

<b>Institution: Birkbeck, University of London</b>
<b>Unit of Assessment: 18 Economics and Econometrics</b>
<p><b>a. Overview</b></p> <p>The research submitted under UoA 18 has been carried out in the Department of Economics, Mathematics, and Statistics. The Department is one of four in the School of Business, Economics, and Informatics (BEI). The research activities are grouped under the headings of macroeconomics, microeconomics, econometrics, finance, statistics, and mathematics.</p> <p>The merger of Economics with the Department of Mathematics and Statistics (in 2000) continues to be very productive, with growth in the number of mathematics and statistics staff and synergies between mathematics and economics in mathematical finance, and between statistics and econometrics.</p> <p>As in previous RAEs, research staff in mathematics and statistics are submitted to UoA 18, because they are integrated with economics but we recommend that their work is cross-referred to the Mathematical Sciences UoA 10.</p> <p>Birkbeck's five Schools were established as part of the College's restructuring in 2009. The creation of the School of BEI in 2009 led to the creation of the School's Research Committee, which has played an important role in enhancing support for research staff, increasing funding for research studentships and for research pump-priming, introducing more detailed processes for ethical review of research, and spreading best practice among the School's departments.</p> <p>The College's Research Strategy is reviewed every three years by a Working Party comprising the Assistant Deans for Research and chaired by the Pro Vice-Master for Research. Some twenty-five Research Centres serve as foci for cross-discipline collaboration in the College. Organisationally, Birkbeck ensures the autonomy of research and teaching through its committee structure: all Schools have separate committees in these areas reporting to the School Executive Board. There is a College Research Committee (CRC) which reports to the Academic Board, and likewise a College Teaching and Quality Enhancement committee. The Research Students Sub-Committee of the CRC has responsibility for all matters relating to research students and postgraduate research. The Pro Vice-Master for Research is a member of all senior College committees. Thus, a balance is maintained between the requirements of the College's research mission and those of its teaching mission, and the interests of staff and students as researchers are represented throughout the organisation.</p>
<p><b>b. Research strategy</b></p> <p>Within the Department, we have continued to follow the strategy set out in RAE 2008, in which we stated our objectives as the continued promotion of excellence in our chosen areas, emphasising integrated theoretical and empirical analysis which produces applicable results of relevance to practitioners and policy makers. The strategy is implemented through our staffing policy and infrastructural mechanisms for promoting research.</p> <p>The Department has a long tradition of creating an institutional framework that is not overly prescriptive but encourages and values independent, and interdependent, research excellence. A bottom-up research agenda is fostered through support by peers and senior colleagues, mentoring and incentives that emphasises supporting individual initiatives rather than directed planning. The research culture is sustained by frequent and regular discussions among members, via networking forums and seminars. The culture emphasises personal, organic growth and autonomy rather than a hierarchical structure. Alongside the wealth of collaborative research within the Department, staff have extensive networks of collaborators, not only academic but also in the world of public policy and industry.</p>

The long-standing weekly research seminars in economics bring in researchers from around the world for presentation and critical discussion of new work with staff and PhD students. While some speakers are well-known authorities, many are rising stars, sharing cutting-edge research and exploring new ideas. Interaction with these extends networks, particularly for Birkbeck's early career researchers. We have fortnightly seminars in mathematics, and occasional seminars in finance and statistics. Staff members are encouraged to take advantage of the many opportunities for attending seminars, presenting work to colleagues outside Birkbeck, and interacting with policymakers provided by our central London location. Research results are circulated globally through the Birkbeck Working Papers in Economics and Finance series which are listed on IDEAS ([www.ideas.repec.org](http://www.ideas.repec.org)) and the Social Science Research Network, SSRN ([www.ssrn.com](http://www.ssrn.com)).

There is much overlap and interaction among the Department's research groups (macroeconomics, microeconomics, econometrics, finance, mathematics, and statistics), particularly between mathematics and finance, and between statistics and econometrics. While these are natural and broad categories, they do not form distinct and separate units. Several members of the Department belong to more than one of these groups and many research collaborations involve staff from more than one of these groups.

