

<p>Institution: UNIVERSITY OF BIRMINGHAM</p> <p>Unit of Assessment: C18 Economics and Econometrics</p> <p>a. Overview</p> <p>Staff submitted to this unit of assessment are from the Department of Economics (www.birmingham.ac.uk/economics), one of four departments within Birmingham Business School (BBS). As a result of its distinct disciplinary focus, the Department has a considerable degree of autonomy in its management and research, including specific funding for doctoral researchers. Staff within the Department are organised into three research clusters: the Cluster for Research in Econometrics, Macroeconomics and Finance (CREMF); the Cluster for Research in Economic Policy using Theory and Experiments (CREPTEX); and the Cluster for Research in Environment, Trade and Energy (CRETE).</p> <p>The other three departments within BBS are the Department of Accounting and Finance, the Department of Management and the Department of Marketing. Following a large scale reorganisation of the University of Birmingham since RAE2008, Birmingham Business School is now one of four schools in the College of Social Sciences (CoSS), along with the Schools of Education, Government & Society and Social Policy. Interdisciplinary research that cuts across Schools is encouraged by CoSS through College Research Centres, workshops and seminars and targeted funding schemes.</p> <p>b. Research strategy</p> <p>2008 Research Strategy and Achievements</p> <p>Since the 2008 RAE the Department of Economics has undergone a period of expansion with a significant influx of both junior and senior researchers. The Department has increased its specialisms in the areas of macroeconomics/finance and environmental and energy economics and has developed a new specialism in behavioural and experimental economics to complement its existing expertise in theoretical microeconomics. This has further strengthened an already vibrant research culture resulting in a greater proportion of staff producing high level research, a notable increase in external grant income, a greater number of PhD completions and a significant research impact on the discipline of economics and related disciplines and on policy makers and other research users.</p> <p>Following the RAE, and in the context of the broader research aims of the College, the Department developed a research strategy with the key aim of enabling, creating and sustaining research excellence. This was to be achieved via the following 3 research objectives:</p> <ol style="list-style-type: none"> (1) To increase the focus of research activity around three distinct research clusters and to invest in each. (2) To increase external grant income in order to ensure the sustainability of research clusters and their ability to generate high quality outputs. (3) To strengthen the PhD programme by increasing completion rates and further integrating doctoral researchers into the Department's research environment. <p>Significant progress has been made towards achieving each of the above 3 objectives, as described below:</p> <ol style="list-style-type: none"> (1) Research Clusters: <p>The development of research clusters is a key component of our research strategy since clusters offer the means to stimulate, support and enhance research activity within the Department. Each cluster is led by a senior staff member who is responsible for mentoring junior staff within the cluster, reading drafts of papers, providing feedback on grant applications and organising cluster activities. Clusters each have a budget, typically of around £7000 per year, to fund group activities such as workshops, conferences, seminar speakers and co-author visits (this budget is additional to the department's conference budget and to externally generated research awards).</p> <p>The Department identified behavioural and experimental economics, macroeconomics and finance, and environmental and energy economics as the three areas of research activity which are of strategic importance based upon their scope for generating high quality publications, their ability to generate external income and impact, their potential to use advanced economics research to add value to research in other disciplines and finally the distinctiveness which an increased specialism in these areas may offer the Department.</p> <p>The result was the formation of CREMF, CREPTEX and CRETE. Since 2008, each cluster has</p>
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expanded (detailed below) as a result of significant investment from the University. This expansion has been most rapid since 2011 following a College review of the Department's activities which approved its plans and further increased the investment in the three research clusters.

A key achievement within CREPTEX has been the **development of a specialism in behavioural and experimental economics**. This field of economics, being both policy relevant and interdisciplinary in nature, draws heavily upon the field of Psychology as it tries to increase the explanatory power of economics by providing it with realistic psychological foundations. In turn, these foundations provide theoretical insights to economists and allow them to better predict field phenomena and to more effectively guide policy makers. Given the common interests and close links the Department has with the world-leading School of Psychology at Birmingham and the Centre for Rational Emotive Behaviour and the Psychobiology group in particular, stepping into the behavioural field was a natural choice. During the REF period two Professors have been hired in this area (Grosskopf and Sarin) as well as four lecturers (d'Adda, Drouvelis, Di Girolamo and Solaz (Drouvelis has now been promoted to Reader)). The University has funded the creation of a dedicated experimental laboratory (the Birmingham Experimental Economics Laboratory, see Section (d) below) that has generated significant new scholarship resulting in grant applications and a number of papers submitted to journals. Staff within CREPTEX were also responsible for organising a prestigious public lecture delivered by the current Nobel prize winner for Economics, Professor Al Roth. Grosskopf and Sarin departed in September 2013 and the Department will be hiring in this area in 2014.

