



The impact of Quality-related research (QR) funding

University R&D is expanding human knowledge, advancing society, and driving economic growth through the creation of new products, spinouts and jobs. QR funding plays an essential and unique role in achieving this impact. It enables universities to deliver long-term strategic projects, pursue high-risk, high-reward research, and remain responsive to new priorities or external shocks. However, growing pressure on funding is putting the returns it can deliver for the UK's economy and society at risk.

The UK's dual support system drives R&D success

Flexible, longer-term funding complements a grant-based approach to research by ensuring there is a pipeline of new ideas, talent and infrastructure to underpin innovation in areas which have not yet emerged as the global challenges of the future. Without QR funding, and its equivalents in the devolved nations, we would not have had innovations and discoveries such as graphene, genomics, opto-electronics, cosmology research, and new tests and treatments for everything from bowel disease to diabetes, dementia and cancer.

The government recognises that the strength of the UK research system is in part a result of its funding allocation method. This combines competitively awarded grants provided by research funders with formula funding (QR funding and equivalents in the devolved nations) allocated to universities largely based on their research performance through the Research Excellence Framework (REF).

This 'dual support' system enables universities to pursue innovative and high-risk, high-reward research, balanced by direction from government and funders in setting the UK's overall R&D strategy. This has enabled the UK to contribute 7% of the world's research articles and nearly 14% of the most highly cited articles, while accounting for only 2.5% of global R&D funding.

QR funding plays a unique role in delivering government priorities

QR funding is unique and highly versatile because it is not ring-fenced for specific activities. As the only source of flexible, long-term research income in the UK, QR funding is currently enabling universities to:

- Undertake activity that **cannot be funded through other routes**. This includes proof-of-concept pre-funder projects, blue skies R&D too risky or nascent for research funders or businesses to invest in, interdisciplinary R&D, supporting early career researchers who show potential but are not yet ready to apply for competitive funding, and building expertise and capacity in new areas of promise.
- **Act quickly to leverage industry opportunities and additional investment into the UK**. Across the UK in 2022/23, universities attracted £1.4bn in research funding from charities, £1.5bn from industry and £600m from the EU.¹ In the same year at Imperial, for every £1 received in mainstream QR, the institution attracted £5.88 in research grants and contracts from industry, charities, and governments.²
- Respond quickly to new challenges, **external shocks or changes**. For example, UCL used QR funding to rapidly collaborate with industry partners to create breathing aids to keep Covid-19 patients out of intensive care. UCL's Technology Transfer Office then worked to make the design of these breathing aids free for others to manufacture worldwide.³
- Invest in **longer term ambitious strategic projects**. QR funding allows universities to invest in, and coordinate, ambitious projects in their local regions. The University of Glasgow for example is using its QR funding (called the Research Excellence Grant in Scotland), as part of a £1.3bn investment into the Glasgow region over 10 years, delivering a mix of investment in R&D, local infrastructure, housing and teaching capacity.⁴
- Provide **career stability and protect the UK's research talent pipeline** by funding researchers' salaries in between grants, providing job security meaning researchers can concentrate on delivering their research.
- Invest in the bridging funding, wrap-around support, training, infrastructure and equipment needed for researchers to **deliver external funding grants**, often called indirect costs. Without QR funding universities would not be able to undertake government-funded grants.

Specific examples showing how the benefits of QR funding deliver impact can be found in the **Annex**.

QR funding is a cost-effective way of funding research and delivering these benefits for government and universities. It has been estimated that REF 2021 only cost 3-4% of the total QR funding it will allocate in England.⁵ Indeed, a 2014 study of five different high-research productivity countries showed that countries which allocate more resources through QR-like mechanisms spend less public money per citation and publication.⁶ For universities, the low administrative burden and costs associated with QR funding means they can invest more in research and talent, maximising the returns for the UK's economy and society.

