

Institution: University of Bristol
Unit of Assessment: 16: Economics and Econometrics
1. Unit context and structure, research and impact strategy

Unit context and structure

Economics at Bristol has a distinctive focus and a reputation for excellence: we combine innovative, policy-focused research and a firm commitment to outreach, with high-level advances in economic theory, structural modelling and econometrics. We have a very strong record of both highest-quality research and impact, where for the latter, all our Impact Cases were rated 4* in REF2014. This record has been reinforced over the current REF period, as evidenced by publications in top general interest and field journals stemming from all four of our research groups, by our Impact Cases influencing national government policy, and by our varied public engagement activities and leadership in UK-wide initiatives to improve diversity in the discipline.

We are now a stand-alone School of Economics, having formerly been part of a School of Economics, Finance and Management. During this REF cycle we have expanded significantly, submitting just under 40 FTE staff to REF2021, more than double the number at REF2014. Recruitment has been focused at the junior level; a deliberate strategy to hire talent at the research frontier on the international market. Early career researchers (ECRs) therefore make up a high proportion of our staff, with 33% of submitted staff at Lecturer level and 18% formally classified as ECRs. As part of our commitment to improving diversity in the economics profession we have worked hard to support female staff achieve promotion and to place women in key leadership positions in the School.

The substantial growth in staff has both broadened and consolidated the School's research strengths. We have maintained our distinctive focus – high-level, technical research in econometrics and economic theory together with innovative, high-impact research in public policy – and have expanded capacity in other areas, such as macroeconomics. This strategy is explicitly linked to the growth of our postgraduate research (PGR) programme and the need to cover all areas of advanced teaching and supervision. We are now organised into four research groups:

- **Applied microeconomics:** public, development, education, urban and health economics. (Arni, Barsbai, Berg, Burgess, Cannon, von Hinke, Koenig, de Magalhaes, McCauley, Philippe, Seror, Siddique, Sievertsen, Simpson, Smith, Valente, Wang. Departures prior to Census date: van den Berg, Bergemann, Caria, Heblich, Proto. Recruited during the REF period to join after: Costa Dias, Haseeb, Spittal, Tran)
- **Econometrics:** theoretical and applied microeconometrics. (Botosaru, Hubner, Iaria, Muris, Pacini, Polisson, Sokullu, Stouli. Departures: Tetenov, Windmeijer. Joining: Han)
- **Macroeconomics:** macroeconomics and structural labour economics. (Ábrahám, Choi, Doligalski, Jolivet, Sephasalari, Turon, Zylberberg. Departures: Lalé, Temple. Joining: Morchio, Yazici)
- **Microeconomic theory:** information economics, mechanism design, contract theory and political economy. (Doğan, Giovanonni, Grout, Halonen, Hu, Jeong, Oliveros, Park, Wirtz. Departures: Eguia, Hiller, Xiong. Joining: Tsur)

In practice, many staff members span more than one group, allowing for cross-fertilisation of ideas, innovative uses of data and advances in techniques. In addition, many staff conduct interdisciplinary work with co-authors outside of economics. Each group holds regular work-in-progress seminars, and hosts an annual research workshop at Bristol, including international speakers, to boost the profile and visibility of the School's research.

Unit-level environment statement (REF5b)

Research and impact strategy

Our over-arching goals are to:

- 1) *Make outstanding research contributions and foster interdisciplinary research*
- 2) *Deliver policy impact and inform public debate*
- 3) *Improve diversity in economics*

Our research and impact strategy is overseen by the Research Director (Simpson), Impact Directors (Burgess and von Hinke) and Postgraduate Research Director (Jolivet), together with a Research Committee and supported by a School Research Manager. The School's strategy links to broader University initiatives including the Jean Golding Institute for data-intensive research, the Bristol Digital Futures Institute and the Elizabeth Blackwell Institute for Health Research (see REF5a). This section outlines our aims following on from REF2014, and the outcomes we have achieved. Sections 2, 3 and 4 add detail.

1) *Make outstanding research contributions and foster interdisciplinary research*

The key element of our research environment is the people we employ. We have aimed high, to recruit and retain the highest calibre staff. We ensure that staff have the time and resources to conduct internationally recognised research, evidenced by the increased number of publications in world-leading journals during this REF period. Our strategy is firmly aimed at fostering a vibrant and productive research culture.

The increase in staff numbers has broadened the scope of our research; at the same time we continue to emphasise specialisation and critical mass in core areas of strength. For example, our applied microeconomics group draws on shared empirical methods to tackle a wide range of public and economic policy questions. Over the REF period, we have continued to host the annual Econometric Study Group conference to maintain the international profile of econometrics research at Bristol. Many applied researchers and members of the econometrics group combine forces in the ESRC Centre for Evidence-based Public Services (CEPS), (formerly the Centre for Market and Public Organisation (CMPO)).

A distinctive feature of the School is our deliberate emphasis on interdisciplinary research. We believe that other disciplines can enhance the quality and insights of economics research, but also that economists have important contributions to make in interdisciplinary collaborations. We have fostered connections with epidemiologists and geneticists to investigate the importance of gene-environment interactions in the generation of health and education inequalities, and have longstanding connections with geographers, now focused on environmental hazards and cities. We have developed links with the Alan Turing Institute, which have bolstered our data-intensive research.

We recognise the value of a wide network of international, world-leading collaborators at top institutions, and our strategy maximises interaction with the wider research community. We have greatly enhanced our research seminar programme and increased the number of international visitors we host each year, including both academics who are leaders in their field and new rising stars. Additionally, van den Berg, von Hinke and Park held international Professorships at Groningen and Erasmus Universities, the Netherlands, and Sungkyunkwan University, Korea, respectively (all were employed at Bristol more than 0.8 FTE).

As a School we are fully committed to open research, open access and ensuring replicability of our work. Staff pre-register Randomised Controlled Trials (RCTs) with the American Economic Association (AEA) RCT Registry, and the School Ethics Committee ensures our research is

Unit-level environment statement (REF5b)

subject to rigorous scrutiny with respect to ethical standards. This sits within the broader institutional structure of the Faculty and University Ethics Committees.

Since REF2014 we have established a new School Research Fund of up to £100,000 per-annum, providing a wide variety of research support and prioritising support for ECRs. Personal research budgets have been increased. This funding ensures that our researchers have the resources to present their work at the best international conferences, and to fund research assistance.

Much of the strength of our REF2014 submission was underpinned by ESRC Centre funding for the CMPO. When this ceased in 2015 we acted to diversify our sources of external funding and increase the number of staff engaged in grant-raising activity. We also used funds provided by the Faculty to reward and incentivise grant applications among non-professorial staff. As evidenced below, this strategy has been highly successful.

