

RCUK / UUK: Review of the Impact of Full Economic Cost on the HEI Sector

Response by the Wellcome Trust

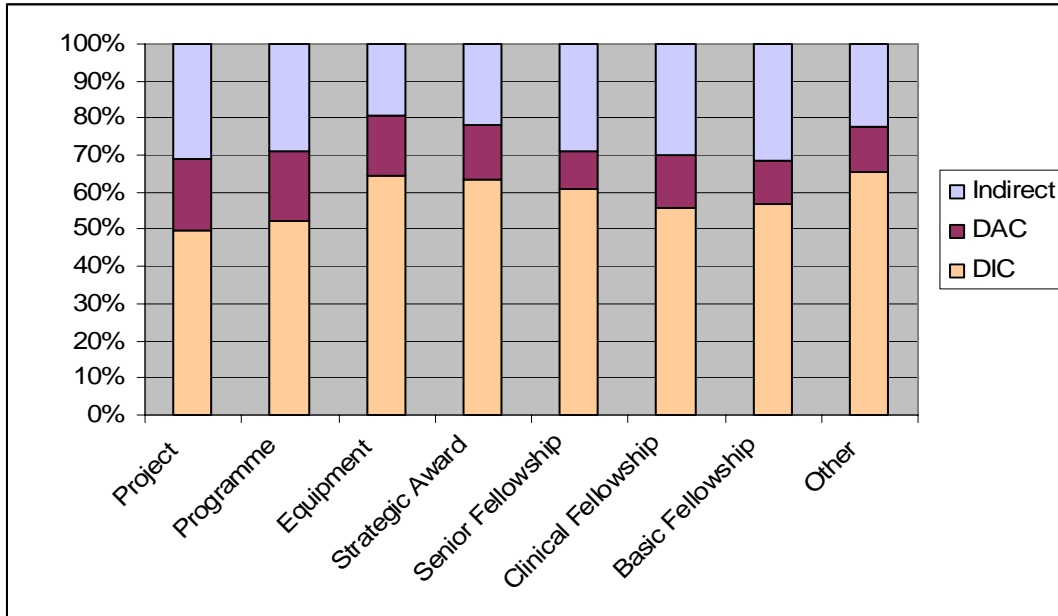
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1. The Wellcome Trust is the largest charity in the UK. It funds innovative biomedical research, in the UK and internationally, spending over £600 million each year to support the brightest scientists with the best ideas. The Wellcome Trust supports public debate about biomedical research and its impact on health and wellbeing.
2. We welcome the RCUK / UUK review of the impact of full economic costs on the higher education sector. The importance of moving towards financial sustainability of UK universities cannot be underestimated, and we are pleased to be able to contribute the views of a charity funder to this important review.

Are there circumstances in which you pay an element of fEC?

3. The Wellcome Trust position in relation to full economic costing (fEC) is as follows:
“The Wellcome Trust funds research in UK universities in partnership with Government. We fund the full directly incurred costs of research on all awards. However, as a charity, we expect the general running costs (e.g. indirect costs, estate costs, support services) to be provided by Government, through funding to universities. We will therefore not fund on a proportion of full economic costs (fEC) basis. We fund many other costs, including infrastructure, buildings and equipment, in a manner that best furthers the Trust's charitable mission.”
4. Researchers from the UK are required to detail the fEC of their research project when applying for funding. For applications to the Trust from September 2005 to September 2008¹, the average breakdown of the full costs reported for the research was:
 - Directly Incurred: 56.1%
 - Directly Allocated: 15.9%
 - Indirect: 28.0%
5. Of this, the Trust funds the full Directly Incurred Costs (56.1%). In addition to this, the Trust also funds the full costs of animal research (part of the Directly Allocated costs) and provides an additional flexible funding allowance and an automatic travel allowance. These costs are equivalent to a further 2.5%. Consequently the **Trust is contributing, on average, 58.6% fEC across all response-mode grants.**
6. The Trust funds a smaller proportion of the fEC for project grants than for Fellowship or equipment grants, as shown in the figure below:

¹ The analysis considered successful applications only



7. These data are derived from 852 grants awarded since September 2005 where robust fEC data is available.
8. The Trust has recently awarded substantial funding to Genome-wide association studies (GWAS), for example in 2007/08, a total of £22.8 million was awarded to the Wellcome Trust Case Control Consortium and other GWAS. It is interesting to note that the percentage of fEC that the Trust covers has been significantly higher on these awards, as a result of funding for the purchase of consumables and associated staff costs.

What information on indirect or estate costs to you expect HEIs to provided with proposals?

