

Policy for allocating formula-based research funding: an equality impact assessment

Summary of key findings

1. One of the key messages from the engagement activities conducted as part of the equality impact assessment (EIA) was that formula-based research funding helps support examples of effective practice and innovation relating to equality, diversity and inclusion (EDI) within English universities. There is a potential role for Research England in further supporting and sharing this effective practice.
2. A second key message was that Research England's formula-based funding is one component of an integrated research funding system. The higher education (HE) sector, UK Research and Innovation (UKRI), the UK HE funding bodies¹ and other research funders need to work together to address EDI at a whole-system level. Key issues such as the under-representation of black, Asian and minority ethnic (BAME) postgraduate research (PGR) students and academic staff, low disability reporting rates amongst staff at English higher education institutions (HEIs) and the under-representation of men and women across specific disciplines, are all systemic inequalities that must be addressed through a collaborative and collegiate approach.
3. A third key message was related to Research England's provision of formula-based research funding directly to institutions as an unhypothecated block grant. As autonomous organisations, universities are best placed to determine this type of funding is spent. This means that universities are able to use the block grant to drive innovation, invest in new and emerging areas, support new talent, and continue to invest in research areas that align with their strategic priorities. Universities should also take seriously their responsibility to EDI and their obligations in relation to the Public Sector Equality Duty (PSED) when deciding how to deploy block grant funding from Research England.
4. The EIA did not provide evidence of any direct negative impacts on the representation of protected characteristics² in the workforce and PGR student population resulting from the

¹ The four UK HE funding bodies are Research England, the Higher Education Funding Council for Wales (HEFCW), the Scottish Funding Council (SFC) and the Department for the Economy, Northern Ireland (DfE).

² The nine protected characteristics are: age; disability; gender reassignment, marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex; sexual orientation.

formula-based research funding allocation methods Research England uses. In the case of quality-related research (QR) Research Degree Programme (RDP) supervision funding, however, survey respondents and workshop participants highlighted the risk of potential unintended effects on the representation of protected characteristics within the PGR student population. Because of the method Research England use, PGR students who take longer than three years to complete their studies, and/or study at less than 50% of full time for a period, attract less funding for their institution. During stakeholder engagement, it was noted that this approach might have the potential to indirectly affect, for example, people with disabilities or people with parental responsibilities. Research England has identified an opportunity to address this concern and has modified its method of counting PGR students, which informs QR RDP supervision funding. Further details are laid out in paragraph 6.

5. Research England found no evidence directly linking our formula-based research funding allocation methods with either positive or negative effects on subjects and participants. Whilst we found evidence of research impacts that benefit people with particular protected characteristics, we did not find evidence of any direct impacts resulting from the allocation methods we use.

Resulting actions

6. As part of our commitment to EDI and in line with the EIA's findings, we have:
 - a. modified our method of counting PGR students, which informs QR RDP supervision funding, by removing the full-time equivalent (FTE) limit and year limit per student. The revised method will capture the student FTE within the latest available Higher Education Statistics Agency (HESA) student record without imposing limits on the individual student's total FTE or the number of years of study they have undertaken; the modified approach will be used for funding allocations from 2020-21 onwards
 - b. added to the Research England Development (RED) Fund³ a new priority relating to innovation in enhancing EDI.
7. We will publish our EDI Implementation Plan in 2020. This plan will also respond to UKRI's EDI Vision and Priorities 2025, scheduled for publication in 2020.

³ See [RED Fund](#).

Context

8. Driving improvement in EDI is an important part of Research England's mission to create and sustain conditions for a healthy and dynamic research and knowledge exchange system in English HEIs. EDI is vital for its own sake and evidence shows that more diverse communities are more effective.⁴
9. Research England was formed in April 2018 as a constituent body within UKRI. In June 2018, we set out our principles and its approach to EDI. In accordance with these principles, we will continue to undertake EIAs of our functions and policy, and where appropriate will act on the findings of these assessments.
10. The UKRI Board is responsible for ensuring that the organisation complies with the PSED as stipulated in the Equality Act 2010. As a constituent body within UKRI and a key component of the research funding system, Research England shares in UKRI's legal obligation to show due regard to the PSED. While the Equality Act does not mandate EIAs, we consider that carrying out such an assessment further strengthens our commitment to EDI and helps Research England to meet the PSED.

Policies assessed

11. Research England's policy for the allocation of research funding is to support excellent research wherever it is found in English universities. For our formula-based research funding, we use a variety of allocation methods that meet this overarching policy goal. Full details of the allocation methods used can be found in the *Research England Guide to Research and Knowledge Exchange Funding*.⁵
12. We distribute the majority of our funds for research on the basis of research quality, taking into account the volume and relative cost of research in different areas. This is known as QR funding. QR funding is awarded to English HEIs as a block grant, made up of several different elements:
 - mainstream QR
 - QR RDP supervision funding

⁴ For examples, see Westminster Business School (June 2014) '[Diversity in STEMM: establishing a business case](#)' and Department for Business, Innovation and Skills (January 2013) '[The business case for equality and diversity: a survey of the academic literature](#)'.

⁵ See Research England's [guide to research and knowledge exchange funding](#)

- QR charity support funding
- QR business research element
- QR Global Challenge Research Fund (GCRF)
- QR funding for national research libraries.

13. Research England also allocates formula-based research capital funding to sustain and develop the facilities and infrastructure that underpin research and enhance the research environment at English HEIs. The two elements are:

- HEI Research Capital England
- Higher Education Research Capital (HERC) England

14. In this EIA, Research England considered evidence to explore whether the way in which QR and formula-based research capital funding is calculated or distributed may affect people differently based on their protected characteristics. Protected characteristics under the Equality Act 2010 are: age; disability; gender reassignment, marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex; and sexual orientation. (There are intersections between some of these.) We looked at evidence to understand the potential impact on:

- university staff (those who support or conduct research funded by the funding streams) and PGR students
- subjects of and participants in research (in other words, individuals that take part in funded research)
- beneficiaries of research (in other words, individuals who benefit or may benefit from the funded research).

15. Our formula-based research funding is provided to institutions as an unhypothecated block grant, with only limited restrictions on its use.⁶ By design, formula-based research funding is not intended to drive or reward research in particular areas or with specific goals. It is an investment in the UK's research base generally. Once allocated, universities deploy these funds depending on their individual priorities, and this ensures that universities, who are better placed to take these decisions, drive innovation, invest in new and emerging areas, grow and support new talent and protect research areas that meet their individual research

⁶ Allocation of QR GCRF is made from the Official Development Assistance budget and so there are additional limitations on its use. See the [GCRF](#) web page for more details.

strategies. Universities might also consider the following elements when considering how formula-based research funding is allocated internally:

- disciplinary specialisms of their research and academic staff
- priorities determined by the university's strategic ambition
- the availability of funding from project funders.

16. Whilst universities themselves are responsible for considering the EDI implications of their use of our funding, we wish to support them in meeting this responsibility.

17. The EIA is set out in Table 1 below. A summary of the evidence collected (including stakeholder consultation) is presented in Annex A. Evidence of impacts on university staff, PGR students, and recipients and beneficiaries of research is presented in Annex B. Annex C comprises a list of external analyses and reports consulted in the course of the EIA.