Finally, we have strengthened our research student programme through the institution of an MRes and the creation of a PhD bursary scheme. These ensure that we can attract the best candidates for postgraduate research and deliver a training programme that is internationally competitive. We have implemented a weekly PhD student seminar series and worked to better integrate the PhD student community into the wider department.

Outcomes

Staff are making significant advances in economic theory and econometrics, in macroeconomics and structural labour economics, and in innovative, policy-relevant empirical research. Our interdisciplinary research is breaking new ground. We have been highly successful in diversifying our sources of grant income and have substantially expanded our postgraduate research provision.

The success of our strategy can be seen partly in our research outputs. Both established and early-career staff have published in 'top 5' journals: three articles in the *American Economic Review* (Heblich, Oliveros, Polisson); one in *Econometrica* (Tetenov); four in the *Journal of Political Economy* (Eguia, Philippe, Proto, Zylberberg), one in the *Quarterly Journal of Economics* (Iaria); and five in the *Review of Economic Studies* (Ábrahám, Caria, Jolivet and Turon, Park, Xiong). Staff have also published multiple articles in other leading general interest and field journals (including the *Economic Journal*, *International Economic Review*, *Journal of Econometrics*, *Journal of the European Economic Association*, *Journal of Labor Economics*, *Journal of Public Economics*, *Journal of Economic Theory*, *Quantitative Economics* and the *Review of Economics and Statistics*).

Our network of international collaborators means that over two-thirds of our submitted outputs featured at least one international co-author, with around 50% based in Europe and a further 40% in North America. Our ECRs are extremely strong in their research contribution – all submitting at least one output – and our PhD students have published in leading international journals (Section 2).

Over the REF period we also published several articles in non-economics and interdisciplinary journals including: *Nature*, *Science*, *Biometrika*, *Journal of the American Statistical Association*, *The American Journal of Political Science*, *Management Science*, *British Educational Research Journal*, *Current Biology*, *Social Science and Medicine* and *PLoS ONE*.

We have established a series of annual workshops associated with each of our research groups and hosted high-profile conferences and events. In 2016 Angus Deaton, Nobel Laureate and former Professor of Econometrics at Bristol, was awarded an Honorary Fellowship and gave a public lecture. In 2019 Nobel Prize winner Oliver Hart visited the School and spoke at a contract theory workshop, hosted jointly with the Law School. We hosted the 2017 Royal Economic Society (RES) Annual Conference and will host the RES Easter School from 2021.

Unit-level environment statement (REF5b)

Our strategy for broadening both our sources of research grant income and the set of staff applying for funding has been very successful. During the review period we won substantial, multidisciplinary grants and awards from international funders (Section 3). For example, in 2019 von Hinke was awarded an European Research Council (ERC) Starting Grant of £1.2million. Our ECRs have had a very high success rate with applications to the British Academy (BA)/Leverhulme small grants scheme. We see this success in securing smaller grants as building towards larger-scale proposals and embedding a much more proactive culture of grant capture within the School.

2) *Deliver policy impact and inform wider debate*

Long before impact became a REF metric, Economics at Bristol emphasised the importance of getting research findings out to the people who need to see them. Many of the staff we employ, at all career stages, are determined to go beyond journal publications and use their research to improve policy.

Since REF2014 we have worked to broaden our contribution to public policy debate and to deliver impact internationally. We have maintained our core areas of expertise in education, health, labour market policy and regulation, and have extended into new areas including transport, the environment and crime. We continue to embed impact and dissemination activity into all our policy-relevant research, for example in the co-design of RCTs in collaboration with policy-makers.

Our strategy for delivering high-level policy impact is based on building a reputation for robust and insightful research and from active engagement with policy-makers through face-to-face meetings, policy conferences and accessible publications. We also provide evidence and insights that shape public debate. The School Impact Directors help staff turn their research into practice and policy advice and ensure that the potential for impact is considered at a very early stage in the research design.

Outcomes

Our Impact Cases exemplify the success of our strategy – a focus on working closely with the policy community to embed impact at an early stage, together with relationship-building and the translation of research expertise into policy guidance. Our Cases cover four areas:

- **Increasing charitable bequests** Smith and co-authors demonstrated the impact of behavioural nudges to increase legacy giving. The results of an RCT were acted on by charities and government ministers to change practice in the sector and to help to preserve inheritance tax charity relief.
- **Understanding school performance in London** The strong performance of London schools since the early 2000s was widely attributed to the policy ‘London Challenge’, with policy-makers advocating its extension throughout England. Burgess was instrumental in halting the rollout, demonstrating that the underlying evidence was flawed and that the high performance was instead due to the very different demographic mix of pupils in London.
- **Pricing of essential public services** Our research has had an impact on UK regulatory bodies which protect consumers in markets where companies face insufficient competition. Grout’s research, coupled with his senior role at Ofgem, has impacted the level of prices that the regulator allows utilities to charge, directly affecting almost all UK households and businesses.
- **Reforms to unemployment policy** In Germany, unemployed workers sign mandatory agreements stipulating their obligations when looking for a job. An RCT by van den Berg

Unit-level environment statement (REF5b)

and co-authors showed that these agreements were not helpful for individuals likely to have short unemployment spells. This led to the abolition of the policy for this group, benefitting millions of people since 2015.

Section 3 details other examples of research impact that we are currently working towards. Section 4 describes the response of our staff to help guide national policy during the Covid-19 pandemic. Our advice is regularly sought by government, and staff have taken up formal advisory roles to deliver impact (Section 4). Our PGR students have also maximised the impact from their research, including through secondments to government departments (Section 3).

In 2019 we were successful in securing ESRC Legacy Centre Status for CEPS, which brings with it funding to further develop research impact. The remit of the new Centre emphasises the increasingly international nature of our policy-focused work and the value of data-intensive research.

The School also has an impressive record of broader user engagement, at a local, national and international level (Section 4). In keeping with this, in parallel with the 2017 RES Conference, we introduced the very first 'RES Presents' public events covering topics from Brexit to re-skilling the UK. Staff have contributed regularly to the Bristol Festival of Economics and the Festival of Ideas.

3) *Improve diversity in economics*

Our staff are committed to using their time and energy to improve the vitality of the economics discipline and the longer-term pipeline of talent. This is central to what we do as a School of Economics and is achieved through two initiatives.