Macroeconomics and finance was traditionally an area of strength for the Department but the number of staff had fallen following retirements. A priority for CREMF was therefore to achieve a critical mass of researchers and in particular to hire a number of outstanding early career researchers. Since 2008 CREMF has therefore appointed five lecturers (Calice, Gortz, Kuang, Mirza, Pouliot) and one Professor (Guariglia). A key strength of this research cluster is its ability to bring together leading researchers across the UK, Europe and North America. Specifically, in recent years, members of the cluster have organised an annual conference with world class economists from the US Federal Reserve, the Bank of England, Oxford and UCLA. In addition, researchers in CREMF have the opportunity to interact with leading financial policy makers and academics at the prestigious annual Royal Economic Society Easter School, which is hosted and organised by the Department (see Section (e) below), on topics in banking and macro/finance.

Environmental and energy economics is an area of activity that is of particular importance to the department in part because it has disproportionately contributed to the department's research income and research impact in recent years (for example, over the REF period Cole, Elliott, Maddison and Green received ESRC, EPSRC, EU and Leverhulme Trust income totalling approximately £500,000). Since 2008 CRETE has therefore received a significant amount of investment from the university. In terms of hiring, CRETE has gained one lecturer (Henry), one senior lecturer (di Maria) and one Professor (Strobl) since 2008. Strobl has worked closely with members of the department for many years and strengthens significantly the Department's work in the area of international/development/environmental economics. In addition, three members of staff within CRETE have been promoted to Professor (Cole, Elliott and Maddison). Green departed in 2010 and Di Maria departed in 2013 and we are currently in the process of recruiting a high calibre Energy Economist.

The performance of the research clusters will continue to be **monitored and evaluated** in terms of their sustainability and continued ability to achieve research grant capture, to attract international staff and visitors, to publish in leading international journals and to engage with research users. Such monitoring and evaluation will also identify if additional investment by the University is required. The Department's Research Committee undertakes this role by reviewing data around current activities, chaired by the Department Director of Research and Knowledge Transfer and attended by the Head of Department and the three leaders of the research clusters. The committee also identifies research opportunities and recruitment priorities and approves applications to the Department's conference fund. The Department Director of Research and Knowledge Transfer is a member of the Department management team and the School Research and Knowledge Transfer Committee which monitors and enhances school-level activities. In turn, the School Research and Knowledge Transfer Director sits on the College Research and Knowledge Transfer Committee which shapes and implements University initiatives.

Environment template (REF5)

(2) External grant income

External grant income is an important means of building research capacity and enables the Department to develop and sustain research activities. However, RAE 2008 identified external grant income as an area of relative weakness within the Department. Concerted efforts have therefore been made to support grant applications, with further details in Section (d) below.

Such efforts have proved to be very successful and the Department has benefitted from a marked increase in grant income. In the 2001-2008 RAE period the Department received research income totalling £348,704 from external sources, averaging £49,814 per year. During this shorter REF period, the Department has received research income of £967,395, averaging £193,479 per year.

(3) Strengthening the PhD Programme

Another important aspect of our research strategy was to further **develop our PhD programme** to increase and improve the training offered to doctoral researchers, to improve completion rates and to further integrate doctoral researchers into the Department's research environment.

Each doctoral researcher is now assigned to a research cluster and doctoral researchers fully participate in cluster activities. They also participate in a weekly doctoral seminar series (attended also by members of staff) and attend weekly internal and external staff seminars. As such, doctoral researchers (DRs) are an integral part of the Department's research activities. Indeed, their greater integration into the Department's research culture is reflected in the use of the term 'doctoral researcher' rather than 'PhD student'.