Our research strategy has facilitated a large amount of visionary and policy-relevant research within our six core areas and topics contiguous to them. It enables us to respond rapidly and flexibly to new research issues and external stimuli, such as the financial crisis. It empowers staff members and allows us to take advantage of the skills of new recruits and encourages the acquisition of skills in existing staff. Examples of this are as follows:

Birkbeck has had a strong presence in macroeconomics research for many years. A large group work in this area (Aksoy, Driffill, Petrella, Sibert, Tinsley, Wright, Zoega, and, until April 2013, Garratt). Influenced by the agonised reappraisal following the 2007-8 financial crisis, the Department has directed its macro research to address perceived failures of the field, for example, working on financial market dysfunctions. Our evolving strategy and programme of work include the following:

- Members of the group have organised conference sessions, spoken at conferences and published papers on the state of macroeconomics and directions for future research.
- In addition to the work of Garratt and Sibert discussed in the impact case studies, Birkbeck's macroeconomists have modelled the failings of financial markets, as in work by Aksoy; limits on ability to forecast and models of rational expectations imposed by lack of data, in Wright's research; effects of inaccurate and extensively revised macro data in Garratt's work.
- Sibert's work on the theory of monetary policy was put to practical application when she joined Zoega on the monetary policy committee of Iceland's central bank, following the financial collapse there. Sibert's impact case study describes this in detail.
- Tinsley's work on monetary policy is informed by his many years as a senior researcher at the US Federal Reserve. Garratt and Wright joined Birkbeck having previously had years of experience in research at the Bank of England.
- The role of linkages between industries and fluctuations in different sectors of the economy in macroeconomic cycles is explored by Petrella.

Microeconomic research (Daripa, Kapur, Nikandrova, Sciubba) covers a wide range of inter-related topics: mechanism design and auctions; new approaches to modelling choice under uncertainty, using notions of ambiguity; financial crises, banking, non-market credit, and financial regulation; trust, social networks; policies on the environment. The work undertaken in this field is tightly interwoven with research on macroeconomics and finance. An example is Daripa, Kapur and Wright's recent paper on *'Labour's Record of Financial Integration'* (Oxford Review of Economic Policy, 2013), and on a more parochial note their research into the failure of the Birkbeck Bank in 1911.

In the area of finance, Geman leads research on commodities, undertaken with a large network of academic and practitioner collaborators outside Birkbeck and a large group of PhD students within the College. Baxter, Brummelhuis and Hubbert, undertake research in both the Department's mathematics and finance groups. Staff work on empirical finance (asset pricing, implied cost of capital, equity duration, hedge funds, & profitability of firms) and decision theory. Research on decision making under ambiguity uses experimental methods with financial market professionals as subjects. This research is closely related to that of Daripa, mentioned above under microeconomics. Experimental work on ambiguity is under development and is strategically important and represents an area which the Department will enthusiastically support. Versteeg, who joined Birkbeck in 2011, complements these interests with research on financial liberalization and economic development. Related research projects on bond markets and monetary policy link with the macroeconomics group and the econometricians.

The work of the econometrics group covers time series, which links to macroeconomics and finance (Psaradakis, Sola, and Smith), and micro-econometrics (Beckert), which links to industrial economics. Thus, there are links to the work of Garratt, Petrella and Wright, amongst whom there is a continuum of interests and mutually reinforcing strengths. Smith's interests cover a wide field, including applied macro-economics, in which he has a long-standing and very fruitful collaboration with Professor Pesaran (Cambridge), defence economics, labour markets (in which he has collaborated with Zoega) and others. Research in micro-econometrics includes analysis of panel data and models of discrete choice, applied to issues *inter alia* in competition policy, transport, and health care. It is undertaken with a large network of collaborators, internationally and locally, including colleagues at the Institute of Fiscal Studies.

