



Supporting UK Research

November 2019

Summary

Changes to research funding

- There have been **significant changes in the scale and pattern of university research funding** over recent years. The overall level of funding has increased steadily¹ while many funders – including charities, the EU, Research Councils and businesses – continue to fund university research at levels below the full economic cost of the work². This is compounded by the **increasing use of matched funding requirements**.
- Rising investment from these sources and correspondingly larger volumes of university research are opening a **growing gap between the cost of research and the income to support it**. This is unsustainable.
- Meanwhile, **changes to research institute funding models** are requiring universities to provide substantial funding for new institutes, including the Crick and Alan Turing institutes.

Role of universities and the dual support system

- **Universities, and the dual support system, underpin the UK's thriving research base.** Project research is enriched by the broader university context and funding system.
- **QR funding underpins the UK's research funding ecosystem** including public, charity and business research funding. It enables universities to sustain the academic workforce and lines of research between grants; partner with business, charities and others; leverage research funding; and stay globally competitive.

Recommendations

- **Sustainable investment in overheads and infrastructure is fundamental to the delivery of high quality research, maximising the economic return of UK R&D.** Investment in infrastructure stimulates additional R&D activity and fosters industry investment, bolstering efforts to reach the target for R&D funding to reach 2.4% of GDP.
- We encourage the Government to improve the sustainability of research funding by **rebalancing R&D funding mechanisms**, including:
 - **increasing the proportion of public R&D funding** going towards **QR funding**
 - **increasing Research Council fEC rates**, resulting in fewer, but better-funded projects
 - easing matched funding requirements.

1. Introduction: The current funding landscape

UK research funding comes from a number of complementary funding streams that collectively develop and sustain research excellence and a rich variety of research outputs. Project grants are awarded by funders including the Research Councils, NIHR, charities, national academies, the EU and industry. Core (QR) funding is awarded annually by Research England and the other regional higher education funding councils. It contributes a significant proportion of the costs of research projects as well as underpinning research undertaken in universities. Project funding and QR funding are thus interdependent,^a and the delicate balance between them is essential to the success and sustainability of UK research.

Balanced funding

The Higher Education and Research Act 2017 recognises the importance of 'balanced funding' to ensure a 'reasonable balance' between funding allocated by Research Councils and by Research England.³ Performance-related QR funding is allocated on the basis of assessment through the Research Excellence Framework. QR funding for 2019-20 totals £1.7bn across England, or approximately £2bn across the UK, taking into account similar funding streams in the devolved administrations. (Current QR or equivalent budgets in Scotland, Wales and Northern Ireland are £236m,⁴ £71m⁵ and £47m⁶ respectively.)

QR is essential to securing the financial sustainability and success of UK research and provides multiple benefits. As well as covering overhead and infrastructure costs, it provides the stability of core funding that supports the continuation of research careers and lines of research between grants – both vital to the UK's research base. QR enables the UK to break new research ground, both by de-risking the pursuit of novel approaches to research, which drives innovation, and by enabling universities to invest in national initiatives including research institutes.

Widely regarded as key to the UK's research performance, QR is an important factor enabling the UK to rank first amongst its comparator countries by field-weighted citation impact (an indicator of research impact), despite falling well below the OECD average for the quantity of research investment.⁷

QR increases the UK's competitive edge in attracting research talent and business investment, when contending with US institutions with extensive endowments with considerable annual returns: the endowments of Harvard, Stanford and Princeton are worth \$39.2bn,⁸ \$26.5bn,⁹ and \$25.9bn¹⁰ respectively, according to the latest figures (released in 2018). Princeton's endowment alone increased by \$2.1bn from the previous year,¹¹ providing an annual return equivalent to approximately 80% of the £2bn QR funding distributed across all universities in the UK each year.

Beyond the academic context, QR supports partnerships, leveraging research funding, and drives the pursuit of research impact, owing to the 'impact element' in the REF). The Scottish equivalent of QR funding was increased in 2018/19 with the Scottish science minister stating: "This extra grant will increase the competitiveness of research teams from Scottish universities when they are bidding for UK-wide funding together with industry partners"¹². (See [Annex 3](#) for more detail on QR's impact.)

^a The dual support system also combines assessments of prospective (via competitive project-based funding) and retrospective (via core funding on the basis of performance in the Research Excellence Framework) funding.

The role of QR and infrastructure in research and economic impact

QR has a vital role to play in supporting the development and maintenance of research infrastructure, which in turn enables and enhances the delivery of high-quality research. As noted in a recent UKRI analysis, “Research and development (R&D) has a central role to play in driving economic growth. Meeting...the target to increase total R&D investment to 2.4% of GDP by 2027, requires investment in infrastructure as the basis of our research and innovation landscape.”¹³

UKRI’s 2019 landscape analysis¹⁴ of UK R&D infrastructure notes the role of infrastructure in enabling the generation of impactful research knowledge, training of highly skilled researchers and innovators, and knowledge exchange with businesses. Of 750 infrastructures identified by UKRI as being of regional, national and international significance, over 75% carry out collaborative work with UK businesses, spanning numerous sectors of the economy.