The PhD programme now features significantly more research training, in part due the University being awarded an ESRC Doctoral Training Centre in the Social Sciences. Significant efforts have also been made to improve the quality of applicants, helped by scholarships from the ESRC and the University's College of Social Sciences, and DR performance is now monitored in a more rigorous manner. More details are in Section (c) below.

PhD completions provide an indicator of the improvement of our PhD programme. Over the RAE 2008 period, 16.5 DRs completed their PhDs, with an average of 2.35 per year. Over the shorter REF period 51.5 DRs have completed, with an average of 10.3 per year.

Five year Research Plan and New Initiatives

Our strategic aim is that our research should make significant advances to the economics discipline, particularly in our areas of specialism. The review of activities since RAE 2008 demonstrates that the Department has made significant progress in delivering the strategy it developed at that time. This puts us in an excellent position to continue to strengthen our capacity and to contribute to the discipline and to the stakeholders who benefit from our research. We will deliver on the Departmental strategy by focusing on the following objectives:

(1). To continue to build a stimulating and sustainable environment for top class economics research. We will **further develop our capacity** to attract leading scholars at all stages of their career, from PhD researchers to professors, and provide a supportive, rewarding and well-resourced environment for their work. This will involve continuing to attract University investment and external research awards, in which we have developed a strong track record since RAE 2008. We expect to increase to 40-45 members of staff by 2019. Existing areas of strategic interest will remain and will receive further support although the number and breadth of clusters will be regularly reviewed and new clusters may evolve as expansion continues.

(2) To **consolidate a fourth research cluster on the Chinese economy** supported by new investment coming into the School. The growth in our size and capacity enables us to support a fourth high quality research specialism, in collaboration with BBS colleagues in Management and Accounting & Finance. Over the next five years, we will ensure that this group develops a strong research reputation based on the quality and contribution of its work. The Department currently has a good number of faculty members (Guariglia, Cole, Dickinson, Horsewood, Elliott) and doctoral researchers undertaking research on the Chinese economy and financial system, and has access to a wide range of databases on Chinese firms. The objectives of this proposed cluster are as follows:

- to create an internationally recognised cluster of excellence for research
- to achieve sufficient critical mass to support a broad research agenda and to be responsive to changes in that agenda through time
- to make a meaningful contribution to capacity building in the study of the Chinese economy and financial system by nurturing a new generation of specialists

- to promote high quality, policy relevant, work which will inform dialogue on the appropriate policy context for understanding the reform of the financial sector in China

The cluster will serve as a platform to consolidate resources in the Department and will maximize existing strengths with the aim of producing high quality research papers. The cluster will apply for grants from internal and external bodies to organise seminars, workshops and conferences. It will also host academic visitors from China and help to initiate new research collaboration with highly ranked Chinese institutions such as Fudan and Renmin. The cluster aims to organize yearly workshops, to be held in Birmingham and Shanghai/Beijing in alternate years. The cluster is expected to receive new faculty and a number of post-doctoral fellows.

The cluster will benefit from the School's links with highly ranked Chinese institutions such as Fudan and Renmin. Professor Guariglia has significant experience in the creation of collaborative research activities with China. She played a key role in establishing the Durham-Fudan Finance Research Cluster, which opened in September 2010 in Shanghai. The cluster will also benefit from the College's and University's focus on China in their international strategy.

(3). **To encourage and support innovative research methods and techniques.** Our relationships with the mathematics and psychology schools at the University are already generating benefits for colleagues in economics. We are also networked into wider international communities interested in novel approaches to the analysis of economic problems or the application of economic theory to problems traditionally not considered using this form of analysis. Planned topics to be examined range from the economic impacts of earthquakes to the performance of the UK's Police and Crime Commissioners. We will continue to foster this connectivity and interdisciplinary, both to strengthen the economics discipline but also to increase its value to other fields. In particular, we will deepen our research links with other parts of BBS. While good links already exist, there is scope for further collaboration involving all three of the Department's clusters. Such collaborations have significant potential to generate high quality research that is of interest to funding bodies, business and policy makers. As well as receiving direct University investment, the Department will also benefit from University investment in BBS. Following the recent appointment of a new Head of School, the School is to receive significant investment from the university based around a research strategy which will create School-level clusters of research excellence. The Department's research on the Chinese economy and in Behavioural/Experimental economics is earmarked to receive such funding. Both of these areas are therefore expected to receive additional investment in the form of faculty posts, research fellows, PhD scholarships as well as seed corn funding of £60,000 over three-years.

c. People, including:

i. Staffing strategy and staff development

Investment in staff, in terms of appointments, reward, retention and promotion, has been an important component within our research strategy.