Our pure maths group has developed greatly under the leadership of Hart since 2008, with new appointments Fairbairn, Paterson and Rattan, focusing on algebra and combinatorics. This group now has a critical mass, having more than doubled staff numbers. This is a vibrant, young group, all but one gaining a PhD between 2000 and 2009. We have established a growing community of pure maths research students, with three new ones having started in the last 18 months. In addition we have introduced a maths seminar series, running fortnightly, with mostly external speakers. Fairbairn has put on a conference under the London Mathematical Society's (LMS) "celebrating new appointments" scheme. Paterson and Hart contribute to the College's Athena SWAN applications. Members of the group have sought and been granted research funding, internally and externally, for example funds awarded to Hart from the LMS for research at the interface of mathematics and computer science. Numbers of papers published in maths (MathSciNet) for the years 2008 to 2012 are growing. Our applied maths group (Brummelhuis, Baxter and Hubbert) work in both finance and maths.

In statistics, the strategy is to develop research strengths in a number of closely-related fields, embracing quantitative decision sciences (operational research and management science), and computational statistics (data mining and modern statistical methods, including simulation and computational techniques). Research in applied statistics includes work on dependent data, multivariate Bayesian methods, and medical statistics. Research on stochastic modelling overlaps with research among the finance group on financial mathematics and there is collaboration on regression techniques. Members of the group collaborate extensively with colleagues internationally and in nearby institutions such as University College London and London School of Hygiene and Tropical Medicine as well with the Department's econometricians. The group has changed considerably in the REF period with one retirement (Evans) and appointments of three outstanding young scholars (Papageorgiou, Radice, and Xu).

While forecasting is fraught with difficulty we see some trends in the near future. We already have extensive interdisciplinary links and, building on existing teaching links, we will explore the development of more research linkages within Birkbeck and elsewhere, with political science, sociology and psychology, enabling us to provide a more rounded analysis of economic, political and social issues. This is likely to develop in conjunction with further work in behavioural and experimental economics, probably with more emphasis on behavioural finance. The output of the micro group has grown over the REF period and its leadership has been strengthened by the

appointment of Kapur to a chair. We see this trend continuing and this group extending their work in providing theoretical underpinnings for research in macro-finance such as integrating banking into macro models. An example is the joint supervision by Daripa and Smith of the completed PhD thesis on the effect of capital requirements on banks, by Spaltro, then working at the Bank of England. More generally we will seek to foster the development of mathematics and statistics, to gain economies of scale, and exploit the synergies between economics, mathematics and statistics, to gain the economies of scope.

**c. People, including:**

**i. Staffing strategy and staff development**

One element of our strategy has been to appoint excellent new researchers within our broad areas of operation and we have done this very successfully.

The Department's practices in recruiting new members of the academic staff enhance its vibrant research culture. Most of our appointments have been to lectureships. We have been able to attract staff with recently-completed, or soon-to-be-completed, doctorates, full of enthusiasm, ability, energy and ambition, who have quickly integrated into our research culture. After successfully launching their research careers with us, some have stayed at Birkbeck while others have moved on to posts in academia, public and private sectors. There have been many promotions in the current REF period which have strengthened the academic leadership of the Department: Kapur, Garratt, Wright, and Hart to professorships; Aksoy and Baxter to readerships; Paterson, Beckert, Sciubba, and Hubbert to Senior Lectureships. Hart is our first Professor of Mathematics for many years.

In EMS, new and inexperienced academic staff members are given reduced teaching loads for their first year. They are linked with an experienced member of staff who serves as mentor and probationary advisor.

Most of the interaction among members of the academic staff, concerning research and discussions about career development take place through frequent, informal meetings, and seminars. The Department has a culture of openness and collaboration. Besides these channels of communication, there are a number of formalised, institutional procedures to provide support, guidance and help with staff development. The professors in the Department meet at least annually to review the research and other achievements of academic staff, make recommendations on applications for promotion, and give feedback to colleagues. Each year, all staff members are offered a Progress and Development Review in which achievements, plans and issues may be discussed with a colleague who offers advice and informs the College of resources needed to support research, and personal and career development.

The College provides for sabbaticals, normally one term in ten. The Department is flexible and is willing to allow more frequent sabbaticals than the College norm, to enable staff to develop research more rapidly. Sabbaticals are enabled by reallocating duties amongst members of the Department which fosters rotation of teaching duties, widens colleagues' experience, and revitalises the teaching programme.