18. Supporting material is available in the slide pack 'Equality Impact Assessment: Supporting HESA Data Analysis'.



Table 1: Equality impact assessment

Formula-based funding stream	Is there potential for positive or negative impact?	Explanation and examples of evidence/data used
<p>Mainstream QR</p>	<p>No evidence of positive or negative impacts</p>	<p>The EIA did not provide evidence of any direct positive or negative impacts on EDI resulting from the funding allocation method for mainstream QR.</p> <p>Where survey respondents and workshop participants suggested a negative effect, this was on the basis that the funding formula takes no account of the diversity of the staff base and the PGR student base.</p> <p>The EIA sought to understand whether there are trends relating to receipt of QR and the ethnicity of staff employed on an academic contract. The highest proportion of black, Asian, mixed and other staff (of all nationalities and including the category 'unknown') are employed in universities in receipt of the higher amounts of QR, although the analysis did not examine data about salary or seniority level. Evidence also shows there is a relationship between the proportion of academic staff who report having a disability and the receipt of QR, with universities that receive less QR reporting a higher proportion of staff who report having one or more disability. However, there is no evidence to suggest a causal relationship.</p> <p>Because of the voluntary nature of reporting certain protected characteristics, we have insufficient data to examine trends for gender</p>



		<p>reassignment, religion and belief, sexual orientation, marriage and civil partnership, or pregnancy and maternity.</p> <p>Survey respondents provided evidence of positive effects on EDI, in that mainstream QR is in some cases used to support EDI initiatives such as return-to-work programmes and cover for periods of leave needed for carers, which predominantly support women. Survey respondents also noted that mainstream QR has been used to support new posts (for example, pro-vice-chancellors for EDI). This positive effect of mainstream QR results from the provision of the funds and from institutions' decisions on how to use them, rather than being related to the allocation method. Institutions with a higher income (for example, QR) are more able to support positive EDI initiatives.</p> <p>There is limited evidence on effects on subjects of or participants in research, or on beneficiaries. Workshop discussions and survey responses noted potential bias in research projects (citing examples such as the tendency to use male animal disease models in biomedical research) and that most participants in research are white.</p> <p>Survey responses also noted the potential positive effects of the use of QR, for example that it may be used to fund professional services staff who work with academics to embed robust ethical and other research governance processes into research. It was also suggested that QR has a positive effect on research participants and beneficiaries because of the ability to deploy funds to support activities that involve communities in the design of the research. We also found evidence of research impact that benefits people with particular protected characteristics. As noted previously, however, QR can be used flexibly</p>
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		<p>in line with individual institutional strategies. When carrying out the EIA we found no evidence directly linking our approach to formula-based research funding with either positive or negative effects on subjects, participants and beneficiaries.</p> <p>In carrying out the EIA, it is clear that there is a complex relationship between the funding of research, the disciplinary mix of that funding and the nature of the potential and actual beneficiaries of research. It is not possible to map specific groups of beneficiaries to particular research disciplines, and the level of funding is not necessarily a proxy for either the volume of research or the potential or actual impact on the beneficiaries of research. Research England considers that the nature of its role as a block grant funder means that it is not in a position to establish clear evidence about beneficiaries.</p>
<p>QR RDP supervision funding</p>	<p>Potential for negative impact</p>	<p>Survey respondents and workshop participants suggested that the formula currently used for RDP funding has the potential to give rise to unintended effects on certain protected characteristics, for two reasons. Firstly, funding is only provided in regard of three years FTE of PGR study. Survey respondents and workshop participants suggested that the need for some students to study for longer than three years FTE may be more commonly associated with certain protected characteristics. Secondly, the formula uses data on each student for six years from the start of their study, so part-time students who have periods of part-time study at less than 50% will not be credited with the maximum three years FTE in the formula. Survey respondents and</p>



		<p>workshop participants suggested that the likelihood of studying part-time, or deferring periods of study altogether, may more commonly be associated with certain protected characteristics, including sex, age and disability. We note, however, that QR RDP funding is provided to institutions not students, and those institutions have an obligation to treat all students fairly, irrespective of the funding we provide.</p> <p>Our analysis of PGR students (full-time and part-time) with UK nationality found a higher proportion of white PGR students across all QR groups. Analysis of PGR students (full-time and part-time) with non-EU nationality revealed a marked difference in the diversity of the PGR population.</p>
<p>QR charity support funding</p>	<p>No evidence of positive or negative impacts</p>	<p>Responses to the survey suggested that QR charity support funding is likely to be used to support research which is more likely to benefit groups of people with protected characteristics.</p> <p>Survey respondents also noted a perceived bias in research focus, which, if it occurs, has the potential to disadvantage certain groups with protected characteristics.</p> <p>The UK Health Research Analysis 2018⁷ notes that the four largest medical charities in the UK are Arthritis Research UK, the British Heart Foundation), Cancer Research UK and the Wellcome Trust. The two largest areas of funding are generic health relevance (24.4%, or £625</p>

⁷ See [UK Clinical Research Collaboration \(UKCRC\): UK Health Research Analysis 2018](#) (published January 2020).



		<p>million) and cancer and neoplasms (18.9%, or £483 million). The smallest area of funding is ears (0.4%, or £10 million).⁸</p> <p>The report suggests there is “relatively poor matching” of the UK’s burden of disease in terms of disability-adjusted life year (DALY) rates and the research funding available (Spearman’s coefficient 0.66)⁹. In 2018, cancer received the highest proportion of spend and had the highest DALY rate. Most health categories show research funding is lower than the comparative burden of disease, with the difference being significant for the categories musculoskeletal, respiratory, oral and gastrointestinal and the combined group blood/cardiovascular/stroke.¹⁰</p> <p>The UKCRC report notes, however, that disease burden does not always correlate with the research costs involved and that funding is not necessarily a proxy for impact. There is also potential for fundamental research to have wider spill-over effects beyond the areas of research originally envisaged.</p>
<p>QR business research element</p>	<p>No evidence of positive or negative impacts</p>	<p>Where survey respondents and workshop participants suggested a negative effect, this was linked back to a perceived bias in research focus which may disadvantage certain protected characteristics. No evidence or data was provided to support this assertion.</p>

⁸ See Table 5 in the UKCRC report (p.33).

⁹ UKCRC’s analysis compares the proportion of research funding in 2018 across all health categories and all funders against the most recently available UK DALY rates (2016) from the [World Health Organization’s Global Burden of Disease project](#). The analysis only accounts for 71% (£1.82 billion) of spend, as three health categories (inflammatory and immune system, generic health relevance, and ‘other’) have no equivalent Global Health Estimate (GHE) codes and are omitted from the data.

¹⁰ See Figure 7 in the UKCRC report (p.37).



<p>QR GCRF</p>	<p>Potential for positive impact</p>	<p>Survey respondents and workshop participants tended to suggest that QR GCRF is beneficial in EDI terms (with 47% of survey respondents suggesting a slight or strong positive effect on participants and beneficiaries, and 3% suggesting a slight negative effect), on the basis that it is intrinsically linked with developing countries and projects are more likely to be directed at (and beneficiaries are more likely to be from) groups with particular protected characteristics.</p> <p>Case studies submitted as part of Research England’s annual GCRF monitoring exercise highlighted instances where funding has had a positive impact on gender equality in Development Assistance Committee (DAC) nations.</p>
<p>QR funding for national research libraries</p>	<p>No evidence of positive or negative impacts</p>	<p>National research libraries funding was not discussed at the workshops and only one survey respondent referred to it.</p>
<p>Formula capital funding:</p> <ul style="list-style-type: none"> • HEI research capital England • HE research capital (HERC) England 	<p>No evidence of positive or negative impacts</p>	<p>Responses from the online survey suggest that formula-based research capital funding may be used to improve building accessibility and to enhance facilities and equality-related support services. Whilst this might be viewed as a positive effect resulting from formula-based research capital funding, it relates to the use of funds rather than their allocation.</p>

Annex A: Summary of the evidence collected

Evidence reviewed

1. Research England wrote to all vice-chancellors and principals of HEIs eligible to receive QR and formula-based capital funding on 27 June 2019 to inform them about the EIA and the opportunities to contribute.
2. Research England provided a range of opportunities for individuals, groups and institutions from across the HE sector (and beyond) to engage with the evidence-gathering process for the EIA. These opportunities included:
 - face-to-face meetings and/or telephone conversations with representative organisations, including groups not within the HE sector
 - invitation-only discussion workshops
 - an online survey and related call for evidence to gather further information on the potential impacts of our funding policy on protected groups.
3. Related online resources, including a slide pack, were available to all interested stakeholders
4. This EIA drew on the EIA carried out for next the Research Excellence Framework (REF) exercise, which itself proposed steps to address EDI issues raised by the impact assessment carried out following REF 2014.¹¹ Whilst recognising data gathered through the REF is key to elements of the QR and research capital funding formula, and as such the robustness of the REF in terms of EDI is fundamental, it is not sufficient to rely solely on the EIA undertaken for the REF to inform EDI in Research England's formula-based research funding policy as they are two separate activities.
5. Data from the HESA staff and student records for the academic year 2017-18 has informed our analysis. We have also drawn on Advance HE's staff and student statistical reports for 2019. The EIA draws too on existing analysis and reports; a full list is provided in Annex C.

¹¹ See: [Higher Education Funding Council for England \(HEFCE\): *Equality Impact Assessment for the Research Excellence Framework 2021*](#) (published March 2018). See also paragraphs 44 to 48 of Research England's [Guidance on Submissions](#) (published January 2019).