In terms of appointments, our research strategy required us to invest in behavioural and experimental economics, macroeconomics and finance and environmental and energy economics, as outlined in Section (b). Since 2008 the Department has therefore **pursued a global recruitment drive to build capacity in these key research areas**. As a result, the Department has attracted a number of outstanding scholars over the assessment period, including several staff at an early stage of their careers who are therefore on a strong upward trajectory. In terms of numbers, the Department has made twelve appointments at lecturer level, one at senior lecturer level and four at Chair level. In terms of departures, since 2008 we have lost three Lecturers, two Senior Lecturers and four Professors (one of whom retired), resulting in a net increase of 8 staff members. Relative to the size of the department in 2008, this represents **an increase of approximately 35%**.

During the REF period the Department has also invested in a number of Teaching Fellows (e.g. in 2012/13 we have four full-time Teaching Fellows). These appointments ensure that teaching loads across the Department are not excessive and allow us to effectively protect research time.

Research excellence is an essential criterion in all appointments (other than Teaching Fellows), with new hires expected to add significantly to the Department's research profile. Most category A staff are recruited to open-ended contracts, with probation periods for early career staff.

As part of our research strategy we have specifically sought to encourage applications from **early career academics** who have the potential to make a significant contribution to our research

specialisms. In return, we actively support their career development and contribution to the discipline (see below). Seven of the new Lecturers hired since RAE2008 are classed as Early Career Researchers for this REF.

The Department's research strategy was aimed at not only enabling and creating research excellence but also sustaining it. In addition to recruiting early career staff, great efforts have therefore been made to **build research teams that are not overly dependent on one or two individuals** and to ensure that high-performing staff are promoted. On this latter point, the Department has been proactive in identifying staff who may be close to promotion and, through mentoring, ensuring that such individuals are meeting the criteria for promotion. Research is one of the key criteria when considering promotion to Senior Lecturer, Reader or Professor. Over the assessment period, four staff members have been promoted to Professor, two to Reader and two to Senior Lecturer.

Research excellence is primarily rewarded through promotion, annual pay rises linked to performance and other discretionary payments. Adjustments to workload (e.g. reduced teaching) will also usually be offered to staff who secure large external research grants which include a significant element for the academic's time.

Given the **importance of research** to the Department, a workload model is used to ensure that academic staff are able to protect at least one third of their time to devote to research. Staff members can also apply for a period of study leave every three years and this is typically granted to all who can demonstrate that they are research active and have a plausible set of objectives for the leave period (13 individuals were awarded study leave during the REF period). Staff are reviewed annually in the form of a Research Performance Review where research delivery over the last year and plans for the next 12 months are discussed. If particular needs are identified then Departmental/School action is activated. For example, it may be that study leave is provided or staff who need some additional time for submission of journal articles are given a short break from administration duties. Early career staff, in addition, receive support through the probation and mentoring process, with research performance targets agreed and monitored by the mentor. The University has a longstanding commitment to the promotion of equality and undertakes a wide range of activities to promote better outcomes and meet the needs of different groups of students and staff. There is an expectation that all staff complete the University's Diversity in the Workplace online training course (see the University Report, Promoting Equality Celebrating Diversity, 2013 - <https://intranet.birmingham.ac.uk/collaboration/equality/documents/publication-of-information-report-2013.pdf>).