For example, scientists from Rolls Royce have used the Diamond Light Source, the UK’s national synchrotron science facility, to study the impact of a strengthening treatment applied to aeroplane fan blades, to inform future aircraft design.¹⁵ Collaborations, such as this, between research and industry have high potential for productivity. Research has shown, for example, that companies located on university science parks have higher research productivity.¹⁶

Investment in infrastructure stimulates a surrounding cluster of related research and innovation. For example, research on the establishment of the £380m Diamond Light Source, a third generation synchrotron light source in Oxfordshire, has found that it has “created a highly localised cluster of related scientific research”.¹⁷

By enabling the delivery of high quality research, stimulating further research and fostering collaborations with business, investment in infrastructure is key to the impact of R&D on the economy. Indeed, every £1m of public R&D spend leverages £1.4m of private R&D funding,¹⁸ together resulting in £7m of net economic benefit to the UK¹⁹.

2. Risks to the sustainability of UK research funding

Reduction in QR funding relative to project funding

QR funding has not kept pace with the UK’s science and research budget, which has grown in recent years, while QR has declined in real terms (see Fig.1 overleaf). There was a 12.8%^b reduction in QR funding in real terms from 2010-11 to 2017-18.²⁰ Since Research Council funding increased over this period, the ratio of Research England to Research Council funding declined significantly, from 1.8 in 2010/11 to 1.1 in 2016/17 (see Fig.2 overleaf). This decline reduced the proportion of HEIs’ income made up by QR from a third in 2006/7 to a quarter in 2016/17.²¹

We welcome the £55m increase in QR in England announced in July 2019,²² from £1,642m in 2018-19 to £1,698m in 2019-20 (see [Table 1](#),^c figures do not sum exactly owing to rounding). Of this increase, £45m will go towards mainstream QR funding and £10m to GCRF QR funding. This represents a real terms increase in mainstream QR funding of 2.3%.²³ While this is a welcome

^b To compare like with like, this figure excludes QR for the Global Challenges Research Fund, which was introduced in recent years.

^c All tables can be found in Annex 2.

increase, a substantially higher proportion of public R&D funding would need to go towards QR in order to reinstate the previously more sustainable balance between Research Council and QR funding.

International comparisons: institutional vs. project funding

The allocation of a large percentage of public R&D funding to institutional core funding for research, alongside project funding, is a well-established model across Europe. European countries vary in their balance between project funding vs. institutional funding for research. The UK – along with Poland, Belgium, Czech Republic, Estonia and Ireland – is one of few countries with less than 50% of national public R&D funding allocated to institutional funding (see [Fig.4](#) in Annex 2).²⁴

By contrast, the equivalent figures in other research-intensive nations – the UK’s main competitors in Europe – are substantially higher. The proportion of Government R&D spend going towards institutional (as opposed to project) funding is over 60% in Germany, over 70% in France, close to 80% in Spain, and just under 90% in Italy.²⁵

The autonomy and stability associated with institutional funding, such as QR, provides universities with the flexibility to invest in unusual or novel research areas, pursue risky, innovative ideas, sustain research careers and high quality infrastructure. There is a risk that the significant decrease in the proportion of public research funding going towards QR (shown in Fig.2) could make the UK less globally competitive.

Figure 1. QR budget and Research Council funding income for HEIs, 2002-2016.

- Source: CaSE submission²⁶ to the Science and Technology Committee inquiry on the balance of research and innovation spending; data from HESA – Finances of Higher Education 2002-2016