Stakeholder consultation

Approaches to representative organisations

6. While conducting the EIA, we held discussions (either face-to-face, by telephone or through email correspondence) with representatives from the Russell Group, Million Plus, Universities UK (UUK), the University College Union (UCU), GuildHE, the British Academy, the Royal Society, the Association of Medical Research Charities (AMRC), Wellcome and Advance HE. In addition, we consulted with the REF Equality and Diversity Advisory Panel and the UKRI E&D Special Interest Group External Advisory Committee. Research England also worked with colleagues across UKRI and the UK HE funding bodies (the Scottish Funding Council, the Higher Education Funding Council for Wales and the Department for the Economy, Northern Ireland).
7. The EIA sought to look at the impact of our funding not only on staff and PGR students but also on the participants and beneficiaries of research. To understand the extent (if any) to which the way our formula-based research funding policy may have a positive or negative effect on participants and beneficiaries of research, we emailed the following non-HE organisations that represent different groups of people with protected characteristics as identified by the Equality Act 2010: Disability Rights UK, MIND, the Fawcett Society, the National Association of Women's Organisations, the Men and Boys' Coalition, the Gender Identity Research & Education Society (GIREs), Maternity Action, Working Families, Age UK, Race on the Agenda (ROTA), Stonewall, InterFaith and the Office for Disability Issues. We received email responses from four of these organisations (the Men and Boys' Coalition, Working Families, Age UK and InterFaith) and held a discussion with the Men and Boys' Coalition. These organisations did not raise issues which specifically related to Research England's allocation method for its formula-based research funding.
8. Whilst these groups are representative of almost all the protected characteristics listed in the Equality Act 2010, we note that there is not a representative group for civil partnership and marriage. However, we consider that, given the intersectional nature of civil partnership and marriage, any issues pertaining to this particular characteristic could be highlighted by the groups listed in paragraph 7.

Workshops

9. EIA discussion workshops took place in Manchester and London during July 2019. The aim was to enable discussion among HE sector representatives about the aims of the EIA, and to inform our understanding of the potential impact of our decisions on different groups of people. The workshops were intended not only to provide notes and feedback to inform Research England's work to meet the aims of the EIA, but also to enable participants to respond fully to the EIA survey questions.
10. The events attracted 101 participants from 90 HEIs and from stakeholder groups including UUK, GuildHE, the British Academy and the AMRC.
11. Questions raised and discussed by workshop attendees included, but were not limited to:
 - does the way in which QR is calculated affect some groups differently, taking into consideration volume of research (based on numbers of research-active staff as returned to the REF), subject cost weighting, quality of research as measured in the REF, the different elements of QR and how they are calculated?
 - how can Research England capture information on other protected characteristics, and should/can we consider socioeconomic characteristics?
 - what is the role of the HEI and what is the role of Research England?
 - can any potential positive impacts be identified?
 - what opportunities to promote equality could we consider in future?

Summary of workshop discussions

12. The EIA was welcomed but participants emphasised that the HE sector needs to work together to bring about positive change with regard to EDI issues. Participants explored the relative responsibilities of Research England and of HEIs with regard to EDI and the PSED.
13. Attendees also saw the EIA as only one element in the wider UKRI approach and suggested that UKRI should avoid duplication across its constituent parts, sharing best practice internally as well as externally.
14. There was recognition of the difficulties of disaggregating QR, and the specific elements of QR, within the data. Some concerns were expressed with regard to the data underpinning the EIA.

15. Possible reasons for the apparent disparity between staff and PGR students in terms of reporting disability were discussed. It may be that students are willing to report disability because they feel this will lead to offers of support. Staff may be reluctant to report for reasons of privacy, or because of concerns about discrimination. A low proportion of staff with disabilities may be a recruitment or retention issue for universities.
16. Participants suggested that the EIA should consider EDI more broadly than simply looking at protected characteristics. Caring responsibilities and inequalities of place, for example, may present barriers. The lack of diversity in terms of socioeconomic class and the challenges of capturing and acting on this type of information were highlighted as an issue.
17. QR GCRF was also debated and the equality issues were recognised as complex. The international aspect and the tendency of research staff to need to travel may inhibit some groups with protected characteristics (for example as a result of the impact on carers, who are disproportionately women), but diversity may be enhanced in other ways.
18. Participants welcomed the closer focus on EDI in the REF and generally welcomed the changes introduced following the 2014 exercise to strengthen the REF in this area. They welcomed the involvement of the REF Equality and Diversity Advisory Panel in the EIA.
19. There were questions about the funding associated with the REF, given its role in the QR formula funding allocation method. Approaches to EDI contribute to only a part of the REF Environment Statement: whilst the weighting for the Environment Statement has remained the same for the next REF exercise (15%), institutions are now required to submit a statement at Unit of Assessment (UOA) and institution level. REF impact case studies might be used for information-gathering about EDI, particularly in terms of research beneficiaries.
20. Some attendees suggested that HEIs should be asked to undertake an EIA for QR funding but not all attendees shared this view. Whilst some felt it was an obvious next step, others felt that another benchmarking exercise was unnecessary, or unnecessarily burdensome.
21. Workshop participants and some survey responses noted that enhanced data on the use of QR in relation to EDI would enhance the sector's understanding and might highlight ways to mitigate negative effects or to promote positive impact.

22. Some workshop participants recommended that Research England should mandate that some QR funding be ring-fenced for EDI activity, or that a separate QR EDI fund should be established.

Survey

23. Research England produced and circulated an online survey and related call for evidence to gather further information on the potential impacts of Research England's funding policy on protected groups. The survey was open between 4 July 2019 and 11 September 2019. We invited responses from HEIs and other organisations with an interest in research, research funding and EDI issues; a list of these organisations is included in paragraph 6. We also highlighted the survey to non-HE organisations whom we contacted directly; a list of these is included in paragraph 7.
24. Of the 44 responses received, nine were nil returns and one was a repeated submission. Of the 34 usable responses, two came from charitable organisations and the other 32 came from HEIs. Thirty-one (91%) of the respondents receive formula-based research funding from Research England. Whilst the response rate was small, we consider the survey to have been an important part of our engagement activities and have given due weight to the evidence it provided.
25. Unless otherwise specified, percentages and proportions have been calculated using the total number of usable survey responses.

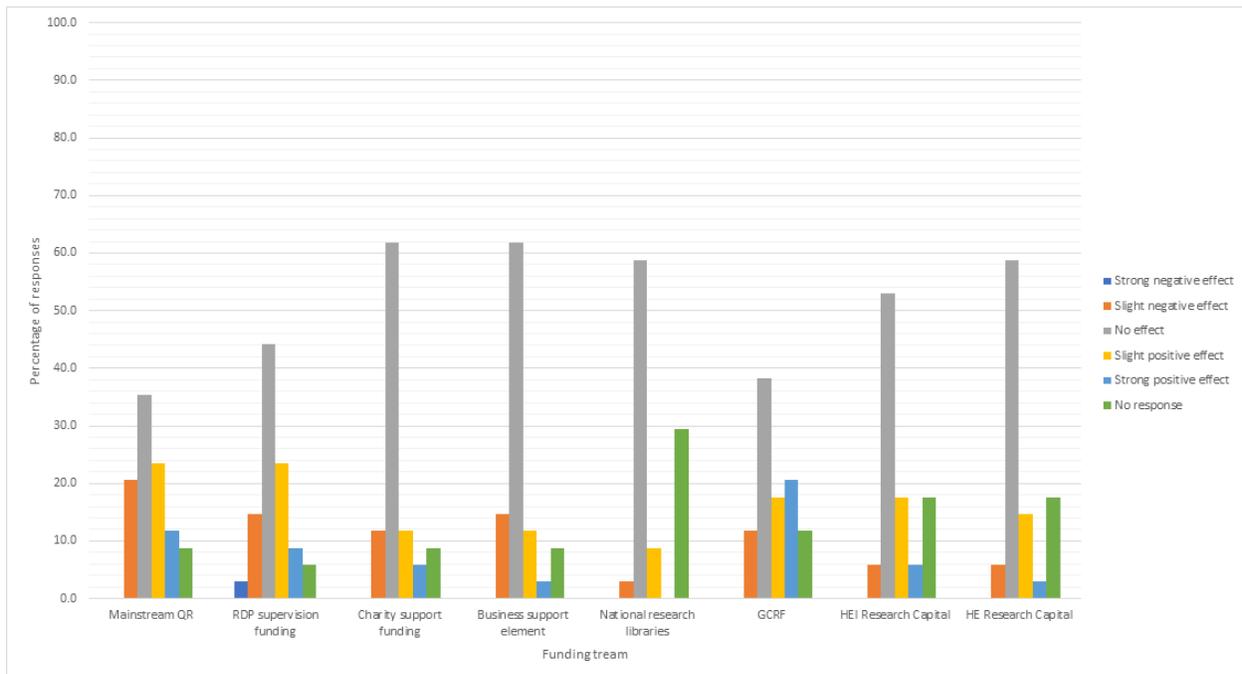
Summary of survey responses

26. Fifteen institutions explicitly mentioned that they distribute at least part of their mainstream QR funding to faculties, schools and departments by formula, based on the institution's REF 2014 results. Some HEIs retain some QR to support core central facilities that support research, and to contribute to staff salaries. HEIs often ring-fence RDP funding to support studentships and to contribute to staff costs. Three institutions mentioned that business and charity support funds are allocated to departments according to business and charity research income received.
27. The survey asked about institutions' key EDI considerations when allocating or distributing QR or formula-based research capital funding. As in the workshops, respondents noted that the unencumbered nature of QR allows for HEIs to fund a broad range of EDI activity.

