

Academic Careers and Funding in the UK

1. UK Universities

Universities in the UK are higher learning institutions which are official recognised by the government as degree awarding bodies.

131 Registered Universities in the UK

Independent organisations (Charity incorporated by Royal Charter) but significant proportion of funding comes from public finances

“The objects of the University shall be the advancement of learning and knowledge by teaching and research and the provision of University education”

1.1 Russell Group Universities

The Russell Group represents 24 leading UK universities which are committed to maintaining the very best research, an outstanding teaching and learning experience and unrivalled links with business and the public sector

These are the research intensive universities in the UK

76% of all research income in UK universities

71% of all EU research funding to UK universities

83% of research funding from UK charities

68% of UK Funding Council QR funding

More ERC grants in RG universities alone than in Germany or France

University of Bristol	Imperial College, London	University of Oxford
University of Birmingham	Kings College, London	Queen Mary University of London
University of Cambridge	University of Leeds	Queen’s University Belfast
Cardiff University	University of Liverpool	University of Sheffield
Durham University	London School of Economics	University of Southampton
University of Edinburgh	University of Manchester	University College London
University of Exeter	Newcastle University	University of Warwick
University of Glasgow	University of Nottingham	University of York

2. Research Funders

Three sources of research Funding in UK;

1. UK Government
2. Private/Commercial funding

3. Charitable organisations

2.1. Government Research Funding

Government funding of research is major source of research income in UK universities.

Two main streams;

1. Core funding (QR) through HEFCE – linked to research performance (£1.5bn per year)
2. Competitive funding through Research Councils (£3bn per year)

2.1.1 Higher Education Funding Council for England (HEFCE)

The Higher Education Funding Council for England (HEFCE) is a non-departmental public body in the United Kingdom, which has been responsible for the distribution of funding to universities and Colleges of Higher and Further Education in England since 1992.

Most universities are charities and HEFCE (is their principal regulator. HEFCE has therefore the duty to promote compliance with charity law by the universities for which they are responsible.

HEFCE funds universities through a core grant based on;

- QR - Quality of research (Research Income, REF)
- Teaching (Student Numbers)
- Knowledge Exchange
- Capital costs

HEFCE Grant to Warwick 2017-18

Teaching funds	£ 13.3M
QR	£ 36.3M
Knowledge Exchange	£3.6M
Total	£52.3M

Approx. 10% of Warwick Income – important source of funding

Wales – HEFCW

Scotland – Scottish Funding Council

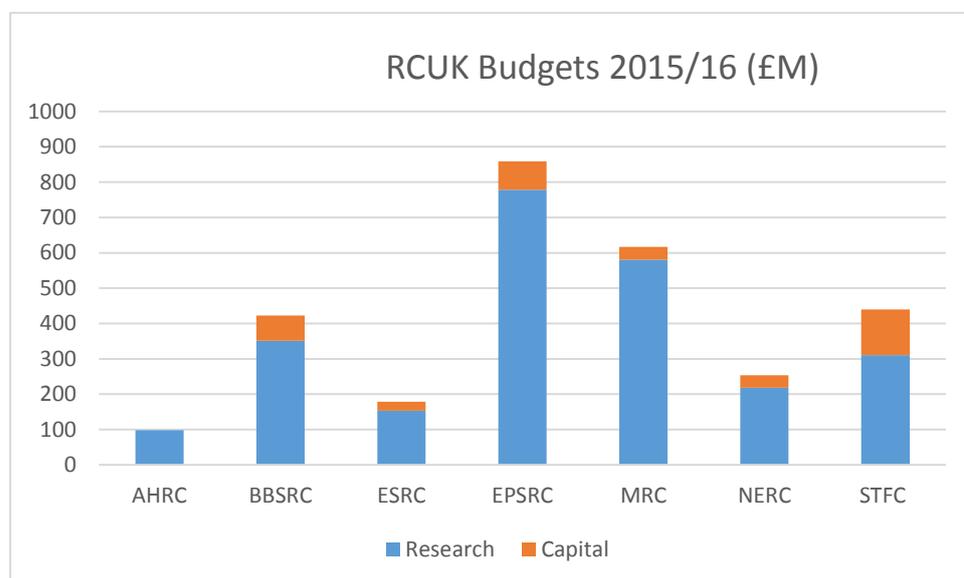
Northern Ireland – Devolved administration

2.1.2 The Research Councils

Research funding in the UK is dominated the seven Research Councils (RCUK):

- Arts & Humanities Research Council (AHRC)
- Biotechnology & Biological Sciences Research Council (BBSRC)
- Economics & Social Sciences Research Council (ESRC)
- Engineering & Physical Sciences Research Council (EPSRC)
- Medical Research Council (MRC)
- Natural Environment Research Council (NERC)
- Science and Technology Facilities Council (STFC)
- (Innovate UK)

Annual budget of approx. £3bn but not split evenly between councils



Each has own remit, but there are also a number of cross council themes.