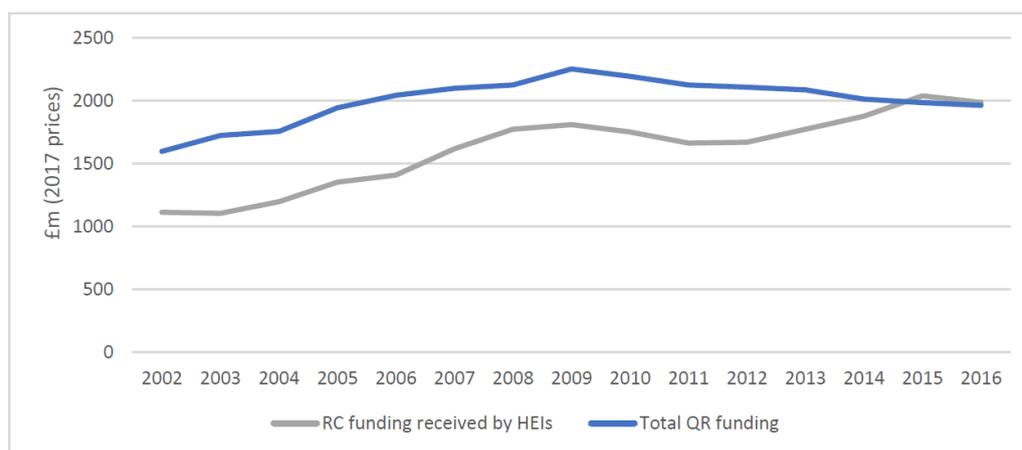
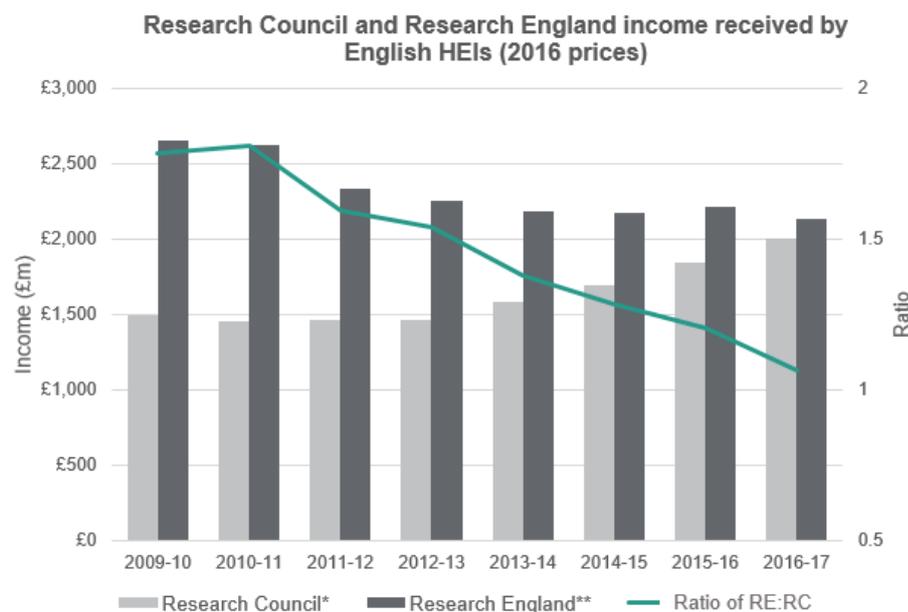


Figure 2. Research Council vs Research England income received by English HEIs, 2009/10-2016/17.

- Source: Letter²⁷ from Prof Graeme Reid, UCL Chair of Science and Research Policy, to the Commons Science and Technology Committee
- N.B. QR funding makes up the majority, although not all, of Research England funding.



In addition to ‘mainstream’ QR, there are a number of specific QR funding streams that underpin particular strategic activities and areas of research.

- The **Global Challenges Research Fund (GCRF)** is a £1.5bn fund to support cutting-edge research that addresses the challenges faced by developing countries. The QR GCRF element of this funding (£68m in 2019/20,²⁸ 17% of the £393m GCRF budget for that year²⁹) supports institutional activity to underpin and enhance GCRF project funding.
- The **Business Research Support Element (BRSE)** “provide[s] additional support for research that universities carry out with business and industry” and “encourages universities to collaborate with business.” Institutions “must attract money from industry to qualify for the funds”, which are allocated to “institutions in proportion to their qualifying income”.³⁰
- The **Charity Research Support Fund (CRSF)** “provide[s] additional support for research that universities carry out on behalf of charities” and “is allocated to institutions in proportion to the income they receive from charities for research”.³¹

BRSE and CRSF funds are intended to be used to cover some of the overhead gap left by the funding model in most charities and businesses (see section below on shortfalls on grants).

Charity and business funding for research has substantially increased in recent years: from 2013/14 to 2017/18, funding from UK charities (via an open competitive process) for UK research increased by 24% from £901m to £1.12bn, while that from UK businesses grew by 14% from £313m to £358m (see [Table 2](#)). Meanwhile, in England, the BRSE has remained at £64m for several years, while the CRSF has also been constant at £198m, with a small increase to £204 in 2018/19 (see [Table 1](#)). The proportions of total QR in England going towards CRSF and BRSE have stayed relatively constant at 12-13% and 4% respectively (see [Table 1](#)).

Shortfalls on grants

QR funding is vital to enable universities to undertake research in the context of reductions in the percentage of the full economic cost (fEC) of research projects covered by project funding. In recent years, the proportion of fEC covered by grants from Research Councils, industry, EU and UK charities has either gradually decreased or remained flat at levels substantially below 80% (see Fig.3 overleaf and [Table 3](#)). The resulting grant shortfalls, and consequent risks to sustainability, are especially pronounced in the context of an increase in project funding (i.e. there are more grants so the overall shortfall for the university sector is greater).

To what extent does QR make up the shortfall?