9. The Trust is monitoring the impact of fEC on the applications we receive. As part of this monitoring process, grant applicants from the UK are required to detail the fEC of their research project when applying for funding. Universities have been supportive of this approach as a way of encouraging a culture of fEC across all research proposals. The fEC data provided by universities have improved significantly over the course of the three years.

Have you widened your definition of 'allowable costs' (e.g. infrastructure, buildings and equipment) since the introduction of fEC?

10. Recognising the changes taking place under fEC, and the new way that charges are defined and classified, the Trust did refine its policy position on allowable costs. From 1 April 2006, the Trust has provided explicit funding for some costs, including recruitment and advertising, personal and project licences, access charges for basic equipment, and non-salary inflationary costs, which were previously funded by our flexible funding allowances.
11. Although the Trust does not fund on a proportion of fEC basis, we will fund some additional costs that are otherwise defined as Directly Allocated, where it furthers our mission. Specific examples include:

- **Animals:** The Trust recognises the important contribution that research using animals has made to advances in medicine and surgery and therefore supports biomedical and veterinary research involving animals, provided it meets a number of specific requirements. We therefore will cover fEC charge-out rates for animal house facilities when animal use is essential to a project.²
- **Open access publishing costs:** The Trust provides funding to cover the costs of making journal publications freely accessible. Under TRAC methodology, publication costs can either be included as direct or indirect costs. However, the Trust will always fund the full amount – usually through a block grant to the university.
- **Equipment:** The Trust will provide funding for equipment through two different routes. Within a standard project grant, programme grant or fellowship application, we will cover the cost of small, project-dedicated items of essential equipment.³ We normally expect a proportional contribution from the host institution or other source if an item costs more than £100K. Alternatively, the Trust has dedicated equipment grants for pieces of multi-user equipment, including equipment required to create a central resource for a number of disparate scientific programmes. The amount awarded on these applications range from £75,000 to £1 million; around £4.5 million has been awarded to date in this financial year.

Are there other mechanisms you've introduced to support sustainability – for example fostering more innovative partnerships; and can you provide examples and quantitative information on the above?

12. As part of our approach to full economic costing, the Trust is committed to supporting sustainability in universities, by investing in infrastructure, buildings and equipment, and strengthening research resources, in a way that best meets the Trust's charitable mission. Such investments are ideally made through partnerships with the Government, universities and other funders. Examples of the mechanisms that the Trust has adopted are listed below.

13. **Capital funding scheme:** In 2007 we introduced a new biennial competition to provide capital funding (above £1 million) for large-scale projects that support science-based activity. The projects are intended to facilitate internationally competitive, leading-edge biomedical research, or to support public engagement, that would not otherwise be possible, and applications should normally involve a commitment of partnership and funding support from the university. A total of £31.6 million was awarded in July 2008 for

² Charge-out rates may include running costs (including the purchase and maintenance of animals, and any experimental procedures involved), plus appropriate estates and depreciation costs. The exception to this is where the Trust has provided significant funding towards the infrastructure and/or core support of the facility when we may not be willing to meet the full charge-out rate for an animal house facility

³ Contributions are not limited to cash and can include benefits in kind, such as refurbishment or the underwriting of a key support post. We will consider requests to cover equipment maintenance for equipment originally funded by us. Maintenance costs of equipment not funded by the Trust may not be sought on applications from the United Kingdom or Republic of Ireland. Further details are available on the Trust website at:

[http://www.wellcome.ac.uk/Funding/Biomedical-science/Application information/WTD004084.htm](http://www.wellcome.ac.uk/Funding/Biomedical-science/Application%20information/WTD004084.htm)

the first round of this initiative; a second call will be held in mid-2009. Before the introduction of the new scheme, one-off awards for capital funding were provided to universities (for example, in 2006/07 the amount awarded was approximately £9.3 million).