From April 2018, all Councils will sit under an overarching body, UK Research & Innovation (UKRI)

Arts & Humanities Research Council (AHRC)

Strategy - <http://www.ahrc.ac.uk/about/visionstrategygovernance/>

Four themes identified through the Future Directions for Arts and Humanities Research consultation in 2009. This indicated support for a number of research areas that were likely to shape or change aspects of multiple research fields over future years.

Care for the Future: Thinking Forward through the Past
Digital Transformations in the Arts and Humanities

Science in Culture
Translating Cultures

New Fellowship Scheme – deadline May 2018 - “Inter-disciplinary Interface
Innovation Leadership Fellows”

<http://www.ahrc.ac.uk/funding/opportunities/current/ecr-highlight-notice-in-the-ahrc-leadership-fellowships-scheme/>

Biotechnology & Biological Sciences Research Council (BBSRC)

Mission - To promote and support, by any means, high-quality basic, strategic and applied research and related postgraduate training relating to the understanding and exploitation of biological systems.

Strategic research priorities

- Agriculture and food security
- Industrial biotechnology and bioenergy
- Bioscience for health.

Two main fellowship schemes – Future Leader, David Philips

Economics & Social Sciences Research Council (ESRC)

Strategy and priorities

Our research makes a difference. It shapes public policies and makes businesses, voluntary bodies and other organisations more effective.

Our initial priority areas for investment across all areas of our portfolio are:

- Mental health
- Housing
- Productivity
- Understanding the macro-economy
- Ways of being in a digital age

Postdoctoral fellowships – immediately post-PhD. Restricted eligibility

New Investigator Grants – open to those without permanent position

Engineering & Physical Sciences Research Council (EPSRC)

Priority areas are;

You will find more information about the individual themes' approaches at the following locations:

- Digital economy

- Energy
- Engineering
- Healthcare technologies
- Information and communication technologies (ICT)
- Manufacturing the future approach
- Mathematical sciences
- Physical sciences

Areas in each theme defined as Grow, Maintain or Reduce.

Fellowships linked to Priority areas and need to Grow, Maintain or Reduce capability in that area

Based on person specification rather eligibility criteria.

Medical Research Council (MRC)

The Medical Research Council funds research aimed at improving human health, from fundamental lab-based science to clinical trials.

Two main themes;

Theme 1: Resilience, repair and replacement

Natural protection

Tissue disease and degeneration

Mental health and wellbeing

Repair and replacement

Theme 2: Living a long and healthy life

Molecular datasets and disease

Life course perspective

Lifestyles affecting health

Environment and health<

Numerous fellowship schemes

Don't need permanent position to be PI on grants*

Natural Environment Research Council (NERC)

The Natural Environment Research Council is the UK's largest funder of independent environmental science, training and innovation, delivered through universities and research centres

Three key challenges;

- Benefiting from natural resources
- Resilience to environmental hazards
- Managing environmental change

Plus opportunity for blue-sky research through the Discovery Science programme

Single fellowship scheme for academic career development

Science and Technology Facilities Council (STFC)

Big Science infrastructure projects, international collaborations (LHC, Telescopes etc.) and funding for the science which may use them (Astronomy, nuclear physics, astrophysics etc.)

Innovate UK

Technology transfer funding. Working with industry to translate research into commercial product.

2.2 Charitable Funders

Wellcome Trust

The Wellcome Trust is a charitable foundation which is dedicated to achieving improvements in human and animal health. The Trust funds research in biomedical research and medical humanities.

Plenty of support for early career researchers

Leverhulme Trust

The Leverhulme Trust makes awards for the support of research and education. The Trust emphasises individuals and encompasses all subject areas but places special emphasis on;

- The originality of the projects put to them;
- The significance of the proposed work;
- The ability to judge and take appropriate risk in the project;
- The removal of barriers between traditional disciplines.