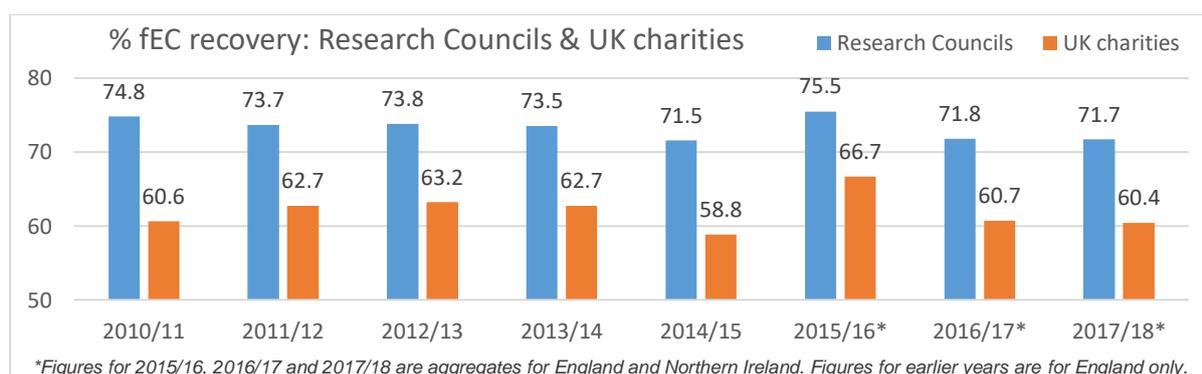
In 2017/18, Research Councils covered 72% of the costs of research projects, while UK charities covered 60%. If we incorporate QR funding, and assume that all QR goes towards the costs of research projects (which is not its sole purpose – as described in [Annex 3](#), QR has vital purposes beyond overhead recovery), the proportion of research costs covered for Research Council and UK charity projects in 2017/18 would be 88% and 72% respectively (see table below, and [Table 4](#)).

| Recovery of full economic costs by funder, 2017-18 (HEIs in England and Northern Ireland) | | | | | |
|---|-------------------|-----|--------------|----------|----------------------------|
| QR taken into account? | Research Councils | EU | UK charities | Industry | Across all funding sources |
| No: % of costs covered by funder | 72% | 65% | 60% | 78% | 56% |
| Yes: % of costs covered by funder + QR funding | 88% | 82% | 72% | 83% | 69% |

This means that, in practice, to supplement project grants and QR funding, universities had to find funds to cover 12% of the costs of research projects funded by Research Councils, with equivalent figures of 28% for UK charities, 18% for EU funders, and 17% for industry. As a consequence, research at universities is funded at a significant loss. The **research deficit in England is substantial and has been growing** in recent years, increasing from **£1.8bn in 2010/11**³² to **£3.7bn in 2017-18**³³ (aggregate figure for England and Northern Ireland).

These figures correspond to a **decrease in recovery of full economic costs** of HEIs' collective research activity from **77.8% in 2010-11** to **69.4% in 2017-18**³⁴. According to a report³⁵ by the Higher Education Policy Institute, the research deficit “**demonstrates the systemic underfunding of research**, which requires universities to cross-subsidise from other income to fund research”, and is not sustainable. The particularly low rate of fEC recovery for charity-funded projects risks discouraging researchers from applying for charity grants.

Figure 3. % fEC recovery in England in Research Council and UK charity grants 2010/11-2017/18.



Matched funding requirements

The pressure on sustainable funding is further exacerbated by matched funding requirements. Research Council funding schemes are increasingly requiring or encouraging institutional commitments to research and research training (either through specific scheme requirements and/or their inclusion in peer review criteria). For example, to apply for funding from the 2017 AHRC Doctoral Training Partnerships, institutions had to commit 33-50% of studentship funding, in addition to administrative and in kind contributions such as staff time. Further examples are set out in [Annex 1](#). Similarly, university-business collaborations require significant funding contributions from universities.

Such commitments place further pressure on university finances, by reducing overhead recovery for grants and reducing the financial sustainability of grant-funded activity. Matched funding requirements also make it difficult for less research-intensive universities (with less QR funding) across the UK to apply for these funding opportunities, compromising their ability to build research capacity.

Funding of research institutes

In the medical sciences space, the funding of new research institutes (such as the Francis Crick Institute and Health Data Research UK) has diverged from more sustainable funding models in not allowing indirect costs (i.e. they are not funded on a TRAC-fEC basis). The size and scale of such institutes require significant underpinning support in terms of university administration and facilities. Universities are also expected to provide substantial leveraged institutional support (direct and in kind), compromising the sustainability of the financial model.

Research institutes funded by charities have a more sustainable model (in contrast to that for project funding). UK charities cover 100% of fEC in their own institutes (such as the Wellcome Trust Sanger Institute, the Cancer Research UK Beatson Institute and the Alzheimer's Research UK Drug Discovery Institutes), compared to an average of 60% of the costs of university research projects.