First, we place a strong emphasis on wider outreach and are working actively to improve diversity within the discipline from the ground up. Smith launched, and is Co-Director of, the RES Discover Economics initiative, a national campaign aimed at changing perceptions of what studying economics entails, and at increasing representation from women, minority ethnic students and students from state schools.

Second, by hosting the Economics Network we aim to improve economics pedagogy. This organisation supports economics education and enhances teaching and learning both nationally and internationally. In line with this, we have developed a strong economics education career pathway, with staff promoted to both Professor (Birdi) and Associate Professor (Proud and Spielmann).

Outcomes

To improve the strength and shape of the discipline, Smith is playing a nationally leading role in helping to diversify the economics profession through school outreach initiatives and the establishment of Discover Economics. A national launch event was held in 2019 at the Resolution Foundation, and at a local level staff have engaged with schools to boost the pipeline of students choosing to study economics through our Schools Event, run alongside the Festival of Economics in Bristol and attracting over 250 students.

We have continued to raise the profile of the Economics Network, in part through sustained expansion in staff numbers on our teaching-focused career pathway. We provide support for teaching within the discipline, and the Network's website and training courses are leading resources for economics education. We have delivered both pedagogical training focused on early-career staff, and research in areas such as graduate employability and the public understanding of

Unit-level environment statement (REF5b)

economics. As well as playing a prominent role in the Network, our staff are publishing pedagogical research in leading journals.

Finally, we have continued to innovate and strategically support our commitment to outreach. To deliver impact, to make progress in the way that economics is communicated and to improve the public perception of the discipline, we have established the UK's first Chair in the Public Understanding of Economics (Davies).

Future strategy

Our future strategy retains the core elements of combining leading-edge research with policy-relevant impact and builds on past success. The move to becoming an independent School of Economics is a significant boost to our profile and coincides with further growth in staff. We will continue to prioritise staff retention and development and will provide the support needed for staff to reach senior levels. Overall, this will advance our research and enable critical mass, increase our international visibility, ensure robustness to staff departures and extend our capacity for PhD supervision and advanced training. We will continue to raise the profile of our MRes and PhD programmes, and further increase PGR student numbers.

We will re-bid for ESRC Centre funding for CEPS once we have established the new Centre's identity. Shorter-term, the ESRC funding allows us to launch a new website and magazine, and to host policy conferences tailored to fill gaps in the evidence-base identified by policy-makers. We aim to capitalise on our interdisciplinary research agenda, which puts us in a strong position to respond to other, large-scale interdisciplinary research calls, e.g. from UKRI, and we will continue to use our networks to apply to international sources of research funding.

Our aim is for our newly appointed Professor in the Public Understanding of Economics to raise both the profile of economics research at Bristol, but also, crucially, the wider impact of the discipline. One vehicle for this is the Economics Observatory website, which brings economic analysis and evidence on the Covid-19 crisis to national policy and public attention. School members have contributed articles and Smith is a lead editor. We will continue to push our focus on policy impact and contributions to local initiatives, such as the Festival of Economics, to improve the public perception of the type of insights that economics can offer. In line with this, we will enhance our outreach activity with a view to increasing diversity within the discipline, with knock-on beneficial effects on the variety of ideas and viewpoints which economics reflects.

Finally, we plan for new appointments to bolster the role which the Economics Network can play in improving economics pedagogy, pushing forward the frontier of how economics is taught and benefitting the health of the discipline.

2. People**Staffing strategy**

We have achieved our objective from REF2014 of substantially increasing staff numbers and have embedded equality and diversity into our hiring strategy. Recruitment has been focussed at the early-career level, hiring at the research frontier on the international market, and leading to a young and dynamic research environment. Each recruitment round we have conducted initial interviews at the AEA/ASSA meetings and/or the equivalent meetings within Europe. We have recruited talented researchers from prestigious PhD programmes, including Stanford, University of Pennsylvania, EUI Florence, Toulouse, Oxford and UCL.

Unit-level environment statement (REF5b)

At senior level, we seek individuals who provide leadership and support the professional development of early-career staff and research students, and who have the skills needed for the highest-level research. At all levels, we emphasise the need to draw in researchers who can address important practical or policy questions in innovative ways and deliver research impact.

During the REF period we have had some departures, with most moving abroad (van den Berg, Bergemann, Heblich, Hiller, Lalé, Tetenov, Xiong), and three to positions within the UK (Caria, Proto, Windmeijer). We have hired new Chairs to bolster academic leadership within each of the research groups: macroeconomics (Ábrahám, Yazici); econometrics (Han); applied microeconomics (Costa Dias); economic theory (Hu, Oliveros) – the appointment of Hu, with expertise in monetary economics, being one where we had identified a research gap. Recruitment at the senior level takes place in a tight market. We have therefore worked hard to retain staff and to promote from within to ensure that we have research leadership across the board. Over the REF period, Cannon, Giovannoni, von Hinke, Jolivet and Simpson were promoted to Professor.

We have also increased our community of postdoctoral researchers, who have subsequently progressed to permanent positions or further fellowships. Carter was awarded a British Academy Postdoctoral Fellowship and Wang worked on a grant-funded position on gene-environment interactions and was subsequently awarded an ESRC postdoctoral fellowship. We hosted a University of Bristol Vice-Chancellor's Fellow (see REF5a), Seror, with a research focus on urban and environmental economics applied to China. Following this, Seror gained an Assistant Professor position at Université de Québec à Montréal, Canada.

Career development, promotion and progression

Early-career staff are assigned a mentor within the School with whom they can discuss research and professional development. Postdoctoral researchers also typically collaborate on research projects with their mentor. In addition, all staff participate annually in the University-wide Staff Review and Development programme, which is a formal opportunity to discuss career goals and future development with a senior colleague. Staff have access to a wide variety of University training programmes encompassing teaching (leading to Advance HE Fellowships), research and leadership. Postdoctoral researchers and ECRs can access the Bristol Clear development network and can join the Faculty early-career network.

We recognise that time is a key resource constraint when it comes to producing the highest-quality research for career progression. New research staff receive a teaching reduction in their first year and we use a teaching-relief scheme to reward individuals who publish at the highest-level. Teaching for research staff is also concentrated into a single teaching block, to allow for a focussed period of research time and to facilitate research visits. This condensed teaching schedule substitutes for formal periods of sabbatical leave. Staff also receive teaching-free days to dedicate to research.

As well as research, impact is an integral part of the promotion and progression criteria. While it is recognised that not all research will lead to practical outcomes, impact and engagement activity is formally considered by promotion committees. Impact is also accounted for within our workload model via a teaching-relief scheme. Taking secondments and external advisory positions is encouraged and staff can move to part-time working to take up more substantive external roles.