Early Career Fellowships

The Early Career Fellowship Scheme aims to provide a means by which a promising postdoctoral researcher can make a career move towards establishing themselves as an independent researcher and gaining a permanent academic position.

These fellowships are funded for two or three years but only provide 50% of salary costs with the rest to be funded by the host institution. The fellowship also provides up to £6000 per year towards research costs.

Eligibility is restricted to those who have not held a permanent academic position and have no more than 5 years post-doctoral experience at the application deadline.

Royal Society

The Royal Society is a Fellowship of the world's most eminent scientists and is the oldest scientific academy in continuous existence. Their aim is to expand the frontiers of knowledge by championing the development and use of science, mathematics, engineering and medicine for the benefit of humanity and the good of the planet.

University Research Fellowships

These awards are designed to allow the most outstanding early career researchers with the opportunity to build an independent research career, with the aim of securing a permanent academic position at the end of the fellowship.

The award provides five year salary and a contribution to research costs, with a possible further three year extension.

British Academy

The British Academy is the UK's national body for the humanities and social sciences which aims to inspire, recognise and support excellence in the humanities and social sciences, throughout the UK and internationally, and to champion their role and value.

As a funding body, in receipt of Government grant-in-aid, the academy supports excellent ideas, individuals and intellectual resources in the humanities and social science and enables UK researchers to work with scholars and resources in other countries, sustain a British research presence in various parts of the world and help to attract overseas scholars to the UK.

Postdoctoral Fellowships

This scheme is designed to enable outstanding early career researchers to strengthen their experience of research and teaching in a university environment, which will develop their curriculum vitae and improve their prospects of obtaining permanent lecturing posts by the end of the Fellowship. Applicants are expected to be at an early stage of their academic career.

2.3 European Union Funding

Horizon 2020 is the current framework programme for research funding in the EU

ERC Starting Grant

The ERC Starting Grants recognise that there are insufficient opportunities for early career researchers to make the transition from being a supervised postdoctoral researcher to an independent research leader and that this can lead to a delay in the emergence of new ideas or the loss of talented researchers to other parts of the world.

ERC Starting Grants target researchers with a proven potential to become research leaders and to support the creation of new research teams around them.

The scheme covers research in any area of science, engineering or scholarly research and is open to researchers who have between two and twelve years of postdoctoral experience. Funding is available for up to 5 years up to a maximum value of €2 million.

These awards are highly prestigious and are only likely to be awarded to researchers with an exceptional track record in their career to date. An applicant must be able to demonstrate the potential for research independence and evidence of scientific maturity. Applicants would be expected to have produced at least one important publication without the participation of their PhD supervisor and should also be able to demonstrate a promising track-record including significant first-author publications in major international peer-reviewed journals. They may also demonstrate a record of invited presentations in well-established international conferences, granted patents, awards, prizes etc.

Marie Skłodowska Curie fellowships

Marie Curie Fellowships focus on mobility and career development of researchers via a series of specific calls for proposals. There are three different types of Marie Curie Fellowship:

Intra-European Fellowships (IEF)

International Outgoing Fellowships (IOF)

International Incoming Fellowships (IIF)

The fellowship is expected to be part of a structured, long-term professional development plan that is coherent with past achievements and clearly defines the future aims of the researcher. The main activity of an IEF will be training delivered through a research project which is developed by the researcher in conjunction with the hosting organisation. The project should be tailored in order for the researcher to reach a realistic and well-defined objective in terms of career advancement.

3. Other Hot Topics in UK Academia

Research Excellence Framework (REF)

Every 5-6 years the quality of the research carried out in all UK universities is assessed through the Research Excellence Framework (REF).

Outcome determines the level of QR funding received from HEFCE.

Last REF was 2014. Next expected in 2021.

Warwick ranked 7th overall in 2014.
2014 REF assessment was based on;

- Quality of publications (75%)
- Impact from research (25%)

Each academic submitted 4 best publications from assessment period to a particular unit of assessment (broadly, subject area). These are ranked 1* to 5*.

Scores for published by unit of assessment and overall institutional score.

REF 2021 starting to take shape;

- More weighting for impact
- Interdisciplinarity more recognised
- New rules around portability of publications

We will be doing much more on this.

VERY IMPORTANT TO UNDERSTAND REF AND WHAT YOU NEED TO DO TO BE SUBMITTED FOR ASSESSMENT.