3. Significance of the sustainability of university research funding

The sustainability of university research funding is vital to the UK's continued position as a research powerhouse with international standing. The higher education sector is the second largest research sector in the UK (behind business), performing 23% (£8.2bn) of total UK R&D in 2017.³⁶ The UK is home to numerous universities of high calibre, four of which feature in the top 10 universities in the world³⁷. Universities are key to the success of the UK research base, and therefore to the UK punching above its weight in research: the UK accounts for 14% of the world's most highly-cited publications,³⁸ despite representing just 0.9%³⁹ of the global population and 2.3% of R&D spending⁴⁰.

In addition, the Government's commitment to invest 2.4% of GDP in R&D will be dependent on the sustainability of research funding at universities:

- The **ratio of private to public investment in R&D** is roughly 2:1, a ratio that is also found in Germany and the USA.⁴¹ As the focus of much of public investment in research, investing in research at universities at sufficient, sustainable levels will be crucial to meet the 2.4% target.
- Universities play a key role in **attracting international R&D investment** – vital to meet the 2.4% target. Their international reputations and high quality research are key attractors of overseas investment. Investing in universities will be important to sustain the substantial foreign investment in UK research: in 2017-18, 23% of total research funding in the UK came from abroad.⁴²

- Universities across the UK have the capacity to host **major new research partnerships with business**, facilitating innovation and leveraging additional business investment in R&D, which will need to rise by about £10bn per year in order to meet the 2.4% target.⁴³ Such partnerships are integral to translating research outputs into valuable applications and boosting productivity, in support of the UK's Industrial Strategy.

4. Solutions

Research at UK universities has widespread value, including for public good, societal impact, the economy, and the UK's international reputation as a research powerhouse. With this in mind, it is vital to address the current shortcomings in the financial model, to prevent the gradual erosion of the UK research base and secure the sustainability of UK research. The stability of UK research funding is particularly critical given that the UK's access to EU research funding could be significantly reduced, or removed, post-Brexit. (The UK has been a net recipient of EU funding, receiving £3bn in net EU R&D funding from 2007 to 2013, having contributed €5.4bn⁴⁴ and received €8.8bn⁴⁵.)

Below we propose a number of potential solutions to improve the sustainability of UK research, which we would encourage the UK Government to consider adopting:

Increasing the proportion of R&D spend on QR funding

Increasing the proportion of public R&D funding going towards QR funding is vital to ensure the sustainability of UK research. The previously more sustainable ratio between Research Council and QR funding should be reinstated, especially in view of the significantly higher proportion of public R&D spend invested in institutional funding in comparator research-intensive nations in Europe. QR in combination with project funding should cover 100% of fEC, across projects funded by Research Councils, charities and business.

Increasing Research Council fEC rates

Research Council fEC recovery rates should be returned to their original level of 80% to ensure that projects are fully financially supported. Given the major role of Research Councils in funding university research, this is essential to tackle the shortfall in research funding.

We recognise that, in the context of a set Research Council budget, to fund research projects at a higher rate of fEC would reduce the number of projects funded. Nevertheless, we would advocate this approach, which prioritises quality and sustainability over quantity.

A sustainable model for UK research funding

The target for UK R&D spending to reach 2.4% of GDP by 2027, and the consequent additional funding available, provides an opportunity to re-evaluate the most effective, sustainable way to fund UK research and deliver the most impact for funding. At a time when research funding is increasing, the most logical step is first to ensure that research projects are adequately supported, at 100% fEC, rather than seeking to fund more research projects with smaller grants than in the past.

There is an opportunity to consider whether the only role for an increased research budget is an increase in the volume of research. We would like to challenge the widespread assumption that the most impactful approach is to support a larger number of research projects, especially when these projects are underfunded. It is quite plausible that – at least in some cases – increasing the level of

funding for individual projects could be more successful in driving research advances and productivity increases (not to mention the resulting positive impact on the sustainability of research).

Easing matched funding requirements

Reducing matched funding requirements and including them in fewer research calls would support sustainable overhead recovery rates and preserve the availability of QR funding for its intended purposes and values (see [Annex 3](#)). It would also support less research-intensive universities to apply for such funding opportunities. An alternative to requiring institutional commitments would be to support universities to use Research Council funding to leverage industry investment. This would also be valuable to enable the substantial increase in business funding required to reach the 2.4% target.

Investing sustainably in people and infrastructure

The sustainability of the UK research base depends on long-term, strategic investment in people and infrastructure. At present there is too great a mismatch between capital investment and resource investment (e.g. £138m in the UK Collaboratorium for Research on Infrastructure and Cities, UKCRIC), to enable sustainable funding and research activity over the long-term. UKRI's development of a national infrastructure roadmap, with its emphasis on funding new research activities 'with batteries included' (i.e. covering ongoing maintenance costs) is a welcome step in supporting sustainability.

Investment in infrastructure should include e-infrastructure and research staff, who can be seen as 'knowledge infrastructure'. People are paramount to our research base and are essential to the effective deployment of physical/e-infrastructure. Therefore investing sustainably in training research students and early career researchers should be seen as a key part of infrastructure investment.

