

Institution: Royal Holloway, University of London

Unit of Assessment: Economics and Econometrics

a. Overview

The Economics Department at Royal Holloway is the youngest of the major economics research departments in the UK. The Department's expansion has continued through the current REF period, with academic research staff growing from 21.7 FTE's in 2008-2009 to 25.4 in 2012-13. The research student population has flourished, growing from 18 to 24 FTE. The research of our academic staff both covers the main research areas of economics and extends across disciplinary boundaries, within economics and beyond to the physical and behavioural sciences. The reach of our work is felt in science and news journalism, battlefields and elections.

We have longstanding groupings in (1) Theory/Behavioural/Experimental, (2) Applied Microeconomics (Public/Labour/Development) and (3) Macroeconomics/Finance/Econometrics/Political Economy. The Department has enhanced these groupings since RAE2008 as planned, while developing and strengthening: (a) experimental economics, including £40,000 of new investment to create a greatly improved experimental facility called EconLab, and (b) labour economics, assembling researchers whose full impact will extend over the next decade. Simultaneously, we have nurtured researchers who have roamed freely and successfully into psychology, political science and natural sciences. During the current REF period many department members published at least one paper in the discipline's top five journals or top science journals.

b. Research strategy

Since its inception the primary goal of the Department, reiterated in RAE 2008, has been to foster first-rate research on par with the best economics departments in the profession. In part, we have satisfied this goal through publication with recent acceptances in places such as *American Economic Review*, *Econometrica*, *Economic Journal*, *Journal of Development Economics*, *Journal of Econometrics*, *Journal of Economic Theory*, *Journal of the European Economic Association*, *Journal of Labor Economics*, *Journal of Monetary Economics*, *Journal of Political Economy*, *Journal of Public Economics*, *Quarterly Journal of Economics*, *Nature*, *Theoretical Economics*, *Review of Economics and Statistics* and *Review of Economic Studies*. In fact, 48 of the 51 papers in our submission are published in the top five economics journals, or top field and general-science journals. Yet ultimately we strive to produce ideas that matter: not just to academic economists, but also to other physical and behavioural scientists, as well as to governments, NGO's, and the private sector (see our REF3 and impact case studies).

Our strategy to attain these goals has been consistent for more than a decade (see earlier RAE documents) and can be broken down into three main elements:

1. Hiring (section ci)
 - a. We seek to hire creative young researchers, regardless of field, whom we judge to possess great upside potential.
 - b. During 2008-2013 we assembled an exceptional group in labour economics.
2. Environment (section ci)
 - a. We provide an intellectual environment that allows our academic staff to develop and pursue their individual research programmes. For example, researchers are encouraged to cross into other fields and to pursue research with a long gestation period.

- b. We give the material and intellectual support people need to succeed, including a state-of-the-art laboratory for experimental research and access to research and travel money.
- 3. PhD Programme (section cii)
 - a. For these early stage researchers we provide more structured and centralised direction with a range of feedback mechanisms that have been honed during the REF period.
 - b. We have made a substantial effort to expand our programme.

In the next five years we will we continue our policy of hiring promising researchers regardless of field, although we expect to use two posts to strengthen our research in macroeconomics and finance. Since strength attracts strength it will be relatively easy to maintain and develop our research cluster in applied microeconomics. Sauer is already spearheading a bid for a Centre for Social Interaction that will leverage our recent strength in labour economics as well as growing connections with the College's Psychology and Mathematics departments. At the same time the Department and College are jointly committed to bring about more of a balance in our research profile. We will slow the rapid expansion of our PhD programme and shift more of its funding to external sources, a process that is already well underway (section cii). We will thereby free resources to improve the quality of our research training and supervision and enhance the research support for our academic staff. For example, to improve our connections with the greater research world we have recently increased our seminar budget by more than 50% and have lined up a seminar series for 2013-14 that is among the best in the UK.