ECRs are initially expected to progress within the lectureship grade based on clearly defined criteria in terms of publications, teaching, impact and citizenship, with an up-or-out tenure-track structure. Staff whose academic profile is progressing faster than expected have successfully applied for 'accelerated progression'. Although all progression and promotion cases are considered

Unit-level environment statement (REF5b)

by a Faculty-level committee, we have created a School-level advisory group to review candidates' applications and provide feedback and support, before they reach the Faculty stage. Promotions to Associate Professor and to Chair draw on reports from external assessors. Equality and diversity considerations are accounted for in all progression and promotion cases.

Postgraduate research students

Structure, recruitment and funding

We have implemented structural changes to our PGR programme to sustain its growth and further improve the quality of our training. In 2015 we created a one-year MRes in Economics. The programme has now doubled in size, with a cohort of 12 students in 2019. We are now further integrating the MRes and PhD, moving to a model where completing the MRes (or equivalent) is a pre-requisite.

The strengthening of our PhD programme has been supported by bursaries funded by both the School and the Faculty. Students have also received grants from the ESRC (including through the Economics Pathway in the South West Doctoral Training Partnership (SWDTP)), the China Scholarship Council, and for interdisciplinary research, from the Medical Research Council (MRC) (through the GW4 Doctoral Training Partnership).

Our primary source of student funding has been 1+3 and +3 ESRC/SWDTP studentships (21 during the REF period, including through the Advanced Quantitative Methods Pathway). Our second source is our School bursaries for 1+3 years or 3.5 years. These started in 2017 and we have gradually increased their numbers, to up to four students per year. The School bursary programme is generating growth in both the number and quality of our PhD students, by increasing our competitiveness in attracting the very best. This will soon be reflected in increased PhD awards and in improved job market placements.

During the REF period we have made 27 doctoral awards (no professional doctorates) to a diverse group of students; of the PhD awards over the period, 60% of students identified as female and 45% as BAME.

Core training

Advanced training has been improved. Our MRes programme has core courses in econometrics, microeconomics and macroeconomics as well as applied research units to prepare students for a PhD. Students complement their training through workshops offered by the SWDTP, or by attending external training sessions at the RES Easter School and the Centre for Microdata Methods and Practice (CeMMAP). Students have attended and presented at summer schools organised by IZA (Institute of Labor Economics) in Germany and at PhD conferences in the UK. From 2021 we will host the RES Easter School in Bristol.

Our students also have access to the training courses and support offered by the University of Bristol Doctoral College (BDC; see REF5a). These range from training in specific programming software to research ethics, writing research papers or posters, and public engagement. Students also attend training sessions on teaching, as most acquire teaching experience by leading classes throughout their studies.

In 2016 we instituted a formal, weekly PhD seminar series, at which each student presents work-in-progress at least once a year. All students must attend, and staff are highly engaged with the

Unit-level environment statement (REF5b)

initiative. The seminars provide students with feedback on their research and serve as a useful milestone. They also receive advice on presentation skills and on handling questions.

Supervision and progress monitoring

All PhD students have two supervisors, at least one of whom has already supervised a PhD student to completion. This method of paired supervision is not only beneficial for the student, but also provides valuable training in postgraduate supervision for staff. We also co-supervise with academics from other disciplines. Students meet with their supervisors weekly and at a minimum of once per fortnight. Many students start their PhD by working on a joint project with a supervisor, before beginning a solo-authored chapter once they have gained experience.

To progress to the end of the PhD, each student gives a presentation at a progression panel after 12 to 18 months and submits a draft chapter for detailed feedback to a committee of at least two academics. Finally, each student's progress is reviewed once a year in a meeting between the PGR academic team and the supervisors.

Research support and development

We encourage strong research interactions between PhD students and staff. Students are based in the same building as academic staff and share the staff common room. PGRs are integrated into the School's four research groups which allows them to identify a wider set of staff with whom they can meet to get feedback on their work. Students attend, and present at, the School's workshops, and we organise PhD poster sessions during the annual School Research Day to give students a further opportunity to discuss their research with staff.

Students' research is financially supported through an individual research allowance, and they can apply to the School for further funding. Each student has access to at least £2,000 for research expenses over the course of their studies. This has enabled students to present at the RES and European Association for Research in Industrial Economics (EARIE) conferences, at IZA workshops and at highly selective workshops, such as the Winter Meeting of the Econometric Society.

PGRs are also allocated collective funds for social events. Wellbeing support is provided within the School, via the Student Wellbeing Service and through the BDC, which offers courses on personal development tailored towards staying well during a research degree. During the University Covid-19 closure, research students were asked to check in with the postgraduate support team weekly, and supervision and viva examinations have continued successfully online.

We have a PhD placement officer (Ábrahám) who meets with students to discuss their career plans and to prepare for the academic job market. Practice job talks are organised in the PhD seminar series.

Research and job market outcomes

Students are encouraged to publish their doctoral research. During the REF period, many students have published in leading journals, including: *American Economic Journal: Macroeconomics* (Borowczyk-Martins), *European Economic Review* (Carter), *Journal of Banking and Finance* (Orujov), *Journal of the European Economic Association* (Bradley), *Journal of Econometrics* (Sanderson), *Review of Economic Dynamics* (Borowczyk-Martins), *Journal of Health Economics* (Janke), *Journal of Economic Behaviour and Organisation* (Sanders), *Journal of International*

Unit-level environment statement (REF5b)

Economics (Carter), *Labour Economics* (Borowczyk-Martins), *Scandinavian Journal of Economics* (Sin) and *Econometrics Journal* (Rose).

Recent cohorts have been well placed in postdoctoral and tenure-track positions (Bradley at Cambridge; subsequently Nottingham; Borowczyk-Martins at Sciences Po and Copenhagen Business School; Rose at Toulouse and Queensland; Sanders at Harvard, Kennedy School and Oxford, Blavatnik and Kings College London), and at leading research institutes (Britton and Stockton at the Institute for Fiscal Studies (IFS)). PGRs have also taken up policy positions (Sin at the International Monetary Fund (IMF), Chande, Kettle and Sanders at the Behavioural Insights Team, Robinson and Stoyanova at the Office for National Statistics (ONS)), and progressed into careers in interdisciplinary research (Janke, Health Research; Lancaster and Sanderson, MRC Integrative Epidemiology Unit, Bristol).