Evidence to the EIA has revealed examples of EDI-related good practice and initiatives, and a number of respondents specifically referred to EDI activity funded or supported by QR, including the funding of new EDI-related posts, specialist advisors, the creation of diversity networks and the funding of specialist support – for example, for early-career researchers (ECRs), those returning from maternity or parental leave, and staff with disabilities.

28. The survey asked respondents to consider whether Research England’s formula-based funding may positively or negatively affect university staff or PGR students with protected characteristics. Specifically, respondents were asked whether the way each funding element is calculated or allocated has a positive or negative effect. Not all respondents provided an answer for the different funding streams. Percentages have been calculated using the total number of responses, including ‘no response’, per funding stream.
29. Figure 1 below shows the perceived effect (from strongly negative to strongly positive) of formula-based research funding on university staff and PGR students, by type of funding stream and percentage of responses. Results showed a slight trend to a belief in a positive effect across all elements of QR funding. More than 50% of the responses indicated no effect for the following areas: charity support funding, the business research element, national research libraries, HEI Research Capital and HE Research Capital. Mainstream QR and QR GCRF are more skewed to there being a positive effect, with 35.3% of responses noting that mainstream QR has a slightly positive or strongly positive effect, and over 38% of responses noting that QR GCRF has a slightly positive or strongly positive effect. However, 20.6% of responses considered that mainstream QR has a slight negative effect on groups or individuals with protected characteristics.

Figure 1: Perceived effect of formula research funding on university staff and PGR students by type of funding stream



30. For mainstream QR, where respondents suggested a positive effect, answers suggested that this was on the following basis: that the calculation was based on REF results and the REF has a strong EDI element; and, most frequently, that QR funding itself may be used in support of EDI activities and initiatives, enabling the HEI to achieve its EDI goals.

31. Where respondents suggested a negative effect for mainstream QR and for other elements, particularly RDP, this was on the following basis: that the calculation for QR takes no account of the diversity of the staff base and PGR student base, so the extra costs of supporting greater numbers of people with protected characteristics are not taken into account; that this may be a particular issue for certain disciplines which attract higher numbers of staff and PGR students with protected characteristics; that those with protected characteristics might be slightly negatively affected where there are not clear policies to promote EDI; and that the formula does not fully account for those working or studying part-time, who might be more likely to have protected characteristics.¹² One respondent suggested that there is a systemic bias in the sector which means individuals with protected

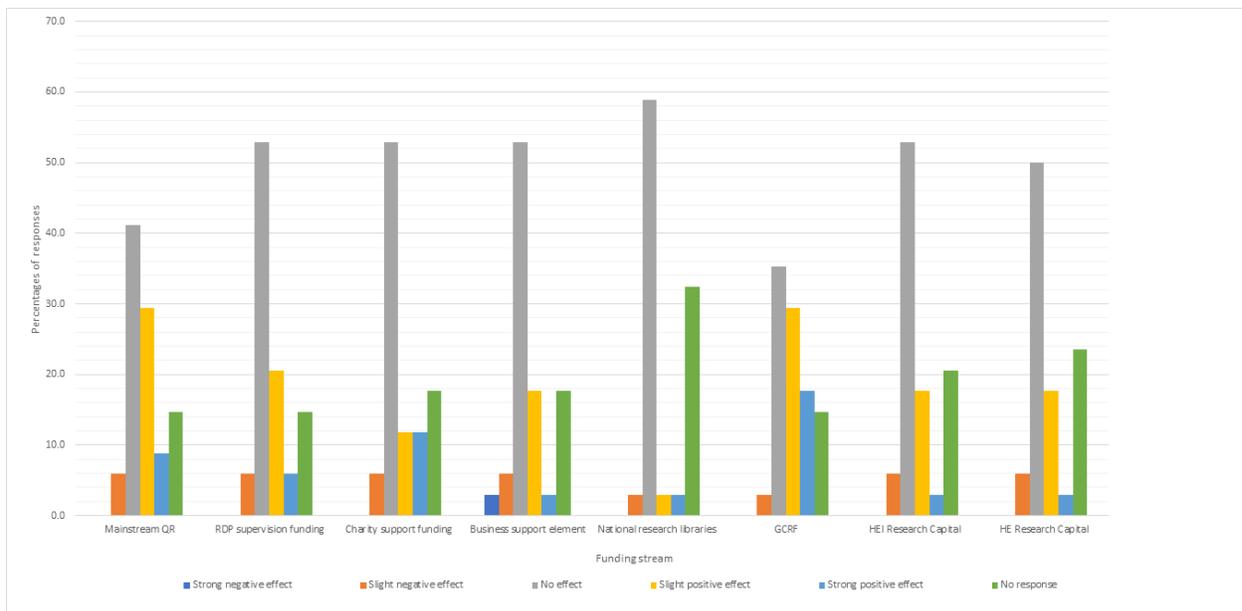
¹² QR RDP allocation reflects PGR student numbers in departments that attract mainstream QR funding. PGR students are counted up to a total of 3 FTE over a six-year period.

characteristics face challenges that hinder their professional progress, and that this reflects a societal structural bias particularly affecting mainstream QR and the business research element.

32. Some other respondents, however, said the RDP fund had a positive effect because it was used specifically to support PGR students with protected characteristics (for example, age, race or disability).
33. Some respondents also saw QR GCRF as having a positive EDI effect because the requirement for a three-year strategic plan may allow institutions to implement lead times in their internal funding calls and to account for potential delays in a project start date.
34. Where QR GCRF was said to have a negative effect, this was on the grounds that it may pose more difficulties for physically disabled staff. One survey respondent also highlighted that it may be difficult for staff with some sexual orientations to take part in overseas activities, as the political or social beliefs of the country being visited might make this dangerous.
35. Where formula-based research capital funding was said to have a positive effect, respondents said this was because it could be used to improve facilities and infrastructure in ways that improve accessibility and enhance provision for staff and PGR students with protected characteristics.
36. One respondent said QR for national research libraries had a strong positive effect because these libraries have a commitment to inclusivity and outreach and because they offer access to all researchers, who may not have access to similar facilities locally. One organisation suggested the fund may have a slight negative effect caused by all elements where there are not clear policies to promote EDI. This respondent said, however, that the effect occurred at HEI level rather than being created by Research England's policy.
37. Respondents were also asked to consider the potential effects of each element of funding on subjects, participants and beneficiaries of research. Figure 2 below shows the responses with regard to the effect (from strongly negative to strongly positive) of formula-based funding on these groups by type of funding stream. 50% or more than 50% of responses indicated no effect for the following areas: RDP supervision funding, charity support funding, the business research element, national research libraries, HEI Research Capital and HE Research Capital. A slight negative effect was suggested by a small percentage of

respondents across all funding streams (less than 6% in each case). As before, mainstream QR and GCRF QR were suggested to have the highest positive effect, with over 38% of responses reporting that mainstream QR had a slightly positive (29.4%) or strongly positive (8.8%) effect on participants and beneficiaries of research, and 47% of respondents reporting a slightly positive (29.4%) or strongly positive (17.6%) effect as a result of Research England’s QR GCRF funding allocation.

Figure 2: Perceived effect of formula research funding on participants and beneficiaries of research by type of funding stream



38. QR funding was said to have a positive effect on research participants and beneficiaries because of the ability to deploy it to support activities which directly involve participants and communities in the design of the research, thus enhancing the opportunity for positive benefit.