The Department employs only a limited number of fixed contract research staff, usually funded by external sources. The University was awarded the HR Excellence in Research accreditation in September 2011 and continues to work towards full implementation of its Concordat to Support the Career Development of Researchers action plan by September 2013.

ii. Research students

A stated objective of the Department's research strategy is to strengthen the PhD programme and further integrate doctoral researchers (DRs) into the Department's research environment, aided by the University's investment of £9 million in doctoral research. This has required the Department to:

(1) Improve the quality of PhD applications

The Department has been proactive in **encouraging higher calibre candidates** to apply to our PhD programme by advertising the areas in which we seek applicants and by registering with online search engines, such as Find a PhD. The Department also receives a large number of scholarships, in part due to the University of Birmingham obtaining an ESRC Doctoral Training Centre (DTC), one of only 12 single-university DTCs. This provides the Department with two dedicated ESRC scholarships per year. In addition, the Department awards £60,000 of **new scholarships** per year and other BBS and College of Social Science scholarships are awarded on a competitive basis. The availability of such scholarships, which are widely advertised, has significantly improved the quality of students who apply to our PhD programme.

(2) Improve the training and supervision of doctoral researchers

The **Doctoral Training Centre** recognises the distinctive nature of the advanced economics research training needed to support the quality of the DRs the Department requires. As a result,

the taught element of the doctoral programme has been substantially strengthened. In year 1 of the programme, DRs have to take an Advanced Research Methods module (more details below) as well as two modules from a choice of Advanced Microeconomics, Advanced Macroeconomics and Advanced Econometrics. Supervision is tightly monitored through University codes of practice. Each doctoral researcher is allocated two supervisors and both DRs and supervisors are required to submit to the College doctoral office records of supervision meetings, including progress since the last meeting and targets for future meetings. These are submitted monthly in addition to the record of an annual progress review meeting. This process ensures that the progress of doctoral researchers is continuously reviewed, leading to significantly shorter completion times. Since 2008, all but one DR who completed did so within 4 years.

The **Advanced Research Methods** module provides DRs with a greater understanding of economics research which not only adds to their training and employability but also helps them to better understand, and engage with, the research undertaken within the Department. More specifically, the module gives an overview of how the discipline looks at research issues and what constitutes 'good quality' research. DRs are taught how to write a research paper, how to critically evaluate economic literature, how to select the right journal to submit their work to, how to effectively respond to referees, how to undertake research in experimental economics, how to use panel data, how to present their work effectively, and how to prepare a grant application.

(3) Actively embed doctoral researchers within the Department's research environment
 Doctoral researchers within the Department actively **contribute to the research profile** of the Department in a variety of ways. Doctoral researchers are each allocated to one of the Department's research clusters and fully participate in cluster meetings, seminars, workshops and other activities. Doctoral researchers are also required to participate in the weekly PhD seminar series, attended by staff members and other doctoral researchers. Each DR is expected to present their work in each year of their programme. Doctoral researchers also regularly attend internal staff seminars as well as weekly seminars given by external seminar speakers. Doctoral researchers are also encouraged to present at national and international conferences and can apply for funding from the Department to enable them to do this. Doctoral researchers are encouraged to publish their research and joint publications with supervisors are common. The Business School also organises an annual joint doctoral colloquium with Aston University which is open to students from any Midlands university to enable them to present their research.

The training provided to our doctoral researchers and their knowledge and understanding of economics research ensures that they have **excellent employment prospects** once they graduate. Doctoral researchers who graduated during the assessment period went on to take lectureships at the University of Nottingham, the University of Lancaster, the Australian National University as well as posts at institutions such as the US Environmental Protection Agency, the African Development Bank and the UK's Department for Environment, Food and Rural Affairs.

d. Income, infrastructure and facilities

Income

Expanding external research income is a stated objective within the Department's research strategy. Securing such funds is therefore seen as an important activity within the Department and, by providing research assistance, travel funds and other resources, can be a significant means of generating high quality publications, dissemination and impact.

The Department has secured **a significant increase in external research income** in the REF period relative to the last RAE period as mentioned in Section (b). This income has come from a variety of competitive sources including the ESRC, the Leverhulme Trust, the European Union and the British Academy. This funding has provided research fellows, teaching buyouts and datasets and assisted with dissemination and impact activities.