The strategic uses of QR funding are increasingly under pressure

University expertise in cutting-edge research is transforming UK cities, creating thriving clusters of high-value activity and helping to deliver the government's growth mission. In 2021/22, each £1 of public funds invested in research at our universities added more than £8.50 to the UK economy – and as a result, our universities' research and commercialisation activities deliver almost £38bn for the economy every year.⁷ This activity sustains over a quarter of a million jobs, twice as many as in the chemical and pharmaceutical manufacturing industries combined and has supported more than 1,200 spinout companies currently operating in the UK.

QR funding enables universities to respond to new opportunities while making long-term investments in talent and emerging innovations to drive productivity and job growth. However, strategic uses of QR funding are at risk as institutions are having to increase investment to meet the full economic cost of research. The proportion of research costs covered by external funders has decreased over time, with UK Research Councils now funding only 68.9% of full economic cost (FEC),⁸ while external funding for capital has also fallen over time. In England, this has been compounded by a 16% drop in real-terms QR funding from 2010/11-2024/25 compared to an increase in Research Council grant funding over the same period, with more severe declines in the value of QR-equivalent funding being seen in the devolved administrations.⁹

To maintain the agility, innovation, and long-term planning that it affords, we recommend that:

- **the decline in value of QR funding is addressed across the UK's nations, and in future the funding is linked to inflation to prevent erosion of its value over time.**
- **when new R&D commitments are introduced, QR funding is uplifted to ensure the research base is supported to deliver on new priorities.**

Annex: How the unique benefits of QR funding deliver impact

<p>Enabling activity that cannot be funded through other routes. This includes proof-of-concept pre-funder projects, blue skies R&D too risky or nascent for research funders or businesses to invest in, interdisciplinary R&D, supporting early career researchers who show potential but are not yet ready to apply for competitive funding and developing expertise and capacity in new areas of promise</p>	<p>With minimal flexible funding sources for interdisciplinary research, QR funding has played an essential role in the University of Exeter establishing and running five interdisciplinary University Research Institutes, which focus on topics such as environment/climate change and AI/data science. Over the last 10 years these have brought academic communities together across faculties and departments, developed partnerships with external agencies and leveraged funding to support the interdisciplinary and collaborative research needed to address complex global challenges relating to health, social justice and the environment. For example, QR-underpinned research from the Institute of Data Science and Artificial Intelligence supported the WHO to improve the accuracy of their information on global air quality. This data has directly fed into Sustainable Development Goal (SDG) indicators and has guided national policy interventions.</p> <p>King’s College London is using QR funding to develop the next generation of young scientists through its Prize Fellowships scheme. This provides 2 years of support to the most promising researchers. So far, the scheme has funded approximately 50 fellows, of which around 30 have subsequently been awarded a competitive, externally-funded fellowship (from UKRI, Wellcome, ERC and similar), and an additional 13 have been recruited to open-ended academic positions. As an indication of success, these fellows have generated c.£50m of external research funding to support their work. Their research covers topics such as human brain development (and the effects of COVID), fetal cardiac imaging, addictions treatment, and chronic pain. Without the QR funding underpinning the Prize Fellowships scheme, King’s believe that very few of these outcomes would have been possible.</p>
<p>Allowing universities to act quickly to leverage industry opportunities and respond to external shocks or changes</p>	<p>The University of Oxford's Jenner Institute had a robust infrastructure and grant funding that allowed it to conduct advanced research on vaccine technologies for many years, including a vaccine for MERS (Middle East Respiratory Syndrome) coronavirus. In response to the SARS-CoV-2 coronavirus outbreak in December 2019, the Institute commenced development of the COVID-19 vaccine on 11 January 2020, as soon as the genetic code of SARS-CoV-2 was released. This rapid breakthrough stemmed in part from QR funding which provided researchers with the freedom to pivot and adapt their existing research on MERS to target the new coronavirus. The resulting Oxford-AstraZeneca vaccine saved 6.3 million lives in the first year of the global vaccine rollout.</p> <p>Imperial College London’s Molecular Sciences Research Hub is the most advanced molecular science facility in the world. The facilities, including the Centre for pulse electron paramagnetic resonance (PEPR) and the Centre for Rapid Online Analysis of Reactions (ROAR) need QR funding in order to remain world-class. Imperial ensures that local SMEs and industrial partners can access these world-class facilities and Imperial expertise, helping growing businesses to characterise and test their products. For example, half of the equipment time in the ROAR facility is utilised by SMEs and industrial companies.</p>
<p>QR funding is the only long-term, reliable public funding source available so it can be used to invest in longer term</p>	<p>QR funding has supported Durham University’s Durham Energy Institute (DEI), a leading centre for energy research focused on energy transitions and decarbonisation, since its establishment in 2009. Notably, it has been a reliable source of income to support staff salaries, providing the long-term security of posts needed to attract talent and enable the team to take the necessary longer-term approach to their research. For example, as a result of over 10 years of</p>