14. **Centre funding:** The Trust supports nine Wellcome Trust Centres in the UK, which are internationally recognised centres of excellence that receive core funding from the Trust. Trust Centres are expected to have a clear and important strategic vision and to carry out world class science, receiving a 'critical mass' of research funding. Each centre is usually a distinct entity with clearly defined boundaries, and the main aim is that they should demonstrate 'added value', with the whole being greater than the sum of the parts. They are also expected to have clear and defined arrangements to encourage career development, and may add value through additional public engagement or training activities. Centres must have strong links with the host institution. Core funding is reviewed on a quinquennial basis, and usually covers: salaries of core staff (technical/administrative); materials and consumables associated with core facilities; a director's discretionary fund (which can be used to recruit additional staff); and some additional core costs associated with the Centre's activities, for example scientific advisory board costs and meetings. Following review this year, the Trust awarded £2.5 million to the Wellcome Trust Centre for Molecular Parasitology at Glasgow and £2 million to the Wellcome Trust Centre for Human Genetics at Oxford.
15. **Biomedical resources:** The Trust also provides significant support for the establishment of biomedical resources which may benefit the wider scientific community. This includes a specific response-mode funding scheme for biomedical resources, providing grants for researchers wishing to establish or maintain biomedical resources (including databases and collections).⁴ £6.3 million has been awarded for this purpose so far in 2007-08. In addition, the Trust has provided funding to support the development and availability of large-scale research resources and services, including model organisms, genomics databases and tissue collections. Examples include:
- ENSEMBL: the Trust has contributed £20 million to ENSEMBL, which provides free access to genome sequence data and analysis tools via a web browser. It is used by thousands of researchers worldwide and receives almost one million visitors each week.
 - A knockout mouse resource, operated through the European Mutant Mouse Archive (EMMA): the Trust funds the acquisition of a limited number of gene knockout mouse strains and associated phenotypic data. This service provides public sector researchers with unprecedented access to knockout mice, providing valuable models for the study of human disease and laying the groundwork for a public, genome-wide library of knockout mice. Under the terms of the world-wide academic licence granted to the Trust for the use of the mouse lines, researchers will be able to share the mouse lines acquired with other academic collaborators.⁵
 - Biobank: the Trust is a founding partner of UK Biobank - a DNA database resource that will build up a uniquely rich resource for investigating why some people develop particular diseases while others do not.
16. **Facilities:** The Trust additionally provides capital and ongoing support for key research facilities for use by the wider research community, of which the Diamond Synchrotron is

⁴ Further information is available at: <http://www.wellcome.ac.uk/Funding/Biomedical-science/Grants/Equipment-and-resources/index.htm>

⁵ Further information is available at: <http://www.wellcome.ac.uk/Professional-resources/Biomedical-resources/Model-organisms/WTD025941.htm>

a prime example. The Diamond Light Source, which welcomed its first users in February 2007, is the result of a collaboration between the Wellcome Trust and the UK Government, providing funding both for capital and operational costs. Diamond is a world-class large, multi-user facility, with significant potential to encourage interdisciplinary research. The Trust has also recently provided support to the Diamond Research Complex to build on and expand the research activity at the Harwell campus.

17. **Clinical Research Facilities:** Another example where the Trust has been able to provide additional expertise through its support is the funding of Clinical Research Facilities. The creation of five Clinical research Facilities has enabled the Trust to foster the uptake of research to clinical practice and policy, and to simulate clinical research.
18. **Innovative partnerships:** The Trust has also been exploring new models of partnerships, both with universities and with other funders, to contribute towards university sustainability and address key biomedical research challenges. For example, the Structural Genomics Consortium is a public-private partnership (with a node at Oxford University) that brings together GlaxoSmithKline, Novartis Foundation, the Wellcome Trust, Merck & Co Inc, four of Canada's leading research funding agencies and a consortium of Swedish funders. The planned UK Centre for Medical Research and Innovation (UKCMRI) also provides the opportunity for a groundbreaking partnership between University College London, the Medical Research Council, Cancer Research UK, and the Trust. The Centre, due to open in 2013, will be a world-class facility in which the best researchers and clinicians will work together, sharing ideas and knowledge.
19. **Training:** The Trust recognises that human capital is an important component of sustainability. Through Fellowships and personal awards, we support researchers working in the basic and clinical sciences at all stages of their careers, including training, intermediate and senior awards. The Trust has given high priority to schemes which improve the attractiveness of research careers in the UK, and introduced a variety of four year PhD programmes to improve training. Training also provides opportunities for novel partnerships. For example, in July 2008, the Trust announced four major new partnership programmes between academia and industry to support new Interdisciplinary Training Programmes for Clinicians in Translational Medicine and Therapeutics. The industrial partners, including GlaxoSmithKline and Wyeth, agreed to match £11 million of Wellcome Trust funding. The recipient academic institutions are Imperial College London, the University of Cambridge, Newcastle University and a consortia of Scottish universities.
20. **Strategic awards:** We also use Strategic Awards to foster major research and training activities in key areas, providing flexible support to add value to outstanding research groups. Strategic Awards, usually in the region of £3-5 million for five years, aim to 'add value' to excellent research groups. To ensure sustainability, partnership with the host institution is an important condition of the award. In 2005, the Trust awarded £8.1 million over five years to a team of scientists at the University of Dundee to help discover new drugs to treat some of the world's most neglected tropical diseases. The award has allowed the University to add a team of 16 scientists to all the disciplines needed from those of biology to drug design, synthesis and testing.

What is your experience of the operation of the Charity Research Support Fund (and its equivalent in Scotland, Wales and Northern Ireland)?