The Department vigorously encourages members to apply for external research funding. In addition, it provides small amounts of money (of the order of £1000 to £2000 per person per year) to support members' research and conference participation. The School of Business, Economics and Informatics provides small grants: for presenting papers at conferences (up to £500 per year per person); and to support research (indicatively up to £10,000 but awarded competitively depending on the number and size of applications and the total funds available, recently roughly £50,000 per annum). The College Research Grants Office provides regular bulletins on external funding opportunities and support for developing grant proposals, through formal training sessions. The Department and School provide individual support and mentoring in this area.

Since the last RAE, several members of the group have moved on to develop their careers in prestigious environments: Garratt in 2013 to a Professorship at the Warwick Business School and

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Snower to devote himself full-time to his duties as President of the Kiel Institute for the World Economy and Professor at Kiel University (macroeconomics); Gilbert returned full-time to his professorship at the University of Trento and research fellow Ohana moved to an Assistant Professorship at the University of Paris-Dauphine (finance); lecturer Lee moved to Korea (where he is now Associate Professor at Seoul National University) and St Paul returned to his Professorship at the University of Toulouse (microeconomics), 2009; Skene moved to the private sector and Evans retired (statistics).

There have been seven replacements and appointments to new posts. We have recruited from diverse institutions, including Imperial College and Cambridge University, and have been able thereby to add new dimensions to the Department's research. They are: Xu, Papageorgiou and Radice in statistics; Fairbairn, Paterson, and Rattan in mathematics; Versteeg in finance; Petrella in macroeconomics; and Nikandrova in microeconomics. All appointments were at lecturer level, initially for a 3-year fixed term post. Petrella, Rattan, Versteeg and Xu have now been given permanent posts, and we hope the others will be made permanent too.

As a result of these movements, the UoA is now younger than it was in 2008. 10 members are under 40; 6 between 40 and 50, 4.9 FTEs (6 people) between 50 and 60, and 3.5 FTEs (4 people) sixty and over.

The Department is moving gradually in the direction of gender balance. Of our seven recruits since 2008, four are women, and we currently have 3 female professors as well as a strong cohort of more junior female staff.

In 2012 Birkbeck was awarded an Athena SWAN Bronze Award and is now aiming for Silver. The Athena SWAN Charter recognises and celebrates good employment practice for women working in science, engineering and technology (SET) in higher education and research. It aims to assist the recruitment, retention and progression of women in SET. The Bronze Award recognises that the College has a solid foundation for eliminating gender bias and developing an inclusive culture that values all staff. In October 2012 the Department became a Supporter Department of the LMS's Good Practice Scheme for Women in Maths, which supports mathematics departments interested in embedding equal opportunities for women within their working practices. It provides specific support for departments working towards Athena SWAN Award status.

**ii. Research students**

As part of its research strategy, the Department places great emphasis on postgraduate education: PhD supervision, masters' courses, and graduate diploma courses. PhD students are fully integrated into its life. They have work spaces in offices close to those of their supervisors and other academic staff. They constitute a substantial and essential part of research seminar participation and are involved as teaching assistants in supporting the teaching programme, typically giving classes and doing other small group teaching, and occasionally giving lectures. Numerous current and recently completed PhD students collaborate in research with their supervisors and other members of the Department.

There are 65 MPhil and PhD students currently registered in the Department, with a flow through of around 8 a year. New full-time students in Economics and Finance are required to take a programme of taught advanced courses in their first year. Requirements for part-time students are more flexible: these courses may be taken over the first two years of the programme and they are tailored to individual needs for advanced training. Some courses are put on by the Department specifically for PhD students and others are modules from our masters' programmes. For many years, research training has been offered in collaboration with UCL: Birkbeck students can take modules from UCL's research training programme. In addition, we are participants in the London Graduate School of Mathematical Finance ([www.londonmathfinance.org.uk](http://www.londonmathfinance.org.uk)), a consortium of the mathematical finance groups at Birkbeck, Brunel, Imperial, King's, LSE and UCL. With the advent of the ESRC's DTCs, Birkbeck's economics is part of the Bloomsbury Doctoral Training Centre (which includes the Institute of Education, School of Oriental and African Studies, and the London

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School of Hygiene and Tropical Medicine). In the last few years, two ESRC studentships per year have been provided for Birkbeck Economics students. The School of BEI provides one new full and one new fees-only studentship each year to the Department's research students.

