before making relocation decisions. Organisations have started to see a decline in the flow of talent from the EU to the UK, noting that the best candidates are harder to attract. This is reflected in application patterns for research positions, including PhDs, postdoctoral roles, fellowships and academic posts. In their submissions to CaSE members reported⁹:

- In 2017, the proportion of EEA researchers applying to Wellcome's early career research schemes fell by 14%.
- UCL have seen significant drops in application rates from EU nationals for postgraduate research roles and academic posts and in 2017 had no applications from the EU for their Life and Medical Sciences research excellence fellowships that offer three years' salary and £50,000 of research funds. In previous years, EU nationals made up approximately a third of applicants.
- Major science funders, including Wellcome Trust, British Heart Foundation and Cancer Research UK, report instances of candidates for prestigious research fellowships and funding turning down the opportunity citing uncertainty due to Brexit as a key factor.

About CaSE

The Campaign for Science and Engineering (CaSE) is the UK's leading independent advocate for science and engineering. Our mission is to ensure that the UK has the skills, funding and policies to enable science and engineering thrive. We represent over 115 scientific organisations including businesses, universities, professional bodies, and research charities as well as individual scientists and engineers. Collectively our [members](#) employ over 336,000 people in the UK, and our industry and charity members invest over £32bn a year globally in R&D. We are funded entirely by our members and receive no funding from government.

⁹ <http://www.sciencecampaign.org.uk/resource/brexit2018.html>