Regional clusters and collaborations

It is also worth considering how to harness and develop regional clusters and collaborations to deliver the most impact for funding. There is a valuable role for collaborations between larger, more research-intensive universities and smaller, less research-intensive institutions in other regions, as well as large-scale national initiatives that coordinate national research strengths, such as UKCRIC. Regional initiatives such as the Science and Engineering South Consortium are also of value in supporting collaboration, including by providing a framework for sharing knowledge and data.

5. Conclusion

The Industrial Strategy sets out ambitious plans to take research investment in the UK to internationally competitive levels and harvest the benefits of research to bring productivity gains and greater wellbeing to all parts of the country. In order to achieve these aims, it will be essential to invest sustainably in research at universities across the UK, given their major role in supporting the UK's research excellence and international standing and in leveraging industry R&D funding.

Sustainable Research Council fEC rates and levels of QR funding will be crucial to complement the 20% increase in project funding announced alongside the Industrial Strategy. Taking steps (as outlined in section 5) to secure the sustainability of UK research funding is necessary to deliver the ambitions of the Industrial Strategy, including helping to meet the Government's commitment to invest 2.4% of GDP in R&D by 2027.

Annex 1: Examples of matched funding requirements

General

Research Council Equipment Funding

The requirement for institutions to co-invest at least 50% of the cost of research equipment on grants has now been in place for about five years.

EPSRC

2018 EPSRC CDT call

EPSRC contributes funding for up to 8 studentships per cohort, with the requirement for host institutions to underwrite (if not directly fund) extra studentships to ensure cohorts of at least 10 students per year. At least 20% of studentship costs are required to come from non-UKRI sources.

EPSRC Fellowships

In the absence of project studentships on grants, EPSRC encourages host institutions to provide additional PhD studentships as commitments to fellowship applications.

ESRC

ESRC Centre Grants

In addition to the 20% of fEC institutional commitment, host institutions should provide additional investment corresponding to 5% of the fEC of the proposed Centre to show evidence of long-term commitment to the centre (i.e. institutions commit 25% and ESRC funds 80%, to provide 105% of the fEC). This is an explicit change to the previous regime whereby institutions committed 20% of fEC.

ESRC Centres Transition Funding

Proposals had to provide at least 45% of fEC of the ESRC centre grant coming to an end. This was a significant request in the social sciences and may have inhibited proposals from high-quality centres.

AHRC

AHRC DTP2

A minimum Consortium Contribution was 33-50% of the total studentship funding (equivalent to 50-100% of the funding provided by AHRC). In addition to this, consortia were asked to commit funding to cover administrative costs and resourcing (e.g. staff time).

MRC

UKRI Rutherford/Innovation Fellowships (MRC)

UCL's four fellowships were funded at £286k per fellow for three years, which barely covers salary and estates costs. As a London university, there are higher estates costs and a London weighting for salaries. Departments have to work to cope with budget shortfalls. Although divisions are working with candidates for the UKRI fellowships to cope with the budget shortfalls, this is not sustainable.

Research Institutes

HDR UK

The call required applications to commit to co-investment for capital investment for at least five years: either significant in kind and leveraged financial support aligned to the capital request, or a financial contribution at a minimum of 50% of the HDR UK Ltd contribution. Additionally, applicants were required to provide leveraged resources to support research delivery, training and innovation, access to wider research facilities and services, and to provide insurance and ethical approvals for studies.

Annex 2: Tables

Table 1: QR funding streams in England 2010/11-2019/20

| <i>Source: HEFCE⁴⁶, Research England^{47,48}</i> | Funding (£m) | | | | | | | | | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| QR funding element | 2010/ 11 | 2011/ 12 | 2012/ 13 | 2013/ 14 | 2014/ 15 | 2015/ 16 | 2016/ 17 | 2017/ 18 | 2018/ 19 | 2019/ 20 |
| Total QR in England | 1,603 | 1,603 | 1,558 | 1,558 | 1,558 | 1,558 | 1,578 | 1,606 | 1,642 | 1,698 |
| CRSF | 198 | 198 | 198 | 198 | 198 | 198 | 198 | 198 | 204 | 204 |
| <i>As percentage of total QR (%)</i> | 12.35 | 12.35 | 12.71 | 12.71 | 12.71 | 12.71 | 12.55 | 12.33 | 12.42 | 12.01 |
| BRSE | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| <i>As percentage of total QR (%)</i> | 3.99 | 3.99 | 4.11 | 4.11 | 4.11 | 4.11 | 4.06 | 3.99 | 3.90 | 3.77 |

[Return to text relating to Table 1](#)