Research students are initially enrolled as MPhil candidates, and are given a primary and secondary supervisor. They are upgraded to PhD registration when they have demonstrated that the breadth, depth and originality of their project warrant it, as judged by the Department's PhD committee. Upgrading requires the completion of a satisfactory substantive chapter, is refereed by someone other than the student's primary supervisor and satisfactory presentation of the paper in a seminar, usually at the PhD student "Jamboree", a presentation of PhD student research. Most members of staff submitted in this REF are supervisors. Supervisors report annually to the Departmental PhD committee which decides on progression.

All full-time students are given a workspace in one of several shared study rooms in the Department with good facilities. They need little encouragement to attend research seminars and indeed usually make up a substantial proportion of the participants. Many are supported by working as teaching assistants, some hourly paid, others offered an annual bursary. Bursaries for teaching support around 8 student FTEs in this way.

The Department provides funds (indicatively up to £500 per student per year) to enable them to present work at international conferences. The PhD students organise a series of seminar presentations, at least once a term ('PhD Jamborees') attended by students and staff, as a way of developing presentation skills, getting feedback, and presenting work for up-grade of registration.

Birkbeck offers support for PhD students via its Graduate Research School, which provides one-day courses on research skills, writing a PhD thesis, other transferable skills, various on-line resources, and videos. The College provides short courses on teaching and communications skills for prospective teaching assistants.

Because of the long-established and well-recognised strength of the PhD programme, we are able to attract able students and our graduates move on to posts in prestigious universities, public bodies, and in the private sector. Recent PhDs include; Roache, 2007, economist, IMF; Melina, 2011, economist, IMF, 2012-2013, lecturer at City Univ., 2013 onwards; Cavatorta, 2011, Lecturer at King's College London; Bove, 2011, research fellow at U. of Essex; Brun-Aguerre, 2011, analyst at J. P. Morgan; Basso, 2008, research dept., Bank of Spain; di Pace, 2011, lecturer, U. of St. Andrews; Gonzalez, 2009, Vice-Minister of Energy, Republic of Colombia; Akdogan, 2009, research staff, Central Bank of Turkey. Villa, 2011, postdoc researcher, Leuven; Paiardini, 2012, teaching fellow, Queen Mary; Merella, 2011, City University, then Assistant Professor at the University of Cagliari (joint winner of the 2012 Unicredit & Universities Best European PhD Thesis Award).

**d. Income, infrastructure and facilities**

The Department has held a number of externally-funded grants during the assessment period. Driffill held an £800,000 grant as Director of the ESRC's £6 million research programme on World Economy and Finance from March 2004 until January 2010. Garratt held a £228,000 ESRC grant on Producing Robust Density Forecasts from July 2009 until June 2011. Geman held a £171,000 COMISEF grant from the European Union on Computational Optimization Methods from December 2006 until December 2010. Smith (with Elisa Cavatorta) held a £13,000 grant on Food security in the Middle East funded by Georgetown University from June 2011 to May 2012.

While the Department has been successful in obtaining external funding, much of our research is internally funded. Nevertheless, the Department encourages members to develop applications for large scale external funding when it is needed. The mechanisms used to do this include the small scale research support from the Department and the School of BEI and other initiatives that are described in section c(i) above. Over the next period we will be investing more strongly in seed funding and using mentoring to encourage high quality applications for external funds.

The Commodities Finance Centre (directed by Geman) acts as a focus and forum for research in commodities, and has held a number of conferences, most recently “*Modelling and Managing the Risks of Commodities and Food Prices in a Changing World*” (20 January 2012). The conferences are an important vehicle through which it successfully pursues its goal of bringing academics, practitioners and policy makers together.