c. People, including

i. Staffing strategy and staff development

As a new and growing department, hiring has always been the core of our research strategy. Our approach has mainly been to hire bright young scholars in any field whom we judge to have substantial upside potential (Hamermesh is one of the few hires at the later-career level). Casting a wide net, the Department has hired both newly minted PhD's and established, but still relatively young, academics from continental Europe, the United States, and the UK. The Department interviews at the ASSA meeting in the United States every year. Our global hiring strategy has brought intellectual vibrancy to the department, while bringing many of our new hires to greater prominence. This success has created retention difficulties as some who have flourished here have taken up opportunities elsewhere (e.g., Engelmann, Normann, and Huck). Conversely, some who have struggled to meet our high publication standards have moved on. Yet we will continue to refresh ourselves with mobile potential stars. The good news is that constructive dialogue with the College has led to a system of market salary supplements that has allowed us to increase our salaries substantially, directly addressing retention and making our offers to new staff more attractive.

During the current REF period, we have created an outstanding group of labour economists, adding Bagger, Gemici, Hamermesh, Pavan and Sauer to an already-strong group that included Anderberg, Chevalier, Seltzer and Wadsworth. We expect this to be a high-impact cluster over the coming decade and beyond.

The Department has hired 14 academic staff since RAE 2008. At the Professorial level, Pavan was hired from Rochester, Sauer (Bristol), Galenianos (Penn State), Sancetta (Bank of America Merrill Lynch, earlier Cambridge), Bade (Max Planck Institute), Feri (Innsbruck) and Hamermesh to a 40% position following a reduction in his time commitment to Texas at Austin. Gemici has arrived from NYU as a senior lecturer. With the exception of Hamermesh, all academic staff are full-time permanent members of staff with no other

affiliation apart from visiting positions. Since RAE 2008, we have hired the following staff members from PhD programmes or post-doctoral positions: Goldmanis (who completed his PhD at Chicago), Bordalo (Harvard), Bagger (Aarhus/Northwestern), Trapeznikova (Northwestern), Luhrmann (Mannheim/IFS), Neary (UC San Diego), Rud (LSE). Rud was promoted to Senior Lecturer in 2013. The 25.4 FTE academic staff are distributed as follows (with * showing new hires since RAE 2008):

1. Theory/Behavioural/Experimental: Bade*, Bordalo*, Feri*, Galenianos*, Goldmanis*, Mandler, Naef, Neary*, Seltzer.
2. Applied Microeconomics (Public Economics / Labour Economics/Development / Political Economy): Anderberg, Bagger*, Chevalier, Gemici*, Hamermesh*, Luhrmann*, Pavan*, Rud*, Sauer*, Seltzer, Trapeznikova*, Wadsworth.
3. Macroeconomics/Finance/Econometrics/Political Economy: Frank, Galenianos*, Mountford, Sancetta*, Spagat, Testa.

Our hiring strategy and wide-ranging general-interest seminars have facilitated interaction across disciplinary boundaries. The effect of this culture on our research has been substantial. For example, Spagat has shifted his energy from macroeconomics to the field of conflict economics (see Spagat's impact case study and the discussion in the impact template.) Seltzer, an established economic historian, has relied on the Department's experimental economics research group and lab to produce first class work in experimental economics. Mountford has widened his interest from theoretical to empirical macroeconomics and Mandler has broadened his outlook to apply pure economic theory to the problem of how political campaigns should maximise their chances of victory.

The Department has worked hard to build a lively and challenging intellectual environment. Teaching loads are low so that staff can prioritize their research. At the beginning of the REF period, the Department had two seminars, an External Seminar that invites well-known names and new lecturers from outside the Department and an Internal Seminar in which our own academics present their work. Since 2008 the Department has added two field seminar series, an Applied/Policy seminar and a Theory seminar. We continue the tradition of mixing established and new figures, and continue to run a seminar for research students.

The Department favours a decentralized research environment and expects researchers to create and implement their own research agendas. At the same time, the Director of Research (DR) and the Research Committee assist the Department's academic staff to achieve their research goals. The DR coordinates closely with the University's Research & Enterprise Office and the VP (Research) to match staff members to the most propitious source of grants. The University also promotes and preferentially funds interdepartmental projects, an opportunity that the Department has taken advantage of in its growing collaboration with researchers in the Psychology Department.