Table 2: Charity and business funding for research in the UK 2013/14-2017/18

| <i>Source: HESA</i> | Funding (£000s) | | | | | % increase 2013/14-2017/18 |
|--|-----------------|----------------|----------------|----------------|----------------|---------------------------------------|
| | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | |
| UK-based charity funding (open competitive process) | 901,168 | 929,332 | 1,043,357 | 1,065,852 | 1,119,378 | 24 |
| UK business funding | 312,992 | 336,528 | 349,105 | 350,309 | 358,128 | 14 |

[Return to text relating to Table 2](#)

Table 3: fEC recovery (income as a percentage of costs) by funder 2010/11-2017/18, HEIs in England

| <i>Source: HEFCE⁴⁹ & OfS^{50,51}</i> | % fEC recovery by year | | | | | | | |
|---|-------------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16* | 2016/17* | 2017/18* |
| Research Councils | 74.8 | 73.7 | 73.8 | 73.5 | 71.5 | 75.5 | 71.8 | 71.7 |
| Industry | 74.3 | 72.2 | 73.0 | 72.2 | 72.0 | 78.8 | 78.1 | 77.7 |
| EU | 65.8 | 65.7 | 68.5 | 67.0 | 65.0 | 68.0 | 65.2 | 65.1 |
| UK charities | 60.6 | 62.7 | 63.2 | 62.7 | 58.8 | 66.7 | 60.7 | 60.4 |

*Figures for 2015/16, 2016/17 and 2017/18 are aggregates for England and Northern Ireland. Figures for earlier years are for England only.

N.B. "EU" covers EU government bodies including the Commission. "Industry" includes all other organisations such as UK industry, commerce and public corporations, EU non-government organisations (comprising EU-based charities, EU industry and any other EU source), overseas charities, overseas industry and other sources.⁵²

[Return to text relating to Table 3](#)

Table 4: fEC recovery (income as a percentage of costs) by funder, 2017/18, taking into account QR funding (HEIs in England and Northern Ireland)

| QR taken into account? | Research Councils | EU | UK charities | Industry | Across all funding sources |
|---|-------------------|-------|--------------|----------|----------------------------|
| No: % of costs covered by funder | 71.7% | 65.1% | 60.4% | 77.7% | 56.0% |
| Yes: % of costs covered by funder + QR funding | 88.2% | 81.5% | 71.7% | 82.6% | 69.5% |

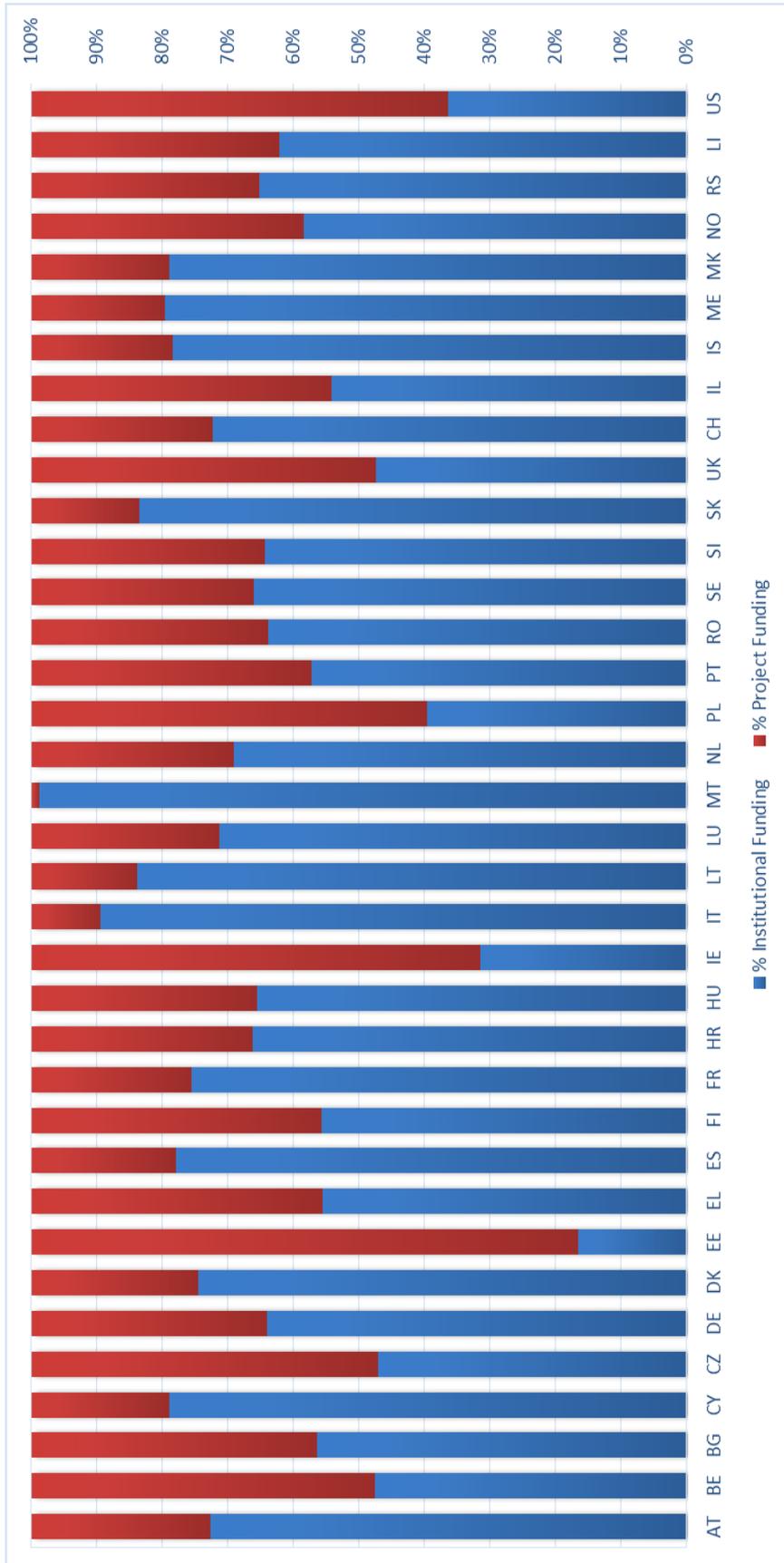
- *Figures for UK charities and industry have been calculated based on CRSF and BRSE QR funding respectively.*
- *Figures for Research Councils and the EU have been calculated on the assumption that non-CRSF/BRSE/RDP QR funding is spread proportionately to research costs.*
- *For example, Research Council-funded projects accounted for 35% of the non-charity/industry/RDP research costs in 2017-18, so for our purposes we have assumed that 35% of non-CRSF/BRSE/RDP QR funding went to Research Council-funded research.*
- *Figures have been calculated using data from OfS⁵³.*