The Birkbeck Centre for Applied Macroeconometrics was set up in 2013 with Garratt as Director, as a focus for research on forecasting, analysis and a wide range of econometric issues, with the prospect of collaborative research with colleagues at Norges Bank, the Reserve Bank of New Zealand, and other Central Banks, and ambitions to secure funding from these and other institutions. Following Garratt’s departure, Aksoy has taken over as Director. The direction of the Centre will be recalibrated and it will give a focus to, and raise the external profile of, macroeconomics research at Birkbeck, seeking external funding and organising conferences and workshops. To inaugurate the Centre, on 21-22 June 2013 it hosted the 2013 conference of the Anglo-French-Italian Macroeconomics Research Group.

The Department has a Seminar Room for its own use located conveniently in the heart of the Department in Birkbeck’s main building in Malet Street to accommodate its many research seminars and related activities.

EMS benefits from comprehensive support for IT with two dedicated members of staff, a very wide range of software, and good provision of data including Datastream for financial research. Consideration is being given to enhancing financial data provision through more collaboration with the Department of Management.

Birkbeck’s library provides a good range of journals, has a very extensive e-library with journals and other materials, and a satisfactory budget for buying books, both for research and teaching. Besides the College’s own library facilities, many others are available in the immediate vicinity including the University of London Senate House Library, the British Library, the London School of Economics and University College.

#### **e. Collaboration or contribution to the discipline or research base**

Given our strategy of encouraging independent and interdependent research, members of the Department have large networks of academic collaborators and contacts with the world of public policy and the private sector: locally, nationally, and internationally. These diverse internal and external collaborations are largely driven by research synergies.

Academic collaborators include former PhD students, former supervisors, and former colleagues at Birkbeck or other institutions, and many other people with common interests. In some areas, such as mathematics, external networks of fellow researchers have made an important contribution to sustaining a vibrant research group in the College.

Below we give examples of contributions, collaborations, editorships, conferences and networks.

The Department contributes to the discipline through learned societies and funding bodies. We contribute to wider society through advice to government bodies in the UK and internationally.

- Driffill contributed a briefing paper on the state of UK macroeconomics and monetary economics for the panel that wrote the 2008 RES/ESRC International Benchmarking Review of UK Economics. Following this he was a member of the Steering Group for the ESRC Macroeconomics Initiative (convened to address concerns about macroeconomics in the UK.)

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- Sibert is a member of the Panel of Economic and Monetary Experts of the Committee of Economic and Monetary Affairs of the European Parliament. She was an external member of the monetary policy committee of the Central Bank of Iceland 2009-2012; she was a member of the UK Shadow Monetary Policy Committee 1997-2007.
- Zoega was an external member of the policy committee of the Central Bank of Iceland 2009-2013.
- Kapur is a consultant to the Cabinet Office and DEFRA; he contributed to a Financial Services Authority conference on 'The Limits of Regulation'.
- Geman became a Scientific Advisor to the European Union on the subject of Commodities in 2010 and is the scientific member of the Board of the UBS-Bloomberg Commodity Index.

Members of the Department conduct research in collaboration with a large number of academics around the world and with employees in the public and private sectors.

Our academic collaborations include those in the UK, Europe, the US, Canada, the Middle East and Australia. In the public sector, we work with the IMF, Ofgem, IFS, Competition Commission and the Bank of Spain. Finally, our collaborations with the private sector include KPMG, NERA, Frontier Economics and RBB Economics. Some key examples are:

- Aksoy works with Basso, a recent Birkbeck PhD, currently at the Bank of Spain, and Melina, also a recent Birkbeck PhD, recently at the IMF, now at City University, and Coto-Martinez, at Brunel University. Aksoy is member of the CESifo research network.
- Wright acted as consultant and expert witness on the cost of capital for regulated monopolies for Ofgem, NERA, Frontier Economics and a consortium of Australian energy companies, among others. He has collaborated at irregular intervals with Andrew Smithers, of Smithers & Co, providing reports on asset allocation and economics to fund managers.
- Beckert works with McFadden (UC Berkeley) on econometric theory; with Blundell (UCL and Institute for Fiscal Studies) on demand analysis; with Thanassoulis and Smith (Oxford) on industrial organisation; with Nesheim (UCL & IFS) and Griffith (IFS & Manchester) on supermarket choice; with Kelly and Tetlow (IFS) on healthcare. Beckert works for the Association of Competition Economics (ACE).
- Hubbert works with Bejancu (University of Kuwait) and Chernih (University of New South Wales) on approximation theory problems. He is also involved with a collaborative project with Leicester University and Uppsala University (Sweden) which is devoted to developing solutions to high dimensional problems in mathematical finance.
- Paterson does research in combinatorics and cryptography with a network that includes Stenson, Dept of Computer Science, U Waterloo, Canada; and researchers in the maths dept. and Information Security Group at Royal Holloway.
- Radice's network of research collaborators on regression techniques and aspects of medical statistics includes Marra (University College London), Kneib (Universität Göttingen, Germany), Calabrese (Università di Milano-Bicocca, Italy), Osmetti (Università Cattolica del Sacro Cuore, Milano, Italy) and Harris (Intensive Care National Audit & Research Centre).

Members of the Department contribute as members of editorial boards on academic journals in the UK and internationally. These include:

- Driffill is an editorial board member of *Economica*
- Aksoy is an associate editor of the Review of the Central Bank of Turkey.
- Sibert was Associate Editor of *Macroeconomic Dynamics* 2006-2009.
- Smith is on the editorial board of *Journal of Conflict Resolution* and *Journal of Peace Research*
- Geman is a member of the Advisory Board of the *Journal of Banking and Finance*; Associate Editor, *Journal of Energy Markets*, *Journal of Financial Services Research*, *Mathematical Finance*, *Geneva Papers on Insurance*, *Journal of Alternative Investments* and *Applied Mathematical Finance*.
- Paterson is an editorial board member of *Designs, Codes and Cryptography*.

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Conferences, on different scales, are organised at Departmental and School level. Some are specialist research meetings but many are intended to include academic, public sector and industry participation. We contribute to wider School events, such as Business Week, where we have had the opportunity to showcase our research and engage with a wider audience.

- In September 2009 the Department hosted and organised the annual conference of the Money, Macroeconomics and Finance Research Group. In May 2009 and in June 2013, it hosted the annual conference of the Anglo-French-Italian Macroeconomics Research Group.
- Kapur organised a 2-day conference on “*Internationalisation of Chinese and Indian Firms*” at MERIT, Maastricht, September 2008 and edited a special issue of *Industrial and Corporate Change* based on it.
- Fairbairn organised a conference on Finite Simple Groups, Algebraic Groups and their Impact on Wednesday April 10th 2013 at Birkbeck with funding from the London Mathematical Society. He is a voluntary mentor for the UK Mathematics Trust.
- The first Annual Tress Memorial Lecture was given by Smith (2012) on military economics and followed by Geoff Mulgan, CEO of NESTA (2013), on innovation and creativity.

Members of the Department belong to international research networks which increase the range of academic and user interactions. For example:

- CEPR: Driffill, Petrella, Sibert
- CESifo: Aksoy, Driffill, Sibert
- Keil Institute for World Economics: Sibert

### Interdisciplinary Research

Following on from links established through the ESRC World Economy & Finance Programme, Driffill and Kapur worked with Lash (Sociology, Goldsmiths) and Keith (Migration Studies, Oxford) in an ESRC-funded interdisciplinary research network on Rising Powers in 2010 and 2011. Building on his research in economics of defence, Smith has an extensive network of collaborators in the fields of international relations and war studies.

The foregoing describes a sample of the Department’s wealth of connections with researchers in academia and the private and public sectors of the economy, policy makers and practitioners; and wider contributions to the academic community. These interactions come about because of the strength and breadth of the Department’s research activity, and reciprocally contribute to it. The Department gains much from, and vigorously encourages, its members’ engagement on a broad front with the wider world.