39. Some mainstream QR and QR GCRF funding was said to be used to support research projects that are directly addressing research questions relating to EDI, while mainstream QR was also said to be used to fund professional services staff who work to embed robust ethical and governance processes into research, benefiting subjects and participants.

40. In contrast, it was suggested that mainstream QR has some negative impact because of the implicit bias in research focus (for example, the male bias and white bias in medical research), with respect to projects which mainstream QR is used to support.
41. Where respondents said that QR GCRF had a positive EDI effect, this was on the basis that it is intrinsically linked with developing countries and projects are more likely to be directed at, and beneficiaries are more likely to be from, groups with protected characteristics. One respondent noted that “GCRF funding is specifically aimed at communities in developing countries that suffer from a number of equality issues including gender, race, religious and disability discrimination”.
42. Where the charity and business support elements were said to have a positive effect, this was because the research undertaken tended to be likely to benefit groups with protected characteristics. One respondent noted that QR charity support funding “allows us to reach out to groups that are traditionally excluded for health, economic and social reasons”.
43. Where these elements were said to have a negative effect, this was linked back to an implicit bias in research focus which disadvantages people with protected characteristics. In addition, one respondent noted their belief that, for the business element, the need to evidence income as a proxy for value of collaboration has a strong negative effect on EDI. They pointed out that the micro and small businesses in the private and third sector which often have great potential for positive impact are the businesses that are often cash-poor and unable to contribute financially to the cost of collaborative research.
44. One respondent suggested that QR for national research libraries helps to ensure that research literature relating to groups or individuals with protected characteristics is systematically preserved and made available and represents a wide range of voices, including those under-represented in more traditional research collections.
45. Where research capital was said to have a positive effect, this was on the basis that infrastructure work ensures the provision of facilities that are inclusive, benefiting visitors who include participants and/or beneficiaries of research with protected characteristics. One respondent, however, noted that funding for research facilities is often directed towards science, technology, engineering and maths (STEM) subjects, which tend to be more male dominated.



46. Respondents noted that REF impact case studies highlight positive effects on beneficiaries. These case studies are an excellent resource showcasing good practice in working closely with beneficiaries and, in particular, with disadvantaged or hard-to-reach groups.

Data analysis

47. Data from the HESA staff and student records for the academic year 2017-18 was used to inform our analysis. We explored the data to compare trends across English institutions eligible to receive Research England funding, grouped by receipt of QR funding.¹³ We approached the data analysis by protected characteristic because the HESA data reports on these categories. The analysis of institutions by receipt of QR was based on data from English HEIs only.
48. English institutions were split into six groups by the amount of QR funding received for the academic year 2019-20. The top sixth of institutions by QR allocated in 2019-20 formed one group, followed by the next-highest sixth and so on, so that A = institutions with most funding and F = institutions with least funding. The number of institutions in each group was almost equal (either 22 or 23 institutions per group). Supporting material on this is available in the slide pack 'Equality Impact Assessment: Supporting HESA Data Analysis' (slides 8 and 9).
49. We also used Advance HE's 2019 staff statistical report to further understand the relationship between university staff and different protected characteristics, by HESA cost centre.¹⁴ Advance HE uses the generic classification of academic departments from the HESA staff record. The presentation of results is divided into science, engineering and technology (SET) HESA cost centres and non-SET HESA cost centres.
19. We also used Advance HE's 2019 student statistical report to further understand the relationship between PGR students and different protected characteristics, by subject

¹³ Our analysis looked at institutions *eligible* to receive QR funding. This meant that some institutions which do not receive QR funding have been included in our analysis. The University of Buckingham and Heythrop College, University of London have not been included in our analysis. There are also three institutions (Hartpury University, the London Academy of Music and Dramatic Art (LAMDA) and the Royal Academy of Dramatic Art (RADA)) newly eligible for 2019-20 funding (and therefore included in the QR groupings) but which did not return 2017-18 HESA staff or student data.

¹⁴ The Advance HE staff statistical report 2019 is based on data drawn from the HESA staff record 2003-04 to 2017-18.

area.¹⁵ Subject areas were split into SET and non-SET disciplines.¹⁶ Advance HE defines 'postgraduates' as those on courses leading to higher degrees, diplomas and certificates. The Advance HE report disaggregates postgraduates into research and taught postgraduates. As QR RDP provision relates to PGR students only, we only reviewed the data relevant to PGRs.

50. Advance HE's staff and student statistical reports use HESA data from England, Scotland, Wales and Northern Ireland.¹⁷

51. Whilst we had robust data on age, sex, ethnicity and disability, we had limited information on other protected characteristics. The EIA drew on a number of external reports as well as responses to the online survey to inform analysis, but we are aware that our consideration of other protected characteristics is necessarily limited.

52. As part of the EIA, we also sought to understand the potential impacts (positive or negative) of our formula-based research funding policy for the participants and the beneficiaries of research; however, there is no database comparable to the HESA record to provide evidence to underpin these considerations.

53. During stakeholder workshops, participants stressed the limitations of HESA data. These include the following:

- HESA staff data cost centres do not map directly onto REF UOAs; in our analysis by QR groupings, subject-level analyses were disaggregated by HESA cost centre rather than by REF UOA to maintain robustness of data

¹⁵ The Advance HE student statistical report 2019 is based on data drawn from the HESA student record 2017-18.

¹⁶ In the Advance HE report, SET subject areas refer to: agriculture and related subjects; architecture, building and planning; biological sciences; computer science; engineering and technology; mathematical sciences; medicine and dentistry; physical sciences; subjects allied to medicine; and veterinary science. Non-SET subject areas refer to: business and administrative studies; combined subjects; creative arts and design; education; historical and philosophical studies; languages; law; mass communications and documentation; and social studies. In this report we have not separated SET and non-SET subject areas in our presentation of Advance HE's analysis.

¹⁷ Staff by country: 82.3% of staff employed by HEIs worked in England, 11.3% in Scotland, 4.9% in Wales and 1.6% in Northern Ireland (Advance HE staff statistical report 2019). Students by country: 81.6% attend HEIs in England, 10.5% in Scotland, 5.5% in Wales and 2.3% in Northern Ireland.

- HESA staff data includes information on all staff employed by HEIs; as well as records of research staff, it covers professional services staff and staff on teaching-only contracts, who may not necessarily be affected by QR funding; we disaggregated staff records into professional services and academic contracts (teaching and research); as the majority of HESA staff contracts are returned as both teaching and research, we did not split academic contracts by type
- institutional data is often only updated during a recruitment process, so some protected characteristics (such as disability) may alter but may not be captured in an institution's annual HESA return; we accept that the HESA data is not a comprehensive representation of protected characteristics in the HE sector, but there was no alternative database suited to the scope of this exercise.

54. Limitations of HESA data are also set out in Annex B.

55. Workshop attendees stressed that intersectionality¹⁸ was an important area to explore as multiple challenges tend, they suggested, to multiply disadvantage. As is the case for each individual protected characteristic, there is no evidence of direct effects arising from QR and formula-based research capital, but we are concerned that where there is a possibility of negative effects (for example, in terms of age, race or disability), clearly these would be compounded by any intersection of those protected characteristics.¹⁹

¹⁸ Intersectionality 'means recognising that people's identities and social positions are shaped by multiple factors, which create unique experiences and perspectives' (source: Advance HE, 2019).

¹⁹ See for example [Athena Survey of Science, Engineering and Technology \(ASSET\)](#) report, published by the Equalities Challenge Unit (ECU) in November 2017: "in each of the six aspects of working life covered in the ASSET 2016 survey, there was at least one area in which BME female respondents experienced confounded disadvantages." The survey further reported that: "the size of the gender gaps in a number of aspects of working life appear to be age-dependent, as many were not present (or at least substantially smaller) among respondents aged 30 and under" (p.4).

Annex B: Evidence of impacts on university staff, PGR students and recipients and beneficiaries of research

Evidence of impacts on university staff

56. Workshop participants and survey respondents tended to focus on academic rather than professional services staff when considering potential EDI impacts of QR and formula-based research capital funding.
57. Representation, career progression and pay gaps in academia are live issues currently subject to considerable scrutiny and discussion. We looked at trends in the university workforce by protected characteristic (age, disability, ethnicity, sex, other).
58. Supporting material is available in the slide pack 'Equality Impact Assessment: Supporting HESA Data Analysis' (slides 10 to 18).