[Return to text relating to Table 4](#)

See overleaf for Fig.4

Figure 4. Percentages of institutional and project funding out of total Government R&D budget (2014) ([return to text relating to this figure](#))

- Source: Reale, E. (2017), *Analysis of National Public Research Funding – PREF. Final Report*, doi:10.2760/19140. Reference year is 2013 for AT, ES, LT, UK and 2015 for FR.



Annex 3: Impact of QR funding

QR is essential to securing the financial sustainability and success of UK research and provides multiple benefits:

- **Infrastructure and overhead costs:** QR enables universities to meet the full economic costs of project-based research funding and supports long-term investment in infrastructure.
- **Stability:** QR allows staff and activity to be sustained between grants, enabling continuation of research areas, and greater stability in research careers and teaching provision.
- **Global competition:** QR increases the UK's competitive edge against US institutions with far more substantial stable core funding in the form of their endowments.
- **Vibrancy of the research base:** QR allows universities to pursue novel ideas and sustain research areas outside funders' current priorities, including interdisciplinary research.
- **Partnerships:** QR provides the flexibility for universities to collaborate with partners within and beyond academia, enabling responsiveness to emerging challenges and opportunities.
- **Innovation:** QR drives innovation by de-risking the pursuit of novel approaches to research, including through responsive projects and partnerships.
- **Leveraging funding:** Universities with higher research funding (including from QR) generate more research income from other sources.⁵⁴ QR also enables the appointment of research leaders who then attract funding, according to a report for HEFCE.⁵⁵
- **National strategic priorities:** QR enables universities to respond to national research priorities by investing in national institutes (such as the Crick and Alan Turing Institute).
- **Research culture and impact:** Following the introduction of the REF's 'impact' element, QR funding has provided an important driver of research culture and the pursuit of impact.

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Annex 4: Feedback from members of the UK Clinical Research Collaboration Board

The above paper was originally produced for the UK Clinical Research Collaboration (UKCRC) Board, but does not represent the board's views. Views voiced by board members, in relation to the issues raised by the paper, included the following:

Membership of the EU Framework Programmes for Research and Innovation

- A number of board members emphasised that it would be beneficial for the UK to have associate membership of the EU Framework Programmes post-Brexit.

R&D tax credits

- Industry investment in R&D provides a valuable income stream for universities, and so should be incentivised. R&D tax credits provide a minimal-bureaucracy system that rewards and amplifies companies' investment in R&D, stimulating further investment. The Government should seek to maintain and strengthen the R&D tax credit system to support business R&D.

Infrastructure

- Research infrastructure is key to the delivery of research.
- R&D investment specifically targeted at research infrastructure, such as that provided by Research England's Research Capital Investment Fund, may help to offset some of the deficit in research funding resulting from low FEC recovery rates.
- Some R&D funding streams include support for infrastructure, whereas others do not; the latter may be seen as more risky sources of funding.

Efficiency of research

- A suggestion was raised as to whether or how institutions should modernise to become more efficient in their use of research overheads, noting the possibility of assessing research productivity per institution over time.
- It was also suggested that more information on how QR funds are distributed and used to support research at universities would be of value.

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