Equality and diversity*Recruitment and promotion*

Equality and diversity considerations are integral to our hiring and are accounted for by all promotion committees. Female representation at senior level continues to increase. Compared to other UK economics departments a high fraction of our Professors and Associate Professors are female: at July 2020, 30% female at Professor level, and 40% at Senior Lecturer/Associate Professor level, compared to UK averages of 14% and 27% respectively (RES Women's Committee, 2016). The share of Lecturers with research responsibilities is lower at 20% female (compared to a UK figure of 33%). During the REF period two female staff members were promoted to Professor and one to Associate Professor. In two cases, these promotions took place shortly after periods of maternity leave.

Research and academic environment

Equality and diversity are embedded in the day-to-day functioning of the School and in the physical work environment (both main office buildings are wheelchair accessible). Measures are taken to avoid bias (conscious or unconscious) and discrimination (direct or indirect). Meetings are scheduled to end by 5:15pm to allow members of staff with caring responsibilities to participate fully in the life of the School. After consultation with staff, seminars have been moved to lunchtime and a set of seminar good practices has been introduced to create a respectful environment. We monitor our seminar series for diversity and have made gender an explicit consideration in selecting speakers.

The School allows flexible working hours and part-time work, and staff members, both with and without protected characteristics, use these opportunities to combine work with their caring responsibilities. Circumstances such as maternity leave (three among REF-eligible staff since 2014) and ill-health are accommodated by re-assigning teaching and by buying in replacement teaching, which helps protect research time. As per University procedures, staff can claim childcare costs to enable them to attend conferences. In addition to formal leave, staff are also able to request, and are granted, career breaks of up to one year.

The School is particularly proactive about gender equality and female leadership. Smith was Chair of the RES Women's Committee and has been a mentor at RES and European Economic Association (EEA) female mentoring events, which early-career staff attend. 45% of academic staff with administrative responsibilities related to internal research funding decisions and REF decisions are female. The Director and Deputy Director of CEPS and two of the five research strand leads are female. The CMPO had a female Deputy Director and three female theme leads.

Unit-level environment statement (REF5b)

A working group reflecting the diversity of the School in terms of gender, age and roles, was set up in 2019 to prepare an application for Athena Swan Bronze status in 2021. This demonstrates our commitment to reflect upon our current practices and further improve our inclusiveness. For example, all staff were surveyed during the 2020 lockdown to better understand how additional childcare due to school closures affected research productivity. We subsequently decided to implement teaching reductions in the next academic year for all non-professorial staff with below secondary school age children to reflect the adverse impact on research.

At PGR level we are close to gender parity, and doctoral students with circumstances such as maternity leave and caring responsibilities are supported in the same way as staff (e.g., flexible teaching arrangements and funding childcare costs during conferences). Students have taken maternity leave with commensurate extensions to their thesis submission dates and are given support on their return to study. Those with caring responsibilities can be particularly vulnerable due to time limits on their funding. The School has an alumni hardship fund, which has helped support research students facing financial difficulties.

REF

The School's procedure for the selection of outputs to be submitted to the REF follows the University's code of practice. The University has a fair and transparent approach to guide decisions regarding who and what outputs are submitted, and all REF-eligible members of staff were invited to submit information, on a voluntary basis, if they felt they had experienced any circumstances which restricted their research during the relevant period. This was then evaluated anonymously by a panel whose composition did not include anyone with a role in REF-related decisions.

All eligible staff were given equal opportunity to propose their best outputs for consideration for submission and these were evaluated internally by at least two members of staff. When selecting outputs for inclusion at equivalent level of quality, we followed the principle set out by the University and chose outputs that contribute to a fair representation of staff and their protected characteristics. To avoid conscious or unconscious bias, the REF UoA lead (Simpson, formerly Windmeijer) took part in a specific REF training workshop on EDI-related issues. Female staff account for 20% of our submitted outputs (by Category A staff) and one of our four Impact Cases is female-led.

3. Income, infrastructure and facilities

Research income

We have a strong track record of using external funding to strengthen our research environment. In 2015, ESRC Centre funding for the CMPO came to an end. In response, we diversified our sources of research income, leading to higher proportions of funding for interdisciplinary research and from international funders. We have also built on the previous ESRC Centre, winning ESRC Legacy Centre Status for CEPS in 2019.

Research income has been significantly boosted towards the end of the REF cycle. This has been achieved through our strategy of broadening the set of staff members applying for grants, including ECRs, strategic financial support for grant capture, and better positioning ourselves to bid for grants internationally and as part of interdisciplinary consortia.

Unit-level environment statement (REF5b)

Examples of the success of our strategy include:

- Education Endowment Fund grants of over £1.7million for a series of RCTs (Burgess)
- £1.2million ERC Starting Grant (von Hinke)
- £375,000 New Opportunities for Research Funding Agency Cooperation in Europe (NORFACE) award (von Hinke)
- £250,000 ESRC New Investigator grant (Stouli)
- £200,000 from the International Growth Centre and Bill and Melinda Gates Foundation (Valente)
- £180,000 Deutsche Forschungsgemeinschaft award (van den Berg)
- ESRC Legacy Centre Funding of £100,000 (Simpson)

Interdisciplinary awards include a £360,000 Natural Environment Research Council (NERC) award on the effects of hydrometeorological hazards in Vietnam in collaboration with Geographical Sciences at Bristol (Co-Investigator Zylberberg; income allocated to UoA 14), and von Hinke's NORFACE and ERC grants on gene-environment interactions and later-life economic outcomes and health. The start of the ERC award was postponed and hence not included in our research income figures.

Staff are part of collaborative awards with other institutions. von Hinke's NORFACE award is joint with Erasmus University and the University of Zurich. Arni's funding for work on Swiss labour market policy is joint with the University of Lausanne. Simpson was a Co-Investigator on the What Works Centre for Local Economic Growth led by the LSE and the Centre for Cities. Windmeijer collaborated on an Australian Research Council grant. At July 2020, we await the outcome of two large-scale international grant applications on which we are leading and which have reached the final stage of the Open Research Area (ORA) scheme joint with researchers in France and Canada.

ECRs have been highly successful in raising small-scale external funding to support their research activity (with five successful applications to the BA/Leverhulme small grants scheme). We are building new cohorts of researchers with the tools to bid for research income, with recent success in the form of Stouli's ESRC New Investigator grant and Wang's postdoctoral fellowship.

We have also been successful in raising money for research impact, with the £100,000 ESRC Legacy Centre funding being dedicated to impact activity. As of July 2020, we are applying to host the newly established Economics Observatory website to tie in with our appointment of Davies as Chair in the Public Understanding of Economics.

Female leadership is reflected in our grant award success. For grants held during the REF period, female staff were Principal Investigator (PI) on 35% of these awards by number, and 20% by value, rising to nearly 40% by value in the final two years.