Key to the production of top-level research is the dissemination of work in progress and the gathering of feedback on the first papers in the longer arcs of research that our academic staff undertake. The Department therefore operates an open-ended policy of support for conference presentations. On top of an annual conference budget of £2,500 assigned to each academic, the Department has never let one of its academics fail to present in a major international setting due to a shortfall of funds. The introduction of our staff to larger international audiences promotes co-authorship and offshoots of existing research.

The Department feels that academic staff need generous leaves of absence to undertake more intensive research. Academic staff enjoy one sabbatical term of leave for every six they are in residence. The Department has made sure when staff members have valuable research opportunities but have not yet accumulated sufficient leave credit that special additional leave arrangements are made. In 2013, for example, Bordalo was granted an

extraordinary leave to pursue his on-going research with Shleifer at Harvard.

It has been a priority of the Department to encourage the intellectual productivity of its junior academic staff and of newly minted PhD's in particular. Junior staff have a reduced teaching load for their first three years and do not undertake any of the Department's major administrative duties. Also, each junior staff member has a mentor who provides advice on research strategy, suggests how to complete work in progress, recommends journals as possible publication outlets, and makes editorial suggestions both for journal submissions and for revisions. One motive for hiring Hamermesh in particular was his capacity to serve as a font of intellectual and professional advice for our junior applied economists. Long-term objectives are supported; during the REF period the department shifted probation requirements to producing a single "top-five" quality article rather than multiple good publications. Consequently a number of our junior staff not entered in the current REF (e.g., Bagger, Trapeznikova) will be in a strong position for the next REF. The College carefully vets the progress of early-career researchers as part of the process that can grant permanency.

The Department hires junior staff who have a good chance of publishing in the top five and encourages journal submissions that aim high, despite the risks involved. Two recent successes deserve emphasis. Bagger's forthcoming article in the *AER* is the first to develop a rich, tractable equilibrium labour market model that accounts for both human capital accumulation and job search. The paper finds that workers tend to 'job shop' for ten years before settling into high-quality jobs after which they use outside offers to generate gradual wage increases. Bordalo's paper in the *QJE* develops a novel framework for decision-making in which people's attention is drawn to the salient attributes of available alternatives. The paper provides a psychologically well-founded and unified account of longstanding paradoxes of choice, backed by experimental evidence.

Royal Holloway actively endorses the seven principles outlined in the *Concordat to Support the Career Development of Researchers* and has policies and practices at both institutional and departmental level designed to facilitate full implementation of these principles. For example, we require mandatory training for all members of selection panels which includes equal opportunities training, equitable treatment for part-time and fixed-term staff, clear and an equitable promotions process. Extensive staff development opportunities are offered, including a centrally administered mentoring programme (supplemented by departmental mentoring for early career staff) which is open to all research staff and a comprehensive annual equality and diversity data monitoring and review exercise.

ii. Research students

The Department takes a special pride in its blossoming PhD programme, which has gone from being a distinct weakness in RAE 2008 to a considerable strength in 2013.

Our postgraduate research students bring zeal and energy to our research community. We invest heavily in their academic and career development. Postgraduate research strategy has been based on three main initiatives:

1. To expand on the size of our PGR programme size and its resourcing.
2. To engage with the ESRC South East Doctoral Training Centre (DTC).
3. To develop training at the department level and to foster participation in the college's training programme.

The Department has increased the research students population from 18 in 2008/9 to 24 FTE's in 2012/13. A key aim of this expansion has been to reach a critical mass that allows us to offer specialized research training within the department. The College, the Department

and the DTC have substantially increased the financial support available to our students, allowing us to offer between five and six new funded studentships. In the last few years the PhD programme has enjoyed substantially increased external funding so that our 2013-14 cohort of nine students will receive only a quarter of its funding from the department compared to about half for our 2010-11 cohort.

The department has participated actively in the ESRC South East Doctoral Training Centre since its inception in 2010-11, increasing our visibility and enabling us to continue to recruit PhD students of the highest quality as we have expanded our programme

We have increased substantially the breadth and depth of our research student training during the REF period. Compulsory courses are delivered almost exclusively within the department and focus on core research areas and skills, including advanced game theory, econometric theory, and advanced programming (Matlab and STATA). Students also enjoy a wide range of optional courses: the College subscribes to the on-line Epigeum 'Research Skills Master Programme' and the Generic Skills Programme offers a series of transferable skills courses. We have offered a series of subject-specific courses in Labour Economics (Hamermesh), Dynamic Programming (Bagger), and Lifecycle Modelling (Luhmann). We operate a dedicated PGR fund to enable students to attend advanced training programmes we are unable to offer internally or from the DTC.