*Age*²⁰

59. Age is a complex protected characteristic as there is potential for age discrimination at every stage of an individual's working life. Where concern was expressed during sector engagement, this tended to be around ECRs and the precarious nature of their contracts. It is often assumed that ECR status is related to younger academics, but this is not always the case.
60. Institutions in QR Group A employ the highest proportion of staff aged 34 and under. QR Group E employs the highest proportion of staff under the age of 25.²¹ Institutions in QR Group E also employ the highest proportion of staff aged 55 and over.

²⁰ This report uses the following age categories, and the calculations are based on individuals' ages on 31 August in the reporting period 2017 to 2018: under 25; 25 to 34; 35 to 44; 45 to 54; 55 to 64; over 64.

²¹ Data has not been disaggregated to determine the proportion of fixed-term and open-ended contracts. Unless indicated otherwise, figures include professional services staff and academic staff.

61. There is no evidence that the research funding formula has any direct age-related effects, but evidence was provided via the online survey that HEIs may ring-fence some portions of it for use in supporting ECRs.

*Disability*²²

62. Advance HE's 2019 staff statistical report notes that "disability disclosure rates remained persistently lower among academic staff than professional and support staff and among professors compared with other academics".²³ This may reflect the challenges of maintaining or advancing through an academic career for people with disabilities, or it may be a reporting issue, which in itself raises questions as to why people may be reluctant to report a disability to their employer.

63. 5% of university staff (academic and professional services) reported one or more disability (source: Advance HE). This compares against 18% of working-age adults in the UK who reported a disability in the financial year 2017-18.²⁴ Amongst academic staff who reported a disability, the most commonly disclosed impairment types were a longstanding illness or health condition or a specific learning difficulty (both 23%). Over 10% of academic disabled staff reported a mental health condition (source: Advance HE, 2019).

64. Disability reporting rates are lower for university staff than PGR students, raising questions as to whether this is a reporting issue or whether recruitment or retention of staff with disabilities by HEIs is disproportionately low.

65. There is a link between the receipt of QR and the proportion of academic staff who report a disability, with a higher proportion of staff reporting a disability in institutions that receive smaller amounts of QR funding. There is, however, no evidence to suggest a causal relationship.

²² The term 'disabled staff' is used to refer to staff who are indicated as disabled on their HESA staff record. Disability is recorded within the HESA staff records on the basis of self-assessment using one of three categories: declared disabled; not known to be disabled; information not provided.

²³ Advance HE: *Equality and Higher Education: Staff Statistical Report 2019*, p.82.

²⁴ Based on the Equality Act 2010 definition. Department for Work and Pensions: *Family Resources Survey 2017/18*, Table 4.1.



66. Our analysis does not include information on disability type by subject level. This might have some bearing on understanding sector trends.
67. Chemical engineering had the lowest proportion of academic staff reporting a disability (1.9%), with health and community studies reporting the highest (8.3%). Civil engineering and economics and econometrics also had low proportions of staff who reported a disability (2.3% and 2% respectively), as did veterinary science (2.5%). Social work and social policy (7.1%), sociology (6.8%), art and design (6.5%) and nursing and allied health professions (6.8%) had high proportions of staff who reported a disability (source: Advance HE).

*Ethnicity*²⁵

68. Analysis of HESA data shows that 89% of university staff (professional services and academics) are white and 3% are black. This compares with the 2011 Census report that black ethnic groups make up 3.4% of the working age population (aged 16-64) of England and Wales.²⁶
69. Excluding the category 'unknown'²⁷ and taking all nationalities into account, institutions in QR Group C employ the highest proportion of BAME staff (although this does not tell us anything about salary or seniority level). QR Groups C and D employ the largest proportion of black staff, although this only accounts for 4% of all staff in both groups.
70. Disaggregated by nationality, institutions within QR Groups C and D employ the highest proportion of black academic staff from the UK (3% and 4% respectively). QR Group C employs the highest proportion of Asian academic staff from the UK (7%); the proportion of Asian staff employed in QR Groups A and D is also over 6%. Regarding the academic staff not of UK nationality, QR Groups C and D employ the highest proportion of black staff (8% and 7% respectively). The highest proportion of Asian academic staff who reported nationality not originating in the UK are employed in institutions within QR Group A (19%); this drops slightly to 18% in QR Groups B, C and D.

²⁵ Ethnicity within HESA staff records is based on the 2011 Census classification system in England and Wales. The Census categories were: Asian – Asian or Asian British, Bangladeshi, Asian or Asian British, Chinese; Indian, Asian or Asian British; Pakistani, and other Asian background; Black – Black or Black British; African, Black or Black British, Caribbean, and other Black background; Mixed; Other ethnic background, including Arab; White – all White ethnic groups, including White British; Unknown.

²⁶ See: [Ethnicity facts and figures](#).

²⁷ The source data includes 'unknown' ethnicity which is not included in this summary.

71. The highest proportion of BAME staff with UK nationality on an academic contract are employed in the following HESA cost centres: chemical engineering (20.4%) and clinical dentistry (22%). The highest proportion of white academic staff with UK nationality are employed in archaeology (99.2%), classics (97.2%) and sports science and leisure studies (96.7%). The highest proportion of BAME academic staff of non-UK nationality are employed in the following HESA cost centres: electrical, electronic and computer engineering (53.3%), general engineering (49.9%) and mineral, metallurgy and materials engineering (48.3%). The highest proportion of white academic staff of non-UK nationality are employed in classics (92%), archaeology (89.4%), history (87%), music, dance, drama and performing arts (86.8%), and philosophy (86.6%) (source: Advance HE).

Sex

72. HESA records the sex of the member of staff, as opposed to the gender they identify with. 'Other' is included for staff whose sex aligns with terms such as intersex, androgyne, intergender, ambigender, gender fluid, polygender and gender queer.²⁸

73. There is no evidence to suggest a causal relationship between the amount of QR funding received by an institution and the sex of university staff. Universities in QR Group A employ the highest proportion of male staff; universities in QR Group D employ the highest proportion of female staff.

74. A higher proportion of male staff work full-time (77%) compared to female staff (60%). Among both academic and professional and support staff, the majority of staff on part-time contracts are women (55% of academic staff and 80% of professional and support staff) (source: Advance HE).

75. Electrical, electronic and computer engineering (85%), mechanical, aeronautical and production engineering (84%) and physics (81%) employ the highest proportion of men. Nursing and allied health professions (75%), education (68%), health and community studies (67%) and modern languages (66%) employ the highest proportion of women. Staff and student facilities also employ a high proportion of women (71%), although they have a

²⁸ See: [HESA Definitions: Staff](#). The specification of the data field 'Sex' is based on [ECU recommendations on monitoring](#). HESA does not, however, include a 'prefer not to say' option for this field.

smaller cohort than the other HESA cost centres listed in this paragraph (source: Advance HE).

Other protected characteristics

76. Because of the voluntary nature of reporting, we have insufficient data to examine trends for gender reassignment, religion and belief, sexual orientation, marriage and civil partnership, or pregnancy and maternity.
77. There is no evidence correlating QR and formula-based capital research allocation methods with pregnancy and maternity leave. A paper presented at a British Academy of Management conference²⁹ found that women generally experienced a lack of support from university employers before, during and after maternity leave, which then hindered their academic careers.
78. On maternity, however, responses to our survey suggested that there may be some positive effects where universities used QR funding to support women returning to work.
79. On religion and belief or non-belief, data is limited and there is no evidence of the effect of QR and formula-based research capital funding with regard to this protected characteristic or its interaction with other protected characteristics. Advance HE's report on religion and belief promotes further investigation of the intersection of different identities and experiences (for example, religion, race and gender). The PSED is clear that institutions should consider ways to improve the experience and participation of staff and students in relation to their religion or belief. We note that some HEIs are using QR for this purpose (for example, using formula-based research capital to enhance provision of spaces that meet the needs of staff and students with regard to their beliefs) and we encourage this positive approach.
80. On sexual orientation and gender reassignment, survey responses noted that the international aspect of QR GCRF and the likelihood that research staff need to travel may inhibit some groups with protected characteristics. For example, LGBTQ+ researchers might be hindered by the difficulty of travelling to certain countries for their work, whether for

²⁹ Lord, J. and Joel, A. (2019). *Organisational Support throughout the Maternity Journey: the Perceptions of Female Academics in UK Universities*. British Academy of Management Conference Proceedings. Reported by A. McKie in *Academic Mothers Criticise 'Consistent Lack of Support'*. Times Higher Education, 1 October 2019.

reasons of health provision or safety and security. There is, however, no evidence of any effect of QR and formula research funding on this group.