Infrastructure and facilities for research

The School's research budget covers the School Research Fund (up to £100,000 per-annum), the Impact Fund (£15,000), seminars, personal research allowances and research expenditure by PGRs. We use the budget to create a stimulating and productive research environment.

The School Research Fund

The Fund is used to enable each research group to host at least one annual workshop. These are the:

Unit-level environment statement (REF5b)

- Econometric Study Group
- Search and Matching Workshop
- Bristol Workshops on Economic Policy Interventions and Behaviour
- Bristol Macroeconomics Workshop
- Bristol-Kent-Southampton Workshop in Economic Theory
- Bristol Junior Economic Theory Workshop

These workshops have the dual purpose of bringing prominent, international researchers to Bristol and allowing our researchers to engage with frontier research, as well as enabling us to showcase our work and to develop new collaborative links.

The remainder of the budget is allocated by a panel on a competitive basis following a formal application process, prioritising ECRs and applications that lead on to an external grant application. We fund data development – in particular, that which benefits multiple researchers – as well as research assistance. Hiring research assistants from the undergraduate and MSc cohorts enables us to identify promising candidates for postgraduate research. From the competitively allocated part of the Fund, around a third of awards by value were made to female staff and around half to ECRs.

Finally, the Research Fund is used for academic visits, both to and from Bristol, conference attendance and journal submission fees.

Other research infrastructure

We place significant value on research interactions. We have substantially expanded our seminar series, which during term, now averages over two external speakers per week. Each research group also holds informal, work-in-progress seminars, in addition to the weekly PhD student seminar which MRes students also attend. We have formed several reading groups which include PGRs, for example, on econometrics, on applied microeconomic methods and on machine learning. Each year we have also held either one or two all-staff Research Days at an offsite venue where staff and PGRs present to the whole School.

Personal research budgets are set at a minimum of £2,000 per-annum, increasing for those who supervise multiple MSc dissertations, and for new recruits. These funds can be used for any research or impact-related activity including spending on I.T. equipment. Research allowances for PGRs are covered in Section 2.

We use internal funding and external grants to boost an area of strength in the School: the development of large-scale, novel datasets, for example digitised historical and micro-geographic data. We also make use of national research data and infrastructure, in particular in our interdisciplinary work, e.g. the Bristol-based Avon Longitudinal Study of Parents and Children (ALSPAC) data and the UK Biobank. As a Fellow, Zylberberg accesses the research facilities at the Alan Turing Institute. Staff also draw on major UK data investments such as Understanding Society and the UK Data Service Secure Data Lab. Simpson contributed to the University's successful bid to host a 'Safepod' allowing researchers to access confidential data in a secure setting.

Given our research focus on both theoretical econometrics, advanced macroeconomic modelling and the development of large-scale data for applied research, we draw heavily on both School and University computing infrastructure. We use the High-Performance Computing facilities, and the University's data storage facilities for secure data (e.g. for safe storage of administrative data). We have a nominated staff member, Choi, whose role is to regularly assess our computational

Unit-level environment statement (REF5b)

infrastructure and hardware and software needs to ensure that no staff are held back in their research.

To increase our external research income we draw on the expertise of the University's Research and Enterprise Development (RED) team, which identifies funding opportunities, advises on research proposals, co-ordinates large collaborative bids and manages peer review to improve the quality of applications. PolicyBristol and RED's Knowledge Exchange colleagues advise on delivering impact (see REF5a).

We draw on University funding – the Faculty Grant Capture Fund, International Strategic Fund and Global Challenges Research Fund – to pump-prime grant applications, develop new, international collaborations and fund Official Development Assistance (ODA) research addressing the UN Sustainable Development Goals. We have used the University Benjamin Meaker Visiting Professorships to bring Oliver Hart, Mark Ottoni-Wilhelm and Krishna Pendakur to Bristol.

Finally, we have appointed a full-time School Research Manager, who provides support for grant applications, administers research budgets, and assists with workshops and website development. In addition, the CEPS funding has allowed us to appoint a part-time communications post to work alongside the School's marketing and communications team.

Infrastructure and facilities for impact

Our impact goals are achieved through a multi-strand approach. To encourage broad interest, on joining the School new staff attend a half-day workshop on understanding and achieving impact. Our Impact Directors meet individually with staff to optimise impact from their research, and the School strongly supports those who want to disseminate their work and achieve policy change through it. This includes advice and training, financial support and freeing up time to devote to impact. We are also supported in our impact activities by PolicyBristol and the University's Public Engagement Unit.

The Impact Directors administer the Impact Fund, to which staff can apply for any impact related activity, e.g. travel to meetings with the policy community or hosting workshops which target non-academic attendees. Since the receipt of ESRC Legacy Funding for CEPS we have been able to supplement the impact funding available and improve our research communications.

We fully recognise that impact takes time and commitment and goes beyond standard research dissemination. Individuals with strong, developing Impact Cases are given teaching reductions to allow them to translate their research into policy impact over a long time-horizon. Over the REF period 50% of recipients were female.

Given this, in addition to the Impact Cases submitted we are already working to translate our research into impact in a range of other areas. These include: the submission of patent applications for auction design mechanisms (Jeong); transforming school attendance in Mozambique (Valente); the take-up of contraceptives in low-income countries (Valente); reforming the pricing of airport landing slots (Sokullu); the implications of teacher assessment versus exams (Burgess and Sievertsen); advising on the effects of 'place-based' policies and on high-speed rail (Simpson); and labour market policy design in conjunction with the Swiss Ministry of Economic Affairs (Arni).

PhD students are also encouraged to maximise the impact from their research. Sanders and Chande took up placements at the Behavioural Insights Team, Cabinet Office, Stoyanova combined her research with an appointment at the ONS, and during her PhD Greaves has

Unit-level environment statement (REF5b)

presented at the Department for Education and provided advice on both reforms to school admissions policy and to teachers' pay.

4. Collaboration and contribution to the research base, economy and society
National and international collaboration and networks

Our strategy maximises interaction with the wider research community. This is done through a vibrant seminar programme, by inviting leading researchers from around the globe to visit Bristol and by allowing staff the time and funding to visit departments both within the UK and overseas.

As well as hosting visits from leading scholars such as Manski (Northwestern) and Newey (MIT), we have also hosted longer-term sabbatical visits (e.g. Nørmark Sørensen (Odense), Tchente (Kent), and Skeels (Melbourne)) and visits for international PhD students (Bocognano (Aix-Marseille) and Hu (VU Amsterdam)).