Each PGR student has from the beginning a supervisory team consisting of a lead supervisor and an advisor. Each student benefits from an annual review with this team and the Director of Graduate Studies. There is also an annual in-house Spring PhD conference with invited speakers (recent speakers include Andrew Chesher, Henrik Kleven and Thomas Crossley). First-year students present posters, second-year students make "upgrade" presentations and fourth year students make oral presentations that anticipate their degree submission. Throughout the year our PGR students take an active role in organizing reading groups and research student seminars. Each research student has a budget to cover research expenses and conference participation (including at least one international conference during their studies), desk space and full access to computing facilities, including individual licences for key software.

One measure of the success of our expanded PhD programme is our recent placement record: students have secured jobs in such places as University of Munich, SUNY Binghamton, the Ifo Institute Munich, the University of Sussex, the University of Melbourne, the World Bank, the University of Maastricht, the University of Exeter, the African Development Bank, UNICEF, the National Institute for Economic and Social Research, and in the Cabinet Office. In recent years our former PhD students have published or have forthcoming papers in the *American Economic Review* (two different papers), the *Review of Economic Studies*, *Journal of the European Economic Association*, *Economic Journal*, *Games and Economic Behavior*, the *Journal of Public Economics* and the *Journal of Public Economic Theory*. In the REF period, work by our research students has also received media attention, including in the *Guardian* and the *Observer*. A further success measure is the high completion rate – 85% for the last three cohorts.

d. Income, infrastructure and facilities

One of the priorities of the Department has been to ensure that all of the research projects of its academic staff receive sufficient financial support. In the first instance, staff are expected to apply to the major funding sources, particularly the ESRC and Nuffield Foundation. When financial needs are immediate, or when external funding has proven problematic, the University through its Research Strategy Fund, or the Department using its general funds, have always been able to step in. Departmental funds for running laboratory experiments have been especially useful to PhD students, many of whom have gone on to publish in top-

quality journals.

In the REF period, research by the Department's academic staff has been funded by eight grants from the ESRC, four from the British Academy, three grants each from the Nuffield Foundation and the Low Pay Commission, a grant from the National Science Foundation (of the USA), an ARCHES (Award for Research Cooperation and High Excellence in Science) grant, a NORFACE (New Opportunities for Research Funding Co-operation Agency in Europe) grant, a NET (Networks, Electronic Commerce, and Telecommunications) Institute Summer Grant, and one grant each from the Ministry of Defence, The International Growth Centre, the United States Institute of Peace (jointly with the Swiss government), and the Danish Council for Independent Research. The most recent funded project is Chevalier's British Academy grant "Children of the Wall: Parental Selection and Children Outcome", £103,971 for one year starting summer 2013.

The Royal Holloway Laboratory for Decision Making and Economic Research (EconLab) is a state of the art facility for experimental researchers. It is run by a full-time Experimental Economics Laboratory Officer. After a recent refurbishment, it is equipped with 32 shielded computer workstations and additional laptops to conduct experiments off site. EconLab is well-known internationally and collaborates with comparable Labs abroad, providing the Department with a strong visibility in experimental economics. With experimental data acquired in EconLab, researchers in the Department have published in the *American Economic Review* (Huck, Seltzer and Wallace 2011), *Journal of Public Economics* (Nikiforakis 2008), and *Games and Economic Behavior* (Blanco, Engelmann and Normann 2010), among other outlets. EconLab's facilities has led to collaborations with researchers from abroad (Walkowitz from Cologne, Engel from the Max Planck Institute in Bonn), the UK (Gurguc from Imperial College London, Hopkins from Edinburgh), and from other College departments (McKay from Psychology). The laboratory is used extensively by PhD students, both to collect data for their theses and to develop their research agendas. With its increasing recognition, EconLab now draws PhD students from elsewhere in the UK and abroad. And the Department's students can learn modern experimental and behavioural economics hands on, reproducing the results of seminal studies as they progress.