<p>ambitious strategic projects</p>	<p>R&D DEI researchers have developed an innovative free piston engine prototype which is 60% smaller and 25% lighter than a conventional internal combustion engine (ICE) generator and provides similar advantages over fuel cell technology. The thermal efficiencies this affords will help reduce emissions and lower operational costs, contributing to net zero ambitions.</p>
<p>Providing career stability and protecting the UK's research talent pipeline by funding researchers' salaries in between grants, this job security allows them to concentrate on delivering their research. This is especially used for early career researchers who are still building their experience and career</p>	<p>The University of Leeds (UoL) used QR funding to support Associate Professor Dr Lucy Stead's research into understanding the development and progression of brain cancer. Building on her initial two-year Wellcome-UoL funded fellowship, university funding (including QR) has supported Lucy to achieve further success – securing external grants, publishing high-quality research and winning a prestigious UKRI Future Leaders Fellowship. This includes support to employ a research technician to continue her work during her maternity leave. Lucy now sits on several external policy boards, co-leads the development of the UK's brain tumour research strategy and works with major international funders. She continues to develop the next generation of researchers, alongside an ever-growing research portfolio (total income: £3m, current group size: nine). Her latest findings could lead to improved patient outcomes through stratification of treatment pathways. Dr Stead said: "The university's use of flexible QR funding gave me the opportunity to develop my own ideas and achieve success in my fellowships. It has allowed me to focus on research which will translate into real benefits for brain cancer patients."</p>
<p>Investing in the bridging funding, wrap-around support, training, infrastructure and equipment needed for researchers to deliver external funding grants, often called indirect costs. Without QR funding universities would not be able to undertake government-funded grants.</p>	<p>The flexibility of QR funding enabled the University of Liverpool to invest in Chemistry, an area that often secures a lower cost recovery rate, over a sustained period. This has resulted in an exceptionally strong research base with 99% of their peer-reviewed research publications ranked as internationally leading or excellent. QR funding has also allowed the university to leverage co-investment from Unilever including a £22m investment into their Materials Innovation Factory and secure collaborations with national and international organisations including AstraZeneca, GSK and IBM. It provided the match funding required for them to secure additional grants creating an agglomeration effect of capability, expertise and impact. For example, as part of an £8.8 million EPSRC Prosperity Partnership announced in 2021, the University of Liverpool, Unilever and the University of Oxford are driving forward important research on new renewable and biodegradable materials for everyday products, such as laundry detergents, helping the UK achieve Net Zero by 2050.</p>

References

- ¹ [OfS \(2024\) Annual TRAC 2022-2023](#)
- ² [QR driving excellence](#)
- ³ [UCL-Ventura CPAP breathing aid: interdisciplinary working to solve a COVID-19 challenge at pace](#)
- ⁴ [University of Glasgow campus development](#)
- ⁵ [WonkHE \(July 2023\) REF is expensive because it's good value](#)
- ⁶ [CPB \(March 2014\) Public funding of science: An international comparison](#)
- ⁷ [London Economics \(2023\) The Economic Impact of Russell Group Universities](#)
- ⁸ [OfS \(2024\) Annual TRAC 2022-2023](#)
- ⁹ [Universities UK \(2024\) Opportunity, growth and partnership: A blueprint for change](#)

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