Our increased research funding has been achieved in a number of ways:

- (1) All grant applications are now rigorously peer reviewed prior to submission which has undoubtedly increased the quality of submitted applications. Peer review is undertaken by the Department Research Director or cluster leader in the first instance, before also being undertaken by the School Research Director and the College Research Support Office.
- (2) Grant application workshops and training sessions have been offered on a regular basis at the level of the Department, School, College and University.
- (3) Seedcorn funding is offered by the Department and there are opportunities to access seed-

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corn funding for research at College level through competitive bids to the Advanced Social Science Collaborative (ASSC). ASSC is designed to act as the College's internal think-tank and research incubator and aims to identify and debate emerging social science challenges. A criterion for receiving such seed corn funding is that it should lead to an external bid for funding.

(4) The College Research Support Office provides support during the application process which has significantly reduced the time burden on academics associated with making grant applications.

(5) The College Research Support Office also provides regular updates on funding opportunities which are directed to relevant individuals rather than sent to all staff. This has increased awareness of suitable funding schemes available to members of the Department.

Facilities

As part of the Department's investment in behavioural and experimental economics a dedicated **experimental economics laboratory was opened in 2012**. The Birmingham Experimental Economics Laboratory (BEEL) contains 40 computer terminals and is suitable for running individual experiments and networked experiments. BEEL is able to draw upon a large database of volunteers, consisting of undergraduate and postgraduate students from various disciplines across the University, who are willing to participate in experiments. Installed in the laboratory is a variety of software, some – like Z-tree – specifically designed for economics experiments. The hardware and software is installed, maintained and supported by the lab manager of the facility.

Every full-time member of the Department has all of the **research facilities** that would be expected: an individual office with a networked PC of a high standard; and a wide range of software, including specialised applications for econometrics and other tasks. The Department has a special IT fund which, coupled with School resources, ensures that staff have all the necessary IT equipment and software to undertake their research.

Library Services support the information resources and services needs of staff and doctoral researchers undertaking high quality research, learning and teaching at the university. The university library is one of the largest academic libraries in the country and boasts an outstanding research collection, incorporating 2.7 million items, over 50,000 scholarly journals (electronic and print), and access to 275,000 e-books. Library Services provide study places, computer clusters and a dedicated research room for postgraduate researchers and academic staff. Academic Support Teams provide subject specialist information for staff across the University. The university is currently in the process of investing over £50 million in further improving its library facilities.

e. Collaboration or contribution to the discipline or research base

Networks and Collaboration

In order to enable and sustain research excellence the Department encourages staff members to **collaborate with leading academics in the UK and beyond**. It does this by funding travel expenses for staff and their co-authors, inviting the latter to give seminars or to participate in workshops, and by providing office space specifically for use by visiting academics. We are assisted in the process by University Travel funds, the College International Committee as well as University of Birmingham offices in Delhi, Guangzhou, Beijing and Brussels.

Staff members have wide-reaching research networks and collaborate regularly with researchers from other parts of the University and from other universities in the UK and overseas.

In terms of **local collaborations**, members of the Department have research relationships with colleagues from other departments in BBS as well as with colleagues in the School of Social Policy, the School of Computer Science, the School of Psychology, the School of Geography, Earth and Environmental Sciences and the School of Mathematics. Topics being examined range from the economics of housing policy to the effect of climate change on hydropower in Africa. A number of staff within the Department have also been involved with the cross-cutting research themes of the university's Institute of Advanced Studies, launched in 2012.

Further afield, members of the Department are working regularly with **co-authors at many institutions in the UK and abroad**. As an example of international collaboration, the majority of the papers in our submission include at least one overseas co-author. These include Acemoglu (MIT, USA), Serrano (Brown, USA), Esteban (Carlos III, Spain), Sjostrom (Rutgers, USA), Okubo (Keio, Japan), Marcellino (Bocconi, Italy) and Durlauf (Wisconsin-Madison, USA). Such collaborations have resulted in many publications in leading international journals including the *Journal of European Economic Association*, the *Review of Economics and Statistics*, *Games and Economic Behaviour*, the *Journal of Economic Theory* and the *Journal of International Economics*.