The Department has access to a first-rate library. Staff may also use the University of London Senate House Library and the LSE's library. The College is investing £35 million in a new library facility that will open 2015. The Department has invested substantially in workstations for academic staff whose work has an extensive computing component. The Department provides staff with both an office desktop computer and a laptop and has supplied virtually every request for software from the academic staff, including some powerful computers and software for staff doing computationally intensive projects.

e. Collaboration and contribution to the discipline or research base

The Department has sought to integrate its academic staff into the top tier of the international research community in economics. One sign of the success is that every member of the research staff of the Department has worked in collaboration with economists abroad. Among the collaborators of our academic staff are Shleifer of Harvard, Mortensen of Northwestern, Fehr of Zurich, and Uhlig of Chicago. We have hosted the Royal Economic Society's annual conference in 2011 and 2013.

Journal Editorships, Editorial Board Membership, Peer Review.

Chevalier is one of the two chief editors of *Journal of the Royal Statistical Society: Series A (Statistics in Society)*. Sauer is an Associate Editor of the *European Economic Review*, Anderberg is Associate Editor for the *Economics Bulletin* and *Finnish Economics Papers*, and Sancetta finished his term as Assistant Editor of the *Econometrics Journal* during the

REF period. Seltzer has been Associate Editor of the *Australian Economic History Review* since 2013 having previously served on the Editorial Board since 2007 and has been on the Editorial Board of *Explorations in Economic History* since 2012.

Seltzer and Mountford have served as external experts for the “National Agency for the Evaluation of Universities and Research Institutes, Area 13: Economics and Statistics” in Italy (the Italian equivalent of the REF). Mountford has served as an external expert for “Research project of significant national interest” for the Italian “Ministry of Education, Universities and Research” (the equivalent of the ESRC) and as a member of the Commissioning Panel of the ESRC Research First Grants Scheme. Hamermesh is a member of the US Bureau of Labor Statistics Technical Advisory Committee, a Consultant/External Reviewer for the Wittgenstein Fund of Austria and on the Advisory Committee for the US Bureau of Labor Statistics Time Use Survey.

Interdisciplinary Collaboration.

Spagat’s work has involved extensive collaboration beyond the boundaries of economics and academia as a whole. His co-authors, restricted to the REF period, include physicists, computer scientists, an engineer, a lawyer, statisticians, political scientists, a psychiatrist, a psychologist, and a British military Lt. Colonel. Organisationally, Spagat has worked in conjunction with the Iraq Body Count, the Oxford Research Group, the Every Casualty Campaign, Save the Children, the Human Rights Data Analysis Group, the Human Security Report, and the Small Arms Survey.

Bade has collaborated with academics in politics, law and psychology to produce research on political representation and democratic legitimacy. Naef works with psychologists, sociologists and neuroscientists from several countries, including South Africa, Austria, Germany, and Switzerland. Testa has worked with political scientists at Harvard and LSE to develop a new methodology based on the use of exit polls data to measure voters’ preferences and partisanship. Goldmanis works with colleagues in the psychology department at Royal Holloway on rationality and the proneness to delusion. Frank is currently working with economists and sociologists in the USA on managerial authority.

Research Fellowships and Awards.

In 2009, Sauer was awarded a Research Fellowship at Collegio Carlo Alberto in Turin. In 2013, Chevalier received a Mid-Career Fellowship from the British Academy. Hamermesh was R.I. Downing Fellow at the University of Melbourne during the summer of 2013. Luhrmann has been a Fellow at the Mannheim Research Institute for the Economics of Aging, Mannheim University since July 2008. Hamermesh received several major awards in 2013: the Jacob Mincer Award from The Society of Labor Economists, the IZA Prize in Labour Economics, and the John R. Commons Award from the Economics Honor Society International OΔE.

Rud’s co-authored article “Modern Industries, Pollution, and Agricultural Productivity: Evidence from Ghana” won the 2013 Albert Berry Junior Scholar Paper Prize, awarded by the Canadian Development Economics Study Group. Spagat’s article “Bias in Epidemiological Studies of Conflict Mortality,” was named ‘Article of the Year’ in 2008 by the *Journal of Peace Research*.