Implications for the EIA

81. We found no significant evidence of any causal links between our funding allocation methods and potential for negative impacts on groups or individuals with protected characteristics. However, our findings do highlight some areas that warrant further investigation, for example, the representation of different characteristics across different disciplines.
82. Workshop discussions and survey responses offered evidence of effective practice (for example, using QR to access specialist support for disabled researchers, supporting LGBTQ+ staff networks and recruiting deans for EDI), but these were linked to the provision of funds and institutional decisions rather than the funding allocation method. Institutions which receive more QR, however, are more able to support specific EDI initiatives and schemes. There is a potential role for Research England in further supporting and sharing effective practice across the HE sector.

Evidence of impacts on PGR students

83. Funding for RDP supervision is provided on the basis of FTE PGR student numbers in all departments that receive mainstream funding for research. PGR students are counted only if they are in years one to three of their full-time study, or in years one to six of their part-time study and, as a transitional measure, up to a total of three FTE over a six-year period.³⁰ We have not been able to collect information on student completion times in this exercise.
84. Supporting material is available in the slide pack 'Equality Impact Assessment: Supporting HESA Data Analysis' (slides 10 to 18).

Age

85. Disaggregated by institutional receipt of QR, a relationship emerges between the age range of PGR students and QR funding, with a higher proportion of younger PGR students

³⁰ See: [Research England \(2019\). *How We Fund Higher Education Institutions*](#).

studying at universities in receipt of a higher amount of QR (and thus an assumed higher amount of QR RDP, given the relationship between QR funding streams).

86. Of all PGR students, 75.4% study full-time; the remaining 24.6% study part-time. Of those who study full-time: 2.4% are aged 21 and under; 44.9% are aged from 22 to 25; 41.3% are aged from 26 to 35; and 11.4% are aged 36 and over. Of those who study part-time: less than 1% are aged 21 and under; 8.7% are aged 22 to 25; 33.6% are aged 26 to 35; and the remaining 57.2% are aged 36 and over. Advance HE's 2019 student statistical report does not disaggregate age ranges beyond 36 years.
87. Disaggregated by subject area, mathematical sciences and physical sciences have the highest proportion of PGR students aged 25 and under (65.5% and 66.7% respectively). Education and creative arts and design have the highest number of students aged 36 and over (61.6% and 43.9% respectively) (source: Advance HE).³¹

Disability

88. A higher proportion of PGR students report a disability compared with all university staff. Across all institutions, nationalities and modes of study (full-time and part-time), 9% of PGR students report one or more disability compared to 5% of university staff.³² The proportion of part-time students who disclosed as disabled was higher than that of full-time students.³³ The most common disabilities reported by PGR students were specific learning difficulties (34.2% of those reporting a disability) and mental health conditions (20.6%) (source: Advance HE).
89. The data for PGR students demonstrates a negative relationship between the amount of QR an institution receives and the proportion of students reporting a disability, across QR Groups A to E. There is, however, no evidence to suggest a causal relationship.
90. Disaggregated by subject area, disability reporting rates among PGR students are highest for those studying creative arts and design (14.8%) and history and philosophical studies

³¹ All students studying the 'combined' subject area are aged 36 and over; however, the cohort for this area is very small (30).

³² By comparison, 14.4% of first-degree undergraduate students and 9.3% of taught PGR students reported a disability.

³³ For all degree levels, the proportion of part-time students who disclosed as disabled was higher than that of full-time students, with the exception of undergraduates (Advance HE, 2019).

(13.1%). Disability reporting rates are lowest among those studying business and administrative studies (5.4%) and engineering and technology (5.9%).

Ethnicity

91. Excluding the category 'unknown'³⁴ and disaggregated by nationality, QR Groups C, D and F have the highest proportion of black PGR students of UK nationality (D has 6%; C and F both have 5%). QR Groups A and C reported the highest proportion of Asian PGR students of UK nationality (8% across both groups). Of the PGR students who reported a nationality not from the UK or EU, QR Group D reported the highest proportion of black students (25%). The highest proportion of Asian PGR students whose nationality is from the UK or EU are studying in institutions within QR Groups A (48%) and E (52%).³⁵
92. Disaggregated by nationality, 58.5% of PGR students in the UK are UK-domiciled, 13.1% are from a nation within the EU and the remaining 28.5% are not domiciled within the UK or EU. Of the PGRs who are UK-domiciled,³⁶ veterinary science, historical and philosophical studies and creative arts and design have the highest proportion of white students (92%, 90.9% and 89.2% respectively). Business and administrative studies and medicine and dentistry have the highest proportion of UK-domiciled BAME students (30% and 26.4% respectively) (source: Advance HE).

Sex

93. Universities in QR Group A have the highest proportion of male PGR students; universities in QR Groups D and F have the highest proportion of female PGR students. There is no evidence to suggest a causal relationship between the amount of QR funding received by an institution and the sex of PGR students.

³⁴ The source data includes 'unknown' ethnicity, which is not included in this summary.

³⁵ Group E reported fewer non-UK and non-EU PGR students than Group A. Group A reported 14,763 PGR students whereas Group E reported 410. This data refers to PGR students across all modes of study (full-time and part-time) and excludes 'unknowns'.

³⁶ Ethnicity data is for UK-domiciled students only. This is because it is only compulsory for HEIs to return ethnicity data to HESA for UK-domiciled students (although these students can also choose not to disclose their ethnicity). Ethnic groups other than white have been aggregated into a single BAME group, although additional detail by the ethnic categories used in the 2011 Census is also presented where possible. White minority ethnic groups have been aggregated into the 'white' group. See Advance HE, 2019.

94. Of the PGR students who study full-time, 47.3% are women and 52.7% are men. Of the PGR students who study part-time, 52.7% are women and 47.3% are men (source: Advance HE).
95. At subject level, education (67.8%), veterinary science (66.7%) and languages (62.8%) have the highest proportion of female PGR students.³⁷ Engineering and technology (74.7%), computer science (72.8%) and mathematical sciences (71.4%) have the highest proportion of male PGR students (source: Advance HE).

Implications for the EIA

96. Whilst we found no evidence of any causal link between our funding allocation mechanisms and representation among PGR students, survey and workshop participants suggested that the formula currently used for RDP funding (which is provided on the basis of three FTEs of PGR study) has the potential to give rise to unintended effects on certain protected characteristics. The likelihood to study part-time, or to defer periods of study altogether, may more commonly be associated with some protected characteristics, including sex, age and disability.

Evidence of impact on subjects, participants and beneficiaries of research

97. There is no database providing evidence on groups of people with protected characteristics who are subjects of, participants in or beneficiaries of research. We have therefore drawn on workshop discussions, survey responses and external reports to inform our analysis in this section.
98. Where relevant, comments pertaining to each protected characteristic have been noted. However, a significant amount of the evidence we received highlighted the potential impact of QR and formula-based capital funding across **all** protected characteristics. This evidence is summarised in the section 'All protected characteristics' below.
99. As a condition of Research England funding, institutions must comply with the Concordat to Support Research Integrity (2019). Although the concordat does not reference EDI explicitly, it notes that "all parties have a responsibility to ensure they have up-to-date knowledge of the frameworks, standards and obligations that apply to their work", which include the

³⁷ PGR students studying veterinary science make up 0.3% of the PGR student cohort.

Equality Act 2010 and the PSED (for public organisations). Recipients of UKRI full economic costing (fEC) project grants are expected to ensure that EDI is considered and supported at all stages throughout the performance of their project.³⁸

100. Research England's allocation mechanisms for formula-based funding do not use any information on the nature of the beneficiaries of research. However, the inclusion of the 'impact' element in the REF (20% weighting in 2014, rising to 25% in 2020) provides an incentive for universities to consider the needs of beneficiaries in general in their research. This incentive does not treat any group of beneficiaries differently.

Ethnicity

101. One survey respondent highlighted that most participants of clinical trials are white, which may limit the extent to which results can be generalised to population level.

Sex

102. Research England's institutional allocation of QR and research capital funding can result in research that examines issues pertinent to people with certain protected characteristics. Survey responses suggested that there may be some unintended bias in research focus, depending on how formula-based research funding is used at an institutional level. For example, one survey respondent noted that historical cardiovascular research has excluded any consideration of sex. Another respondent considered that there are "disparities based on gender in the area of health issues, particularly men's mental health, suicides, depressions and cancers." These disparities could be addressed, the respondent suggested, if all research councils promoted research into these topics. A third respondent noted that funding for research facilities is often directed towards STEM subjects, which tend to be more male-dominated.