21. We welcome the establishment of the Charity Research Support Fund (CRSF) in England, which recognises the contribution of charities to the research base. However, the Government must continue to invest consistently in the Charity Research Support Fund in order to maintain the volume of high-quality research in the UK and to help ensure long term sustainability in universities.
22. The *Science and Innovation Investment Framework 2004-2014* included a pledge to invest further in the CRSF over 2008-2010, adding at least a further £90 million. This would take the CRSF to £270 million by 2011. However, although HM Treasury has indicated that it still intends to meet this commitment, the uplift in 2008-09 has only been £5 million, and we understand a similar rise is anticipated for 2009-10 which would only take the total Fund to £190 million.
23. **Estimating the demands on the CRSF:** Initial modelling suggests that, even if the CRSF reaches the proposed £270 million by 2011, it will still leave a shortfall to match the 80% full economic costs provided by Research Councils. Current estimates do not take into account the increasing demands on the CRSF from: rising costs of grants, including increases in salary costs, or any increase in charitable spend.
24. Taking Trust funding alone, and analysing the demands on the CRSF gives the following estimates for 2005/06 and 2006/07:

Demands on the CRSF – Wellcome Trust funding

	Funds awarded (£ million)	%age fEC funded	Total fEC (£ million)	Demands on CRSF (£ million)		Size of the CRSF ⁶ (£ million)
				To match Research Council 80% fECs	To reach 100% fECs	
FY 2005/06	225	55%	409	102	184	135
FY 2006/07	263	58.5%	449	96	186	180

25. We therefore estimate that to match the 80% of fEC funded by the Research Councils, Wellcome Trust-funded research would need a contribution of approximately £100 million per annum from the CRSF. Corresponding figures for our current Financial Year are not yet available, however funds awarded to English universities as of 31 July 2007 already total £294 million. We anticipate that, in the next five years, funds awarded to English universities will continue to increase year-on-year.
26. **Operation of the CRSF and its equivalents:** The CRSF is awarded as part of QR funding to universities, and we support the idea that Vice-Chancellors should decide how best to allocate the funds at an institutional level. However, anecdotal evidence suggests

⁶ The figures quoted for the CRSF are for 2006/07 and 2007/08 – the years when the funds awarded by the Trust in 2005/06 and 2006/07 would be considered for CRSF allocation.

that there may be a lack of awareness amongst researchers about the existence of the CSRF, or its mode of allocation. Communication is crucial, and we encourage universities to raise awareness of the Fund as widely as possible among departments, researchers and research managers.

27. We also welcome the equivalent funding schemes that have been introduced in Wales, Scotland and Northern Ireland. However, specific concerns have been raised about the Scottish model – in particular, the fact that proportional allocation is based on an institution's total research income and not solely that which is obtained from charities.

How would you summarise the impact of the introduction of fEC pricing?

28. **Application behaviour:** It is still too early to draw conclusions as to whether there has been any change in application behaviour to the Trust as a result of the introduction of fECs. There has not been any significant impact on the number of response mode applications we receive. Although initially there was a small decrease in the number of project grant applications, the applications numbers are now recovering, and programme grant applications have increased. Across all schemes our application numbers continue to rise year on year.
29. **Increasing costs of applications:** We have noticed that the cost of project grant applications has increased by 16 % over the past three years, although we recognise that this is not necessarily related to the introduction of fECs. We are conducting a more detailed piece of work to better understand these cost increases. The average distribution of costs on new project grant applications appears consistent with previous years. However, the new and more precise costing methodologies for animal house facilities have resulted in substantial cost increases for animals in research over the last two years.
30. **Partnership funding:** As described above, the Trust has been exploring innovative partnerships with other funders in order to contribute towards university sustainability. The different approaches that different funders take towards fECs does raise some issues when considering appropriate models of partnership, for example when Research Councils and charities are jointly funding a new initiative. We have used a variety of different models, for example the approach used when working with ESRC, charities and Government departments to support the Public Health Centres of Excellence differs from that adopted with EPSRC as part of the medical engineering initiative. We are confident that appropriate models can be developed, provided these issues are addressed at the initial stages of developing a partnership.
31. **Conclusion:** The importance of moving towards financial sustainability of UK universities cannot be underestimated. UK universities need to have an understanding of the full economic costs of their research activity, and to be transparent in the way that they account for these costs. The introduction of fECs has enabled good progress to be made towards this goal.
32. It is crucial that the Government maintains and increases its commitment to the CSRF. UK charities fund approximately 15% of R&D in UK universities each year. The full benefits of charity funding can only be realised by a close partnership with Government, and we urge Government to continue to provide support for the Charity Research Support Fund.