Our staff work with a wide range of co-authors including international leaders in the field, enabling us to produce research at the frontier. For example, Aguirregabiria (Toronto), Bonhomme (Chicago), Bontemps, Ivaldi, Jullien, Magnac (all at Toulouse), Chernuzhukov (MIT), Crawford (Zurich), Dolado (European University Institute (EUI)), Egger (Zurich), van der Klaauw (VU Amsterdam), Lalive (Lausanne), Lindeboom (VU Amsterdam), Newey (MIT), Payne (Melbourne), Pendakur (Simon Fraser), Redding (Princeton), Sadoff (University of California, San Diego), Spady (John Hopkins) and Taylor (Harvard).

Staff have made research visits to: the US (Berkeley, New York University); Canada (Edmonton, University of Alberta, Ottawa); Australia (University of Sydney, Melbourne, University of Queensland); Germany (CESifo, University of Munich, IZA Bonn, Institute for Employment Research (IAB Nuremberg)); France (Banque de France, CREST, Sciences Po, Le Mans, Nantes, Toulouse); Spain (Universitat Autònoma de Barcelona); Sweden (Centre for Health Equity Studies (CHESS), Stockholm); Norway (Oslo); the Netherlands (Groningen, Tilburg); UK (LSE); Italy (EUI Florence); Belgium (Gent, Louvain); Switzerland (Lausanne, Basel); and Russia (The New School, Moscow).

Staff affiliations include major national and international networks and research centres: Centre for Economic Policy Research (CEPR) (Burgess, Caria, Grout, Iaria, Simpson, Smith, Temple), CeMMAP (Pacini, Sokullu, Stouli, Tetenov, Windmeijer), IFS (von Hinke, Iaria, Polisson, Smith), IZA (Arni, van den Berg, Bergemann, Burgess - IZA Economics of Education theme lead, Heblich, Siddique, Sievertsen, Turon, Valente), CESifo (Arni, van den Berg, Heblich, Temple, Zylberberg), The Abdul Latif Jameel Poverty Action Lab (J-PAL) (Caria), The Danish Center for Social Science Research (VIVE) (Sievertsen), Alan Turing Institute (Zylberberg). Bristol is also a member of the Political Economy UK Group (POLECONUK) network of researchers in political economy.

To broaden our grant capture to include a wider range of international funders, we have sought out international partners for research bids (Section 3). As evidenced by our Impact Cases, our research has also been carried out in collaboration with non-academic partners and research users. Finally, we have fostered strong and productive links through our interdisciplinary research, for example with the Bristol MRC Integrative Epidemiology Unit. Beyond Bristol, our interdisciplinary links are supported by our NORFACE and NERC grants and a Turing Fellowship.

Unit-level environment statement (REF5b)

Relationships with research users and audiences

The School has a very strong record of policy advice to national and international government bodies and to non-governmental organisations, and of public engagement and outreach activity.

Staff have continued to work on policy-relevant research questions, to present work to policy audiences and to engage directly with policy-makers through individual meetings and by taking on advisory roles. This approach has led to significant and sustained research impact. As examples:

- Burgess has been working with policy-makers in education for over a decade. In 2020, he co-led the multidisciplinary Data Evaluation and Learning for Viral Epidemics (DELVE) Royal Society report on schools and Covid-19. He has given presentations at the Department of Education, is on the Advisory Boards of Teach First and the Behavioural Insights Team and served as the Independent Chair of the Somerset Challenge, a school improvement body.
- Grout has roles with prominent regulatory bodies, following a lifetime's research on the economics of regulation. He is a non-executive director of the Office of Gas and Electricity Markets (Ofgem), is the Chair of the Gambling Commission Expert Advisory Group, and the Bank of England Senior Advisor for Competition. In this latter role he advises the Governors and senior Bank of England staff on regulation and competition in the banking market.
- Simpson gave talks at HM Treasury on place-based policies, at the Department for Transport on high-speed rail and the Department for International Trade on outward investment, and has academic and peer review roles at the Department for Business, Energy and Industrial Strategy and the Department for International Trade.
- Smith was invited to present work on charitable giving to the All-Party Parliamentary Group, at the Law Commission and to numerous practitioner audiences of will-writers and charities.
- Sokullu is an Academic Collaborator with the UK Civil Aviation Authority and Bristol Airport.
- Stouli has been appointed to the UK Government's What Works Trial Advice Panel.
- Valente has given talks at the World Bank on the take-up of contraceptives, and to the Department of Education in Mozambique on incentivising school attendance.

Wider public engagement, contributions to the economy and society

We place substantial emphasis on communicating economics, and our own research, to wide audiences. Our appointment of the UK's first Professor in the Public Understanding of Economics demonstrates this commitment.

Staff members regularly participate in the Festival of Economics, which is open to all and generates very lively discussion. Sessions where staff have acted as panellists include: Burgess, "Higher education, decline and fall"; Simpson "Is innovation really good for us?" and "Why are so many places becoming 'left behind'?"; Smith, "What are women worth?"; and Birdi and Spielmann "Ask an economist: economics – what is it good for?". Smith was also a panellist at the York Festival of Ideas. In addition, the RES Conference in Bristol initiated the 'RES Presents' events for members of the public, which drew audiences of over 1,000.

We have run highly successful outreach events for schools as part of the Festival of Economics, and the Discover Economics campaign aims to generate greater interest in the discipline among secondary school students. One example was the Covid-19 blog in 2020, which provided insights from economics aimed at this target audience.

Unit-level environment statement (REF5b)

Contributions during the Covid-19 pandemic include the work of Burgess and Sievertsen on the effects of missed education and exams, including the DELVE report co-led by Burgess. Smith contributed evidence on the gender balance of childcare during lockdown. Arni contributed to an IZA repository on international labour market policies during the crisis, and Burgess and Simpson both participated in the RES webinar series on policy responses to Covid-19.

Staff have been active in the media. As examples, Smith appeared on BBC World Service More or Less discussing women in economics and Burgess featured on Radio 4 Briefing Room on the inequalities of lockdown. Our research has received media coverage: van den Berg's research on the economic effects of grief following the loss of a child; von Hinke and Smith's work on the effects of the Healthy Start voucher scheme on diet; von Hinke's research on smoking and weight loss; Sievertsen's work on school starting age and mental health; Smith's work on charitable donations; Heblich and Zylberberg's research explaining why the east-sides of cities are typically poorer than the west. Smith's work to improve diversity in economics has featured in a variety of print media.