All protected characteristics

103. At the EIA workshops, participants discussed evidence of benefits to be found in impact case studies and whether there might be potential to incentivise activity with third-sector or non-profit organisations. Survey respondents also noted that REF impact case studies highlight positive effects on beneficiaries and could be utilised for any future resource

³⁸ UKRI (June 2019): *fEC Grants Standard Terms and Conditions of Grant*. See section RGC 3.4: Equality, Diversity and Inclusion.

showcasing good practice in working closely with beneficiaries and with disadvantaged or hard-to-reach groups.³⁹

104. One comprehensive analysis of the beneficiaries of university research is based on the impact case studies submitted for assessment in REF 2014. This independent analysis by King's College London and Digital Science identified a wide range of groups who benefit from research. Their report identified 60 impact topics which include: children, young people and families; mental health; religion; and women, gender and minorities.⁴⁰ It is important to note that:

- the impact case studies will result from research funded by any funders, and not just from Research England's formula-based research funding; there are case studies included in the analysis from universities in Northern Ireland, Scotland and Wales, who do not receive any funding from Research England's formula-based funding
- the impact case studies are not necessarily representative of all the impact that comes from research
- the analysis by King's College London and Digital Science reports the frequency with which the group is mentioned in the case studies, not the related research investment or the extent of the impact on that group
- the categories of beneficiaries are not mutually exclusive.

105. Some of the categories of beneficiaries relate directly to protected characteristics defined by the Equalities Act 2010 (for example, the category 'women'). Some categories are also clearly related to protected characteristics (for example, the category 'children' is related to the protected characteristic 'age'). Other categories consist of a mixture of people with a wide range of characteristics (for example, 'patients').

³⁹ Examples of impact case studies considered by survey respondents to highlight positive effects on beneficiaries include: 'Inclusive design: Royal College of Art research creates significant, far-reaching impact in design, industry and education' (Royal College of Art); 'Challenging rape myths and re-directing juries', 'Improving governance, policy and practice in adult safeguarding and in self-neglect' and 'Sugar, slavery and society: shaping perceptions of slavery and emancipation' (University of Sussex); and 'European and global LGBT rights: changing legal and professional practice' (Manchester Metropolitan University).

⁴⁰ King's College London and Digital Science (March 2015): *The Nature, Scale and Beneficiaries of Research Impact: An Initial Analysis of Research Excellence Framework (REF) 2014 Impact Case Studies*. See Figure 14, p.43.

106. Survey responses tended to focus on the potential positive effects of the use of QR. For example, it was noted that QR may be used to fund professional services staff who work with academics to embed robust ethical and research governance processes into research, benefiting subjects and participants.
107. Where the charity and business support elements were said to have a positive effect, this was because the research undertaken was likely to be of benefit to groups with protected characteristics. One respondent noted that the Charity Support Fund “allows us to reach out to groups that are traditionally excluded for health, economic and social reasons”. Where these elements were said to have a negative effect, this was linked back to a perceived bias in research focus (research projects which mainstream QR may be used to support) which disadvantages certain groups with protected characteristics.
108. Where research capital was said to have a positive effect, this was on the basis that infrastructure work ensures the provision of facilities that are physically accessible, benefiting visitors including participants and/or beneficiaries of research with protected characteristics.
109. Through the survey and in the workshops, participants suggested that QR GCRF tended to be positive because it is intrinsically tied to work which is more likely to benefit groups with protected characteristics. We are not aware, however, of any analysis of the focus of GCRF-funded projects. Comment tended to focus on the uses to which QR may be put by universities, for example related to project funding or project design and therefore more pertinent to the other constituent bodies in UKRI.
110. The UK Health Research Analysis 2018⁴¹ notes that the four largest medical charities in the UK are Arthritis Research UK, the British Heart Foundation (BHF), Cancer Research UK (CRUK) and the Wellcome Trust. The two largest areas of funding are generic health relevance (24.4%, or £625 million) and cancer and neoplasms (18.9%, or £483 million). The smallest area of funding is ears (0.4%, or £10 million).⁴²
111. The report suggests there is “relatively poor matching” of the UK’s burden of disease in terms of disability-adjusted life year (DALY) rates and the research funding available

⁴¹ UK Clinical Research Collaboration (UKCRC): *UK Health Research Analysis 2018* (published January 2020).

⁴² See Table 5 in the UKCRC report (p.33).

(Spearman's coefficient 0.66)⁴³. In 2018, cancer received the highest proportion of spend and had the highest DALY rate. Most health categories show research funding is lower than would be consistent with the comparative burden of disease, with the difference being significant for the categories musculoskeletal, respiratory, oral and gastrointestinal and the combined group blood/cardiovascular/stroke.⁴⁴

112. The report notes, however, that disease burden does not correlate with research costs involved and funding is not necessarily a proxy for impact.⁴⁵ There is also potential for fundamental research to have wider spill-over effects beyond the areas of research originally envisaged. Mapping across HRCS and GHE disease classifications used in the analysis is also imperfect.

Implications for the EIA

113. There is no evidence directly linking our formula-based research funding allocation method with either positive or negative effects on subjects and participants. Whilst we found evidence of research impact that benefits people with particular protected characteristics, we did not find evidence of any direct impacts resulting from the allocation methods we use.

114. There is a complex relationship between the funding of research, the disciplinary mix of that funding and the nature of the potential and actual beneficiaries of research. It is not possible to map specific groups of beneficiaries to particular research disciplines, and the level of funding is not necessarily a proxy for either the volume of research or the potential or actual impact on the beneficiaries of research.

115. The UKCRC report is a useful analysis of the distribution of health research funding and burden of disease. However, the type of research (and thus the assumed potential for impact on beneficiaries) carried out by English HEIs using QR and/or capital research

⁴³ UKCRC's analysis compares the proportion of research funding in 2018 across all health categories and all funders against the most recently available UK DALY rates (2016) from the [World Health Organization's Global Burden of Disease project](#). The analysis only accounts for 71% (£1.82 billion) of spend, as three health categories (inflammatory and immune system, generic health relevance, and 'other') have no equivalent Global Health Estimate (GHE) codes and are omitted from the data.

⁴⁴ See Figure 7 in the UKCRC report (p.37).

⁴⁵ "For example, research into Injuries and accidents is part of HRCS coding and includes external injuries (fractures, burns and poisons) and intervention studies to prevent future accidents. This represents a very small proportion of research funding, but the loss of life or quality of life through disability is considerable (7.8%)". See p.50 of the UKCRC report.

funding depends on the strategic decisions made by universities, university research groups and researchers themselves.

116. We note that our formula-based funding is provided as a block grant, and we do not set restrictions concerning the types of research or the disciplinary areas for which it is used. This means that the types of research, the disciplinary mix and the extent to which the research may ultimately benefit different groups within society depends on the strategic aims of the HEI and the disciplinary specialism of academic researchers. It also depends on funding availability from project funders.

Evidence limitations and gaps

117. The evidence provides a snapshot of protected characteristics in HEIs. It does not consider socioeconomic characteristics, nor does it provide a detailed analysis of EDI across UKRI (although the role UKRI plays in furthering EDI within HE has been reflected on, where appropriate).

118. As noted above, there are no databases providing evidence on groups of people with protected characteristics who are subjects, participants or beneficiaries of research.

119. Limitations of the HESA data include the following:

- HESA staff data subject areas (cost centres) do not map directly onto REF UOAs; we have not mapped subject area to REF UOA and instead have disaggregated staff into HESA cost centres to maintain data robustness
- HESA staff data includes information on all staff employed by HEIs; as well as records of research staff, it covers professional services staff and staff on teaching-only contracts, who may not necessarily be affected by QR funding; we disaggregated staff records into professional services and academic contracts (teaching and research) and, as the majority of HESA staff contracts are returned as both teaching and research, we did not split academic contracts by type⁴⁶
- because institutional data is often only updated during a recruitment process, some protected characteristics (such as disability) may alter but may not be captured in an

⁴⁶ The number of staff on research-only contracts plus the number of staff on teaching-only contracts is greater than the number of staff on both teaching and research contracts.



institution's annual HESA return; we considered this caveat around the use of the HESA staff data and note this in the analysis, where appropriate; whilst we also accept that the HESA data is not a comprehensive representation of protected characteristics in the HE sector, there is no alternative database suited to the scope of this exercise.

Annex C: Literature and useful resources

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