Contribution to the Profession

Staff within the Department make a significant contribution to **journal editorship**. This is particularly true within the field of environmental economics where Cole is a Co-Editor of the leading US journal in the field (*Journal of Environmental Economics and Management*), Elliott is Associate Editor of the leading European journal (*Environmental and Resource Economics*, the journal of the European Association of Environmental and Resource Economics where Cole was previously Associate Editor until 2012) and Maddison is Co-Editor of *Climate Change Economics*.

Other editorships within the department are as follows. Backhouse was Associate Editor of the *Journal of the History of Economic Thought* (until 2010). Banerjee is Managing Editor of *Oxford Economic Papers* and Associate Editor of the *Oxford Bulletin of Economics and Statistics*. Guariglia is Associate Editor of the *Journal of Banking and Finance* and the *European Journal of Finance* and Ray is Associate Editor of the *Bulletin of Economic Research* and *Quantitative and Qualitative Analysis in the Social Sciences*.

Backhouse is a member of the Editorial Board of the *History of Political Economy*, the *Journal of the History of Economic Thought* and the *History of Economic Thought and Policy*. Drouvelis is a member of the Editorial Board of the *International Journal of Wellbeing* and the *International Journal of Behavioral Accounting and Finance*. Ray is a member of the Editorial Board of the *Journal of Microeconomics* and *Theoretical Economics Letters*.

In terms of **contributions to funding bodies**, Albornoz-Crespo is a Peer Review College member of the ESRC and in 2010 and 2011 Cole was a member of the Academic Peer Review Group for the joint ESRC-DFID scheme for Research In International Development.

The Department undertakes a number of **disciplinary developmental initiatives**, the most notable of which is to host the Royal Economic Society Easter School annually since 1993. Since 2010 an Autumn School has also been hosted each year. At each of these, 25 places are awarded to doctoral researchers from various UK universities and 10 fee-paying participants from the public sector, mainly from HM Treasury and the Bank of England. A different theme is chosen each year, with recent themes including the economics and econometrics of forecasting, auctions, and financial crises. Eminent academics from the UK and overseas provide a series of lectures on each theme. Recent overseas speakers include Philippe Aghion and James Stock from Harvard, Nobuhiro Kiyotaki and Stephen Morris from Princeton, and Chad Syverson (Chicago). Francesco Caselli, Sanjeev Goyal, David Hendry, Paul Klemperer, John Hardman Moore, Peter Neary, Christopher Pissarides, and John Sutton are among the internationally renowned experts from the UK who have served as instructors. The Easter School receives financial support from the Royal Economic Society, the ESRC, the Government Economic Service and the Bank of England.

Maddison is Chair of the Department for Environment, Food and Rural Affairs (DEFRA) Economic Advisory Panel. Elliott and Guariglia are External Fellows of the University of Nottingham's centre for research on Globalisation and Economic Policy (GEP). Banerjee and Guariglia are External Fellows of the University of Nottingham's centre for Finance and Credit Markets. Banerjee is Scientific Counsellor, Banque de France, DCPM-SEMAP (2011-present) and DIW Research Professor, Deutsches Institut für Wirtschaftsforschung (DIW Berlin) (July 2008-present).

Staff within the Department have **externally examined a large number of PhDs** since 2008 in the UK and overseas. Within the UK these include Aberdeen, Birkbeck, Bristol, Cambridge, Cardiff, Essex, Exeter, Lancaster, Leicester, London School of Economics, Nottingham, Manchester, School of Oriental and African Studies, Sheffield, Southampton, Warwick, University of East Anglia and York. Overseas institutions include Buenos Aires (Argentina), Cape Town (South Africa), Granada (Spain), Leuven (Belgium), Lula (Sweden), Oslo (Norway), Paris X (France), San Andres (Argentina), Tilburg (Netherlands), and Witwatersrand (South Africa).

The Department has **organised a number of conferences** during the REF period, including an annual Macro/Finance conference attended by individuals such as Sir David Hendry (Oxford) and Hashem Pesaran (Cambridge), a session at the 2011 Money, Macro and Finance Research Group conference which was held at Birmingham, as well as the 2013 European Trade Study Group conference. The latter is the largest meeting of trade economists in the world, with more than 350 participants including representatives from institutions such as the World Bank, the World Trade Organisation, the OECD and a number of leading universities from around the world.