In addition to this, much of our contribution to the economy and society comes through the impact that we deliver from our research. This is exemplified by our Impact Cases (Section 1) by the wider examples of nascent impact (Section 3) and by the numerous advisory positions held by our researchers.

Contributions to the sustainability of the discipline

The School is making two major contributions to the vitality of the discipline over the long term: 1) the Discover Economics campaign, and 2) the work of the Economics Network. In addition, we believe that our appointment of a Chair in the Public Understanding of Economics will help to re-establish the valuable contribution that economics can play in shaping public and policy debate. Finally, our focus on interdisciplinary research is broadening the set of questions on which economics can provide insights.

At a local level, staff have run a Discover Economics outreach day as part of the Festival of Economics. In 2019 this brought together over 250 year 10-12 students to compete in a challenge applying economics to real-world issues and to give an insight into studying economics as a degree. We are now launching a student ambassador outreach programme that we hope can be rolled out to other universities. Other school-focused activities include: the Training Partnership schools conference (c.500 students); multi-school events at Woodhouse College in North London and the Royal Grammar School in Surrey (each c.300) and the Scottish Economics Society Schools conference (c.400).

Smith is Chair of the RES Diversity in Undergraduate Economics campaign (from 2019), was Chair of the RES Women's Committee (2017–2020) and has regularly acted as a mentor at the RES Women's and EEA mentoring events. Smith was also an invited panel member at the European Central Bank–Bank of England–Federal Reserve Board Workshop on Gender and Career Progression. She has been invited to discuss diversity in economics at the European Central Bank, Bank of England, Global Economic Symposium conference, Scottish Economics Summit, Erasmus University and Copenhagen Business School.

Unit-level environment statement (REF5b)**Contributions to the research base and indicators of wider influence***Journal editorships and peer review*

During the REF period staff members served as editors, associate editors or board members for the following journals: *B.E. Journal of Macroeconomics* (Ábrahám); *Bulletin of Economic Research* (Giovannoni); *European Economic Review* (Giovannoni); *Fiscal Studies* (Simpson); *Journal of Applied Econometrics* (Windmeijer); *Journal of Economic Behaviour and Organisation* (Proto); *Journal of Economic Geography* (Heblich, Simpson); *Journal of Economic Growth* (Temple); *Journal of the European Economic Association* (Simpson); *Journal of Health Economics* (von Hinke); *Journal of Mathematical Economics* (Hu); *Journal of Urban Economics* (Heblich); *Oxford Bulletin of Economics and Statistics* (Temple); *Regional Science and Urban Economics* (Heblich, Simpson).

All staff regularly act as reviewers for leading economics journals, and many staff peer review work in journals outside of the discipline.

Simpson was appointed as a member of the ESRC Grant Assessment Panel (2016–2020), and other staff have served on the ESRC Peer Review College, and ESRC commissioning panels including Centres competitions. Many staff members have reviewed proposals for overseas grant award bodies.

Smith is a member and Deputy Chair of the REF2021 panel.

Conference and seminar organisation

Smith was Programme Chair of the 2017 RES Conference in Bristol, with de Magalhaes and Sokullu as Local Organisers. Many staff members (Jolivet, Simpson, Valente, Zylberberg) have served on the RES Programme Committee over the REF period, and many have organised special sessions. Bristol has been selected to host the RES Easter School for PhD students and ECRs from 2021.

Heblich was Programme Chair of the European Urban Economic Association Meeting 2017, and Simpson and Zylberberg are on the Programme Committee. Many staff serve on other conference programme committees including the EEA, the Econometric Society and the Conference of the Society of Institutional and Organizational Economics.

Finally, our staff were active in initiating national and international online seminar series during the 2020 lockdown: Virtual Seminars in Economic Theory (Giovannoni and Wirtz); Virtual Industrial Organisation Seminar Series (Iaria); and POLECONUK, (Giovannoni), all of which have attracted high-profile speakers.

Other advisory and elected positions

Staff have contributed to running national and international economic associations. Birdi is a Council Member of the Scottish Economics Society. Park was President of the Korea-America Economic Association in 2016. Smith was an elected Member of the EEA Council, and Smith and Windmeijer have served as members of the RES Council and Executive Committee.

Staff hold senior roles in economics education. Birdi is Chair of the EEA Education Committee. Birdi is the Director of the Economics Network, and Cannon, Proud and Spielmann are members of the Executive Board. Proud is a member of the RES Education and Training Committee. Smith was a member of the Executive Committee of CHUDE (Conference of Heads of University

Unit-level environment statement (REF5b)

Departments of Economics) and is Chair of the CORE EquSS (Economics as a Quantitative Social Science) advisory group.

In addition to the policy and governance positions listed above, Burgess is a governor of the National Institute of Economic and Social Research and sits on the advisory boards of Save the Children's 'Children's Communities' programme, the What Works Centre for Transforming Access and Student Outcomes in Higher Education, and Understanding Society (Ethnicity Strand). Smith is a member of the Scientific Advisory Group at the Max Planck Institute for Social Law and Social Policy.

Keynote talks and training

Keynote talks: Ábrahám: *European Doctoral Program Jamboree*, Florence, 2018. van den Berg: *Aletta Research Meet Up*, Groningen, 2019. Heblich: *Public Policies, Cities and Regions workshop*, Lyon, 2019. Simpson: *Uddevalla Symposium*, Trollhätten, 2017; *ZEW Public Finance Conference*, Mannheim, 2020 (cancelled, Covid-19). Smith: *European Research Network on Philanthropy*, Copenhagen, 2017; *Scottish Economic Society Conference*, Perth, 2018; *Workshop on Behavioural Economics*, Reading, 2018; *Glasgow Student Economic Forum*, Glasgow 2020; *Conference on Gender in Economics*, Copenhagen, 2020 (postponed, Covid-19). Valente: *Annual Economics PhD Conference*, Nottingham, 2016. Windmeijer: *Econometric Study Group*, Bristol, 2017; *American-European Health Economics Study Group*, Harvard Business School, 2018.

Staff have given advanced training courses at other institutions: Tetenov and Windmeijer at CeMMAP; Simpson at Summer Schools in Urban Economics in Barcelona and at the LSE; Zylberberg at Warwick. Many staff have acted as external examiners for PhDs in the UK and abroad.

Prizes

Park won the The Maekyung-KAEA Award in 2014, a lifetime scholarly achievement award given to a Korean economist each year by the Korea-America Economic Association. Koenig won the Best Paper in Applied Economics award at the 2017 Econometric Society European Meeting. Smith won the Best Paper award at the 2019 Association for Research on Non-profit Organisations and Voluntary Organisations conference.