Teaching Excellence Framework (TEF)

Similar to REF, but focusses on teaching quality. Also includes some more controversial elements such as implementation of Home Office strategies (Prevent)

Only conducted once so far (2017). Warwick ranked Silver (like most Russell Group Universities)

Not directly linked to HEFCE funding (so far) but TEF outcome affects the level to which universities can increase student fees.

Global Challenges Research Fund

The Global Challenges Research Fund (GCRF) is a new five year £1.5 billion resource funding stream, announced as part of the 2015 spending review, to ensure that UK research takes a leading role in addressing the problems faced by developing countries.

The GCRF will deploy the UK's world-class research capability to address the challenges faced by the developing world. The funding is protected science spend and the research councils are primary delivery partners. The GCRF is also part of the UK government's pledge to allocate 0.7% of Gross National Income to Official Development Assistance, promoting the welfare and economic development of developing countries. With the GCRF focus on global challenges, research investments are expected to span disciplines including the biological sciences, environmental sciences, medicine and the social sciences.

The research councils have each received directly allocated portions of the GCRF. In addition to the funds allocated to councils, there is a large amount of funding that remains unallocated. GCRF delivery partners are working towards a strategy for this and further details will be announced as soon as possible.

In order to count as overseas aid, projects funded under GCRF must involve a partnership with a Developing Country (ODA compliant) and show a clear path to economic/social improvements in that country.

Need to establish partnership in country prior to GCRF application.

Industrial Strategy.

UK Government announced new industrial strategy in 2017. New funding is flowing through RCUK enable research to support this strategy.

The Industrial Strategy Challenge Fund (ISCF) aims to bring together the UK's world leading research with business to meet the major industrial and societal challenges of our time.

The Industrial Strategy Challenge Fund was created to provide funding and support to UK businesses and researchers, part of the government's £4.7 billion increase in research and development over the next 4 years.

Working together the Government, businesses and academics have identified the biggest core industrial challenges where:

- the UK has a world-leading research base
- there is a large or fast-growing and sustainable global market

The six challenges that have been selected to receive fund support so far are:

Healthcare and medicines

To develop first-of-a-kind technologies for the manufacture of medicines. The aim is to speed up patient access to new drugs and treatments.

Robotics and artificial intelligence

To improve the productivity of industry and public services, innovations using artificial intelligence (AI) and robotics systems will be developed, that can be deployed in extreme environments. This includes industries such as offshore energy, nuclear energy, space and deep mining. Proposals for research hubs are currently in progress.

Clean and flexible energy

To design, development and manufacture of batteries for the electrification of vehicles to support the business opportunities presented by the low carbon economy and tackle air pollution. A call for a research institute is currently open.

Driverless vehicles

The fund will invest in collaborative research and development projects to develop the next generation of A.I. and control systems need to ensure the UK is at the forefront of the driverless cars revolution.

Manufacturing and materials of the future

The fund will develop new, affordable, light-weight composite materials for aerospace, automotive and other advanced manufacturing sectors.

Satellites and space technology

A satellite test facility will be established. This will support new launch technologies, manufacturing and testing capabilities to construct future satellites and deliver payloads into orbit.

UK Research and Innovation

Currently all Research Councils reports into Dept. For Business Innovation and Skills (BIS) as separate entities.

From Apr 2018 a new overarching body, UK Research and Innovation (UKRI), will be created to integrate research council and Innovate UK functions. Aim is to coordinate research council activity more and strengthen the strategic approach to future challenges and maximise value from Government's investment in research and innovation. The new body will deliver:

- a greater focus and capacity to deliver on cross-cutting issues that are outside the core remits of the current funding bodies, such as multi- and inter-disciplinary research, enabling the system to respond rapidly and effectively to current and future challenges;
- a strengthened, unified voice for the UK's research and innovation funding system, facilitating the dialogue with Government and partners on the global stage;
- improved collaboration between the research base and the commercialisation of discoveries in the business community, ensuring that research outcomes can be fully exploited for the benefit of the UK;
- better mechanisms for the sharing of expertise and best practice – for example, around management of major projects and large capital investment – driving up the effectiveness of decision-making;
- more time for research and innovation leaders to focus on strategic leadership through the centralisation of back and middle office functions and the reduction of administrative responsibilities; and
- improved quality of evidence on the UK's research and innovation landscape through the pooling of multiple datasets and information sources, underpinning effective funding decisions.

Funding will be top-sliced from some Research Councils into UKRI to support cross council challenges such as GCRF & Industrial Strategy.

Loss of autonomy for Research Councils?
Effect on budget distribution?

